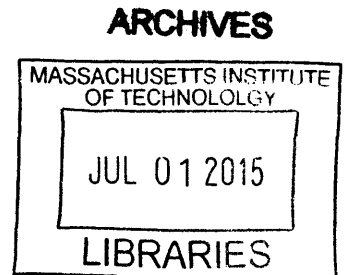


Hypothetical Geography:
Constituting Limits on a New American Frontier

by

Nathan C. Friedman

Bachelor of Architecture
Cornell University, 2009



Submitted to the Department of Architecture
in Partial Fulfillment of the Requirements for the Degree of
Master of Science in Architecture Studies
at the
Massachusetts Institute of Technology

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Abstract

Two hundred fifty-nine obelisk monuments mark the United States-Mexico boundary line west of the Rio Grande. Constructed in three distinct phases (1848-1857, 1891-1896, and 1964-1968) the monuments were the product of territorial negotiations; disputes settled ranging from the violent expansion of sovereign limits to the shifting course of a historic boundary river. Commissioned, inscribed, and placed by both the United States and Mexico, border monuments served as unique bilateral artifacts operating across and reflecting on separate territories and philosophies of nationhood. Beyond symbol, such artifacts were fictions of federal accuracy presented as fact. The monuments served as evidence that a theoretical boundary line existed. Each held a hypothetical narrative of place and placing despite varied geographic realities, too often mired in instrumental imprecision, subjective viewpoints, and historic inaccuracies. In the case of the United States and Mexico, constitution of the two republics required a calibration of the real and representational. While this stitching was required for the solidification of nineteenth century nation states, it also calls into question the foundation of territorial division between the countries and provides insight on a region defined by the cyclical reassertion of international limits. This thesis frames the bilateral production of border monuments and the modes of representation they motivated. It positions these artifacts as instrumental to the constitution of the United States-Mexico border, orchestrating the synthesis of national views and topographies. The monuments straddle a rich gap between the real and representational, the analysis of which reveals an evolution of the international boundary from single line to geopolitical territory.

Ana Miljački, Thesis Supervisor
Associate Professor of Architecture

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Introduction

The sixth incarnation of the United States-Mexico border fence dividing Nogales, Arizona and Nogales, Sonora was completed in the summer of 2011. It reaches up to thirty feet tall and is made of six-inch square steel tubing. Topped with steel sheeting and set into a ten-foot base, the design improves upon earlier models; it inhibits climbing and tunneling while allowing visual permeability for surveillance. Viewed from the historic downtown of Nogales, Arizona the fence is clearly visible climbing the hilltop behind the main commercial strip. It appears as a thick corten line running between a single urban population, its character in contrast to the stylized retail facades on street level. Terraced slum-housing in Nogales, Sonora pushes up directly against it. The line on which the fence sits has taken many forms since the United States carved out its southern edge in the mid-nineteenth century. The international border divides land, populations, and economies into sovereign territory, and this has proven, historically, to be a difficult task. The borderline in Nogales alone has previously been materialized by rock cairns (1849), an iron obelisk (1892), barbwire fence (1917), six foot-high chain link fence (1929), twelve foot-high chain link fence (1956), and twelve foot-high corrugated sheet steel fence (1996). The line is continually in flux, defined by cycles of destruction and rebirth. Each new construction, higher and more imposing than the last, systematically replaces its predecessor with increased material presence. Part of an ongoing United States federal initiative to secure the nation's 1,952-mile border with Mexico, evolutions in the border fence mark distinct political shifts in the relationship of these neighboring countries.

The latest version of the United States-Mexico border fence was initiated by the *2006 Secure Fence Act*, marketed as “an important step toward immigration reform.” Mexican immigrants accounted for 34% of total arrivals since 1990, and in 2004 an estimated 5.9 million unauthorized Mexican immigrants were living in the



United States.¹ Upon signing the bill, President George W. Bush stated, “The United States has not been in complete control of its borders for decades and, therefore, illegal immigration has been on the rise. We have a responsibility to address these challenges. We have responsibility to enforce our laws.”² The bill doubled security funding at the border to \$10.4 billion per year to include hundreds of miles of additional fencing, increased military infrastructure, and advanced surveillance technology. In addition, the *2007 Department of Homeland Security Appropriations Act* and *2009 American Recovery and Reinvestment Act* expanded the objective scope of border constructions to address drug trafficking and amorphous security threats post 9/11.³

* * *

In addition to the border fence, two hundred fifty-nine obelisk monuments mark the United States-Mexico boundary line west of the Rio Grande. Constructed in three distinct phases (1848-1857, 1891-1896, and 1964-1968) the monuments were the product of territorial negotiations; disputes settled ranging from the violent expansion of sovereign limits to the shifting course of a historic boundary river. In the mid-nineteenth century, border monuments preceded inhabitation of a newly defined region, their existence necessary for the dual nation states to be conceivable. Monuments constituted the limits of international territory and called for its immediate settlement. Commissioned, inscribed, and placed by both the United States and Mexico, border monuments served as unique bilateral artifacts operating across and reflecting on separate territories and philosophies of nationhood.

Beyond symbol, such artifacts were fictions of federal accuracy presented as fact, the apex of each designed to correspond with a precise coordinate on the

¹ U.S. Office of the Press Secretary. *Fact Sheet: The Secure Fence Act of 2006*. October 26, 2006

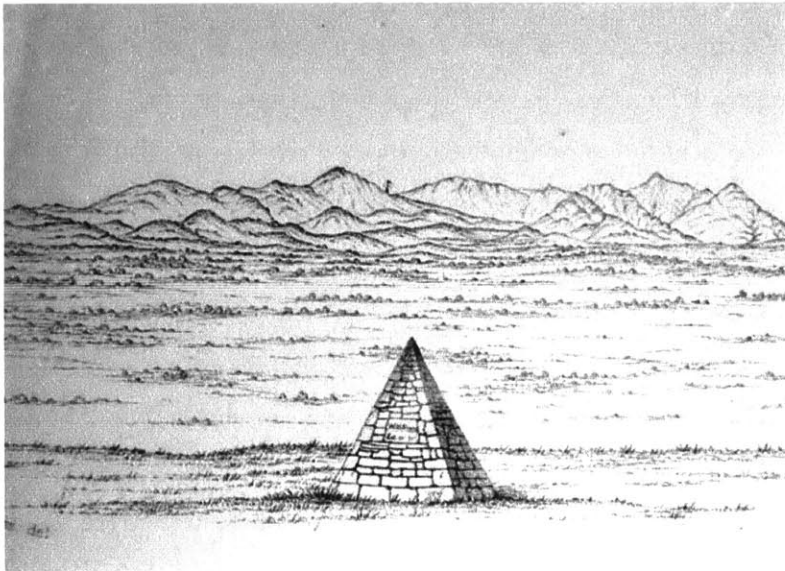
² U.S. Office of the Press Secretary. *President Bush Signs Secure Fence Act*. October 26, 2006.

³ US Department of Homeland Security, Office of Inspector General. *Progress in Addressing Secure Border Initiative Operational Requirements and Constructing the Southwest Border Fence*. April 2009.

international survey line. In theory, the artifacts are split neatly by national territories, the northern half sitting in the United States and the southern half in Mexico. Thus, the markers of territorial division, foreign objects of state control, were deeply enmeshed in a discourse on objectivity, precision, and location. The monuments served as evidence that a theoretical boundary line existed. Each held a hypothetical narrative of place and placing despite varied geographic realities, too often mired in instrumental imprecision, subjective viewpoints, and historic inaccuracies. In the case of the United States and Mexico, constitution of the two republics required a calibration of the real and representational. While this stitching was required for the solidification of nineteenth century nation states, it also calls into question the foundation of territorial division between the countries and provides insight on a region defined by the cyclical reassertion of international limits.

In this sense, border monuments provide a relevant prehistory to the border fence—an element that has undergone comparable iterations in material and form, dominating a contemporary virtual focus of the region. To understand the implications of such a gesture, one that is distinctly unilateral, it is necessary to first consider the bilateral boundary that guides its geographic path.

This thesis frames the bilateral production of border monuments and the modes of representation they motivated. It positions these artifacts as instrumental to the constitution of the United States-Mexico border, orchestrating the synthesis of national views and topographies. The monuments straddle a rich gap between the real and representational, the analysis of which reveals an evolution of the international boundary from single line to geopolitical territory.



I. Hypothetical Geography [1848-1857]

*Hypothetical geography has proceeded far enough in the United States.
In no country has it been carried to such an extent, or been attended
with more disastrous consequences.*

Abstract

Chapter one focuses on the construction of the US-Mexico border during the mid-nineteenth century and in turn new conceptions of federalism for both nations. It is a narrative of complication—encompassing geography, navigation, mathematics, marking, government control, national identity—and one that speaks to broader themes of fragile and abstract political boundaries with concrete historical evidence. Primary archival material is cited from federal reports from both the United States and Mexican boundary commissions, which offer distinct national views of the same region. The material hinges on a term elevated from the 1857 United States boundary Report, “hypothetical geography,” originally used by commissioner Emory to criticize the maps of his predecessors, including von Humboldt, arguing that the border at this moment was in fact the product of necessary fictions. Agreement on and production of the hypothetical allowed for the constitution of sovereign limits.

Introduction

Hypothetical geography has proceeded far enough in the United States. In no country has it been carried to such an extent, or been attended with more disastrous consequences.¹

The first published report of the United States Boundary Commission was presented as a document of facts, a description of the country composed of astronomical work, barometrical levels, meteorological observations, and magnetic measurements. “I have considered that the time has come,” prefaced boundary commissioner William H. Emory, “when hypothetical geography should cease.”² Personal narrative and interests, what Emory called “loose information,” were to be sacrificed in the name of

¹ *Report on the United States and Mexican Boundary Survey, made under the direction of the secretary of the interior, by William H. Emory. Major First Cavalry and United States Commissioner.* Washington: A.O.P. Nicholson, printer. 1857. Ex. Doc No. 108. 34th Congress, 1st Session, p 44.

² *Ibid.*, p xiv.

accuracy. Anything less would fall into the troubled realm of the hypothetical, of which, the report warned, the United States had accrued an unmatched number of precedents and suffered disastrous consequences. (The great legacy of Baron Alexander von Humboldt, a Prussian explorer who documented the Americas in the early nineteenth century, was reduced to: “[He], who, from a few excursions into Mexico, attempted to figure the whole North American continent.”³) For this reason, it was cited, the United States had yet to define a proper transnational railway route by the year of 1857 despite an international war, two treaties, and payment of twenty-five million dollars to Mexico to acquire the appropriate land. No longer was the country to be relayed from the subjective vantage point of a few men on mule back, projecting speculative futures on awaiting territory. The representation of geography had become an issue of federal concern to be derived from instrumental survey and directed with authority by officers of the United States Army.

The problem of geographic representation for the United States emanated from a campaign of westward expansion that outpaced federal knowledge of coveted territory. Boundaries traditionally formed by natural barriers such as mountain ranges or riverbeds in turn referenced the abstract coordinates of latitude and longitude when no other information was available. An 1848 U.S. federal map of territorial acquisitions documents this phenomenon (Fig. 1). As land accumulated through treaties with Great Britain (1783, 1842 and 1846), Spain (1795 and 1819), France (1803), and finally Mexico (1848) boundaries transition from articulated paths in the east to theoretical straight lines leading to the Pacific. The constitution of such abstract limits was indelibly linked to regional documentation. To define the boundary was to define the new frontier. Yet how does one constitute a border that conceptually precedes the territory it divides? What was the role of geographic reality in such a project, and what did it mean to achieve the accuracy Emory strived for?

One leading example, speaking directly to fears of the hypothetical, involved the 1847 Disturnell Map, the main geographic reference of the Treaty of 1848

³ Ibid., p 44.

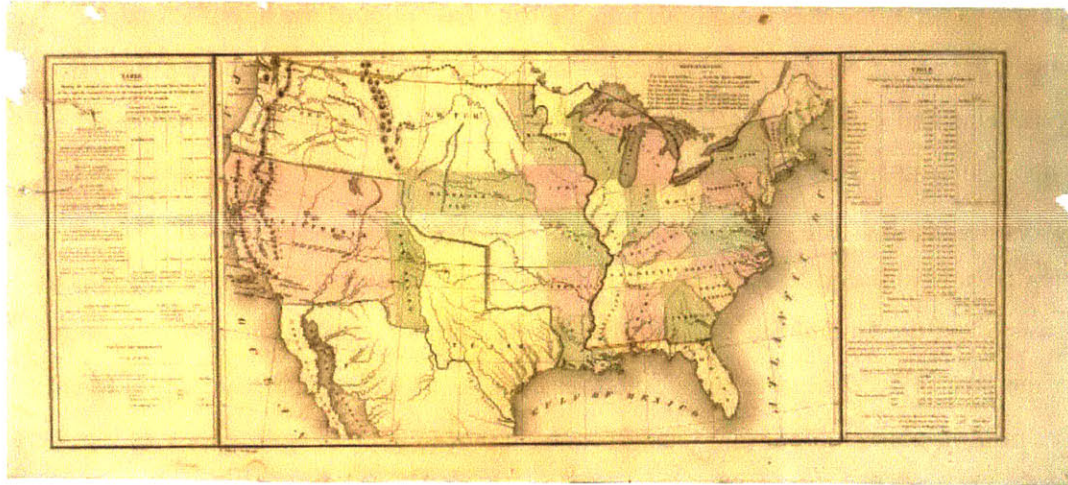


Figure 1. Untitled map of the United States showing boundaries after the Treaty of Guadalupe Hidalgo, with tables of detailing the area of acquired territories, Philadelphia, ca. 1848. 35 x 84.7 cm.

Side tables "showing the estimated surface of the Territories of the United States North and West of the regularly organized States of the Union, and the portions of territory thereof situated North and South of the parallel of 39°30' North Latitude."



Figure 2. Disturnell Map. "Mapa de los Estados Unidos de Méjico, segun lo organizado y definido por las varias actas del Congreso de dicha República: y construido por las mejores autoridades. Lo publican J. Disturnell, 102 Broadway. Nueva York." Sixth edition, 1846. 77.5 x 105.7 cm.

(Fig. 2).⁴ Several landmarks set to define new territorial limits were mislabeled or incorrectly positioned.⁵ The major city of El Paso, for example, was indicated thirty miles north of its actual position and land projected as suitable for a transnational railway route was marred with impassable chasms and rugged terrain. In an early letter to the capital dated April 2, 1849, Emory explained, “The inaccuracy of the map upon which the treaty was made, and which thereby became a part of the treaty, is notorious. It is also known to all who have been much in the frontier States of Mexico, that the boundaries of the States have never been defined on the ground, and are unknown.”⁶ Emory’s statement of fact (or speculation, rather) that Disturnell failed to visit the region his map depicted speaks directly to the anxious gap between representation and the real, between cartographic production and human experience. To document accurately, Emory conveys, one must physically inhabit the space of record. The point simultaneously distanced him from the controversial maps of predecessors while legitimizing a costly expedition of his own.⁷ Yet, unwittingly, it also recognized that the division between instrumental objectivity and subjective observation was not as clearly defined as once hoped for.⁸ An intermediary was necessary, so it seemed, to negotiate between the human subjects of the international boundary commission and the mathematical models they employed.

⁴ *Treaty of Peace, Friendship, Limits and Settlement with the Republic of Mexico* (Treaty of Guadalupe Hidalgo). February 2, 1848, Article V.

⁵ Mention of this dispute can be found in several newspaper reports. See: “The Mexican Boundary Commissions,” *Sacramento Daily Union*, Wednesday Morning, Nov. 24, 1852; “The Mexican Boundary: An Interesting Document: Report of the Secretary of the Interior,” *Special Correspondence of the New York Daily Times*, May 10, 1853; and “The Mexican Boundary,” *New York Daily Times*, June 3, 1853.

⁶ This letter, along with additional correspondence from Emory and other members of the Boundary Commission, is included in *Report on the United States and Mexican Boundary Survey*, p 21.

⁷ On more than one occasion congress refused to provide financial support to survey teams documenting the boundary due to various inefficiencies and suspicions of squandering resources. In 1852 alone \$120,000 of funding was withheld, with reports stating: “The Commission was badly organized from the beginning and particularly under Mr. Bartlett it was too ponderous by more than a half. This was discovered after the first year’s appropriation had been expended and nothing done.” “The Mexican Boundary Commissions,” *Sacramento Daily Union*, Wednesday Morning, Nov. 24, 1852.

⁸ For more on the history of objectivity, see: Lorraine Daston and Peter Galison, *Objectivity*, Zone Books, 2010.

Here, the term *hypothetical geography* may be repurposed, elevated from the pejorative connotation of unfounded speculation to encompass a method actively engaged in. By framing products of the boundary commission not as scientific facts (as they were presented) but as scientific theories, hypothesis grounded in the labor of fieldwork, a new reading of the border emerges. The following chapter investigates the distinct process of mediation between the real and abstract that allowed the boundary commission to navigate varied viewpoints and complications to assert a federal face in territory uncharted. Border monuments, survey instruments, and human players—both federal agents of both nations along with indigenous inhabitants—formed a network of actors functioning simultaneously at the scale of the individual and that of the nation state.⁹ In the mid-nineteenth century the United States-Mexico border was a product of necessary fictions; agreement on and production of hypothetical geography allowed for the constitution of sovereign limits.

Running Double

Binational cooperation was fundamental to the 1848 *Treaty of Peace, Friendship, Limits and Settlement*.¹⁰ After one and a half years of international war that claimed an estimated 38,000 lives, Mexico and the United States resolved to run and mark a new shared boundary through concurrent efforts. It was a process of reconciliation designed to stretch 1,954 miles from the Pacific coast to the mouth of the Rio Grande. Separate national parties—composed of mirrored sets of head commissioner, surveyor, and supporting team—were directed to designate the boundary line by two methods: (1) The production of “authoritative” maps documenting the region and (2) the construction of land-marks (later called border monuments) on the ground.¹¹

⁹ See: Bruno Latour, *Reassembling the Social: An Introduction to the Actor-Network-Theory*, Oxford University Press, 2005, and “From Realpolitik to Dingpolitik: Or How to Make Things Public,” *Making Things Public: Atmospheres of Democracy*, MIT Press, 2005.

¹⁰ Commonly referred to by the site of its ratification, the city of Guadalupe Hidalgo.

¹¹ See: *Treaty of Peace, Friendship, Limits and Settlement with the Republic of Mexico*, Article V. Both the Mexican and United States survey teams produced a comparable set of fifty-four sheet maps

Commissioners William H. Emory for the United States and José Salazar Ylarreguí for Mexico emerged as national figureheads for the nine-year project that was the border, consistent players in a narrative marred by administrative overhauls and crippling gaps in federal funding. Emory, a first lieutenant of the United States Army, had previously traveled the borderlands charting a route through California as chief engineer during the Mexican-American War. Salazar was comparably inexperienced, initially joining the Mexican commission in his mid-twenties as survey engineer with a background in mineralogy. Both men published primary federal reports for their respective countries (Fig. 3-6).¹² They were robust documents, several hundred pages in length, and served as the culmination of efforts for each commission. Comprised of personal narratives, descriptions of territory, maps, sketches, and extensive data sets, the reports offer distinct national views of the same region.

In addition to designating the boundary line national commissions were responsible for gathering a range of information including agricultural and mineral resources. An accumulation of regional knowledge aimed to motivate the population of western territories. At this moment in the mid-nineteenth century conceptions of the emerging nation state were tied to national settlement. The extent of federal territory stretched as far as a population that associated with the central governing body. Politics of national growth were particularly fragile after the Mexican-

at the scales of 1:60,000 and 1:30,000 documenting the boundary line and surrounding region. Each national set was reviewed and signed by commissioners Emory and Salazar. Due to a delay in production and size “too voluminous to admit for publication” they were not included with the original boundary report. Today, the Mexican map series can be found at the Mapoteca Manuel Orozco y Berra in Mexico City. See: [Comisión de Límites Mexicana]. “Línea divisoria entre México y los Estados Unidos” [ms. sMaps]. 54 sheets. 1:60,000 (maps “No.1-“No.45”) and 1:30,000 (maps “No. 46-“No. 54), 1857; The United States map series can be found at the National Archives, Washington, D.C. See: Records Group 76, Entry 417. Map Records, n.d. [U.S. Boundary Commission]. “Boundary Between the United States and Mexico” [ms. Maps]. 54 sheets. 1:60,000 (maps “No.1-“No.45”) and 1:30,000 (maps “No. 46-“No. 54), 1857.

¹² See: José Salazar Ylarregui, *Datos de los trabajos astronómicos y topográficos, dispuestos en forma de diario, practicados durante el año de 1849 y principios de 1850 por la Comisión de Límites Mexicana en la línea que divide esta República de la de los Estados-Unidos* (Mexico City: Imprenta de Juan R. Navarro, 1850). In addition to separate national reports, the “Journal of the Joint Boundary Commission,” holds a series of ten entries from December 1854 to August 1855 signed by both commissioners Emory and Salazar.

American War when massive transitions in sovereign territory subsequently involved the shift and altered conception of its inhabitants. The Treaty of 1848 specified that Mexican citizens living on land newly acquired by the United States would automatically become United States citizens unless opposed; a formal declaration to retain Mexican citizenship to be submitted within one year.¹³ Between the annexation of Texas in 1845 and the Treaty of 1848 the population of the United States increased by an approximate 75,000 individuals previously citizens of Mexico.¹⁴ To settle on a particular side of the international line was an ideological choice. Urbanism in the borderlands region was considered a form of nationalism.

Despite a proclivity of doubles along national lines—including survey parties, data sets, reports, maps, and the promotion of future settlements—the constitution of the United States-Mexico border as a single entity depended on the determination of unified points, the exact position at which border monuments would be placed. Geographic reality on the ground required the diplomatic mediation of national views.

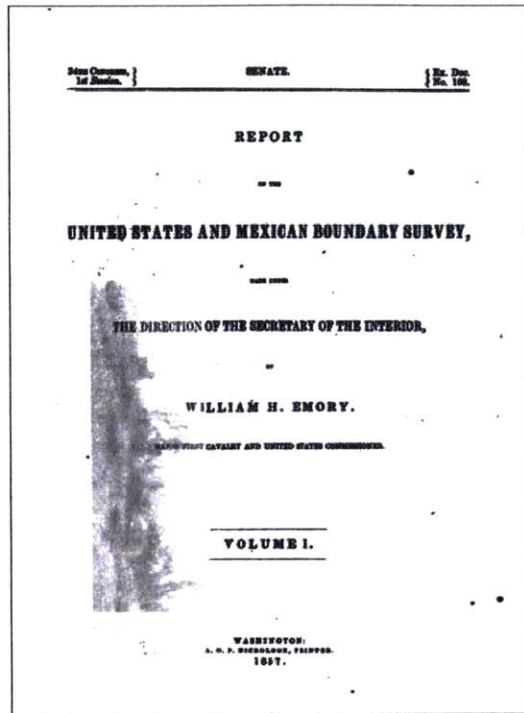
The Initial Point

The act of redefining territorial limits after the Mexican-American War had an exact place of origin: “[O]n the coast of the Pacific Ocean, distant one marine league south of the southernmost point of the port of San Diego.”¹⁵ This location, specified in the Treaty of 1848, was set as the first of a series of points collected to render the linear boundary. The *Punto Initial*, as it was called, on which Border Monument No. 1 would be placed and all future markers would sequentially reference. Though located on a distant shore, far from urban centers of the American northeast, the geographic importance of such a move for the United States was well understood. The point existed independent of a national destiny yet to be made manifest. It was already

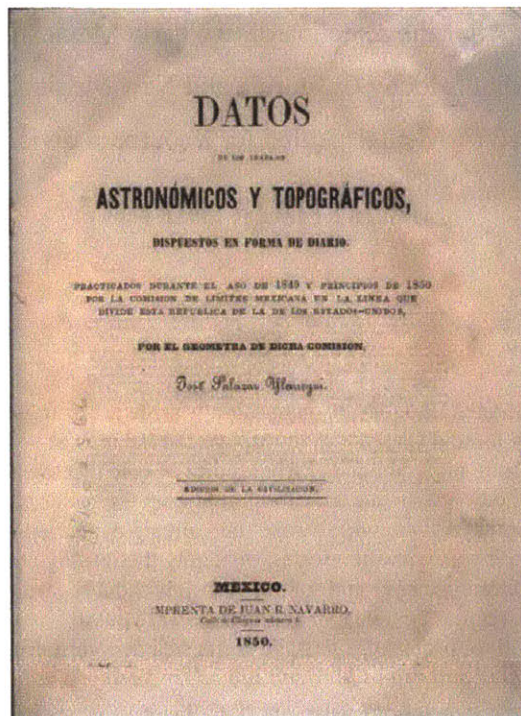
¹³ See: *Treaty of Peace, Friendship, Limits and Settlement with the Republic of Mexico*, Article VIII.

¹⁴ Richard L. Nostrand, “Mexican Americans Circa 1850,” *Annals of the Association of American Geographers*, v. 65, 1975, p 378-390.

¹⁵ *Treaty of Peace, Friendship, Limits and Settlement with the Republic of Mexico*, Article V.



Figures 3-4. Commissioner William H. Emory and the cover page of the 1857 United States Boundary Report.



Figures 5-6. Commissioner José Salazar Ylarregui and the cover page of the 1850 Mexican Boundary Report.

there, waiting at the western limit of expansion. In this sense it functioned as both origin and terminus, a place where one traveled to initiate the process of tracing backwards.

Emphasis on a “southern” position of the point, or location “south of the southernmost...” was equally relevant. The discovery of gold fields in California coincided with the dispatch of the first United States Boundary Commission from Washington. As Emory would express, stuck in Panama with some 4,000 others awaiting eager transport to California, “Each person seemed to think that there was a limited supply of gold, and that his hopes of getting any portion of it depended upon his early arrival in the field.”¹⁶ The firm and immediate establishment of the initial point would signal the valuable port of San Diego—deemed “one of the best harbors on the coast from Callão to Puget’s Sound”—and emerging mineral deposits of California fell under new jurisdiction.¹⁷ Three years prior the United States had established a deep southern presence on the eastern coast with the annexation of Texas in 1845, leaving Mexico with little to negotiate but the latitude at which territory would be divided at the Pacific. After the rejection of two early Mexican proposals that aimed to retain much of what is today California and New Mexico, the first at latitude 36° 30” and the second at 37°, Mexico settled for a southern division at the 33rd parallel—a point that would retain a vital land connection to Baja

¹⁶ One of the first obstacles faced by the United States Boundary Commission was the act of traveling to a newly claimed Pacific coast. Passage by ship around Cape Horn or through the Isthmus of Panama, preferred routes of travel at the time, was in high demand. Early reports of gold discoveries, including those of carpenter James Marshall, gained widespread attention throughout the Americas. In a personal account Emory elaborates: “This report set all ‘the wide awake’ and unemployed men in the country in motion towards the new Eldorado, and it was with the greatest difficulty that passage to Charges could be procured in the meanest craft. Every steamer and sailing vessel, without regard to sea-going qualities, that could be drawn from the regular channels of commerce, were put in requisition, and it was with considerable trouble that I procured a passage in the steamer *Northerner*, which sailed from New York.” *Report on the United States and Mexican Boundary Survey*, p 2.

¹⁷ William H Emory, *Lieutenant Emory Reports: A Reprint of Lieutenant W.H. Emory’s Notes of a Military Reconnaissance*, introduction & notes by Ross Calvin (Albuquerque: University of New Mexico Press, 1951), 176.

California amidst calls from the north for its total acquisition.¹⁸ The land surrendered, approximately 1.2 million square miles, was over half of Mexico's territory.

While the Pacific coast served as a quantifiable means to assess the future of sovereign limits, a slide bar that structured a range of possible divisions, the interstitial lines that connected the western and eastern coasts were plotted largely on speculation. As Emory would later state, much of the land in questions had not been traveled by agents of the federal government, let alone accurately documented. Hypotheticals were elicited as fact by United States surveyors, held in suspense for a suitable transnational railway route deemed essential for the solidification of western ties.¹⁹ Emory's report was no exception: "[I]f the sea were to rise four thousand feet, a vessel could pass from the Gulf of California to the Gulf of Mexico, near the parallel of 32°," he asserted in an effort to conceptual link the coasts with a single path.²⁰ Such broad geographic claims would inform the boundary outlined in the Treaty of 1848 only to prove insufficient to support a southern railway route, necessitating the purchase of additional land five years later in 1853.²¹

The rhetoric of geographic facts—extolled through validated maps, statements, and coordinates—would ultimately undermine the geographic accuracy deemed critical to the Boundary Commission. Fighting against hypothetical speculation, surveyors were left to mediate a surplus of authoritative documents that often did not align. Directives envisioned for the exact and efficient plotting of the boundary instead resulted in lengthy paper trails of missteps, do-overs, and contradictions. Even the Initial Point, so strategically placed, was not immune to complication. Its prescribed location, one marine league south of the southernmost point of the port of San Diego, made specific reference to an outdated cartographic

¹⁸ See: Frederick Merk, *Manifest Destiny and Mission in American History: A Reinterpretation*, (New York: Alfred A Knopf, 1963).

¹⁹ A southern route was assumed to be most feasible, where travel would not be compromised by heavy snowfall. It was in the autumn and winter of 1846 that the Donner Party, made famous by their narrative of cannibalistic survival, became snowbound in the Sierra Nevadas en route to California.

²⁰ *Report on the United States and Mexican Boundary Survey*, p 50.

²¹ The government of Mexico was paid ten million dollars for the land acquired. See: *Gadsden Purchase Treaty* (also, Treaty of La Mesilla), December 30, 1853, Article III.

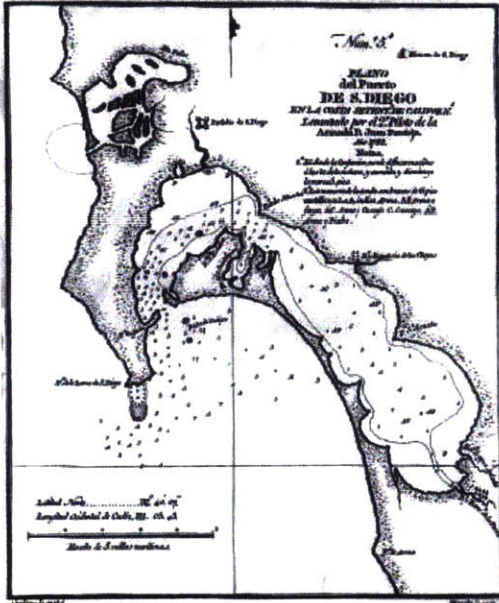


Figure 7. "Plan del Puerto de S. Diego en la costa Setent. de Californ." Armada D. Juan Pantoja, 1782.

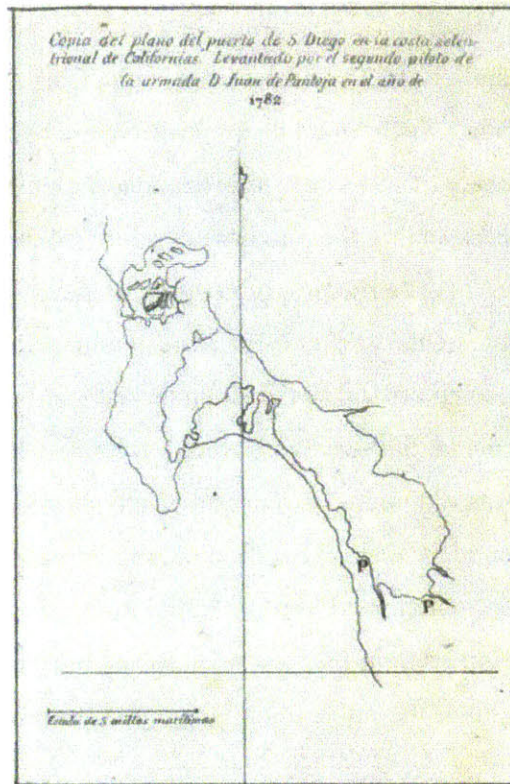


Figure 9. "Copia del plano del puerto de S. Diego...D Juan de Pantoja en el año de 1782" Plan of the port of San Diego, Mexican commission, 1850.

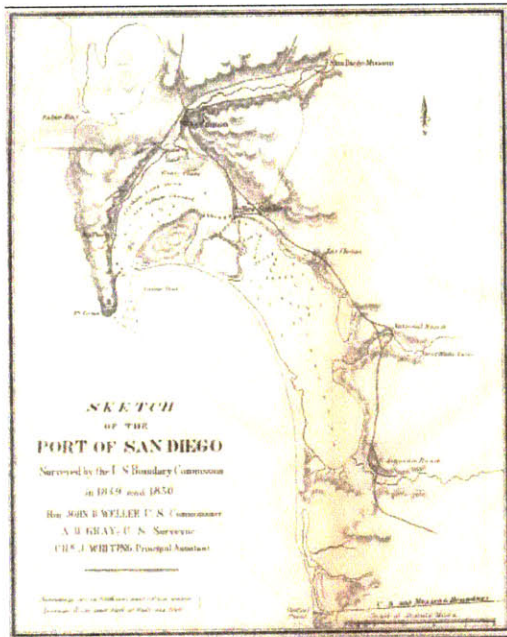


Figure 8. "Sketch of the Port of San Diego" Surveyed by the U.S. Boundary Commission, 1849-50.

source: The 1782 coastal map of Don Juan Pantoja, second sailing-master of the Spanish fleet (Fig. 7).²² When survey teams from Mexico and the United States convened in San Diego the landscape depicted in Pantoja's map had undergone sixty-seven years of evolution. But a single "range of bluffs" could be identified in correspondence with the document, and subsequently served as the primary reference for "hard" measurements.

Further, the exact distance of one marine league, a unit traditionally based on walking distance, was regionally defined. Without an international standard for unit length surveyors were tasked with agreeing upon the proper distance. By referencing an 1838 publication by the French mathematician Louis-Benjamin Francœur, the purity of "one marine league" was translated on the ground to a corrupted length of 5,564.6 meters.²³ This distance was plotted individually by national survey teams and separate maps produced. Structured to check and balance claims of the other, the working process of doubling documents required a final mediation amidst foreseeable discrepancies.²⁴ The port maps of San Diego produced by Mexico and the United States can be identified as the same geographic form but diverge at the level of detail—the size of the lower bay, form of the northern peninsula, and southernmost location of the port (Fig. 8-10). The final geographic placement of the Initial Point was thus a result far from the pure execution of federal directives and instead saturated by subjective views and individual negotiations on site. The location was a theoretical construct; mediated by an outdated historic source, separate national maps, and abstract unit of measure.

As can be expected, the ceremony and publicized dedication of the Initial Point would not betray the myth of the absolute. Surveyors were presented as the

²² *Treaty of Peace, Friendship, Limits and Settlement with the Republic of Mexico*, Article V.

²³ The work of Louis-Benjamin Francœur was one of several references utilized by surveyors on site. For further information see: Paula Rebert, *La Gran Línea: Mapping the United States-Mexico Boundary, 1849-1857*, (University of Texas Press, Austin, 2001), p 63.

²⁴ For a complete account of negotiations at the initial point, and a well-researched narrative of California's international boundary during the first phase of the commission, see: Charles W. Hughes, "'La Mojonera' and the Marking of California's U.S.-Mexico Boundary Line, 1849-1851" *Journal of San Diego History*. Summer 2007, Vol. 53 Issue 3, p126-147.



proxy of a higher power. A sealed glass bottle containing their joint signatures was placed at a depth three feet below the future foundation of Border Monument No. 1. The included statement, in both English and Spanish, read: “[T]he demarcation of boundary between the United States and Mexican Republic shall commence at this point, all in conformity with the 5th Article of the Treaty signed at the City of Guadalupe Hidalgo on the 2nd of February 1848.”²⁵ The form, material and inscription of the border monument held the idealistic aspirations of the commission. Standing between fifteen and twenty feet tall, composed of over eight-tons of solid Italian marble, the obelisk monument was ornately carved and capped with an oblong acorn.²⁶ The seed, a symbol of strength and rebirth, marked the precise location of the initial point and was visible “from a great distance on land as well as by vessels at sea.”²⁷ Along with the necessary inscription of founding dates, commissioners, and cardinal directions the precious materiality of the monument, of foreign origin and craftsmanship, claimed site-specific authority.²⁸ It was the first material marker to

²⁵ *Report on the United States and Mexican Boundary Survey*, p 58-9.

²⁶ The exact height of Border Monument No. 1 received conflicting reports at the time of its construction, cited twenty feet high in the memoirs of Bartlett and slightly shorter in newspapers coverage. One descriptive account from the *Los Angeles Herald* includes, “It was a fine shaft about 15 feet high, with base and sub-base, and was elaborately inscribed in English and Spanish, the legends setting forth the object of the monument; its latitude and longitude as then found; the names of the commissioners and the authoritative treaties, and a carved arrow showed the direction of the line. The monument was constructed in New York, carried around the Horn to San Diego by the ship *Helena* and arrived in the early spring of 1851.” “The Mexican Boundary Line: The Arduous Task of the Crops of Surveyors: A Monument Which is Bolted to a Mountain: The Commission is Now Ready to Begin the preparation of a Complete New Map,” *Los Angeles Herald*: Friday morning, November 30, 1894.

²⁷ John Russell Bartlett. *Personal Narrative of Exploration and Incidents in Texas, New Mexico, California, Sonora, and Chihuahua*. New York: A. Appleton and Company, 1854, p 105.

²⁸ The dimensions and inscriptions of Border Monument No. 1, as documented in the 1898 border report, are as follows: “Pedestal, including base, dado, and surbase, 5 feet 6 inches high; the dado 3 feet 2¼ inches square. The shaft was a pyramid stone 10 feet 6 inches high; terminating in an acorn shaped ornament top. On the dado were inscriptions as follows: North side: ‘Direction of the line,’ with carved arrow above, “United States of America” on a raised shield, a laurel wreath below. On south side similar decorations, with inscription in Spanish, “Direction de la Linea,’ ‘Republica Mexicana.’ On east side: ‘North latitude 32°31’59.58,” longitude 7h 48m 21.1s west of Greenwich, as determined by Maj. Wm. H. Emory on the part of the United States and José Salazar Ylarregui on the part of Mexico.’ On the west side [with Spanish translation]: Initial point of boundary between the United States and Mexico, established by the Joint Commission 10th October, A.D. 1849 agreeably to the treaty dated at the City of Guadalupe Hidalgo February 2, A.D. 1848. John B. Weller, U.S. Commissioner. Andre B. Gray, U.S. Surveyor.” International Boundary Commission, *Report of the*

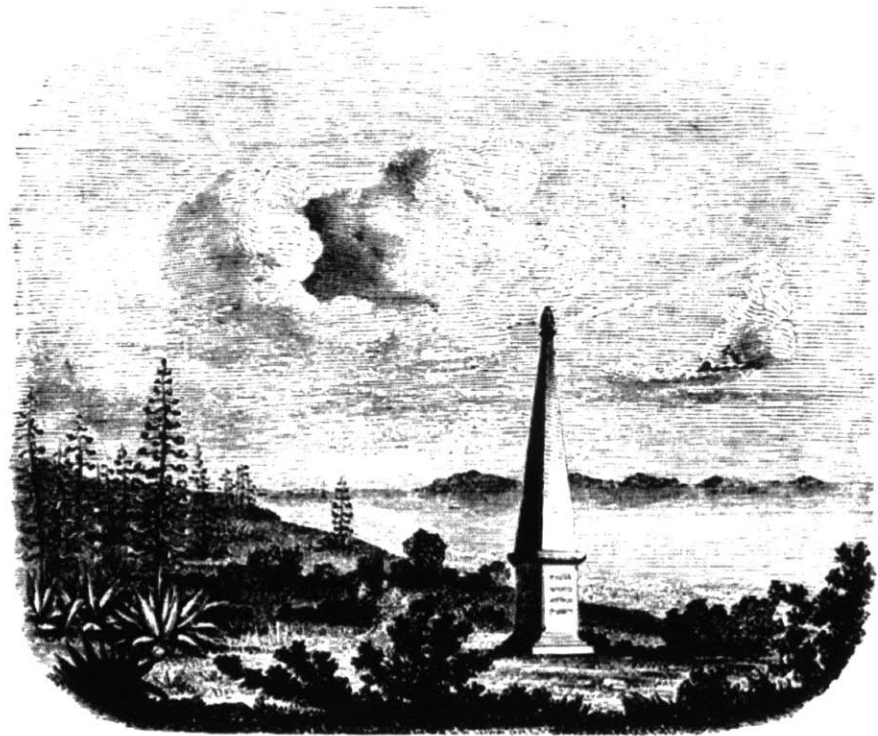


Figure 11. "Monument at Initial Point, Pacific,"
John Russell Bartlett, 1852.

provide evidence of the boundary, and its placement immediately garnered referential status over federal representations of the region, too often mired in historic, technical, or subjective imprecisions. The monument was a fiction of federal accuracy presented as fact, serving as both finite geographic marker and idealized symbol of Mexican-American politics.

One of the few surviving representation of Border Monument No. 1 contemporary to the moment of its erection is found in the memoirs of John Russell Bartlett, a United States Boundary Commissioner from 1850 to 1853.²⁹ A single wood-cut depicts the obelisk from a northern perspective, looking southwest over fields of Mexican agave and onto the Pacific Ocean (Fig. 11). The Coronado Islands are visible in the distance. The image, a distinct view from the United States, undermines the bilateral symbolism of the monument. The foregrounded figure is not framed as the limit of sovereign land, but instead as the next point of departure from which to launch a campaign of national expansion. The view resonates with sentiments expressed by the *Illustrated London News* while reporting on the founding ceremonies at the Initial Point. Commenting on the tone and members involved in such events a January 1850 article observed, “the countenances of the Mexican Commissioners exhibited a remarkable degree of gravity: they did not forget that they were affixing the last seal to the treaty for the dismemberment of their Republic.”³⁰

Striking with Intention: Accuracy and observation

The straightedge delimitation of Upper from Lower California, originally predicated in the Treaty of 1848 to minimize the difficulty of tracing the boundary, unwittingly cut across a range of inaccessible landscapes. The survey from the Pacific coast to the

Boundary Commission upon the survey and re-marking of the boundary between the United States and Mexico west of the Rio Grande, 1891-1896. 3 vols. Washington: Government Printing Office, 1898, p 173.

²⁹ Bartlett, p 105.

³⁰ “California,” *Illustrated London News*, issue 407 (London, England), Saturday, January 05, 1850, p 4-5.

junction of the Gila and Colorado Rivers would be the first in a series of navigational challenges presented to the boundary commissions, and exemplified a key problem with the abstract division of uncharted territory. Had the region been previously documented a natural boundary marker would have likely been specified fitting with historic precedent. Instead, speculation based on cartographic clarity yielded to a far more complicated geographic reality on site. The peculiarities of this journey, estimated in the report at 148 miles in length, was described by Emory in two equal parts:

The first, rising in steppes from the sea, devoid of water, and covered with spinous vegetation, attains in abrupt ascents the height of five or six thousand feet above the sea in the short distance of thirty miles. From this point, for about thirty miles more, the country is occupied by a succession of parallel ridges, striking the boundary nearly at right-angles, and separated by deep and sometimes impassable chasms. It then falls abruptly to near the level of the sea. The remainder of the line stretches across the desert of shifting sand at the head of the Gulf of California, destitute for the most part of both water and vegetation, rendering it impossible to mark the boundary in the usual manner on the ground.³¹

Like depictions of rugged hills, impending heights and fearful depths are detailed in the boundary reports with heroic narratives of traversal and documentation (Fig. 12). Salazar relayed such terrain with national pride, proclaiming Mexico's territory "knows no rivals in its plains and valleys, in its unparalleled picturesque terrain, in the capricious groups of mountains of all shapes."³²

Due to extreme topography throughout the region, the primary method of survey was based on astronomical observation. Determining the line through points of triangulation was believed by the commission to be more accurate, but the high

³¹ Ibid., p 4.

³² José Salazar Ylarregui, *Datos de los trabajos astronómicos y topográficos*, p 11. Translation:

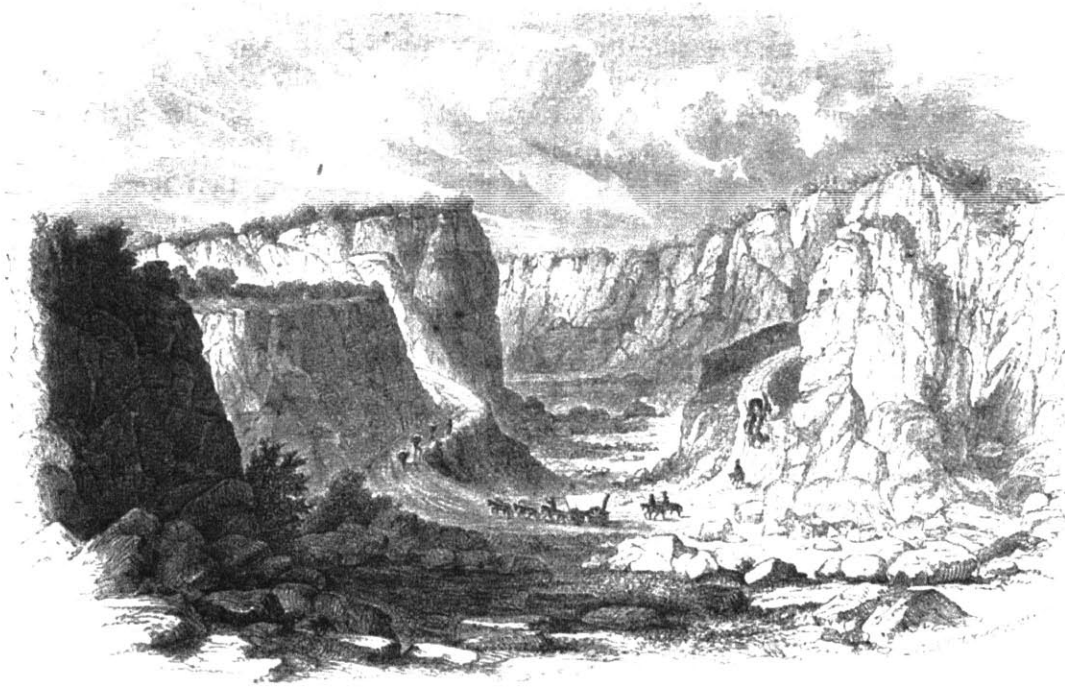


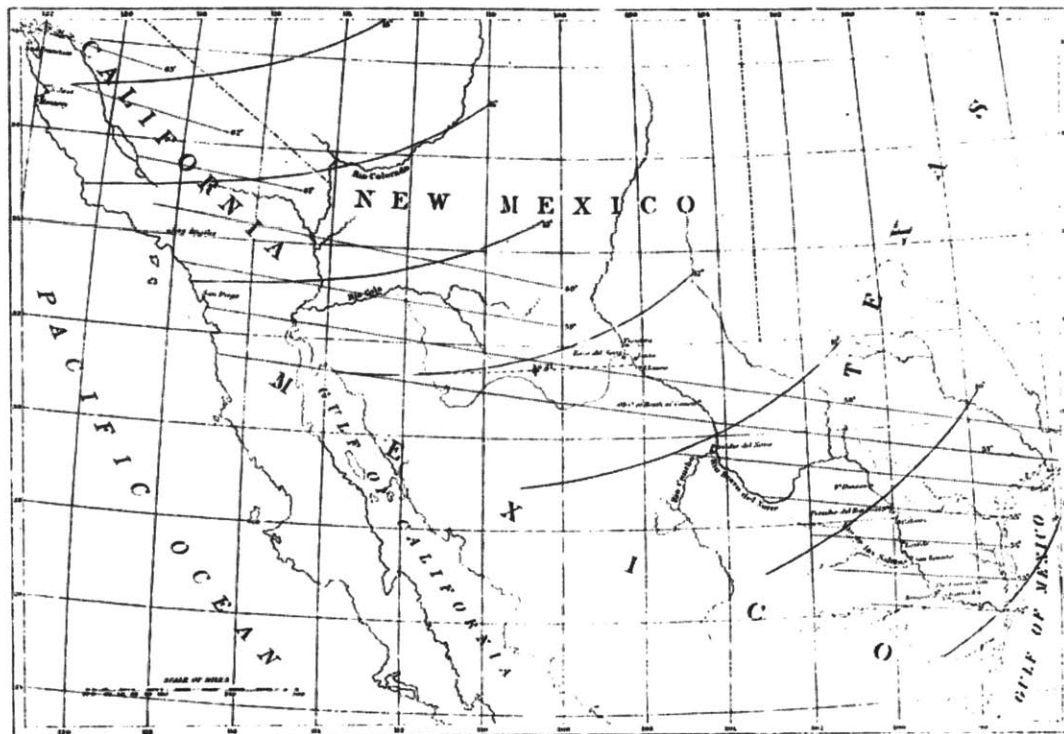
Figure 12. Arroyo Secate, two miles below Laredo.

expense and slow nature of such an operation, particularly over terrain “unfavorable to geodetic operations,” was deemed impractical. Latitude was thus measured by the difference in zenith stars and longitude by moon culminations. The immense scale at which the process operated—the literal positioning of points on earth from the tracking of celestial bodies—was susceptible to an alarming degree of error. A misreading of only a few seconds would “produce a great departure of the line from the point it was intended to strike.”³³ In addition, the instruments carried for such observations were delicate and prone to malfunction. In an inventory listing that singlehandedly undermined the entire Mexican survey Salazar stated: “The mercury was leaking out of the barometers; the telescopes were short-range, the sextants had flagrant defects, the rulers did not have any type of apparatus, and only two thermometers deserved to be called as such.”³⁴

Overcompensating for an anxiety of miscalculation the survey teams published exhaustive charts of coordinate points and astronomical measurements. The United States report contains 114 pages of charts and graphs, clarifying, in some cases, astronomical measurements up to eighty-four hundredths of one second. Regional maps produced were thus backed by aesthetics of data. A field of numbers supported each representation as geographic fact. The intersections of measured lines of “equal declination, dip, and horizontal force” are drawn in one survey map to conceptually corresponded with the exact placement of border monuments on the boundary line (Fig. 13). Astronomical pathways were represented as pure geometry over the border’s length. The reality that such idealized intersections did not correspond with actual geographic points on the ground was of little importance; they existed in a hypothetical realm accepted by both nations. In support of this reading, one only has to look at the diverse data sets compiled by the United States and Mexico for the same set of coordinates. A boundary report entry dated January 10, 1855 details that upon arriving at different observations for the location of a point on

³³ *Report on the United States and Mexican Boundary Survey*, p 5.

³⁴ José Salazar Ylarregui, *Datos de los trabajos astronómicos y topográficos*, p 16. Translation:



——— Lines of equal declination
 - - - - Lines of equal dip
 ····· Lines of equal horizontal force

United States & Mexican Boundary Survey.

Samuel B. Hearne

Figure 13. Map of astronomical observations, charting measured lines of equal declination, dip, and horizontal force.

the parallel of 31°47' on the Rio Grande, it was “mutually agreed to take the mean between the two results.”³⁵ Discrepancies between parties were not attributed to human or instrumental error but accepted as valid national views. The accuracy Emory and Salazar crafted, and thus the nature of the boundary line itself, was based on binational mediation in the field.

Line and view

In total, fifty-two obelisk border monuments of varied size and composition were placed during the first round of the Boundary Commission: One of precious marble at the Initial Point; five of cast iron to delineate the boundary between upper and lower California (with one, positioned at the Gila River, specified to be a third larger in proportion than the others); forty-three of dressed stone at points of inhabitation; and three, formally transitioning from slender to squat, to mark where the line met the Rio Grande River. None of these monuments, however, would find visual representation in national reports. Without a transnational railroad yet established the transportation of monuments was lengthy and arrival times unpredictable. The six monuments in California, for example, were constructed in New York and shipped around the southern tip of Cape Horn to the port of San Diego, to only then travel by mule and covered wagon to their respective destinations.³⁶

Emory, conscious of his own four-month delay while traveling to the western coast, was wary of the undefined lag time between surveyed boundary point and

³⁵ The “Journal of the Joint Commission” is featured in its entirety within the *Report on the United States and Mexican Boundary Survey*, p 26-38.

³⁶ The monuments bound for California were designed and constructed by Messrs. E. & G. W. Blunt of New York City. The cost of the marble monument for the Initial Point and cast iron monuments leading to the Gila River were price fixed at \$2,000 and \$200 respectively. Messrs. E. & G. W. Blunt also provided the Boundary Commission with survey instruments and supplies including barometers, tripods, and collapsible tents. Edmund L. F. Hardcastle, “Letter to Major W.H. Emory.” Congressional Documents, v558, March 20, 1850, p 33-4; “An invoice of, and receipt for, instruments turned over by Messrs. E. & G. W. Blunt to Lieutenant Colonel J. D. Graham, in pursuance of an order from the Department of the Interior, dated January 2, 1851,” *Report of Lieutenant-Colonel Graham, United States Department of War*, 32d Congress, 1st Session, 1852, p 93-4.

sanctioned material expression. An interim means of marking was critical, “to secure the line beyond all cavil and for the convenience of property holders on either side,” he wrote to the Secretary of the Interior in 1849.³⁷ Therefore, the monuments documented by Emory were not those of urbane design, carefully directed by the central government but of his own production, “of a pyramidal shape, twelve feet at the base, and twelve feet high, composed of stones and earth.” Pyramids, not obelisks, would be the first formal means of constituting the United States-Mexico boundary, constructed from the very ground on which they stood. To facilitate the project of national expansion, monuments were constructed wherever available sources of water and stone would allow, particularly at sites on the boundary deemed fit for settlement.³⁸ Boundary markers both designated the joint division of territory and called for its inhabitation by nationals on either side.

Beyond Emory’s immediate concern of security and convenience, the placement and documentation of border monuments was a critical means of constituting international limits by structuring the subjective gaze of both the United States and Mexico. Not only did border monuments provide a material indication of limits as well as proof that man had been there, on the ground in the very place they claimed to have authority and expertise, their position provided a single bilateral viewpoint from which two nations could document a shared frontier. The apex of each, sited conceptually at the exact intersection of territory, served as a lens for both national parties.³⁹ Thirty-two lateral views, visually linking pyramid monuments from one to the next, were prepared to “perpetuate the evidences of the location of the boundary,” as well as to give “a very good idea of the topography of the country.”⁴⁰ Developed in time with the progression of the commission, drawn by American

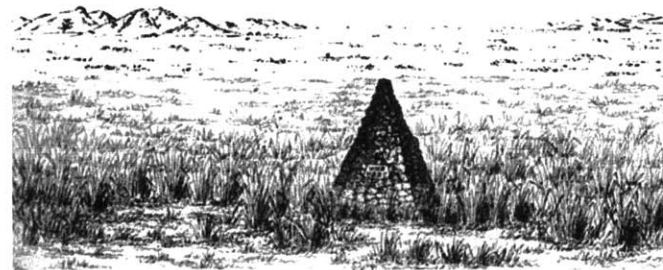
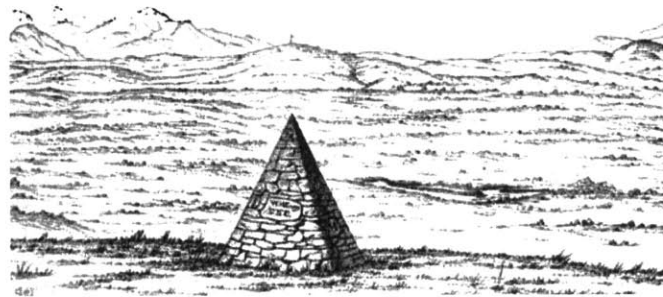
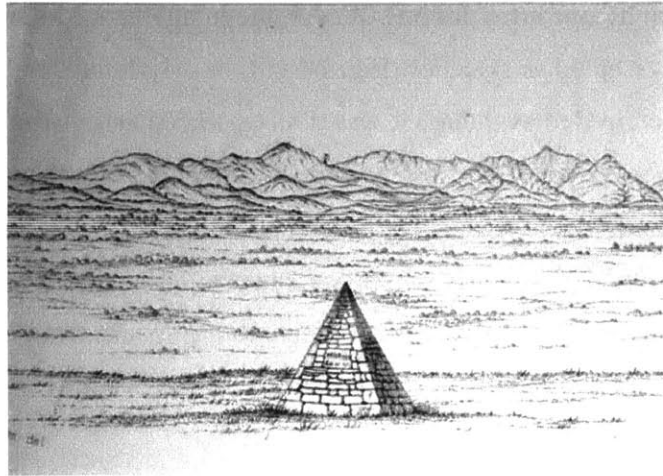
³⁷ *Report on the United States and Mexican Boundary Survey*, p 20. Emory would receive a response approving his independent approach nearly one year later with a letter from Washington dated April 10, 1850. Status of the official border monuments was addressed with the vague concluding lines: “The monuments are in course of preparation. And will be sent as soon as practicable.” *Ibid.*, p 9.

³⁸ *Ibid.*, p 32.

³⁹ On the developments of objectivity and viewpoint in the nineteenth century see: Cary, Jonathan. *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century* (MIT Press, 1990).

⁴⁰ *Report on the United States and Mexican Boundary Survey*, p 96.

Figures 14-16. Boundary sketches by American landscape artist John E. Weyss. Sketch No. 9, "represents a view of the line, on the meridian, from the monument marking the terminal point on parallel 31°47'"



landscape artist John E. Weyss, the images are composed of basic contours and presented as sketches (Fig. 14-16). In individual captions “the line” of the boundary is referred to as though it was directly traced and visible on the landscape. For example, *Sketch No. 9*, “represents a view of the line, on the meridian, from the monument marking the terminal point on parallel 31°47′. The flag marks the direction across the hills.”⁴¹ The views present expansive, mountainous landscapes noticeably void of human presence. The only element that speaks to an observer is the vantage point from which the sketches are drawn, at times acting as the single linear reference point when a border monument is absent.

The views are presented as objective fact, careful to omit representation of the boundary commissions and any of the unstable biases they may hold. However, a closer reading reveals the images to be hypothetical constructs; they support an identity of the border through fictional viewpoints that have no bearing on reality. While the major premise of the series is to connect monuments foreground to background, and thus reveal a straight international boundary line between the two, the condition of intervisibility between landmarks did not exist at this early moment of the border. Monuments were reportedly spaced a distance of ten miles or more apart over mountainous terrain.⁴² Flag posts on the horizon are rendered comically out of scale. Further, the early monuments were described as robust markers twelve-foot square at the base and twelve-feet high, a significant obstacle between any observer and their view of the horizon. The vantage point of each image is consistently elevated above the height of human perception on the ground, a hypothetical perspective of the line that existed only in abstract.

One may also compare sketches of the boundary prepared in the field with their final representation in federal maps and reports. There are several developments

⁴¹ *Ibid.*, p 98.

⁴² For example: “Monument XVII is placed on the “Sierra de Sonora,” seventeen miles from XVIII. Three days were occupied in traveling this short distance. The trail for the first two was over almost impassable mountains; massive rocs and steep precipices constantly impeded the progress of and turned the part out of its course, making the route circuitous as well as hazardous; rough ascents were surmounted, steep ravines followed down, and deep gullies passed; the mules had actually to be dragged along.” *Ibid.*, p 120.

between the initial “Sketch of the Initial Point of the boundary line on the Rio Bravo Del Norte looking W” and its reproduction of the same title on boundary commission map No. 29, drawn with pen and ink (Fig. 17-18). Light and shadow have been added to provide depth, and the contours of a distant mountain range along with the size and positions of plants in the foreground have undergone subtle adjustment. Such finishing details call into question Emory’s early conviction that truth and accurate representation must be rooted in the field. If the views served as evidence of a distant reality then the ephemeral elements of sunlight and organic life were equally important—and equally constructed—as they geographic coordinates of the commission’s border monuments and maps.

Once left unmonitored, border monuments fell subject to the agendas of individual agents operating outside the confines of the federal government. The vast, open wilderness depicted by Weyss in his documentation of the line was in fact inhabited by a diverse regional population yet to be understood. Survey members acting as a tail end means of inspection reported monuments shattered, mutilated or simply missing shortly after construction. Such findings were largely attributed to “formidable and hostile bands of Indians,” on which the report devoted considerable attention based on fantastic myth and gruesome rumor.⁴³ Framed by defamatory narratives, “savage tribes” were systematically accused of tampering with the material limits of federal jurisdiction, breaking “into a thousand pieces” the monuments so carefully positioned.

⁴³ Not only did the United States and Mexico define territory and national identity in relation to one another but also in direct opposition to a categorical other that did not fit either concept of nationhood. A report from United States Lieutenant N. Michler describes two tribes on the Colorado and Gila Rivers of California as follows: The Yumas and Cocopas are said to be very treacherous races; they conquer not by fair and honorable contest, but by craft and cunning, and midnight attack; they steal upon their enemies under the cover of night, and beat the brains of their unsuspecting foes with clubs; or, under the garb of friendship and peace, invite each other to feasts, and suddenly fall upon and kill their guests; or, taking advantage of the absence of the warriors from their villages, massacre the remaining men, old women, and small children, and carry off as prisoners other more youthful women and larger children. N. Michler, “From the 111th Meridian of Longitude to the Pacific Ocean,” *Report on the United States and Mexican Boundary Survey*, p 107-8.

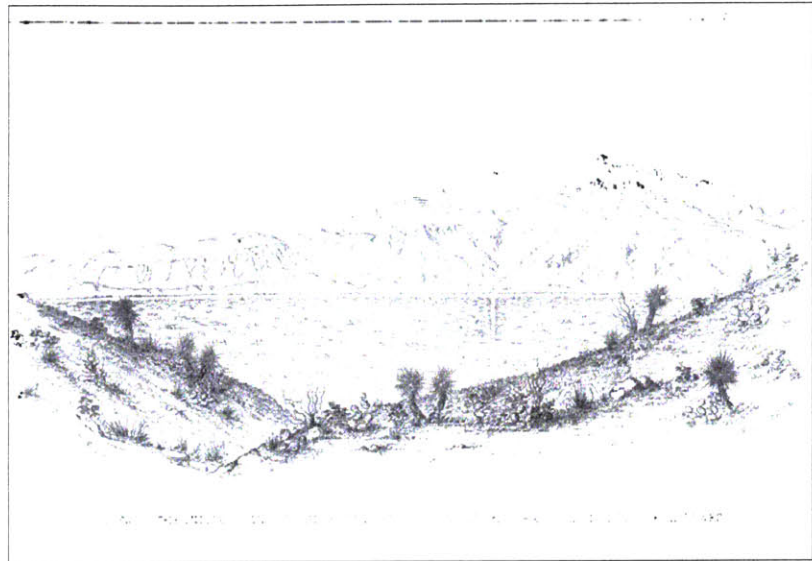
A broader scope of agitation, however, was later uncovered by local newspaper reports. An article in the *Atlanta Constitution* on the “indistinct” nature of the United States-Mexico boundary stated, “Cattle raisers, land hunters and minors of both nations, it appears, have not hesitated wherever it advanced their own personal interests to move a boundary monument bodily to a different locality, perhaps a mile or two south.”⁴⁴ The monuments, foreign artifacts of control with binational reach, were recognized as such by local agents and harnessed for regional gain, operating simultaneously at the scale of the individual and that of both nation states. Those belonging to a normative conception of national identity, as revealed, also tampered with the fate of the border.⁴⁵ A condition framed as a problem of geographic precision was, more accurately, a problem of national identity and government control.⁴⁶

When the boundary report was published in 1857 it included a disclosure: The exact fate and location of several border monuments was unknown to the commission, and news of their displacement was documented in both Mexico City and Washington. The artifacts once believed to be the objective limits of national sovereignty could no longer be relied upon for absolute truth. “Therefore,” Emory declared, “be it *Resolved*, and agreed upon in the joint commission, that these maps

⁴⁴ “The Boundary Stones: The Line Between Mexico and the United States Indistinct,” *The Atlanta Constitution*, Apr 25, 1888, p 2.

⁴⁵ Michel Foucault, “The Subject and Power.” Michel Foucault: Beyond Structuralism and Hermeneutics, edited by H. Dreyfus and P. Rabinow, p208-226. 2nd ed. Chicago: The university of Chicago Press, 1983.

⁴⁶ The historiography of the United States-Mexico border largely stays true to the nationally constructed narratives of boundary reports and government documents, and in many cases continues to exploit the marginalized populations deemed responsible for complicating the ideals of federal accuracy and control. Paula Rebert’s widely cited *La Gran Línea*, focusing on the cartographic efforts of the boundary commission during the first round of survey, addresses the displacement of border monuments with a single sentence: “The original demarcation had been made with only a few, widely spaced monuments, many of which were destroyed in time.” The vague connection between destruction and time treats the disfiguration of the boundary as though it was a natural process of erosion, void of social and political implications rather than the deliberate act of individuals pushing the material boundaries of national sovereignty. The work of historian Rachel St John, and the recently published *Line in the Sand*, acknowledges a political landscape at the border in flux, yet relies on pre-established categories of aggressors. See: Paula Rebert, *La Gran Línea: Mapping the United States-Mexico Boundary, 1849-1857*. Austin: University of Texas Press, 2001, p 14; and Rachel St. John, *Line in the Sand: A History of the Western US-Mexico Border*. Princeton: Princeton University Press, 2011, p 38.



Figures 17-18. "Sketch of the Initial Point of the boundary on the Rio Bravo Del Norte looking W," and its reproduction on official boundary commission map No. 29.

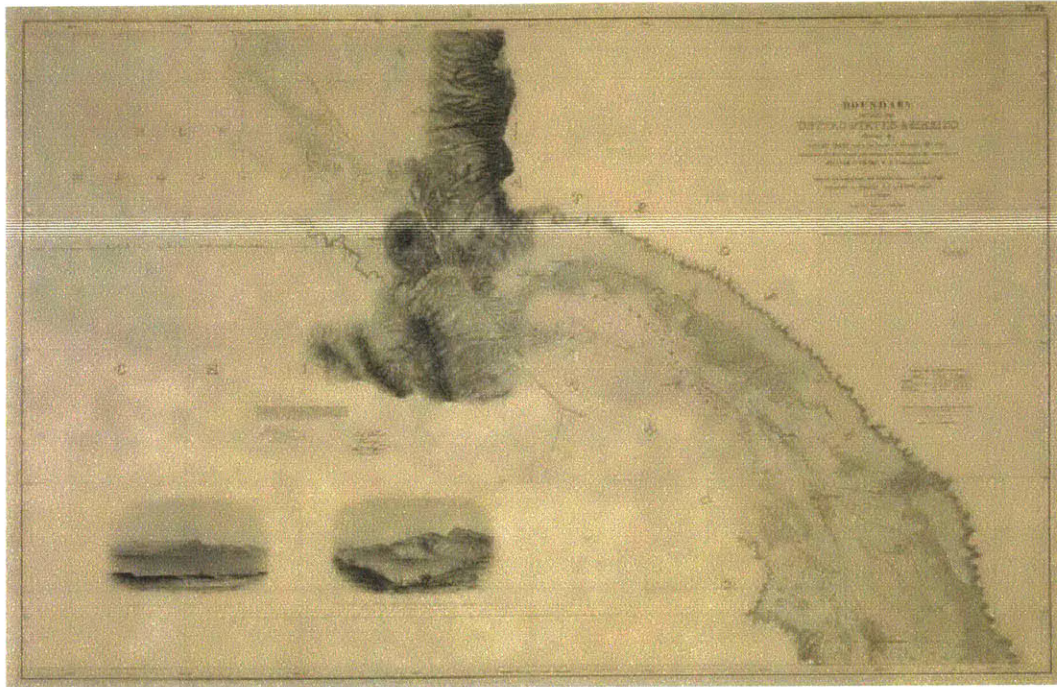


Figure 19. Official Boundary Commission map No. 29, 1857.

and views...shall be the evidence of the location of the true line, as to the location of that line, shall be referred.”⁴⁷ Monuments were striped of their responsibility and all authority was placed in the cartographic sources produced. The very form of geographic representation criticized for its proclivity to the subjective would once again be relied upon for the federal constitution of national limits.

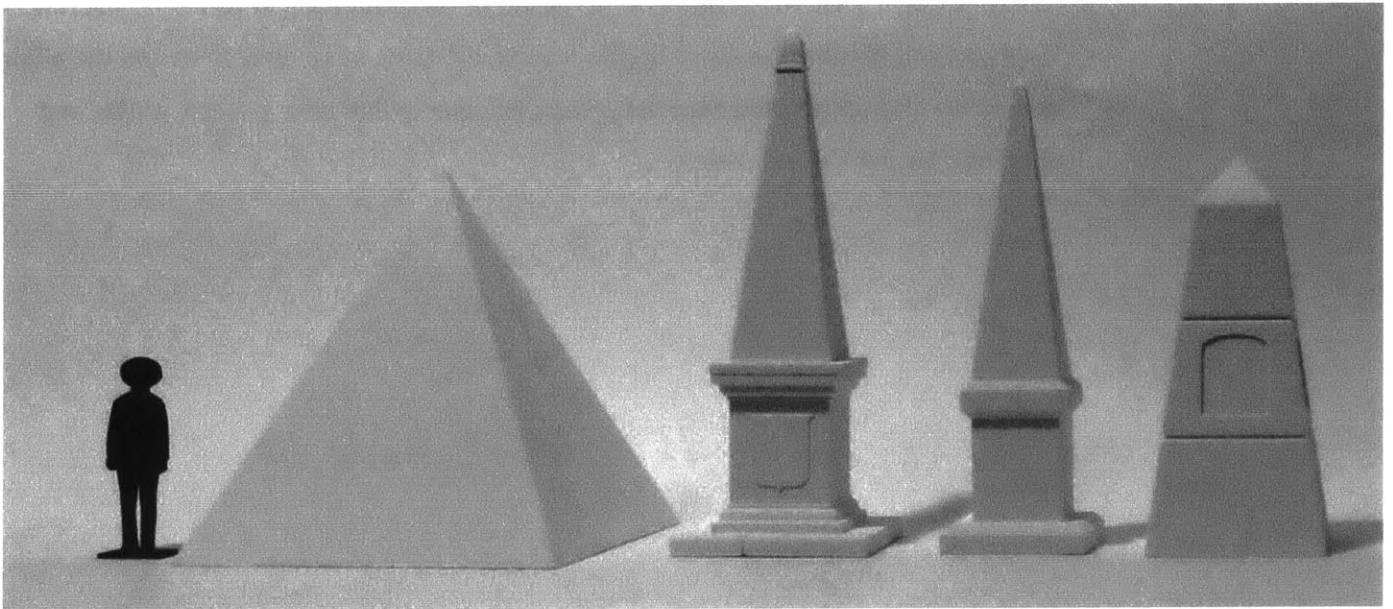
The United States-Mexico border had been successfully constructed but only as a set of fictional maps and views, available to and recognized by distant federal powers. Yet far from Washington and Mexico City the border monuments continued to operate as site-specific markers of sovereign territory, the only products of the boundary commission connected to geographic reality. They were material evidence of a parallel international seam, active symbols of power and authority in a region newly defined. Thus the border would remain in two hypothetical forms for the first forty years of existence—one a fragile federal construct of abstract lines and the other as a series of disconnected material points; landmarks that were pushed, pulled and dissolved by individuals actors.

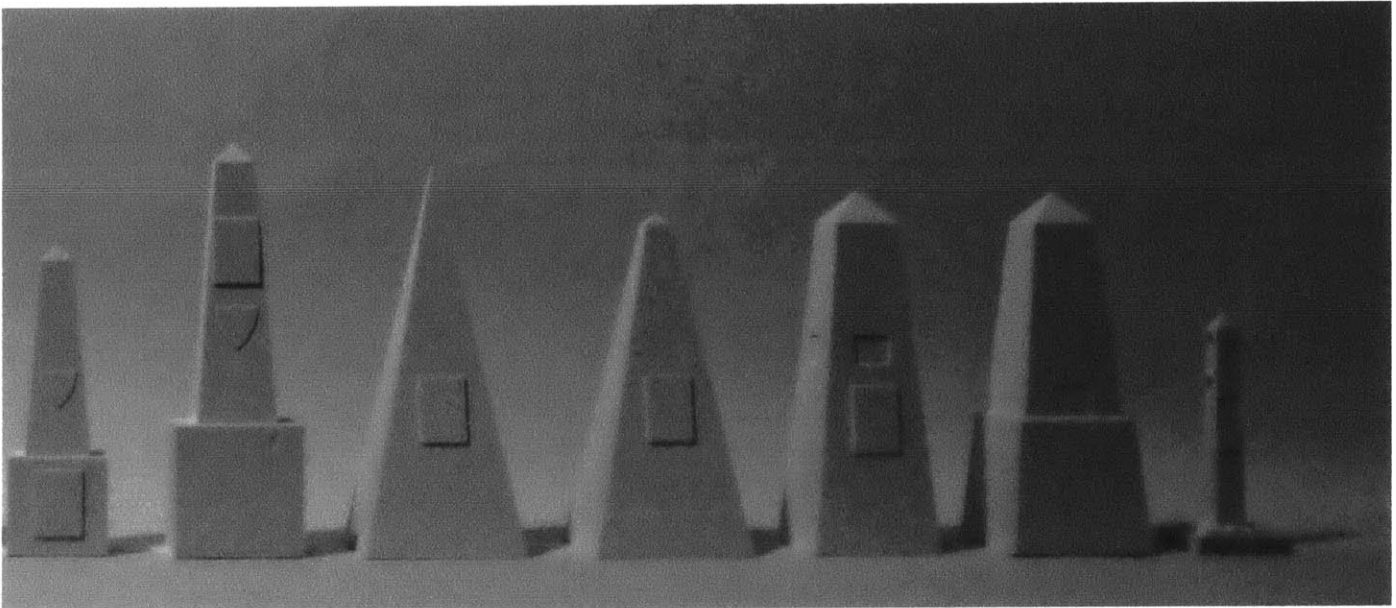
⁴⁷ *Report on the United States and Mexican Boundary Survey*, p 38.

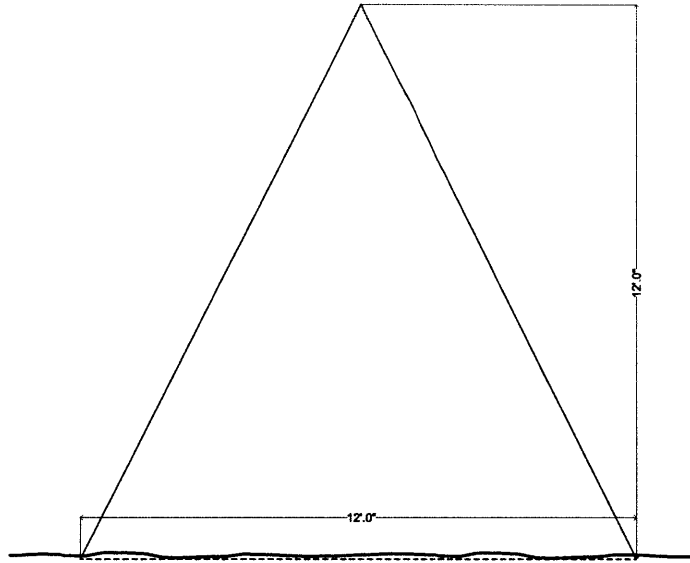
Monuments: Form

The first project presents a complete set of border monument typologies. Dimensions are based on a combination of archival construction drawings, photographs, and narrative descriptions. For some monuments, such as those originally constructed by the Mexican Boundary Commission, measured drawings do not exist in federal reports. The act of drawing and modeling in these cases became a primary means of representing and understanding the artifacts.

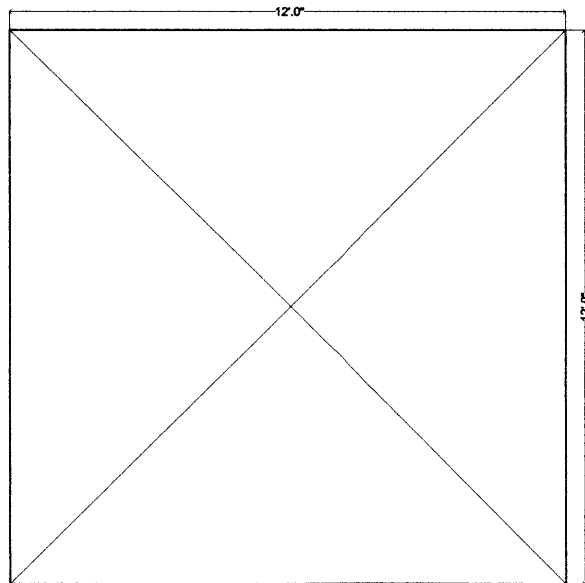
The monuments are organized chronologically to address an evolution of form and scale.

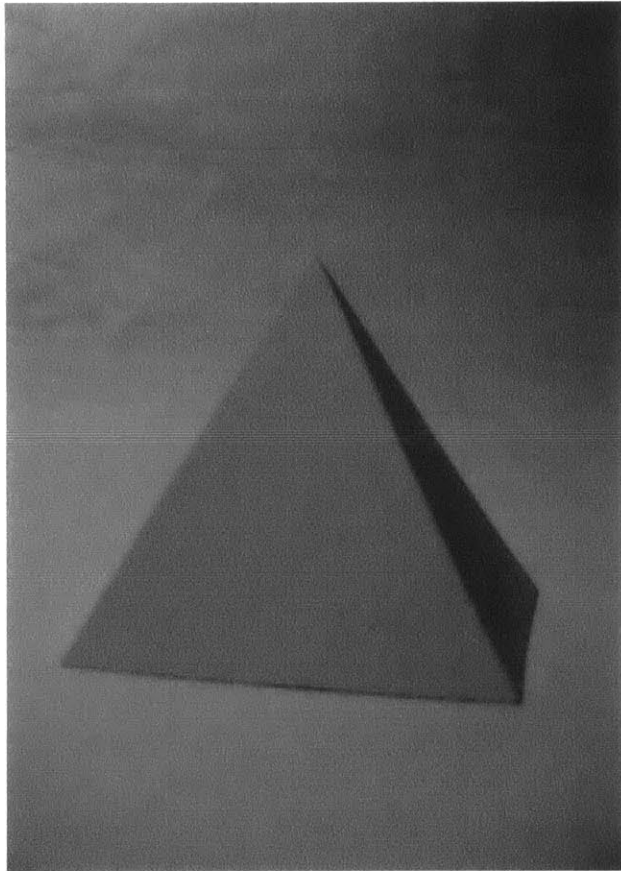


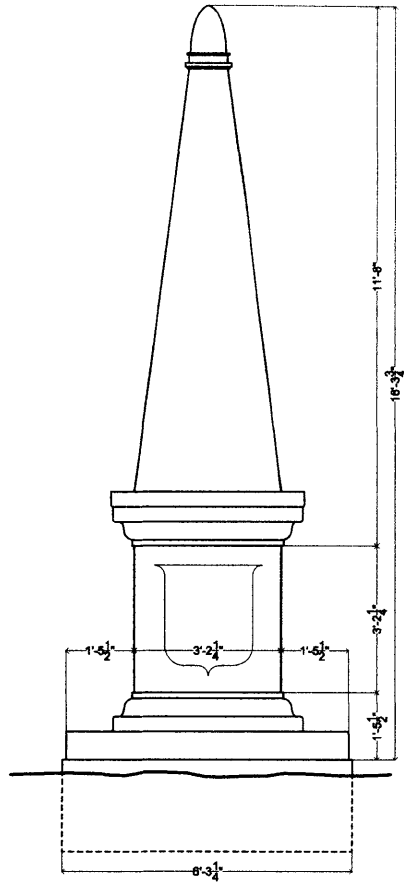




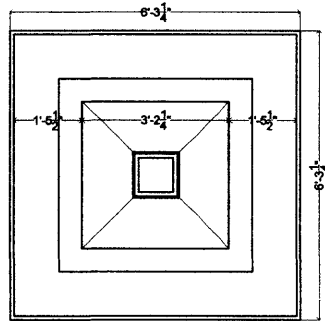
Temporary monuments of earth and local stone. 1849-1850

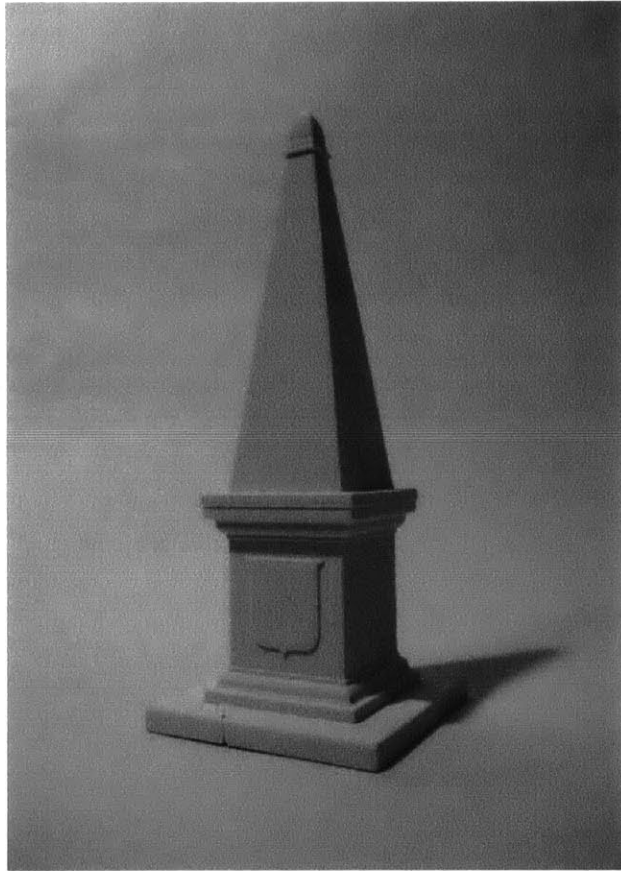


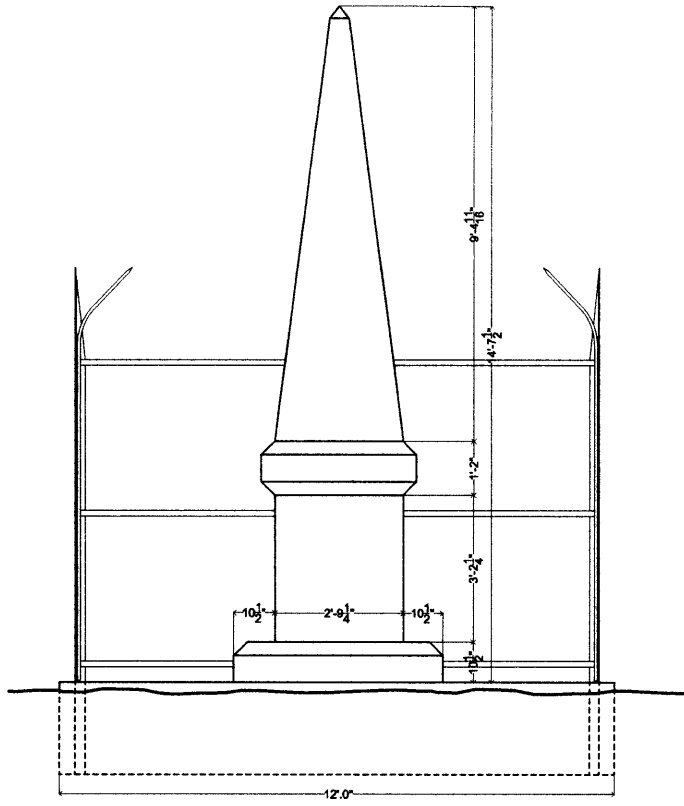




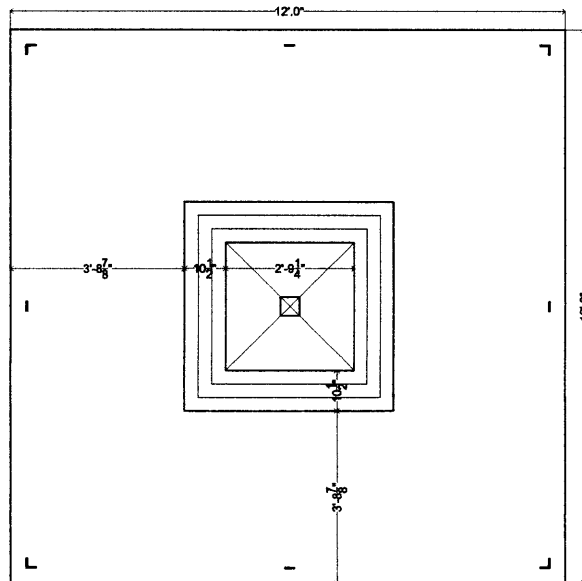
Old Monument
No.1 at the *Initial*
Point. Marble,
1851.



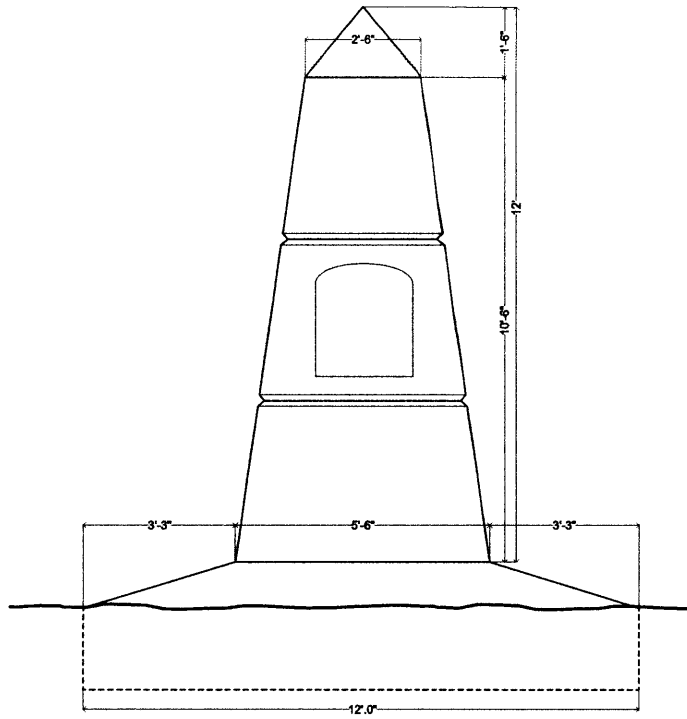




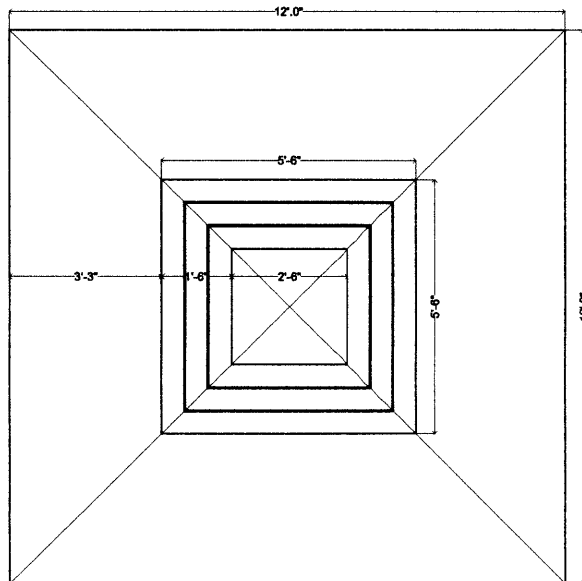
Monument
 No. 1, re-cut and
 enclosed by an
 iron picket fence.
 Marble, 1894.

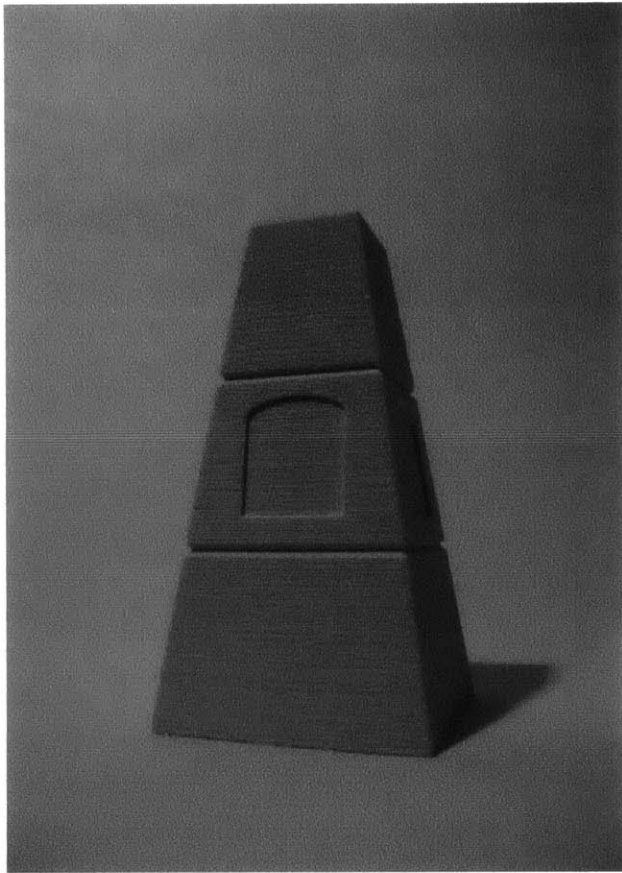


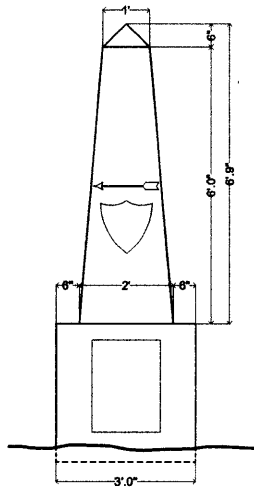




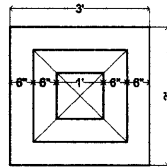
Old Monument
 No. 2 at the cross-
 ing of the Tijuana
 River. Granite,
 1851.

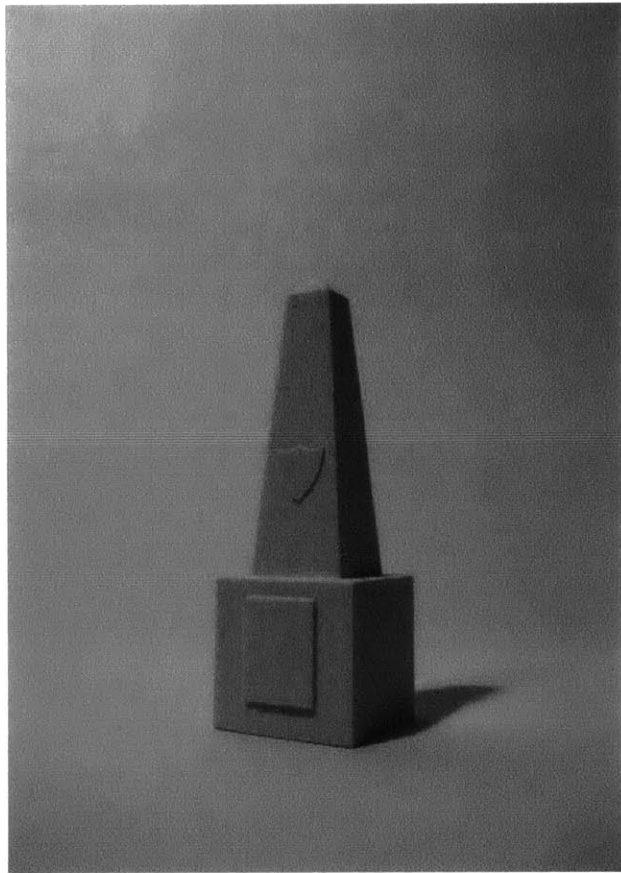


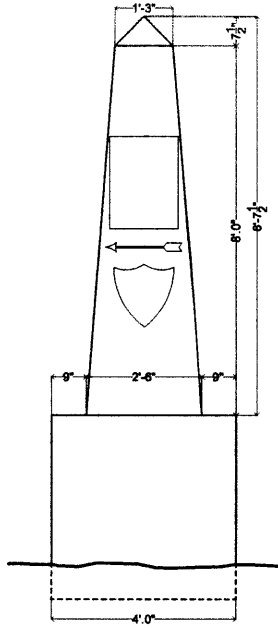




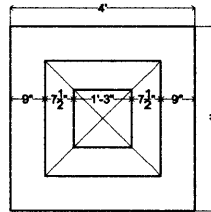
Iron plate monument,
marking the boundary
between Upper and
Lower California,
1851-1857.



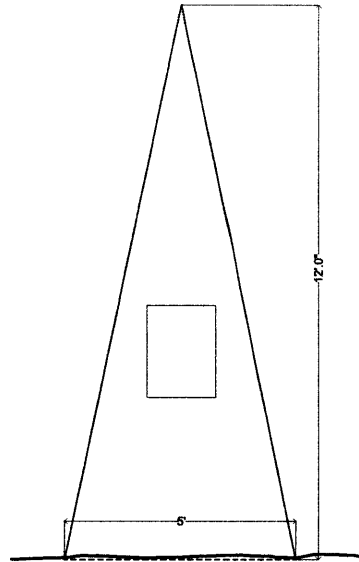




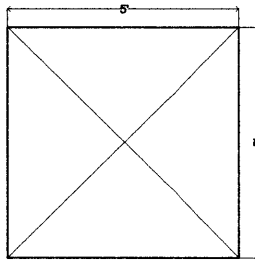
Iron plate monument,
 marking the junction of
 the Gila and Colorado
 Rivers, 1851-1857.

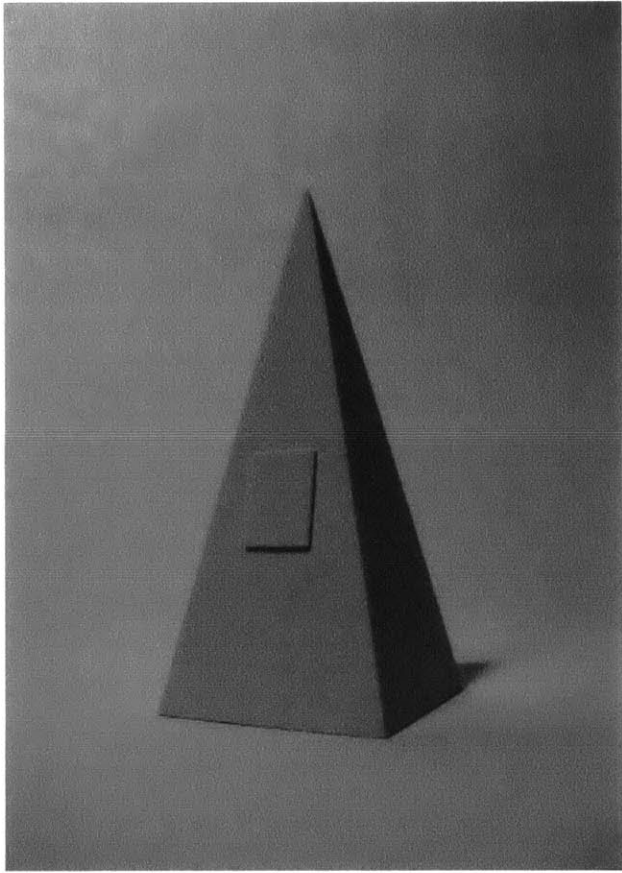


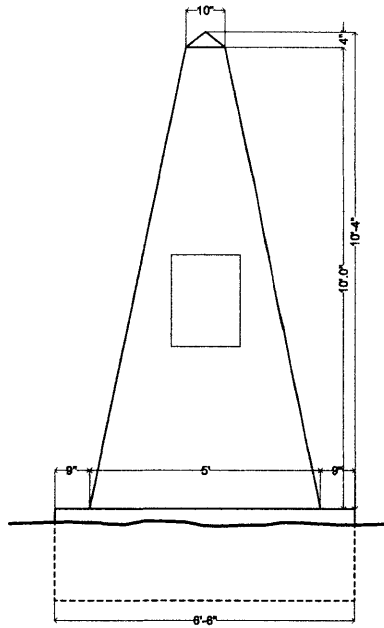




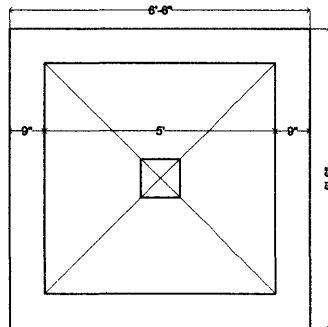
Local stone with
a finishing layer
of cement mortar,
1851-1857.

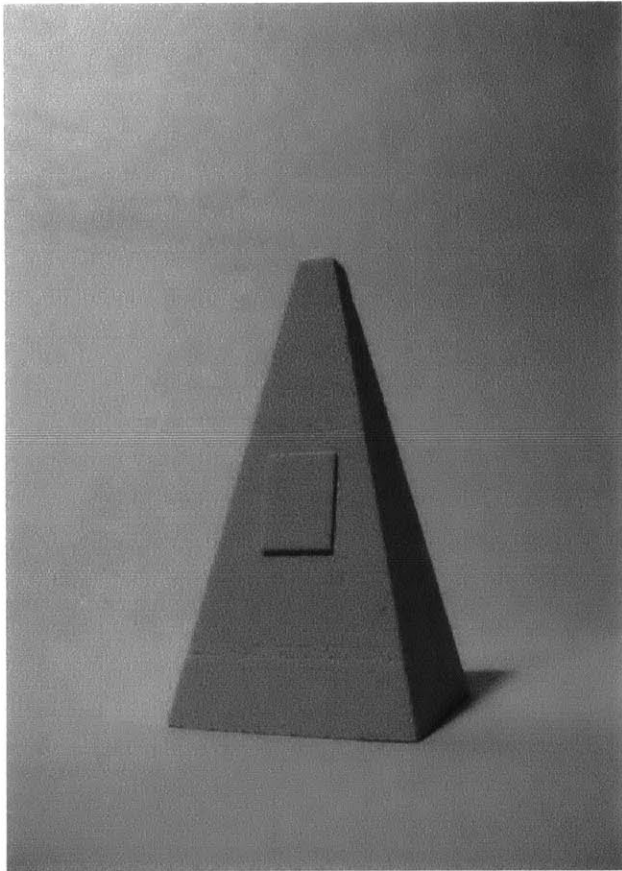


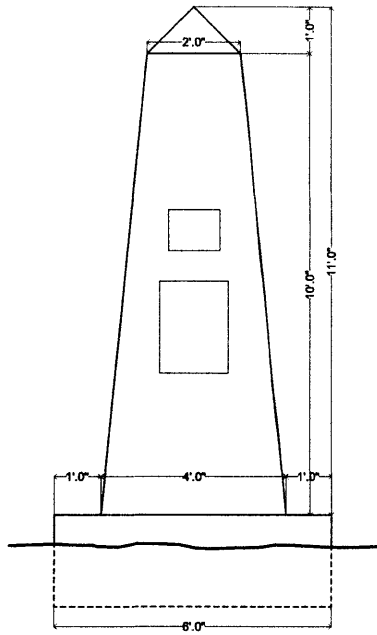




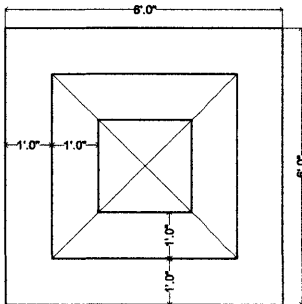
Local stone with
a finishing layer
of cement mortar,
1851-1857.

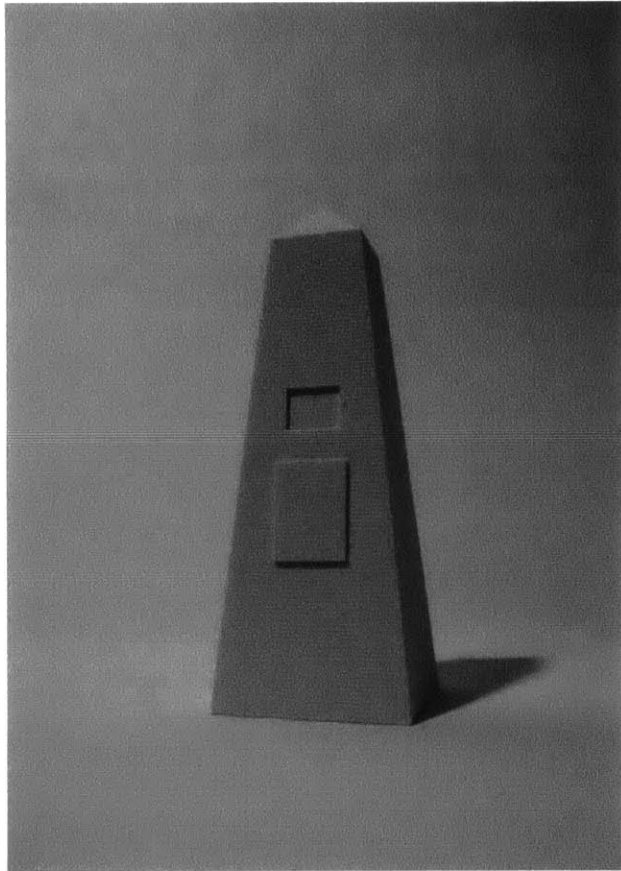


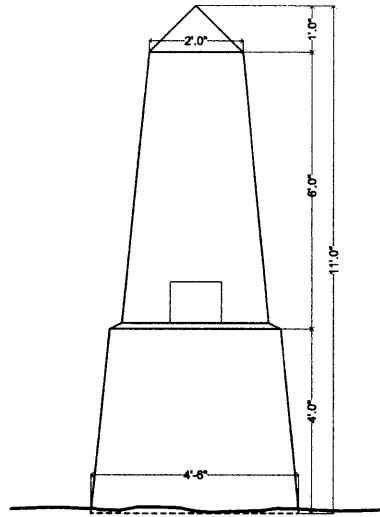




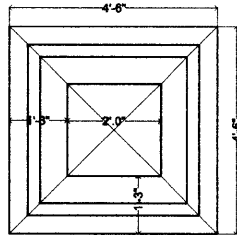
Local stone with a finishing layer of cement mortar, 1851-1857.

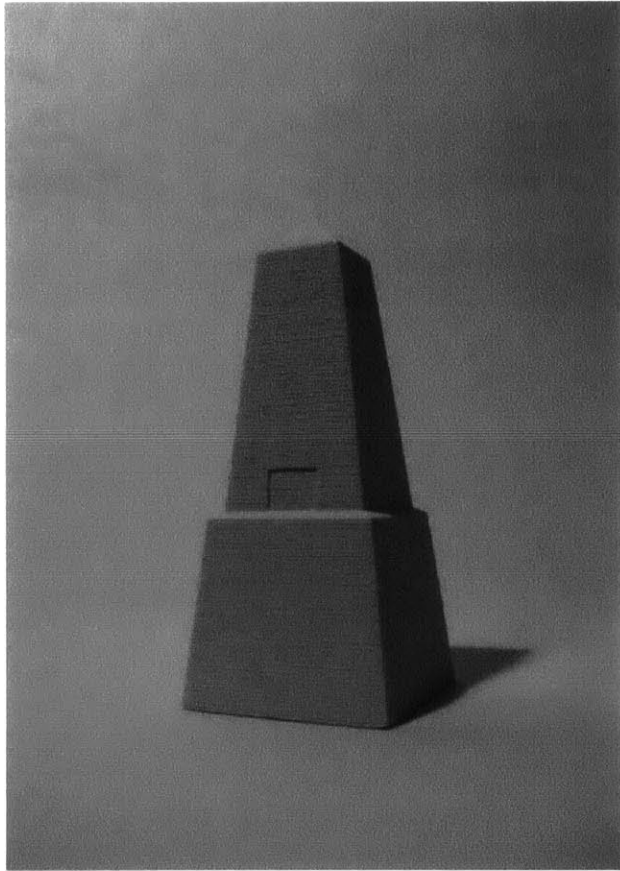


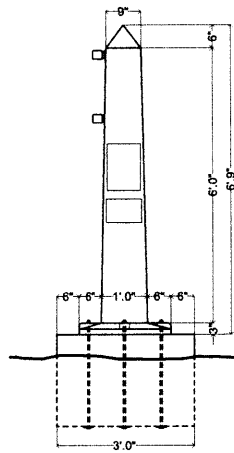




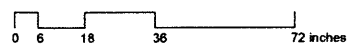
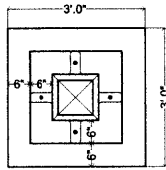
Local stone with
 a finishing layer
 of cement mortar,
 1851-1857.

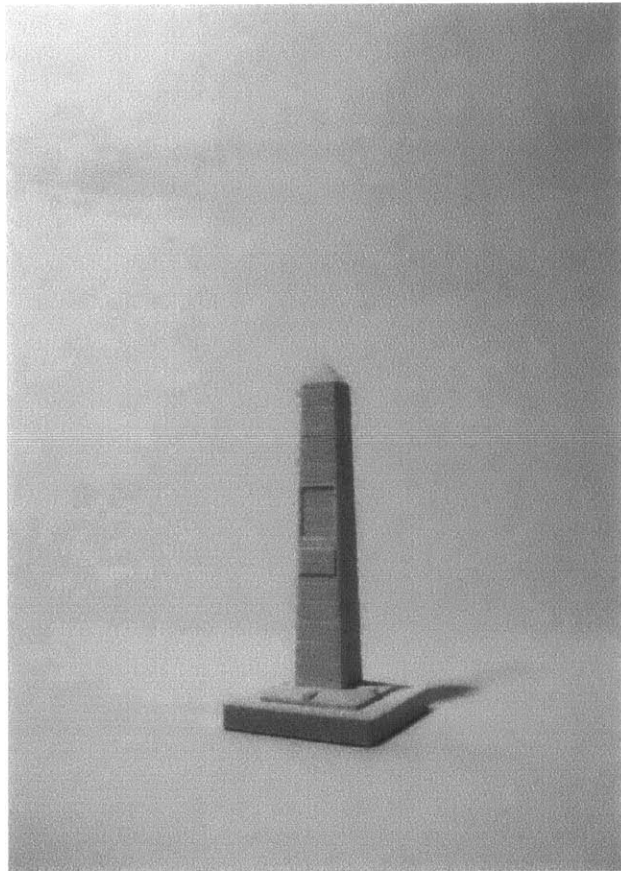






Cast iron,
1892-1895.







II. Belted Vision [1891-1896]

You must know, he continued in explanation, that the boundary line between the two Republics is, for some one thousand two hundred miles, purely artificial.

Abstract

Focusing on the work of the second International Boundary Commission in the late nineteenth century, chapter two introduces a phase of correction, characterized by standardization, federal regulation and surveillance. Valuable mineral deposits—gold, silver, and copper—were discovered in the region, as well as increased trade during the era of Mexican President Porfirio Díaz and the first international railway connection in 1882. After an exact position of the United States-Mexico border was reasserted, a series of linear belts were designated for forms of federal surveillance. A binational conception of the border expanded from theoretical line to a collection of quantifiable and regulated belts. The border settlements of Nogales, Arizona and Nogales, Sonora serve as a case study through which several regulatory conditions can be understood.

Introduction

Relaying an interview with border resident M. Garcia in 1890, *The Washington Post* printed one man's perception of the nation's southern edge: "You must know," Garcia provoked, "that the boundary line between the two republics is, for some one thousand two hundred miles, purely artificial."¹ The statement was at odds with a governing conception of national limits for both the United States and Mexico in the late-nineteenth century. Consecutive United States Presidents Grover Cleveland and Benjamin Harrison had pushed congress to regulated state business and commerce, while Mexican President Porfirio Díaz aggressively centralized government power to stimulate international trade and industrialization.² The notion that an identifiable

¹ "On the Southern Frontier.: An Unmarked Boundary Line Between Mexico and the United States," *The Washington Post*, Sep 17, 1890. The interview with Señor M. Garcia was later reprinted in the *New York Star*.

² For example, the Interstate Commerce Commission Act of 1887 increased the role of United States Congress in the regulation of state commerce, while the Sherman Anti-Trust Act of 1890 called for the federal supervision of business monopolies.

geographic boundary between the neighbors did not exist undermined their federal authority and legislation. In addition to artificial, the boundary was criticized as “unmarked,” “indistinct,” and “imaginary” by national headlines.³ Three decades after the International Boundary Commission had represented the line as fact, the federal myth of its existence had been debunked. A growing population on the United States-Mexico border, attracted by the promise of rich mineral deposits and a growing sector of international trade, found the clear demarcation of sovereign limits in government reports to have little resonance in reality.

Border monuments, though technically void of bilateral federal authority since the 1850’s, were the only artifacts of state power at play in the region. Many of their positions had been altered or eradicated altogether, leaving large swaths of land open to interpretation (Fig. 1). The result was a frontier population unaware of which side of the international line they resided on. Even federal officials were without consensus, unable to navigate the maps of their predecessors.⁴ Early depictions of the boundary as a theoretical line stretching through untamed wilderness was no longer suited to the region in the late nineteenth century. The call for settlement had been fulfilled and in turn required a reassessment of international limits—yet what did it mean to define the boundary amidst an emerging population and how did the process of regulation contribute to a new federal conception of the frontier?

Well before the publication of Garcia’s interview in *The Washington Post*, the destruction and displacement of border monuments was recognized as a binational concern. The United States-Mexico Convention of 1882 called for “an international boundary survey to relocate the existing frontier line between the two countries west

³ In addition to the account printed in *The Washington Post*, see: “The Boundary Stones: The Line Between Mexico and the Unites States Indistinct,” *The Atlanta Constitution*, Apr 25, 1888; “‘A Pretty How’De Do’: A Boundary Complication Hinted At.” *Los Angeles Times*, Mar 28, 1889.

⁴ As one example, the position of a Mexican customs house was contested shortly after construction, built upon what would later be determined as United States soil. Local United States miners took advantage of such confusion, claiming land in Mexico while operating under U.S. mining laws. *The Washington Post*, Sep 17, 1890.

of the Rio Grande.”⁵ The problem of the border was considered to lie exclusively in the western states where no natural boundary was present. Further, the work of the previous boundary commission was not questioned; the line *existed* and simply required assertion. In this regard the border monuments of Emory and Salazar were to be located and restored to their “proper places,” designated as the geographic locations at which they had originally been constructed. Additional monuments were to be erected in between, placed by national reconnaissance parties with particular attention to sections of the line inhabited or well suited for inhabitation.⁶ A multiplication of monuments was designed to provide residents on either side of the border with an exact visual reference for self-regulation.

While the work specified by the Convention of 1882 would take more than a decade to begin (requiring a second treaty in 1889 and additional prompting from national press) the groundwork for a corrective phase of the United States-Mexico border had been laid.⁷ Asserting an exact position of the line allowed for its offsetting for the purpose of defining territorial belts of regulation and surveillance. In the years to follow distinct federal zones were created north and south of the border at varying distances: A fifty-foot building reserve to monitor trade, a two and a half mile extension to survey and map topography, and a unilateral “Zona Libre” or *Free Zone* for duty-free imports extending twenty kilometers into Mexico. These offsets, each with a distinct dimension, observational focus, and sense of texture, are symptomatic of precise forms of vision that emanated from the borderline. The following chapter investigates the act of viewing integral to each belt—a task divided along party lines—and the synthesis required of national views for the placement of border monuments and final process of representation. Through analysis of the linear belts

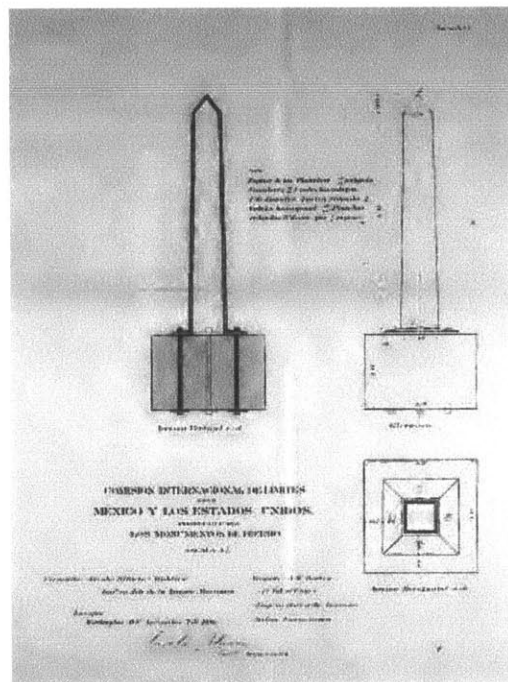
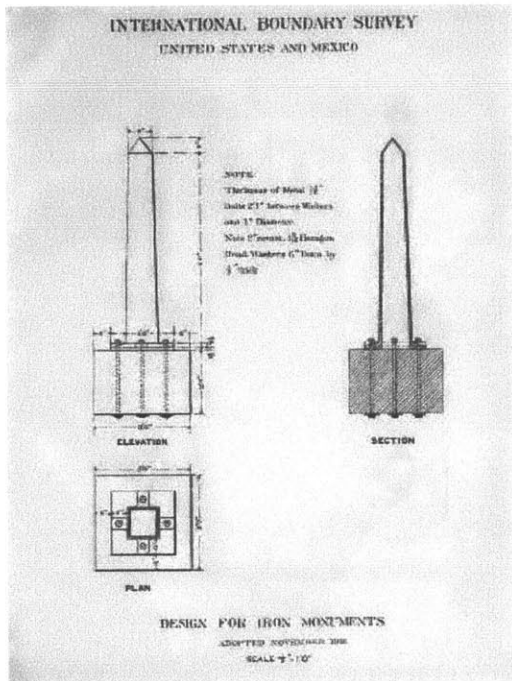
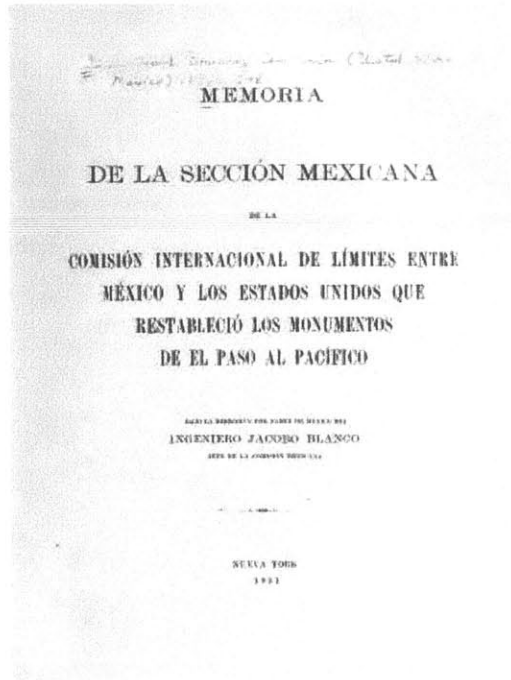
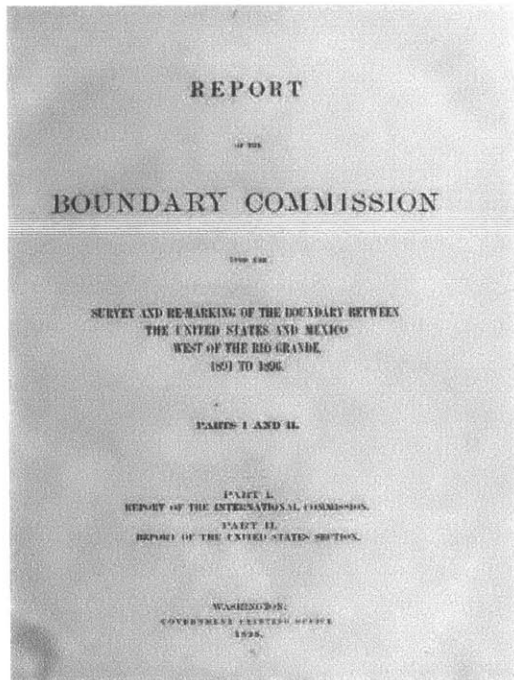
⁵ *Convention between the United States of America and the United States of Mexico: Providing for an international boundary survey to relocate the existing frontier line between the two countries west of the Rio Grande. Concluded, July 29, 1882.*

⁶ See: Convention of 1882, Article III.

⁷ The Convention of 1889 extended the contractual deadline of national parties for the resurvey of the border west of the Rio Grande. Specifications for the survey and location of border monuments were deferred to the articles stipulated in the Convention of 1882.



Figure 1. "Old monument II," nothing more than an empty base. The original iron monument formerly marked an important reference point near the junction of the Gila and Colorado rivers.



Figures 2-5. Above, cover pages from the United States and Mexican Boundary Commission Reports, published in 1898 and 1901 respectively. Below, measured drawings of iron border monuments found within each. Mirrored national views of the same artifact.

constructed and regulated by the second International Boundary Commission a federal conception of the border gained explicit spatial relevance at this moment in the late-nineteenth century, expanding from a single theoretical line to a collection of quantifiable and regulated zones.

International Boundary: 0' | 0'

Fitting to the bilateral task at hand, the first meeting of the second International Boundary Commission took place on the border of El Paso and Ciudad Juarez in 1891. Chief engineer Jacobo Blanco led the Mexican party and Col. J. W. Barlow served as head commissioner for the United States.⁸ The meeting's outcome, it was reported, was to determine the number of monuments required to mark the line so that "each monument would be in sight of another, to the end that a man could trace the line for himself at any point."⁹ The border was projected as a visually accessible reality. In this populous vision, the procurement of federal maps or reports was not required to decipher international limits; a single observer from either nation would be able to traverse the entirety of the border relying on sight alone.

To achieve this objective United States and Mexican parties independently ran and surveyed the length of the border, producing separate national reports (Fig. 2-5).¹⁰ Teams focused on their respective territory north and south of the line, convening at the international seam to jointly position border monuments. Survey techniques were comparable to the first boundary commission: Longitude was determined by astronomical observation (with the technological advancement of

⁸ Far less is known about Commissioner Jacobo Blanco and J. W. Barlow than their counterparts from the previous Boundary Commission, W. H. Emory and Jose Salazar. Personal narrative, which provided rich and varied insight into the lives and personalities of the first commissioners, were not included in the second boundary report.

⁹ *The Washington Post*, Sep 17, 1890.

¹⁰ Both teams started from El Paso and worked towards the Pacific. The International Boundary Commission renumbered all border monuments in sequence. Therefore, original monument No. 43 at El Paso was assigned the position of No. 1. The original monument No. 1 at the Pacific coast, also known as the *Initial Point* was in turn renamed monument No. 258.



Figure 6. Surveying by zenith stars and moon culminations. An astronomical observatory constructed by the Mexican Boundary Commission. Near Tijuana, 1892.

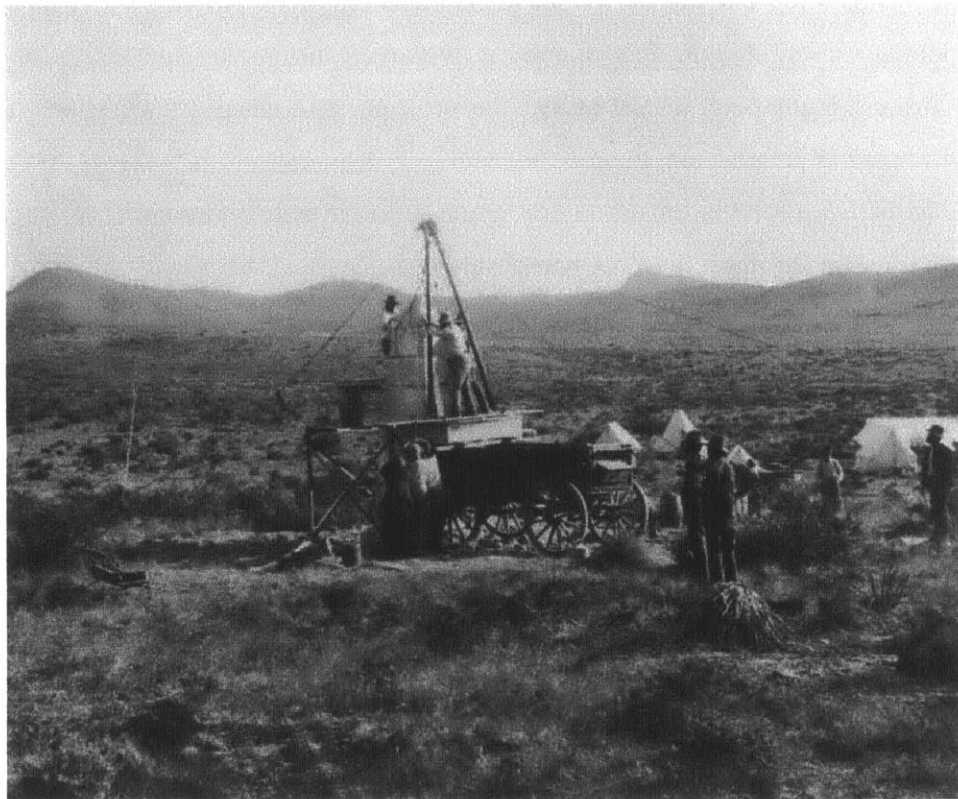


Figure 7. Rebuilding monument 40.

exchange signals via telegraph) and triangulation methods were used for precise measurements (Fig. 6). Heliotropes were newly introduced to achieve signal communication over increased distances. When locating the exact position of border monuments national teams worked within an agreed margin of error. Distances, once individually obtained, were compared; if found to differ more than one three-hundredths of a second on a specified parallel the measurement would be resurveyed.¹¹ A final mean was then taken to determine the location. By this method United States and Mexican surveyors constructed supporting data sets that together produced a synthesized position of the line. Remarkably, unified measurements of the International Boundary Commission were often presented in relation to separate national survey records from the 1850s. For example, the following measurements were listed for a section of the line on parallel 31°47':

- | | |
|--|----------|
| (1) Length of the line according to United States maps, 1849-1856: | 160,658m |
| (2) Length of the line according to Mexican maps, 1849-1856: | 160,847m |
| (3) Length of the line according to present commission: | 159,193m |

Not only did the report list three distinct measurements for the same line—over 1,500 meters of difference between them—the comparison undermined the authority of the original boundary survey, which the Convention of 1882 regarded as absolute.¹²

Such discrepancies in the original report were explained as observational errors, “unavoidable under the conditions existing at that time.”¹³ In total, forty-three boundary markers placed by the first boundary commission were accounted for, with several determined to be constructed miles off course from their intended position on

¹¹ International Boundary Commission, *Report of the Boundary Commission upon the survey and re-marking of the boundary between the United States and Mexico west of the Rio Grande, 1891-1896*. 3 vols. Part I. Washington: Government Printing Office, 1898, p 34.

¹² The chart referenced can be found in: *International Boundary Report*, Part I, 1898, p29.

¹³ *Ibid.*, p 17-8.

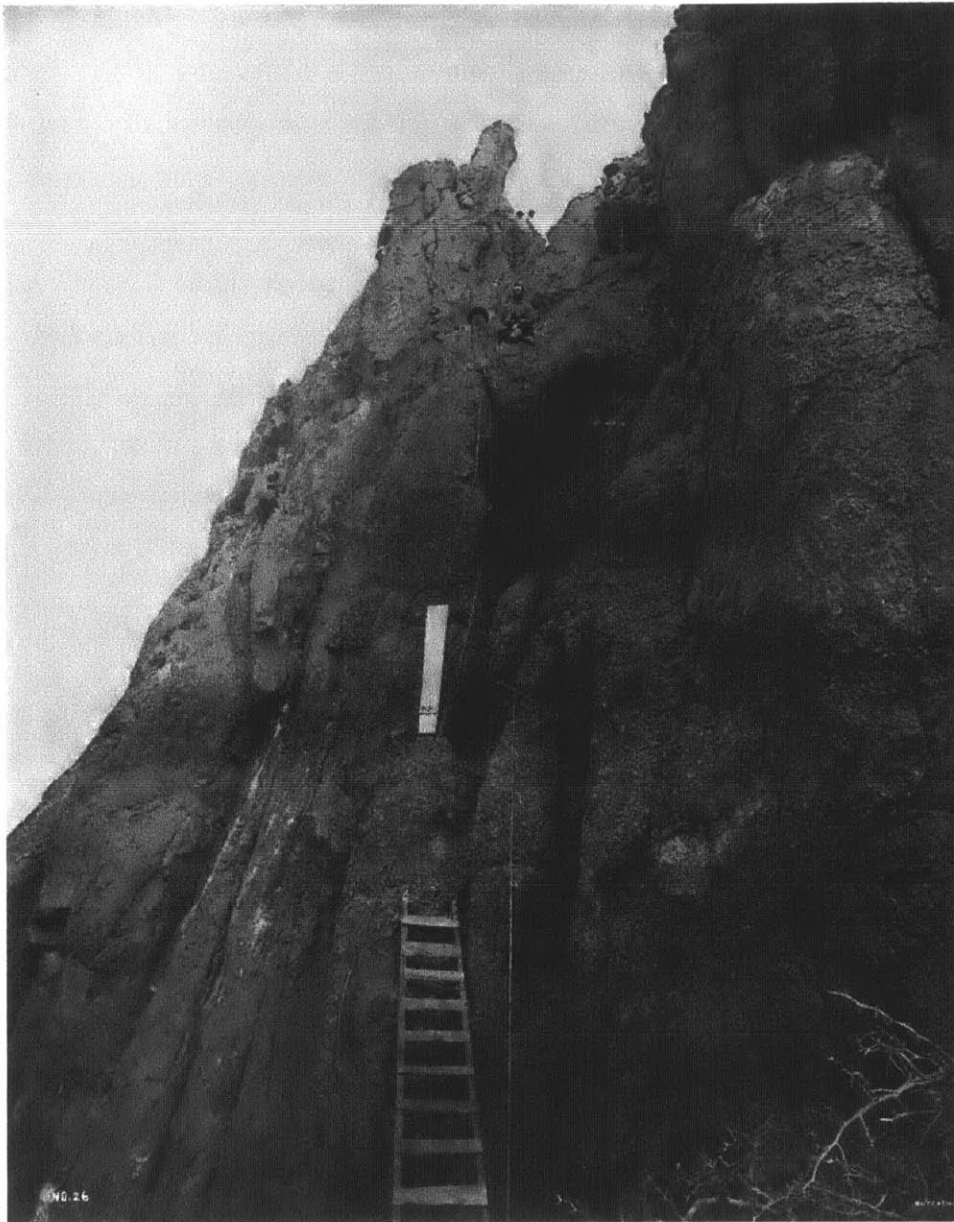


Figure 8. A section of border monument 153, estimated at 200 pounds, hoisted to the peak of the Cerro de la Lesna. "A strong, daring man, Joe H. Wheeler of Tennessee, scaled the vertical precipice and placed a line. By the rope others gained the height, and a monument in sections was pulled up by hand." *New York Times*, 1895.

the line due to inaccurate determinations of longitude.¹⁴ Yet despite definitive knowledge of historic inaccuracies and their impact on national territory, the commission had no authority to make alterations. The Convention of 1882 defined the original boundary as an object of truth to be restored, and the commissioners so complied. Due to this directive, the second survey was not guided by the premise of a theoretical line believed to define the boundary. Rather than translating a mathematical ideal onto geographic reality, it was a process of restoring international limits by means of a set of historic points that had once existed.¹⁵ The original boundary monuments were reconstructed—damaged stones recut and in some instances a finishing “jacket” of cement mortar applied for protection (Fig. 7). Secondary measurements were then strung between consecutive monuments for the positioning of interstitial markers. Thus, the placement of new border markers was a local operation. Measured in relation to the nearest “original” point, their location was not coordinated with an overall geographic conception of the border. Spaced no more than 8,000 meters apart and on high ground wherever possible, the objective of these artifacts was to provide the line with greater visibility.

Forged in El Paso and shipped westward on the Southern Pacific Railway, the new border monuments came in two varieties. The first was a single iron cast, six-foot nine-inches tall and weighing approximately 800 pounds—sufficiently heavy to deter any attempts at removal. The second was of the same form but comprised of seven pieces—base, cap, and five intermediate sections—that could be transported

¹⁴ Inaccurate monument positions and their correlation to territorial loss or gain for each nation was not addressed in federal reports. Several newspapers did however report on the matter, speculating the United States gained approximately forty square miles of territory in New Mexico while Mexico gained approximately sixty square miles in Colorado. See: “The United States and Mexico: What the International Boundary Commission is Doing,” *New York Times*, Aug 27, 1894; “The Mexican Boundary: Work of the International Commission Nearly Finished. Resurveying Begun in July, 1892. Many Changes Made in the Lines, but few of Importance—More than 300 Monuments Placed,” *New York Times*, Jan 5, 1896.

¹⁵ Alterations to the boundary that expanded on the Convention of 1882 would have required an additional treaty between the United States and Mexico. The existing agreement took more than a decade to be acted on and further delays were discouraged.

separately and then assembled on location.¹⁶ Such measures were necessary for monuments placed atop high peaks, inaccessible by either mule or wagon. A photograph taken at Cerro de la Lesna shows the midsection of Monument 153 being hoisted up a nearly vertical rock face (Fig. 8). The image inspired the following preface from an 1849 *New York Times* report: “Monuments were set in places which seemed impossible. It mattered not whether the proper point fell on the side of a bristling cliff or upon a dizzy mountain peak, the monument was placed exactly there.”¹⁷ Regardless of their geographic location in reality, border monuments were publicized as the objective result of pure mathematics. They were the synthesized face of the International Boundary Commission, projected as deliberate federal insertions to structure the frontier landscape. In total, 215 new iron monuments were erected on the boundary, making for a combined sum of 258 markers on the line. Upon completion, the *Los Angeles Times* reported: “So thoroughly and carefully have the monuments been made and placed that they ought to remain intact for centuries...there are monuments erected in desert places which will probably never be visited by man in thousands of years.”¹⁸

United States photographer D. R. Payne documented each of the 258 border monuments. The complete series, titled, “Views of the Monuments and Characteristic Scenes,” served as proof that the markers existed, the fine textures of their surroundings captured on 8x10 inch glass plate negatives.¹⁹ Particular images reveal

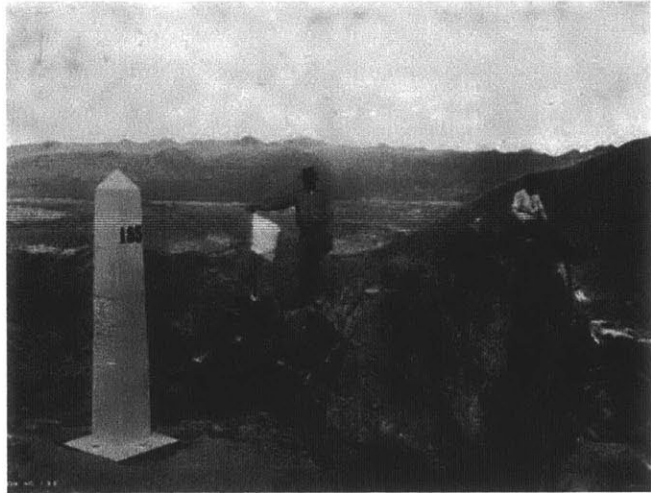
¹⁶ The monuments were produced by the Foundry and Machine Company of El Paso, Texas. “The cost of the iron monuments, including inscriptions plates, numbers, bolts, washers, etc., ready for shipment, was about \$40 each. Their transportation and erection, including cost of concrete bases, added from \$100 to \$110 to each monument, making the total cost in place about \$150 each.” *International Boundary Report*, Part II, 1898, p 180.

¹⁷ The quote continues: “First a strong, daring man, Joe H. Wheeler of Tennessee, scaled the vertical precipice and placed a line. By the rope others gained the height, and a monument in sections was pulled up by hand. It was necessary to blast off the top edge of the peak to give sufficient width for the monument’s base. This is Monument 153, and there it stands bolted fast to the solid rock. “The Mexican Boundary Line: Arduous Task of the Corps of United States Surveyors in Marking it Anew—A Monument Bolted to a Mountain,” *New York Times*, Dec 21, 1894.

¹⁸ “Fixing the Line: Work of the International Boundary Commissions. Monuments Placed Along the Whole Route from El Paso, Tex., to the Pacific Ocean at San Diego.” *Los Angeles Times*, Nov 7, 1894.

¹⁹ Payne’s view camera was portable and “fitted with an excellent lens.” Plate-holders, printing frames, baths, a supply of chemicals, and a developing tent traveled with the boundary commission to

Figures 9-11. Iron monuments erected by the second International Boundary Commission, photographed by D. R. Payne. "The camera was of the portable type, with 8 by 10 inch glass plates, and was furnished with an excellent lens." All 258 border monuments were documented in position and featured in the government album "Views of the Monuments and Characteristic Scenes along the Boundary Between the United States and Mexico west of the Rio Grande, 1892-1895."





Figures 12-13. Border monument 122 at the boundary of Nogales, Arizona and Nogales, Sonora. The image above documents the original monument, a crude pile of stones when found by the boundary commission in 1892. The image below pictures the iron replacement, erected against an adjacent building that would soon be demolished.

players and instruments of the boundary commission—men standing or on mule back, an observational telescope, even a second view camera appear in single frames, secondary accompaniments to a focal monument (Fig. 9-11). In comparison to the 1850's line "sketches" by A. Weyss that conceptually linked foregrounded pyramids to a point on the horizon, the photographs make no attempt to represent the space between markers. Monuments are documented frontally, with context framed only as a referential backdrop to an otherwise interchangeable figure.²⁰ This is significant in that the primary objective of additional markers was to provide intervisibility along the line, yet the condition was never documented. The final 1898 report of the International Boundary Commission equally evaded this detail, stating the monuments were "practically" intervisible without making any claim that an individual could visually link the line on site.²¹ In this sense the boundary was reconstituted as a series of composed federal views, positioned by the synthesis of binational survey measurements. The intervisibility of monuments was a hypothetical construct only to be achieved in reality by viewing photographic images in labeled sequence.

Building Reserve: 50' | 50'

New border monuments and the precise federal limits they indicated had immediate influence on local urban development and international trade. Real estate directly atop the United States-Mexico border became a high commodity. After three decades of sovereign ambiguity the international line had been explicitly defined and private traders vied for prime geographic locations. A business that sat adjacent to or even straddled the border afforded favorable conditions for smuggling operations. Trade

each monument location. *International Boundary Report*, Part II, 1898, p 199. Payne's complete work over the course of the commission was estimated at over 1,100 negatives and 4,000 photographic prints, reported at the time to be "one of the most prodigious photographic enterprises ever undertaken in the field." *Los Angeles Times*, Nov 7, 1894.

²⁰ "Where possible the monuments were photographed against a distinctive mountain or hill in the immediate vicinity." *Ibid.*

²¹ *Ibid.*, p 180.



Figure 14. "International street" Nogales,



Figure 15. Urban splitting: The international seam between Nogales, Sonora and Nogales, Arizona after a fifty-foot reserve belt was enforced north and south of the border.

restrictions, increasing tariffs, and a burgeoning European import market via Mexico made the circumvention of federal regulations an attractive prospect.²² One business in Nogales, Arizona specializing in “American liquors and Mexican cigars” was constructed abutting the boundary so completely as to topple an international border monument, a crude pile of stones when later observed and documented by federal officials (Fig. 12). Though a United States owned and operated business, the front terrace stretched out in welcome over Mexican soil.

A letter to the U.S. Department of State expressed related concerns from the International Boundary Commission. Previous uncertainty as to the exact location of the boundary had stalled development, they explained, but now that the line was “plainly marked” negotiations were on foot for the land on either side.²³ Development adjacent to the line was rebuked as a “grasping and overreaching” of frontier settlers. Such descriptive terms attended to a spatial exchange at the scale of the human body; inhabitants could literally reach across the international seam to collect desired goods. The only solution, it was determined, was to enact a fifty-foot reserve zone on each side of the border where the erection of private buildings was prohibited by law.²⁴ The offset would allow for an unobstructed federal view of the international line and all transactions that occurred across it.

First enforced between Nogales, Arizona and Nogales, Sonora, home of the illicit cigar and liquor stand, the reserve belt was a forceful act of splitting—the separation of conjoined urban twins. Founded together after the Gadsden Purchase as a small trading post, the border towns developed in tandem. In addition to a common name they shared a fluid population that traversed the line through business and

²² Samuel E. Bell and James M. Smallwood, “Zona Libre: Trade & Diplomacy on the Mexican Border 1858-1905,” *Journal of the Southwest*, Vol. 24, No. 2 (Summer, 1982), p 119-152.

²³ J. W. Barlow to Hon. John W. Foster, Secretary of State, Washington, D. C. Copy of letter from Nogales, Ariz. November 29, 1892.

²⁴ International Boundary Commission, *Report of the Boundary Commission upon the survey and re-marking of the boundary between the United States and Mexico west of the Rio Grande, 1891-1896*. 3 vols. Washington: Government Printing Office, 1898, p 178.

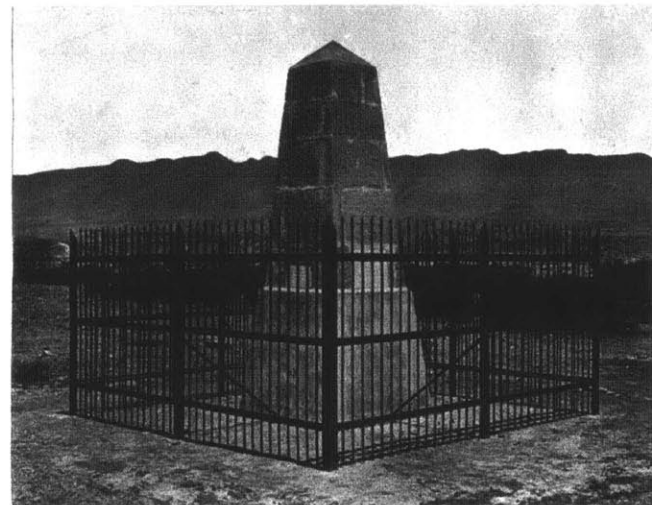
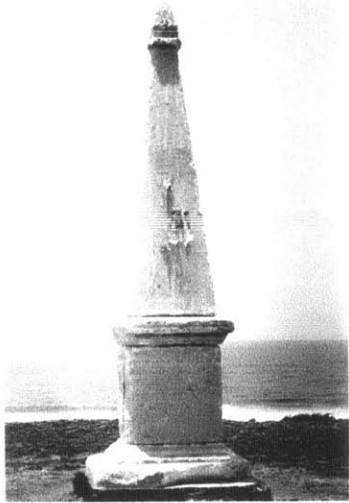
family ties.²⁵ The towns became known as a major gateway in the late nineteenth century after the establishment of the first international railway connection between the United States and Mexico in 1882. When documented by the International Boundary Commission there was a combined population of over 3,500 inhabitants.

Two photographs overlooking Nogales from a local hilltop offer comparative views of the international line, both before and after enforcement of the reserve zone and subsequent demolition of offending structures (Fig. 14-15). The first shows the fifty-foot offset only in Mexican territory, a single disobedient shack in the foreground. In the United States a continuous stream of buildings lie tangent to the line. The second depicts the reserve zone fully enforced, a belt with the combined width of one hundred feet. The precise zone of demolition is made visible by the chamfered corner of a white stucco building mid-frame, consumed in the border's offset. For the purpose of federal observation, a single urban mass was split in two. Despite a visual division along international lines, the settlements continued to support a unified population who referenced the twin developments collectively as "ambos Nogales" or *both Nogales*.

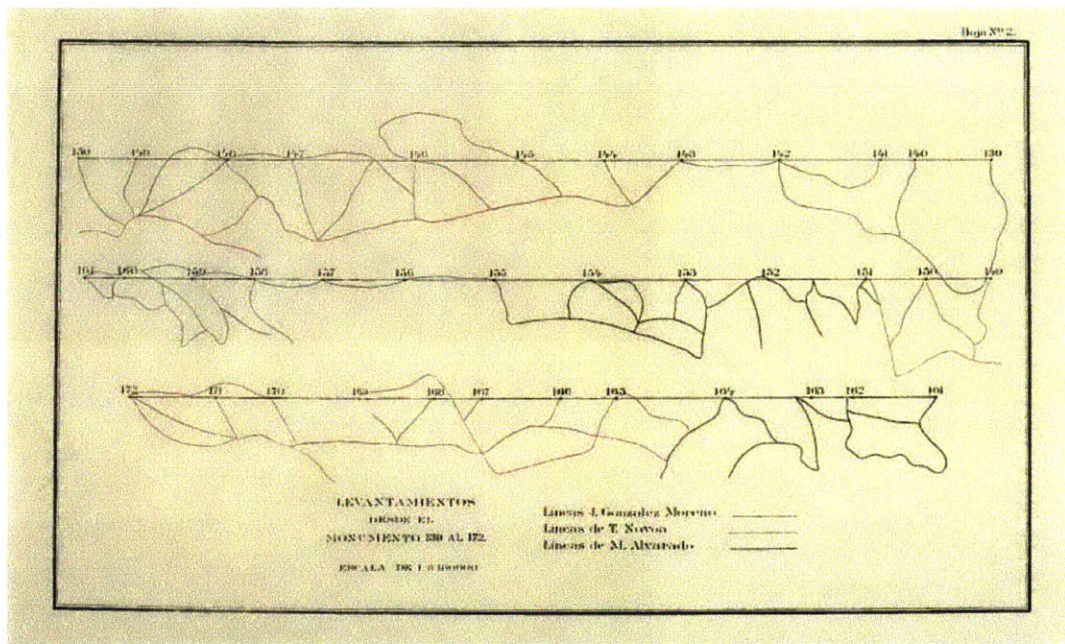
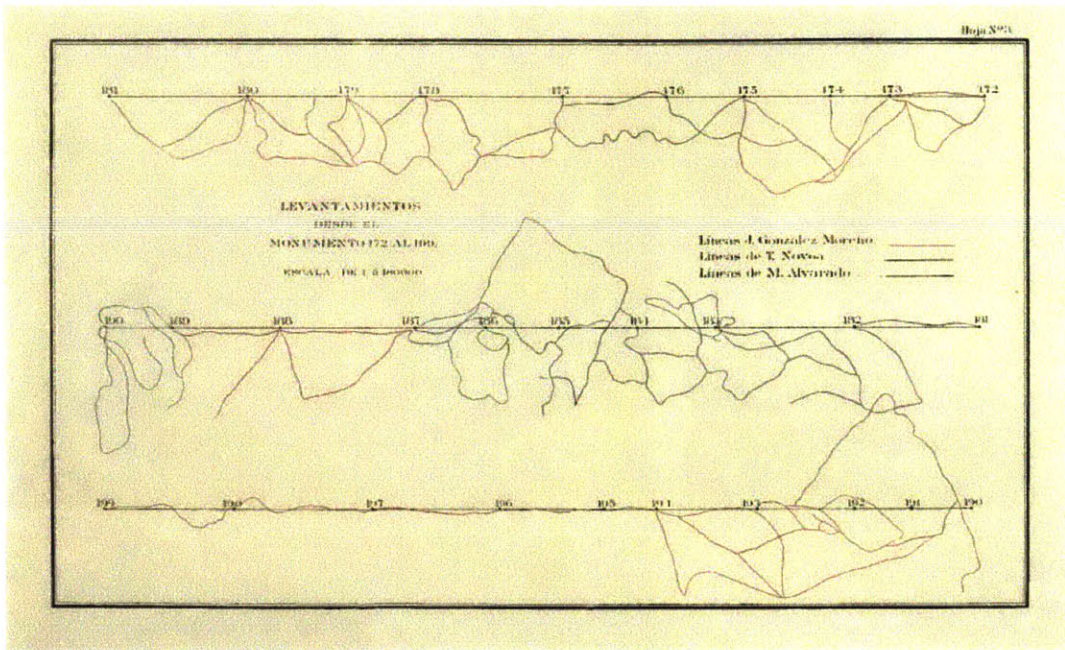
The original border monument between the two settlements was beyond repair, ultimately demolished and fitted with an iron replacement. The Boundary Commission moved to save other existing markers from a similar fate. Those located in urban areas were vulnerable to relic hunters that would chip stone fragments from monuments when passing over international limits. A souvenir from the original *Initial Point*, situated between San Diego and Tijauna, was particularly desired. Due to a prominent position of the Pacific coast and material of foreign marble the entire artifact was "nearly carried away piecemeal."²⁶ Commissioners Barlow and Blanco agreed that monuments in close proximity to settlements were best enclosed in an

²⁵ For further information on the history of Nogales, Arizona and Nogales, Sonora see: Daniel D. Arreola and James R. Curtis, *The Mexican Border Cities: Landscape Anatomy and Place Personality*, University of Arizona Press, 1993.

²⁶ "The Mexican Boundary Line: The Arduous Task of the Corps of Surveyors: A Monument Which is Bolted to a Mountain: The Commission is Now Ready to Begin the preparation of a Complete New Map," *Los Angeles Herald*: Friday morning, November 30, 1894.



Figures 16-19. The old stone monuments, restored and protected. Original border monument No. 1, located at the Initial Point on the Pacific coast (top left) was re-cut at a quarry in San Diego, "its size reduced a few inches in all dimensions." Pictured top right.



Figures 20-21. Footpaths traversed by Mexican party members between border monuments, originally drawn to scale at 1:180,000.

iron picket fence to protect them from trespassers or animals (Fig. 16-19). For all other locations barbed wire wrapped around the base at a distance of two feet was recommended.²⁷ While border monuments served a bilateral public view of the line, any form of physical interaction was prohibited. New inscriptions stated their destruction or displacement was a binational offense, listed on the southern shaft face in Spanish and the northern face in English.²⁸ The artifacts that motivated development in the region ultimately required protection from a population that settled around them. The reserve belt offered an additional spatial buffer. Positioned at the centerline, border monuments became the new subject of a cross-lateral gaze.

Topography: 2½ mi | 2½ mi

With refined focus, the boundary commission specified a two and a half mile belt north and south of the border for topographic survey. The width was measured from the agreed position of border monuments by theodolite and stadia lines, encompassing an immediate landscape that could be seen. It was a study bound by the bilateral view of traveling the line. National parties were responsible for the survey of their respective territory, with measurements later combined in a joint set of maps projected at the scale of 1:30,000. The maps would serve as an official reference for both countries, each sheet signed by Commissioners Blanco and Barlow along with their chief engineers. The survey process involved two individuals per side, one leading to place flagstaffs on prominent peaks and ridges and another following, the “transit man,” to take required measurements.

When official techniques became too time consuming or arduous, contours were “filled in” through the informed gaze of an observer, supported with the aid of a

²⁷ See *International Boundary Report*, Part II, 1898, p 19.

²⁸ The notice read: “The destruction or displacement of this monument is a misdemeanor, punishable by the United States or Mexico;” “La destrucción o dislocación de este monumento es un delito punible por México o Los Estados Unidos.” Ibid.

prismatic compass, hand level, and sketching.²⁹ Logistical constraints coupled with extreme terrain called for portions of the survey to be completed from a single position. Physical limitations also led to the narrowing of the belt in locations. A stretch of desert between the Pozo Verde Mountains and the Colorado River, over 320 kilometers, was only surveyed within a one kilometer offset due to difficult topography and limited access to fresh water. The inhospitable landscape perhaps stretched across too large a surface for the act of filling in utilized in previous sections. The desert land was better left uncharted. In each case the reality of taking measurements in the field had direct implications for how geography was ultimately rendered—whether it was surveyed, speculated, or omitted all together.

The footpaths of Mexican surveyors were documented in a preliminary map series titled “Levantamientos desde el Monumentos.”³⁰ Three federal agents were represented—J. Moreno, T. Novoa, and M. Alvarado—and their distinct routes color-coded (Fig. 20-21). Topography is absent from the maps. Strung from a theoretical borderline, the footpaths appear suspended in space, anchored to the position of monuments on a tensile datum. The most direct path to sequential monuments is drawn, yet never by a straight line. While the two and half mile observation belt pulled surveyors away from the boundary their movement was also directed by a three-dimensional reality. Traversal often required indirect trajectories, even occupation of both sides of the line. Thus, a local geography is palpable, embedded in the footpaths of these agents, even though it is not conventionally represented. The map series offers a relevant counterpart to the monument photographs of D. R. Payne. Both singular in their focus, one visualizes disconnected points of reference, and the other documents the process of moving in-between them.

The official map set of the International Boundary Commission served as evidence that the “existing” frontier line had been relocated. National surveys of territory were synthesized in a final act of drawing. Measurements were transcribed

²⁹ *International Boundary Report*, Part I, 1898, p 49.

³⁰ The Mexican series contains a total of six maps drawn at the scale of 1:180,000. The United States party did not publish a comparable study.

by pencil and joined at a hypothetical seam. The border region is depicted as a belt that is rendered, a fine texture of contours and hatch work that is abruptly truncated at the width of two and a half miles. A five-mile grid of overlaid construction lines, at which the boundary is always centered or aligned, further emphasizes a specific dimension of observation (Fig 22-23). Due to cost and time constraints, the official map set was produced at 1:60,000, half the scale of what was initially specified.³¹ The surveys were thus conducted with a higher level of detail than what was ultimately produced.³² Along with a mediation of scale and national views, the map repositioned border monuments to neatly align on the international seam. Despite knowledge of their geographic locations in reality, at times miles off of the theoretical boundary line, monuments continued to be supported as existing in a state of hypothetical purity. With this in mind, the reduction in representational scale might be attributed to more than simply logistical restriction, allowing the commission to smooth over misalignments that may otherwise have been prominent. Serving as federal proof of international limits, the map further mythologized the location of the boundary line.

Zona Libre: 0 km | 20 km

The dynamics of international trade between the United States and Mexico evolved to encompass a geographic dimension in the late nineteenth century. Shortly after the Convention of 1882, Mexican President Porfirio Díaz extended a unilateral “Zona Libre” for the duty-free import of goods along the length of border.³³ The zone was established to promote commerce and settlement in northern Mexico. Due to the region’s isolated position, far from centers of government and major cities, the cost of

³¹ The final map set of the International Boundary Commission, composed of 20 separate sheets, was engraved upon copper with an approximate cost of \$8,000 U.S. dollars. The cost was split equally by both nations. *International Boundary Report*, Part I, 1898, p 53.

³² For example, topographic contour lines were surveyed every ten meters in the field yet contours are indicated every twenty in the final maps.

³³ A Zona Libre south of the Rio Grande River was first established by Mexico in 1858, however, the zone was locally regulated and did not have a consistent geographic dimension.

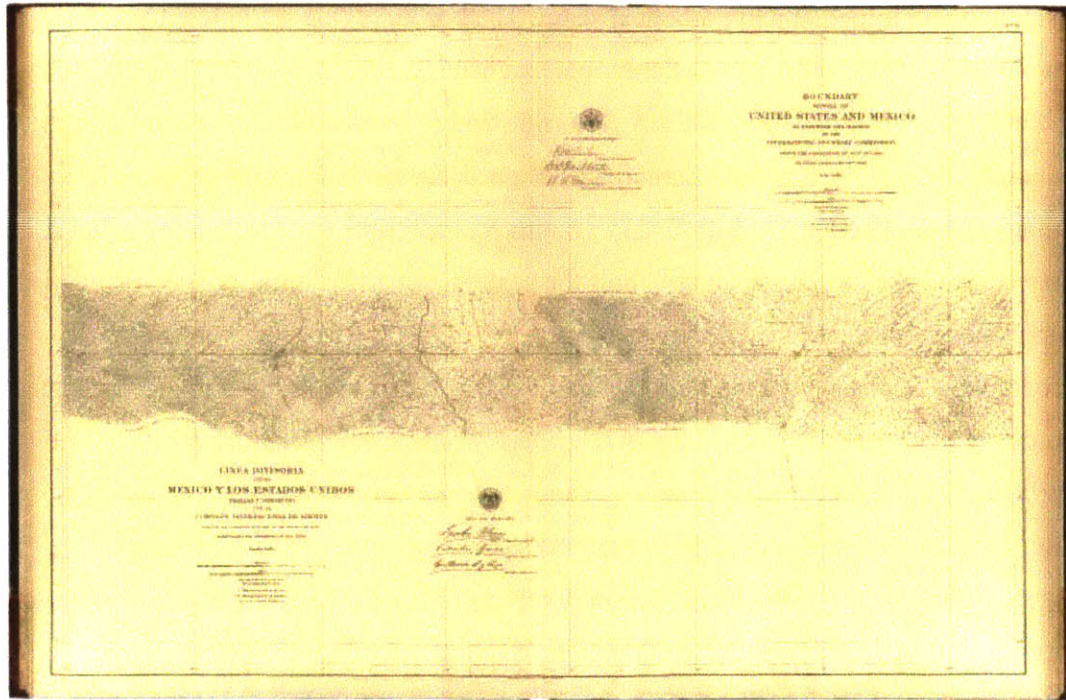
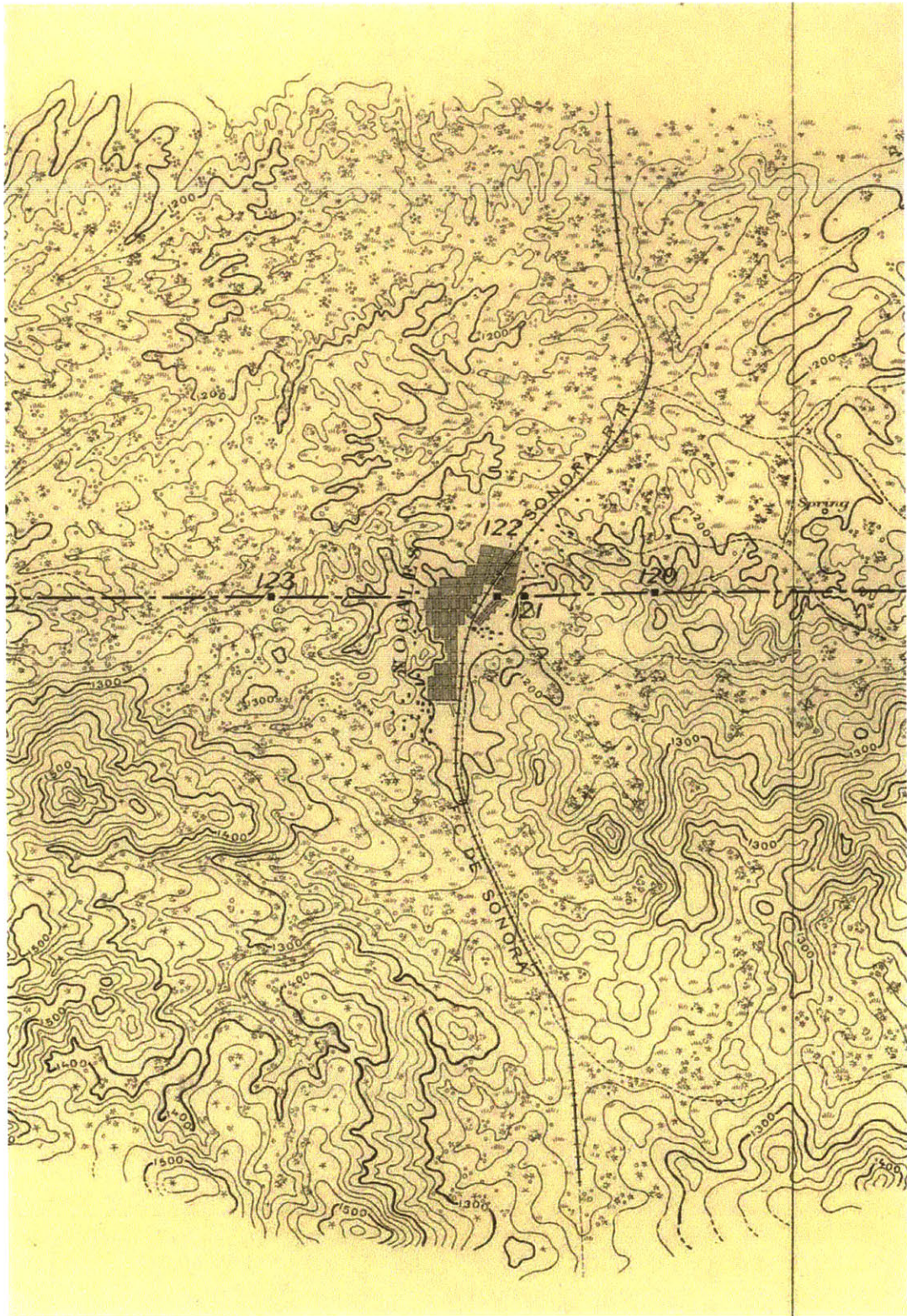


Figure 22. International Boundary Commission map No. 8, published 1898. Opposite page, a detail of the urban border settlements of Nogales, Arizona and Nogales, Sonora. Topography $2\frac{1}{2}$ miles one each side of the border is rendered at a scale of 1:60,000, creating a distinct five-mile thick belt.



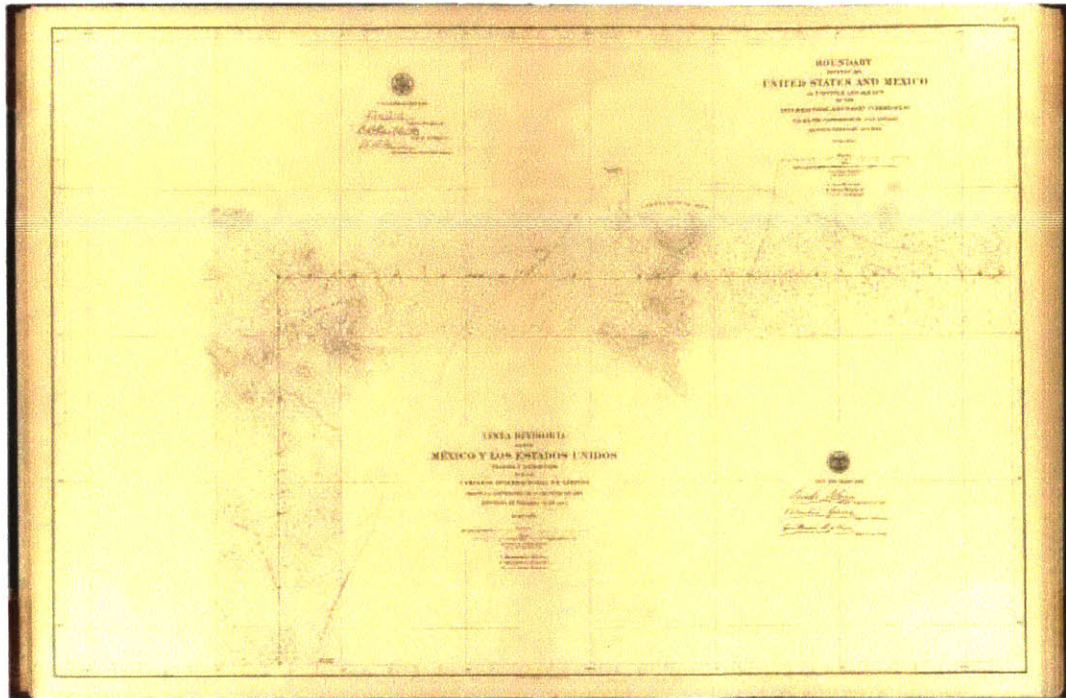


Figure 23. International Boundary Commission map No. 3, published 1898. Opposite page, a detail of the right angle border condition dividing New Mexico from Chihuahua. Grid lines span five miles.



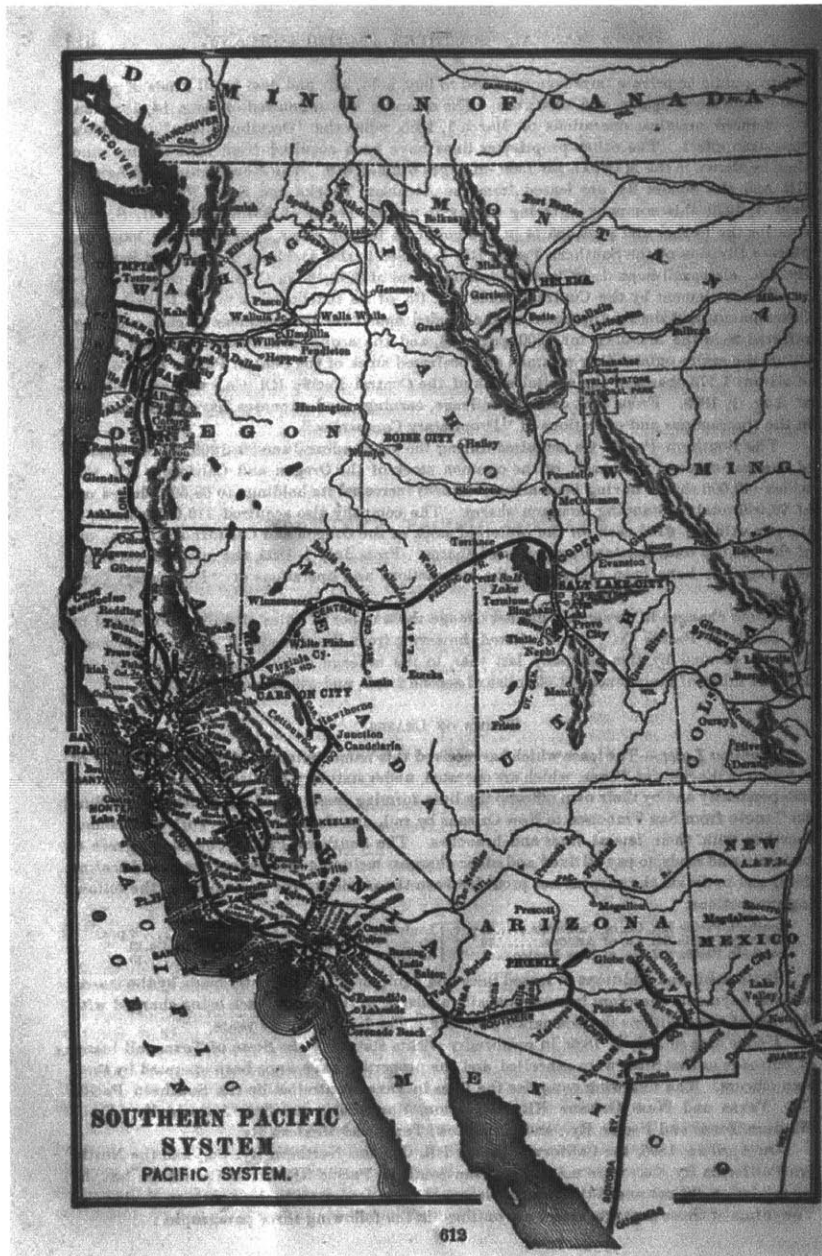


Figure 24. Southern Pacific Railway system, 1901. The first international railway connection was made in 1882, linking the United States and Mexico through Nogales, Arizona and Nogales, Sonora. The line terminated in Guadalajara.

imported goods was prohibitively expensive. The International Boundary Commission provided an opportunity to establish the limits of such a region, specified as an offset twenty kilometers from the position of border monuments. United States business owners were divided on the matter. Large manufacturers were in support of the increased market the zone provided. Emerging international railway routes further facilitated access to the interior of Mexico. The Southern Pacific Railway, for example, had an extensive network by the late nineteenth century and connected through Nogales, Arizona and Nogales, Sonora to terminate in Guadalajara (Fig. 24).³⁴ Local merchants on the United States border, however, strongly opposed the sale of duty-free imports within Mexico. Their businesses were founded on geographic location—an element compromised by legislation providing unregulated access to foreign goods without the traversal of international limits.

The Zona Libre was conceptualized as a continuous belt, however, like the international boundary it existed as a series of disconnected landmarks. A total of five locations were selected in the interior of Mexico for measurement, corresponding with areas of settlement: Costa Valle, Valle de las Palmas, Tecate, Juarez, and the Colorado River.³⁵ Border monuments established by the International Boundary Commission served as an origin point for Mexican surveyors. Lines twenty kilometers in length were projected from their location, the southern terminus measured by triangulation. In Mexican reports, the international boundary and southern limit of the Zona Libre are represented as parallel lines structured by a rigid network of interconnected paths (Fig. 25-26). Intermediary points were marked on the ground with iron stakes. Terminating points at the zone's limit were visualized with

³⁴ Before the existence of international railway connections and the customs infrastructure that followed, the United States government opposed the Mexican Zona Libre due to increased smuggling of U.S. goods after its establishment. United States-Mexican relations grew so contentious as to delay U.S. recognition of the presidency of Porfirio Díaz until 1878.

³⁵ International Boundary Commission, United States and Mexico (1882-1896). *Memoria de la Sección Mexicana de la Comisión Internacional de Límites entre México y los Estados Unidos que restableció los monumentos de El Paso al Pacífico; bajo la dirección de México del ingeniero Jacobo Blanco, jefe de la Comisión Mexicana*. Nueva York: Impr. De J. Polhemus y Compania, 1901, p 257.

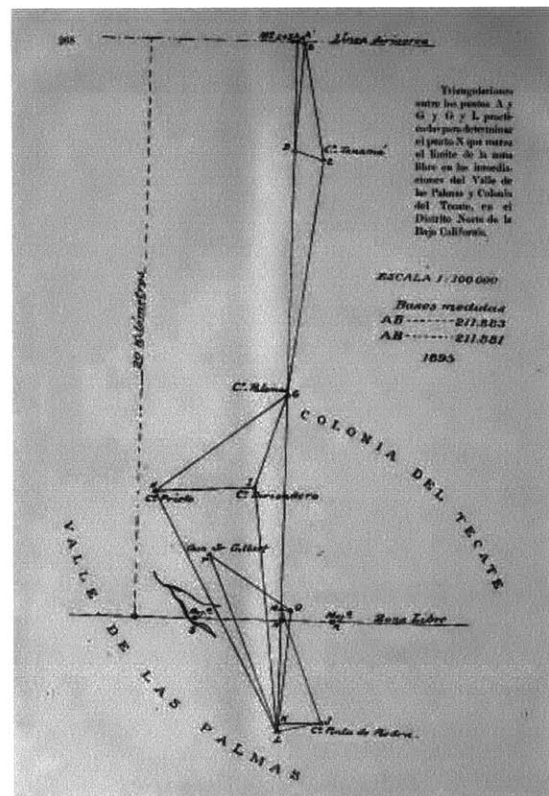
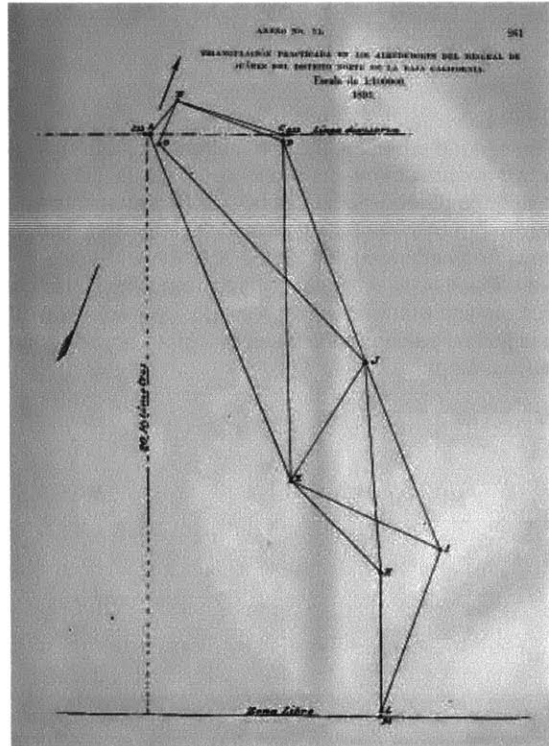
rock formations.³⁶ Such methods evoke the early monuments constructed by Commissioners Emory and Salazar, returning to informal strategies of marking for a southern offset of the boundary. In relation to the composed symmetry of the border—observed through administration of the International Boundary Commission and mirrored belts of urban reserve and topographic survey that were established—the unilateral Zona Libre was a distinct form of Mexican vision oriented towards the influx of United States capital. With a regulated spatial dimension, it recognized the economic potential of international legislation that was decoupled from the geographic demarcation of federal limits.³⁷

With the relocation of the boundary line in the late nineteenth century, the international border was asserted as a collection of quantifiable and regulated zones. Border monuments were integral to this process, cited as anchors of geographic accuracy and historic authenticity. They organized agents of the boundary commission and the final synthesis of their work. Regardless of geographic reality, monuments were represented in support of a hypothetical boundary and placed on the centerline of federal belts of vision. It is through these belts and their corresponding modes of observation that one is able to understand the border as an inhabited space. The region was no longer neutral, and had become imbued with the actions of individuals. While still persevering representation of the line as a theoretical construct, a bilateral conception of the region had evolved beyond abstraction to encompass a new three-dimensional reality.

³⁶ *Ibid.*, p 41.

³⁷ While the Zona Libre was abolished in Mexico in 1905, it set precedent for later government legislation directed towards the development of the northern border region such as the Bracero Program, El Programa Nacional Fronterizo (PRONAF) and the North American Free Trade Agreement (NAFTA).

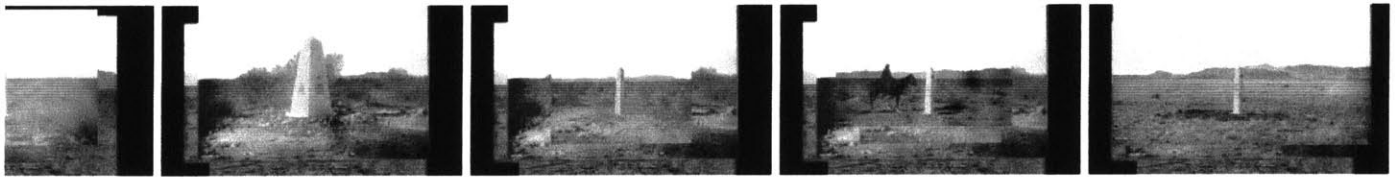
Figures 25-26. Triangulating the Zona Libre, twenty kilometers from monument 233 (above) and monument 245 (below).

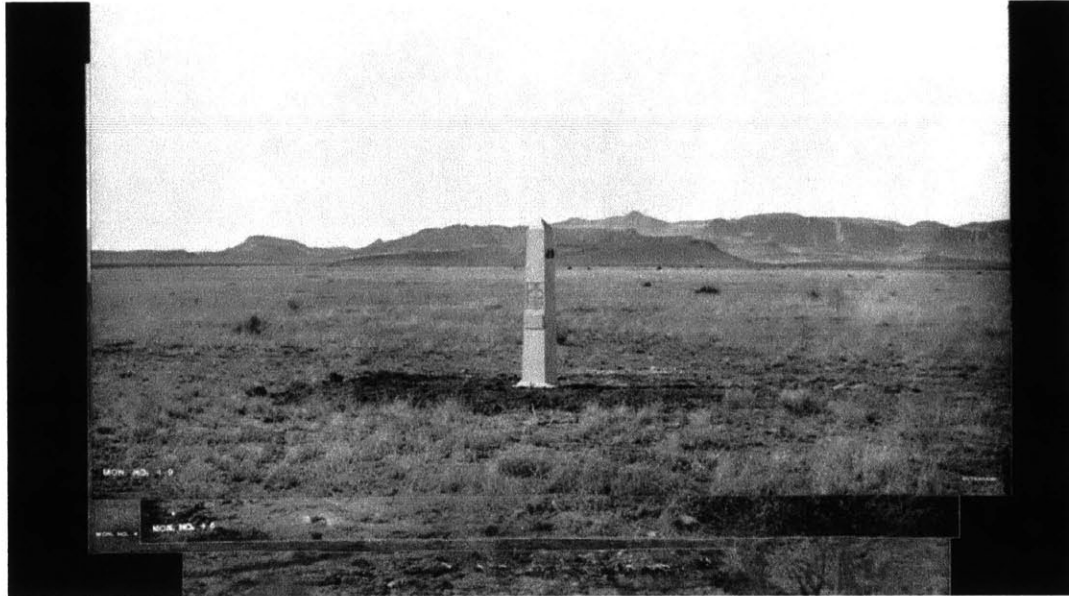


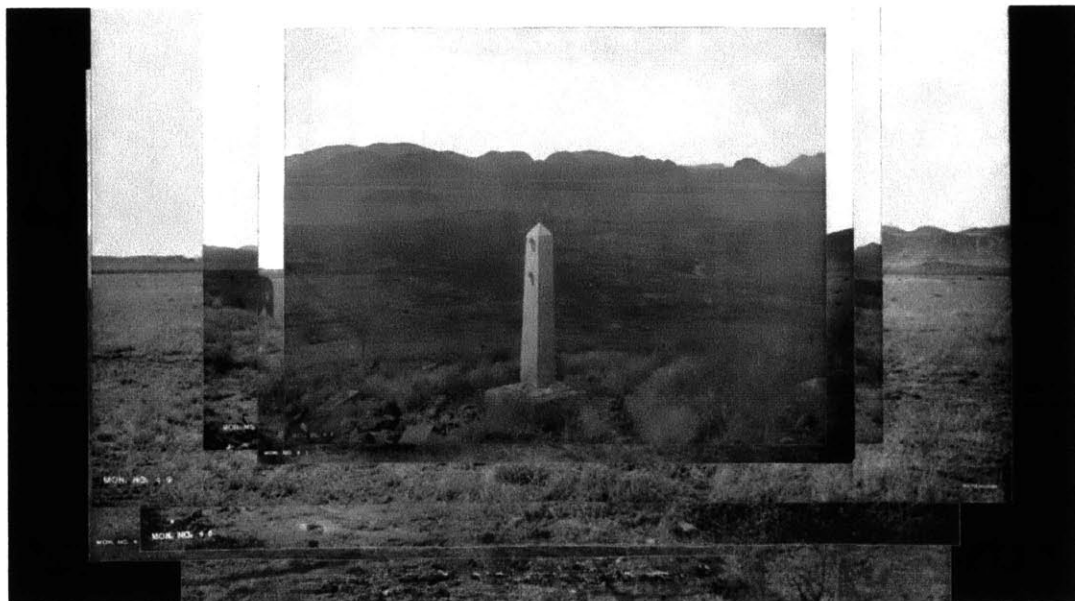
Animation: Proof of the Line

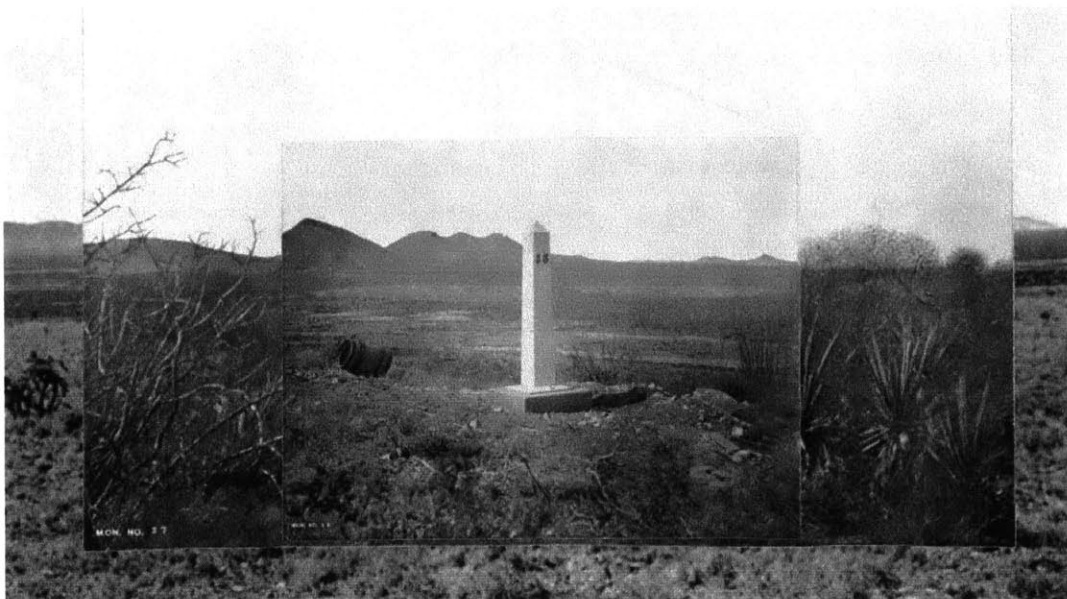
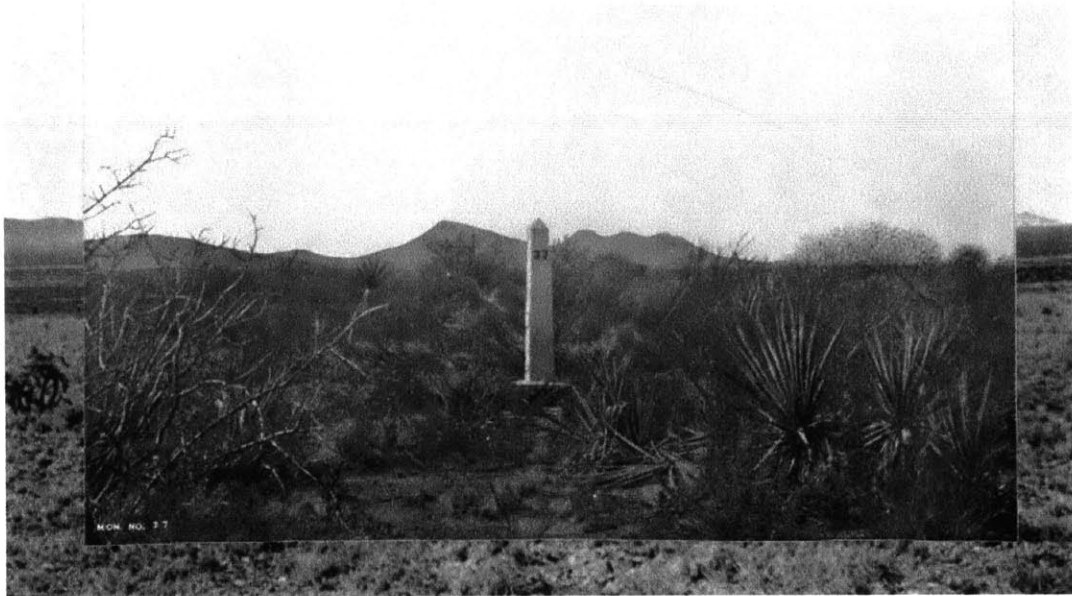
The second project fulfills the myth of monument intervisibility by means of a two-minute animation, presented here as individual film frames. By overlaying the photographic series of D.R. Payne in sequence, one can travel the length of the line as theoretically intended. The archival photographs have been adjusted so that the position and scale of monuments is consistent and relative. Through this method one also gains a reading of the horizon line that is more than simply characteristic of a certain geographic position, speaking to the viewpoint of an observer and the texture of their surroundings.





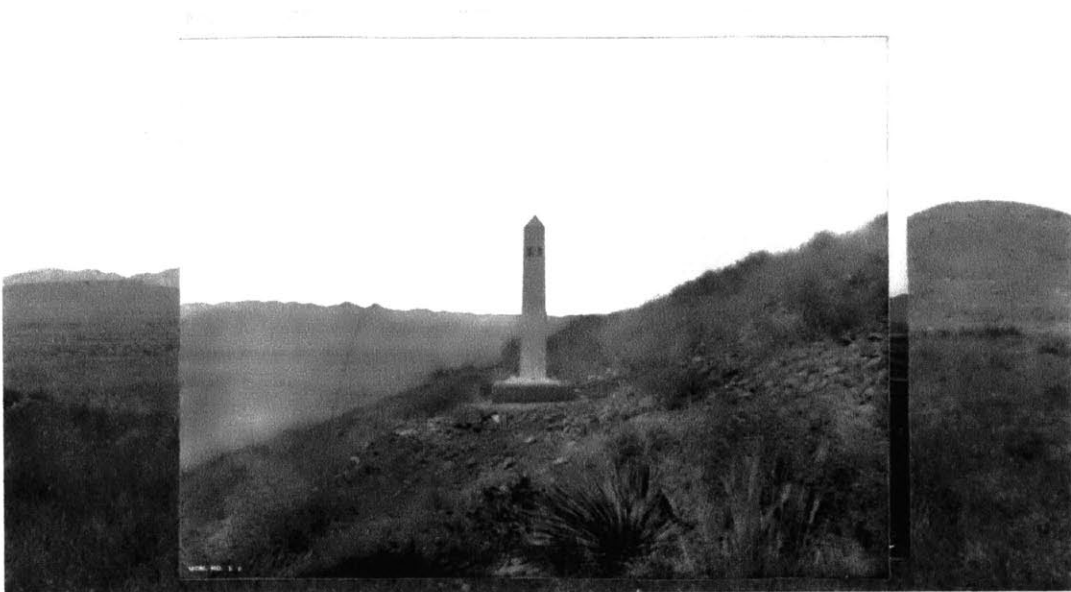






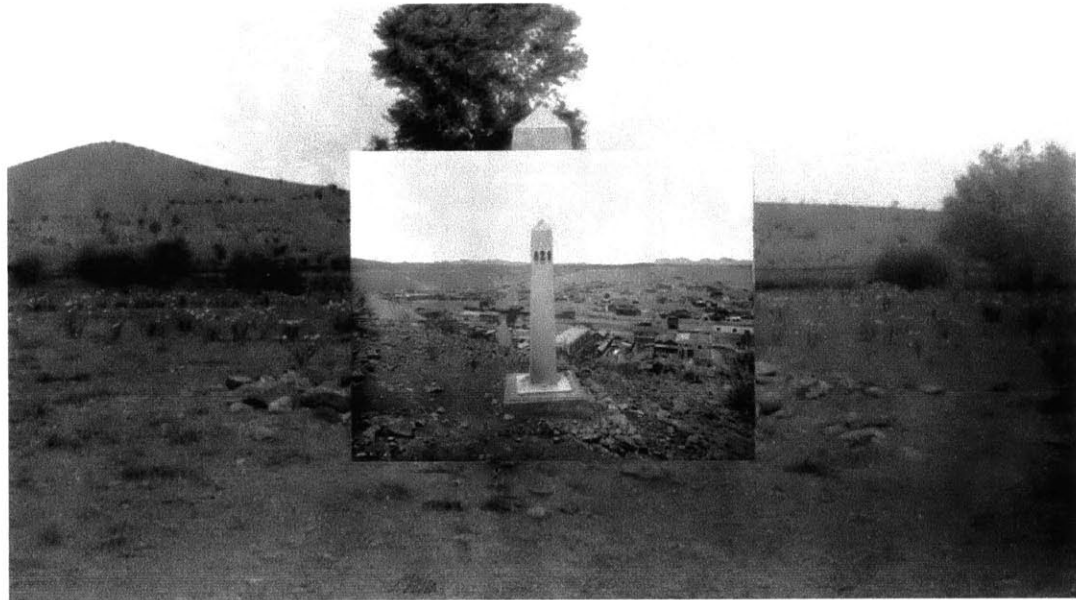
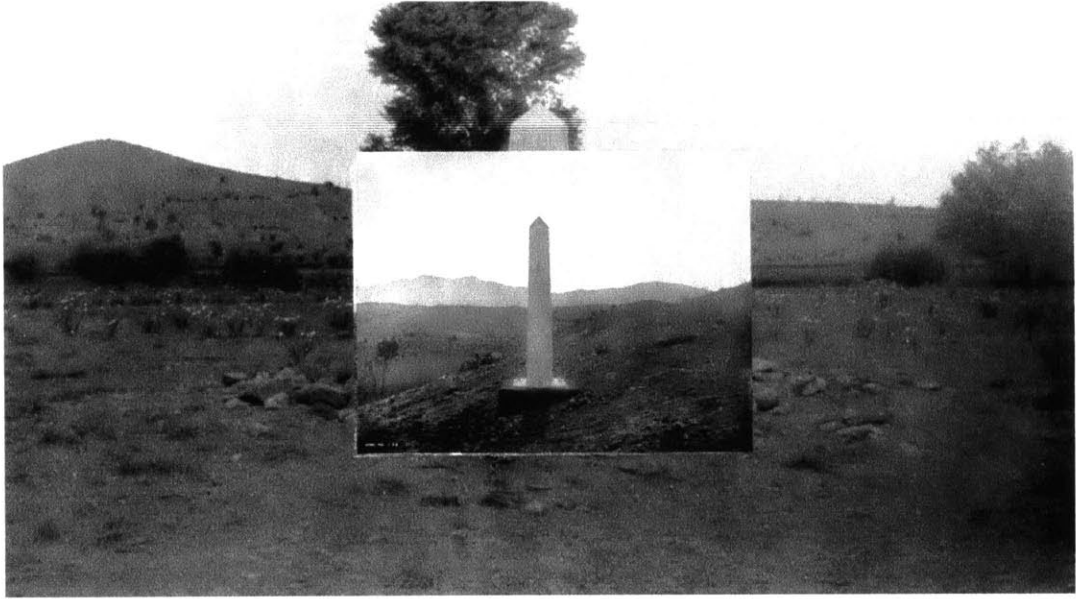








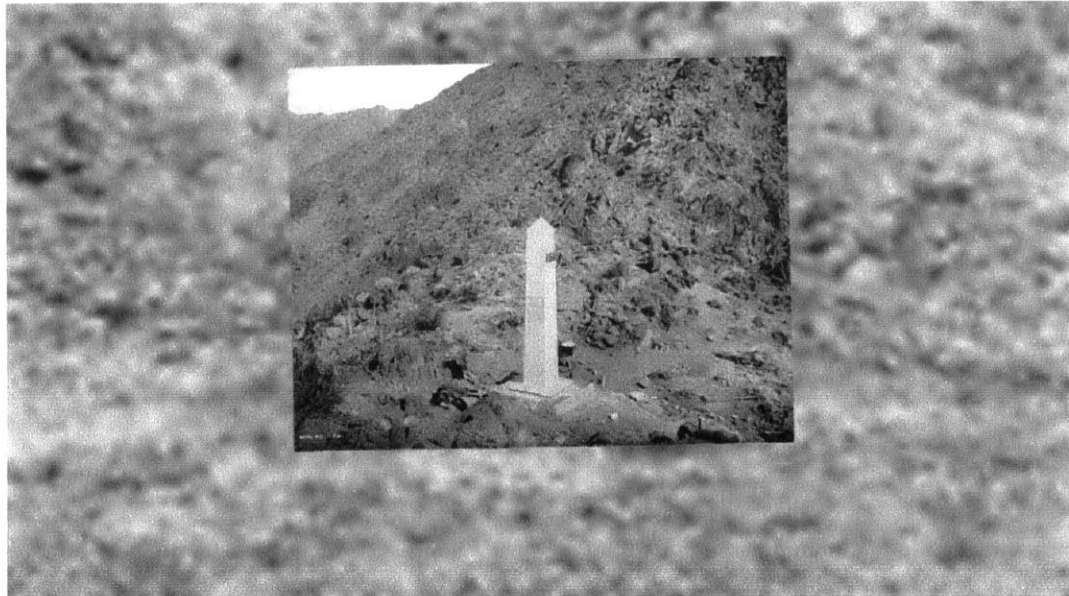
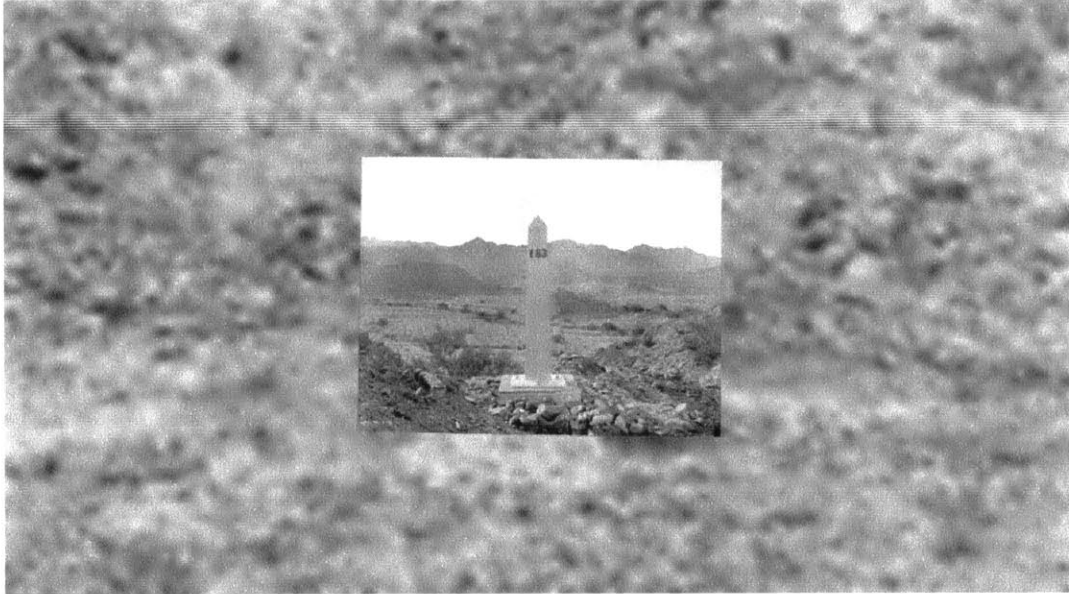


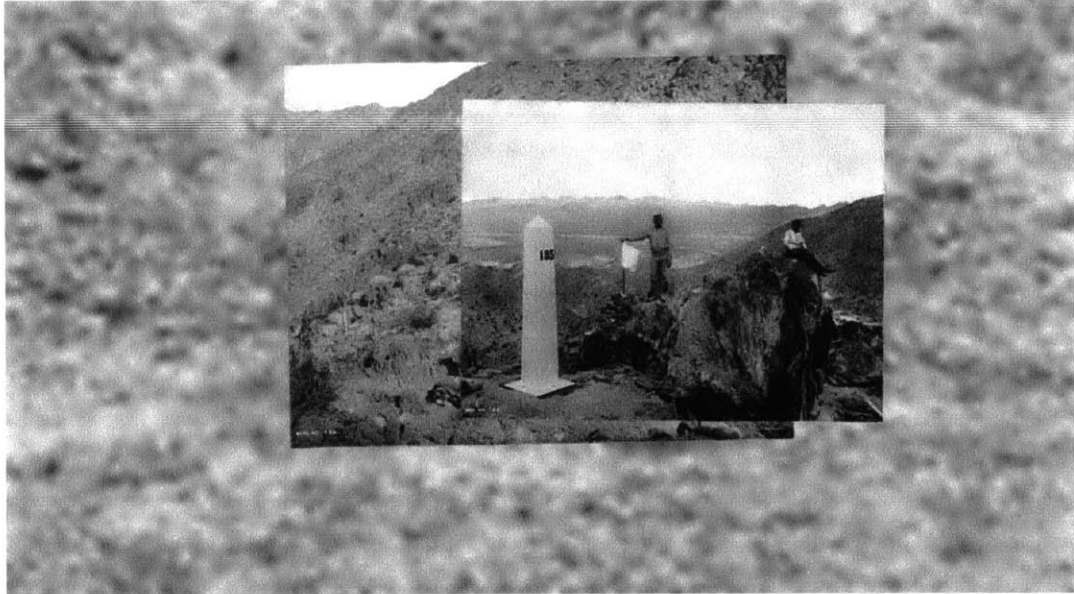


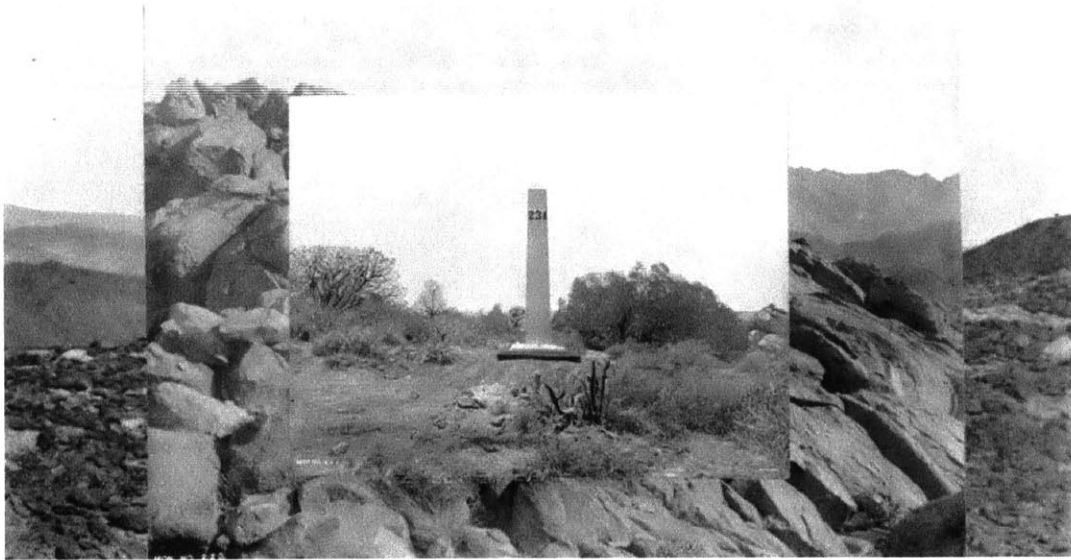






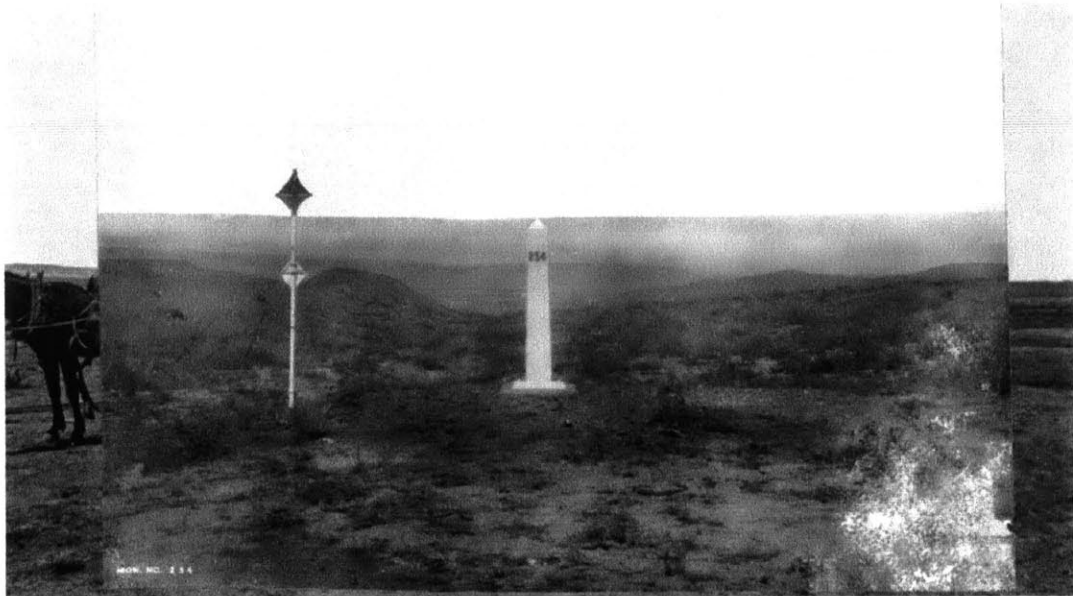














III. Political Props [1964-1968]

The Gila does not always run in the same bed; whenever it changes the boundary must change, and no survey nor anything else can keep it from changing...It forms of itself a more apparent and enduring monument of the boundary than any that can be made by art.

Abstract

Chapter three addresses the shifting role and materiality of the United States-Mexico boundary line amidst Cold War politics and increased urbanization in the mid-twentieth century. It focuses on the course of the Rio Grande River between the cities of El Paso and Juarez, including a contested parcel of land in dispute for over a century. Analysis unfolds a series of “political props,” defined as material elements that support the border as a project performed, and in turn allow for the reconstitution of national limits to occur. The boundary is presented as simulacra precisely at a moment when a concept of the bilateral becomes instituted through federal urban initiatives.

Introduction

The Gila does not always run in the same bed; whenever it changes the boundary must change, and no survey nor anything else can keep it from changing. The survey of that river, therefore, as it fixes nothing, determines nothing, is of minor importance. It forms of itself a more apparent and enduring monument of the boundary than any that can be made by art.¹

A 1964 *El Paso Times* press photograph depicts Mexican President Adolfo López Mateos and U.S. President Lyndon B. Johnson, each standing on the domestic soil of their respective countries, step towards one another with open palms (Fig. 1). It is the moment directly before a handshake atop the survey line dividing Mexico and the United States, an act choreographed as the symbolic end to the Chamizal land dispute in debate for over a century. Behind them stands a chrome obelisk monument on the contentious international seam, highly polished and proudly new. The material

¹ *Report on the United States and Mexican Boundary Survey, made under the direction of the secretary of the interior, by William H. Emory. Major First Cavalry and United States Commissioner.* Washington: A.O.P. Nicholson, printer. 1857. Ex. Doc No. 108. 34th Congress, 1st Session, p 21.

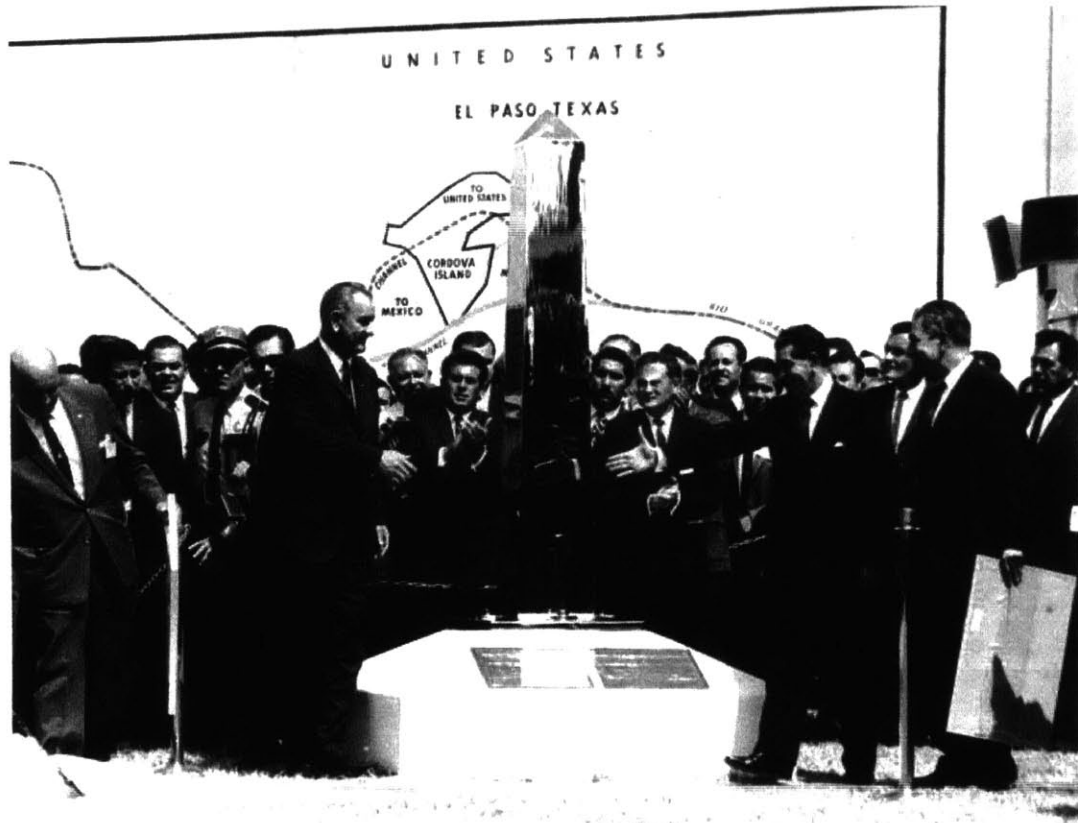


Figure 1. U.S. President Lyndon Johnson and Mexican President Adolfo Lopez Mateos dedicate a new chrome border monument to crowds from El Paso and Juarez, September 25, 1964. *El Paso Times*, photographic archive.

reflects the political gesture in high definition. Surrounding crowds from El Paso and Juárez, documented in the tens of thousands, saw the event doubled: four hands reaching out in mutual, amplified greeting.² A map serving as backdrop to the scene calls out the course of the Rio Grande River with dotted lines and labels disputed land as “To Mexico” and “To United States,” signifying, with the abstract clarity of diagram, the latest division of international limits. On September 25, 1964 the United States federal government publicized a grand gesture of return, an act reported by Mexico City’s *Excelsior* as “the greatest diplomatic triumph in Mexico’s history.”³

The ceremony celebrated the signing of the Chamizal Treaty, an agreement between the United States and Mexico honoring a historic survey line from 1852 and the start of construction of a major landscape-engineering project to redirect the course of the Rio Grande. The location of this meeting, specifically the handshake of Presidents Johnson and Mateos, is of central importance. It is a *sense of location*, rather than the location itself, that supports the occurrence of the event on many fronts. The public audience is lead to believe, through the inclusion of a new obelisk border monument, that the handshake was situated directly atop the international seam, the successful negotiation of which serving as ceremonial impetus. However, this is complicated by the fact that first, the international border between El Paso and Juárez would ultimately be defined not by a material monument on dry land but by a concrete channel for the Rio Grande. Second, the ceremony took place at a high school in El Paso that was *near* the border but not actually *on* the border. Perhaps this anxiety of location produced the necessity for symbolic backdrop, a map to indicate and underline context. Not only must the ceremony take place on-site (or close to it) but it must also be represented as taking place on-site. Backdrop map, monument, and handshake act in unison to institutionally frame and project a geographically specific

² Lyons, Richard L. “Peace Nears For World, LBJ Says: He Meets Mexican Chief, Dedicates Chamizal Shaft,” *The Washington Post, Times Herald*; Sep 26, 1964, p A1.

³ *Excelsior*; Sep 21, 1964, p 8. The signing of the Chamizal Treaty took place in Mexico City on August 29, 1963.

location; an image that would be quickly disseminated across both countries by national media.⁴

The photograph can be read on two levels. The first reading is one of fact, or truthful representation of an event. It acts as evidence and alibi for time, place, and circumstance, elements that are not in dispute or open to interpretation.⁵ The fixed nature of the image and its distribution by national media promotes the action as a binding legal contract, an agreement represented as fact.⁶ Yet far from mutually exclusive, facts are open to interpretation. Each singular fact or description is complicated by a series of alternate realities framed by varying contexts, compositions, and vantage points, all, as sociologist Kim Lane Scheppele explains, “equally true but differently organized.”⁷ Further, such projected narratives are constructed with motive and intention; they are anything but neutral. It is only through a close reading of things that one is able to extract and navigate elements unseen.⁸ Through consideration of alternative realities, a second reading of the photograph as social fiction or ritual emerges. The institutionally framed image

⁴ For starters, see: “Johnson, Lopez Mateos Meet at El Paso Today,” *Los Angeles Times*; Sep 25, 1964; p 4, and “Johnson Says U.S. Won’t Spark War: In El Paso He Vows Not to Frighten Other Nations—Meets Mexican Chief,” *New York Times*; Sep 26, 1964; p 1. In Mexico: “Eso es la Devolución de El Chamizal: Resultado de negociaciones tan honrosas como cordiales entre ambos países,” *El Informador*; Sábado 26 Septiembre de 1964. p 6-A

⁵ Art historian Ariella Azoulay has theorized the medium of photography as a social contract, one that is used to both disclose and promote the negotiations of involved parties. “The invention of photography offered the gaze an absolute plane of visual immobility,” she writes, “a plane on which all movement is frozen, transformed into a still picture that can be contemplated without disturbance.” See: Azoulay, Ariella. *The Civil Contact of Photography*, Zone Books: 2008. p 93

⁶ This concept was relayed literally by the Los Angeles Times. A statement, perhaps written tongue-in-cheek, read: “A handshake Friday between President Johnson and his Mexican counterpart, Adolfo Lopez Mateos, will reduce the size of the United States by 437 acres.” “437 Acres of El Paso to Go to Mexico Friday: Nations to Seal Chamizal Treaty, Settling Long Dispute Caused by Rio Grande Shift,” *Los Angeles Times*; Sep 20, 1964. p L5

⁷ Scheppele, Kim Lane. “Facing Facts in Legal Interpretation,” *Representations*, No. 30, Special Issue: Law and the Order of Culture (spring, 1990). University of California Press. p 49

⁸ Alexander Welsh warns that facts may “devilishly lie” in Welsh, Alexander. *Strong Representations: Narrative and Circumstantial Evidence in England*. Baltimore: Johns Hopkins University Press, 1992. p 7

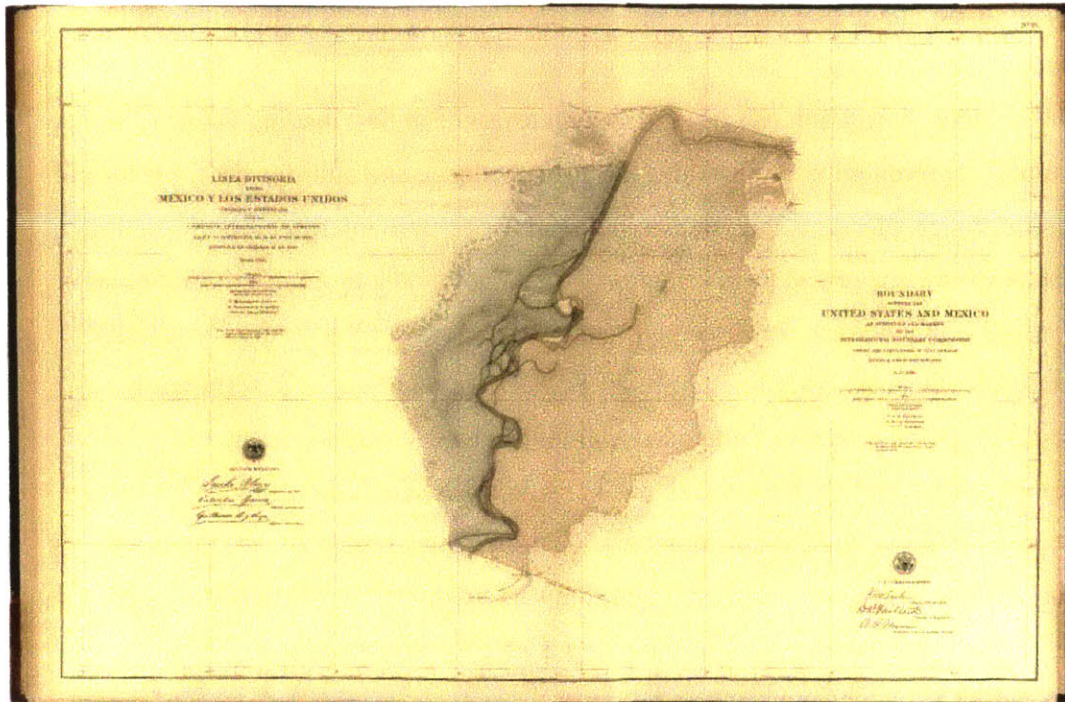
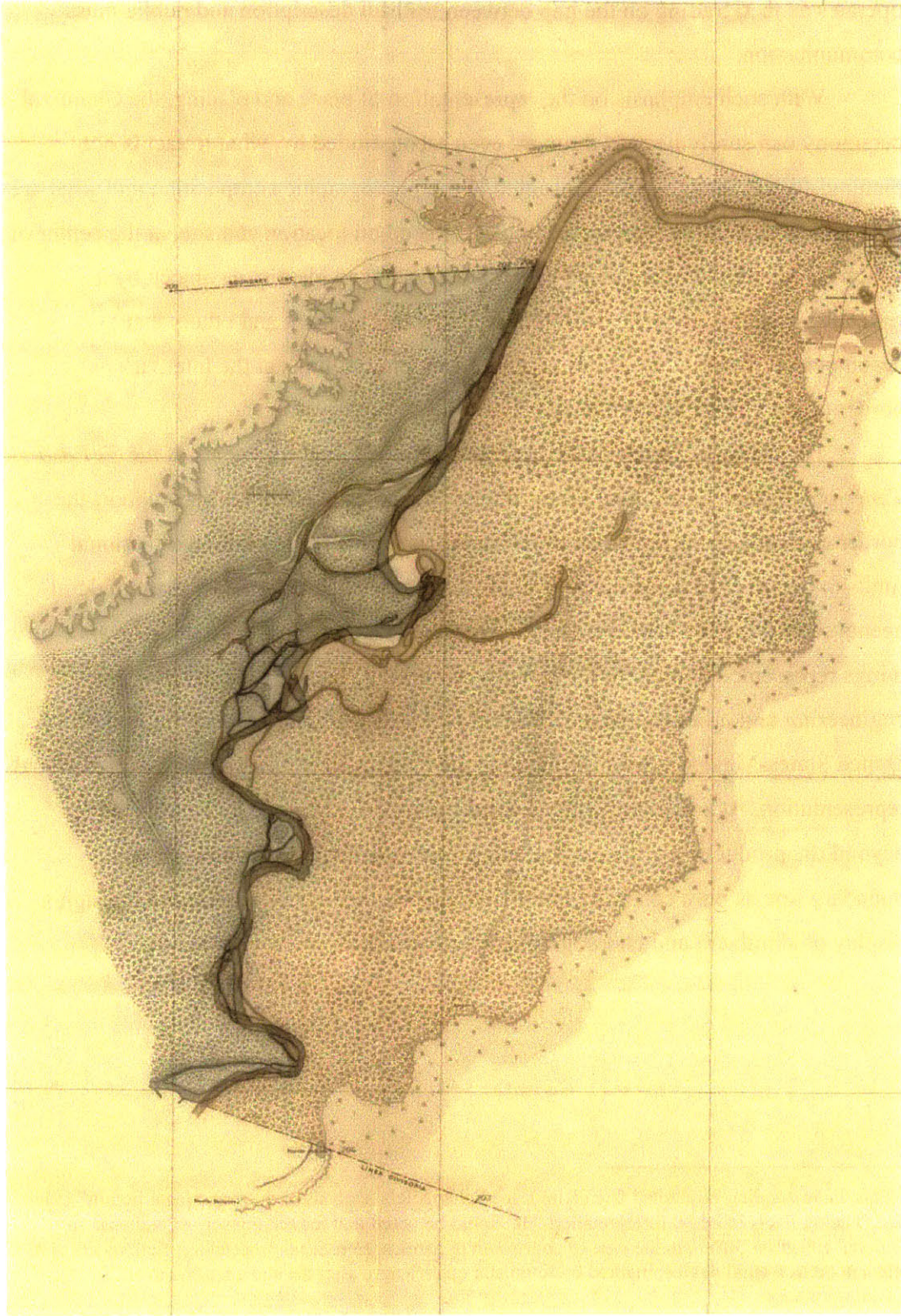


Figure 2. Linea Divisoria Entre Mexico Y Los Estados Unidos, No. 19. The brown color shows the Colorado River as surveyed by the United States section in March 1893. The black color shows the Colorado River as surveyed by the Mexican section in February and March in 1894.



operates as fact, trading on the gap between truthful description and public mass communication.⁹

With such emphasis on the representation of place and placing, the Chamizal ceremony can surely be read through, even reconstituted by, what in fact is not pictured. What, then, is not represented in the photographic composition and what are the implications? Why was such emphasis placed on location and site, at the center of which stood a monument denied visual presence, even identity as object, by a reflective material finish? How might we view this element and others that accompanied it within the larger context of sovereign limits at the international border of the United States and Mexico?

The following analysis investigates compositional fragments of the *El Paso Times* photograph as political props, defined as material elements that support the border as a project performed and in turn allow for the reconstitution of national limits to occur. By tracing the role and history of territory, monument, and federal agents central to the Chamizal Ceremony one is able to understand the relevance of things represented and, more importantly, assert the absence of both landscape engineering and urbanism—elements that played a vital role in the definition of the United States-Mexico border during the mid-twentieth century yet were denied visual representation. At a moment when a conception of the bilateral had expanded far beyond the production of theoretical maps and monuments, the international boundary line as pure construct of the nation-state could only be asserted through a display of simulacra and choreographed performance.

⁹ This understanding is adapted from Kim Lane Scheppele's analysis of the term "legal fiction" in her text "Facing Facts in Legal Interpretation." It should be noted that the relationship of audience to fictional construct differs in the case of courtroom dynamics. In judicial proceedings fictions are well understood as a legal device, marked by linguistic qualifiers to alert the audience and avoid misinterpretation.

Territory

Photographs, especially those that emanate from news media, are public artifacts to be interpreted. Often serving as secondary visual support alongside descriptive text, these images contain their own agency that expands far beyond the individual caption. Even when the image is directed by a single figure, constructed and carefully composed, ownership or authority of meaning does not exist.¹⁰ While it is possible, even necessary, to consider photographs as an assemblage of components, each with their own history and relevance, an overall reading of the artifact cannot be reduced to a single element. The *El Paso Times* press photograph can thus be framed as an assemblage of actors—including territory, monument, politicians, press and audience (both local and international). Once traced, individual threads can be reconstructed to offer new meaning.

The first thread to examine is the history of the territory, represented at the ceremony of Johnson and Mateos merely as static vectors on an expansive backdrop. The land in question, and the borderline that divided El Paso from Juarez, was disputed soon after the Treaty of 1848 specified the Rio Grande as an international boundary.¹¹ The natural element that preexisted the inhabitation of the region and motivated its settlement, chosen as a stable marker of sovereign limits, proved indifferent to politics. Between consecutive surveys in 1852 and 1873 a series of natural shifts pushed the river south, redistributing approximately 600 acres of land from Mexico to the United States.¹² Both countries claimed ownership of the territory

¹⁰ Outlined in *The Civil Contract of Photography*, Ariella Azoulay proposes a theory for reading the medium based on an “ontological-political understanding.” She details a comprehensive and inclusive approach that “takes into account all the participants in photographic acts—camera, photographer, photographed subject, and spectator—approaching the photograph (and its meaning) as an unintentional effect of the encounter between all of these.” Azoulay, p 23, 86.

¹¹ The earliest documented complaint is dated 1856 and described as an “anxious inquiry” to Hon. Caleb Cushman from a landowner in the Valley of El Paso, *Reports of International Arbitral Awards. The Chamizal Case (Mexico, United States)* 15 June 1911. Volume XI, United Nations, 2006. p 329

¹² Mexican surveyors stated “the destruction of the right side [of the Rio Grande or Bravo del Norte] almost wholly took place during the great swell years 1864, 1868, 1874.” Chamizal arbitration: “The counterclaim of the United States of America before the International boundary commission.” United

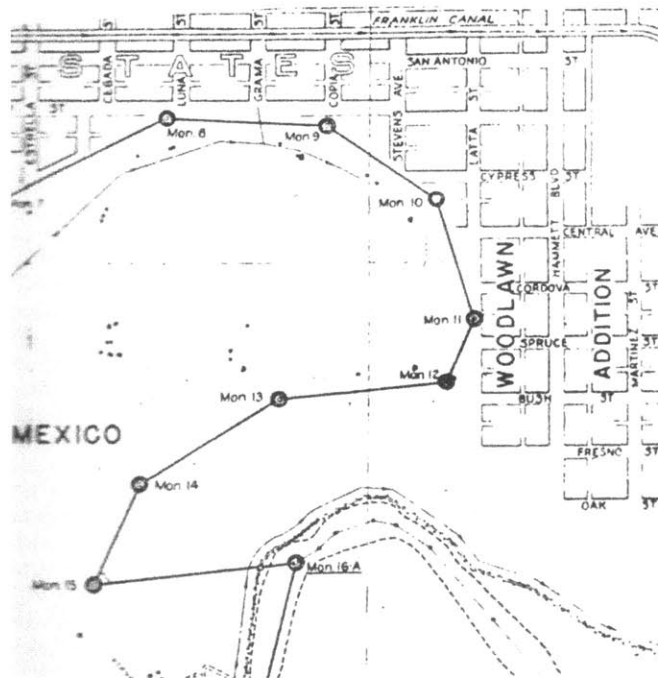
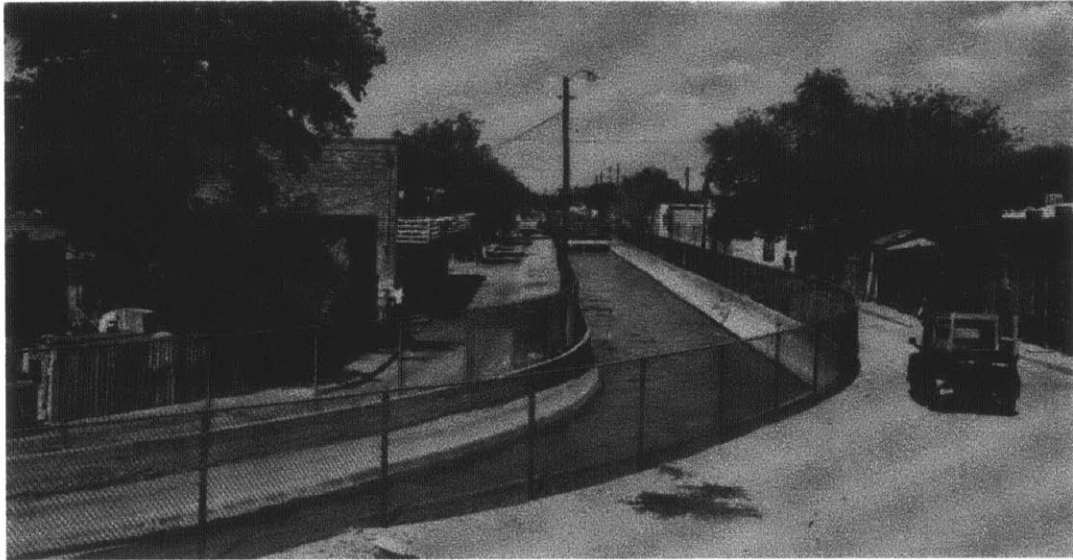
known as the Chamizal.¹³ Mexico believed the original survey line should be honored, while the United States claimed the boundary shift was gradual and, in accordance with international law, the territory was theirs.¹⁴ To complicate matters further, a small parcel of land nicknamed Cordova Island was recognized as Mexican territory north of the Rio Grande, created in 1899 after a man-made channel streamlined the river in an effort to control flooding and additional erosion.

Disjunction between natural barrier and theoretical line was a problem well documented on the United States-Mexico border. Confronted with the unruly course of the Gila River, a regional waterway that designated an early portion of the boundary until the 1853 Gadsden Purchase, early commissioners William H. Emory and José Salazar Ylarreguí reconciled the futility of their efforts with poetic reflection: The river was better suited as a monument to the evolving forces acting on the border, they would write, than as a fixed limit of sovereign territory. Any attempt at survey was inconsequential. Shifting natural boundaries were given explicit representation four decades later when a fifteen-mile stretch of the Colorado River was surveyed in 1893 by the United States commission and then again by the Mexican commission in 1894. “Official map No. 19” shows their efforts superimposed, revealing a tangled network of tributaries and islands formed through time, or perhaps simply by subjective viewpoints (Fig. 2). All 1,255 miles of the Rio Grande could thus be conceived as a dynamic path with an internal logic of its own, redistributing national territory at will. Yet, as unsettling as the concept was to governing bodies, such acts of natural deviance were only of consequence in settled locations where built structures and populations could be quantified along with acreage lost or gained.

States of Mexico, Hon. Eugene Latleur presiding under the provisions of the convention between the United States of American and the United States of Mexico, concluded June 24, 1910. With appendix and portfolio of maps. United States. Washington, Govt. printing office, 1911. p 6

¹³ The name Chamizal is taken from a local saltbush.

¹⁴ Though the Treaty of Guadalupe Hidalgo specified the Rio Grande as an international boundary in 1848, the course of the river was not surveyed and documented until 1852. See: Map No. 29 of the Boundary Commission, Messrs. José Salazar Ylarregui and General W.H. Emory.



Figures 3-4. El barrio del Diablo (or "neighborhood of the devil").

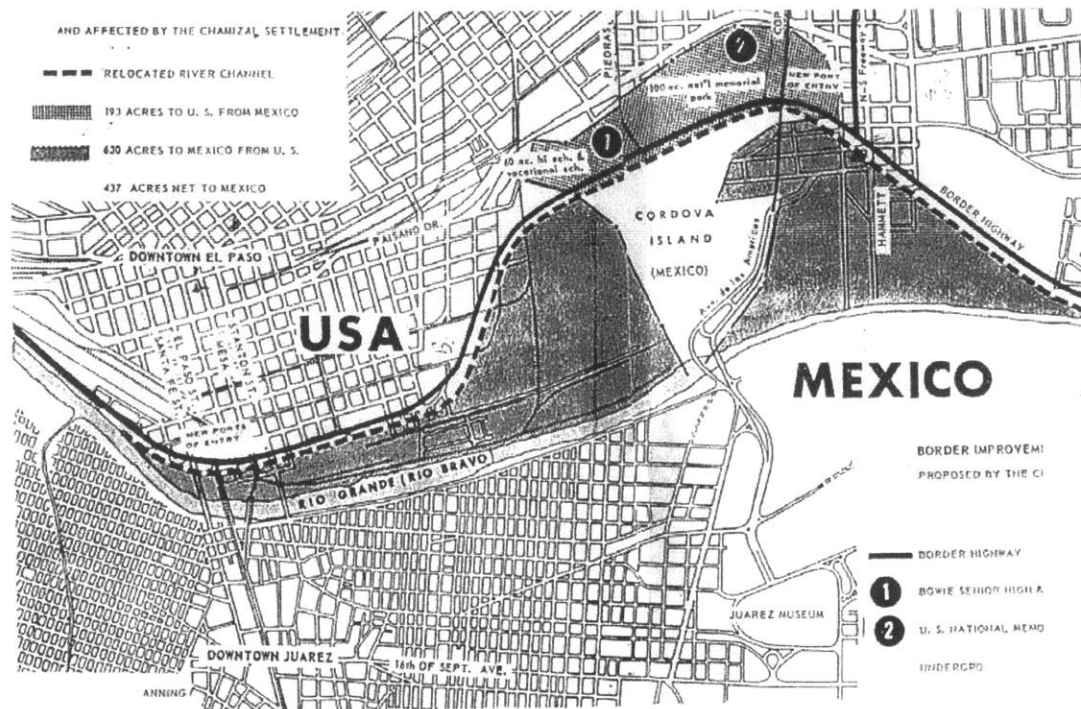


Figure 5. "Land affected by the Chamizal Settlement," map of the city of El Paso, Texas. Dotted line indicates the relocated river channel. Bowie Senior High School, the site of the main ceremony on September 25, 1964, is labeled with the number one.

The boundary shifts that accumulated between El Paso and Juarez by the beginning of the twentieth century produced a thick liminal zone of contestation. Not only was territory in question, which included a residential population and small industrial center of factories and warehouses, but also the fundamental relationship of sovereign limits to historic boundary markers. Cordova Island, a Mexican enclave north of the river in otherwise United States territory, exacerbated this tension. Occupying a geographic position outside the normative bounds of national division, the land mass became a troubles grey zone for federal jurisdiction and responsibility. Nicknamed *el barrio del Diablo* (or “neighborhood of the devil”) it was a popular site for drug smuggling and illegal immigration (Fig. 3-4).

The Chamizal dispute motivated political summits and revolutionary acts. An early 1909 meeting between Presidents Taft and Porfirio Díaz to negotiate the land was disrupted by a violent riot that led in headlines. “Diaz-Taft Meeting marred by Tragedy; Boys Duel Over Flags,” ran the banner of the *Atlanta Constitution* to overshadow Taft’s visit to Juarez, reported as the first time in history a United States president traveled outside of national limits.¹⁵ A year later, an arbitration proposal (mediated by an “impartial Canadian jurist”) to split the disputed land equally between nations and was deemed a failure.¹⁶ Both the United States and Mexico rejected the compromise, concluding in a final report: “The present decision terminates nothing; settles nothing. It is simply an invitation for international litigation. It breathes the spirit of unconscious but nevertheless unauthorized compromise rather than of judicial determination.”¹⁷

Decades later, with the threat of communist infiltration through the nation’s southern edge, John F. Kennedy reopened the Chamizal case in 1962 with then

¹⁵ President Taft was quoted in the *Atlanta Constitution* stating, “This is the first time, so far as I know, that a president of the United States has stepped beyond the border of the United States, either on the north or on the south, and I esteem it a great privilege to be the president at the time when that event has happened.” “Diaz-Taft Meeting marred by Tragedy; Boys Duel Over Flags,” *The Atlanta Constitution*; Oct 17, 1909. p C1

¹⁶ “To Be Arbitrated.: Canadian to Decide Whether Mexico or the United States owns Chamizal Tract,” *Boston Daily Globe*; June 20, 1910. p 3

¹⁷ *Reports of International Arbitral Awards*, p 342

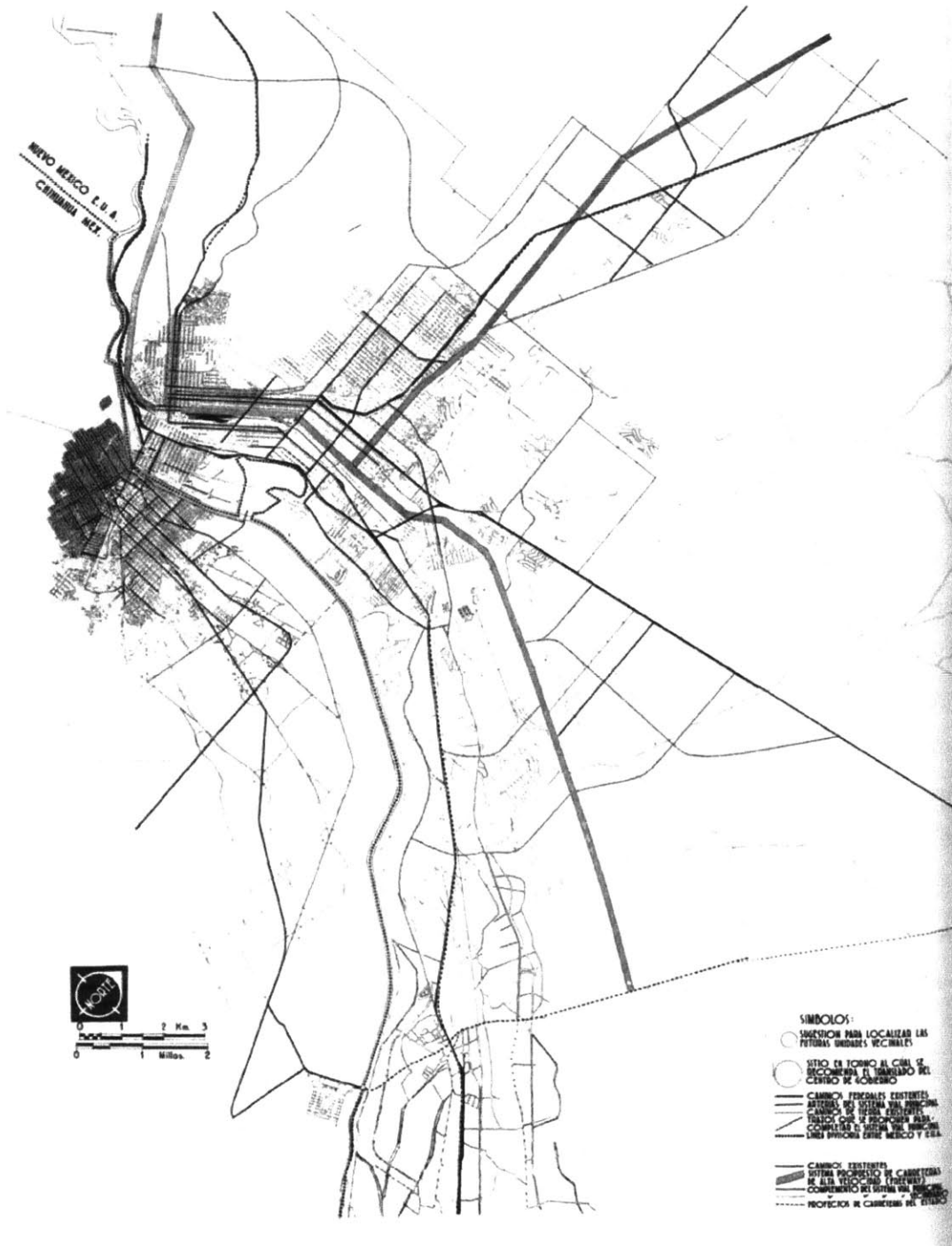


Figure 6. Mario Pani, Plan regulador de Ciudad Juárez. *Arquitectura/México*, 1958.

Mexican President Adolfo López Mateos. Quoted in the *Wall Street Journal* Mateos pronounced the Chamizal “the No. 1 problem in U.S.-Mexican relations.”¹⁸ The disputed land was negotiated within a larger international program, the *Alliance for Progress*, which provided United States government aid to Latin America—publicized as support to “complete the revolution of the Americas.”¹⁹

With sparse historical records largely based on personal accounts, the sole geographic reference for the Rio Grande agreed upon by both nations was the original survey conducted in 1852.²⁰ This survey line held authority for over one hundred and twelve years, cited in ongoing international negotiations and ultimately serving as the final reference for the reconstruction of the river in the 1960s. A map from the city of El Paso, produced in 1964 titled “Land Affected by the Chamizal Settlement” shows the disputed territory as well as the location of the Chamizal ceremony (Fig. 5). Grey poché fills the land in question, bound by the Rio Grande in the south and its future (or nineteenth-century past) course in the north. A thick dotted line snakes through the map labeled “relocated river channel,” representing the 1852 survey line superimposed on an urbanism that had since grown to a half million in population. A new “border highway” is shown offset from the river channel, signifying dual lateral infrastructures of water and transportation that would run alongside and give uninterrupted material presence to the borderline. While boundaries, acreage, and infrastructure are presented with diagrammatic clarity, the displaced residents of the Chamizal, estimated at 5,600 at the time the land was rezoned, are denied visual

¹⁸ Blundell, William E. “Chamizal Struggle: U.S. Hopes for a Cold War Gain From Giving in to Mexico in Old Border Dispute,” *Wall Street Journal*; Feb. 28, 1963. p 16

¹⁹ Kennedy, John F. “Preliminary Formulations on the Alliance for Progress.” *Address by President Kennedy at a White House Reception for Latin American Diplomats and Members of Congress, March 13, 1961.*

²⁰ It should be noted that even the original survey line was a fictional construct, a contractual negotiation between national survey teams who ran and marked the international boundary separately. In a journal entry dated September 21, 1857, boundary commissioners Emory and Salazar addressed the differences in national reports stating: “The Commissioners think it proper to state that in many details along the Rio Bravo, in Topography, and in Latitude and Longitude, there are small differences, the legitimate result of scientific operations performed under difficult circumstances. These differences are explained by notes on the Maps, but they in no way affect the Boundary Line.” *Chamizal Arbitration*, p 19

presence.²¹ A speckled hatch over the contested land obscures any reading of residential side streets or human occupation.

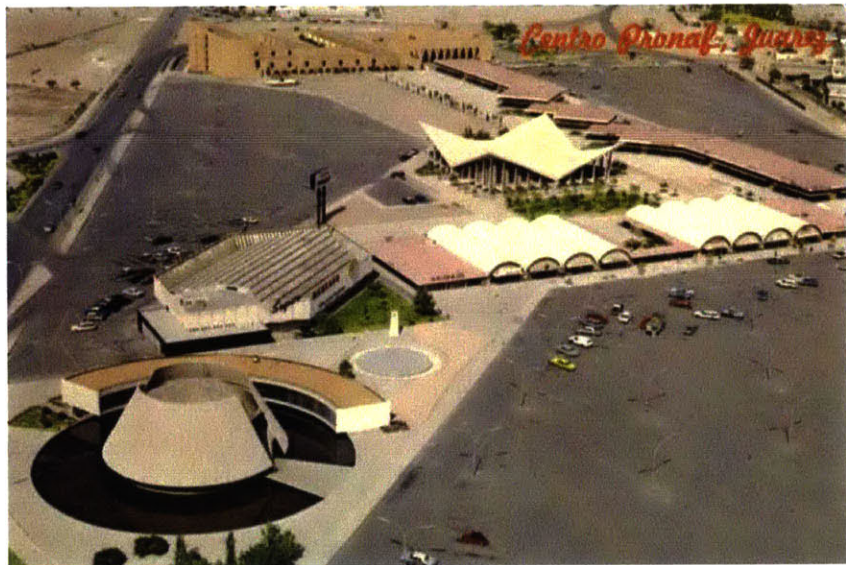
The ceremonial location of Johnson and Mateos is labeled on the El Paso map with a number one, taking place in United States territory on a sports field at Bowie Senior High School. While ample space was a requirement for the large public gathering, it should be noted the distance the event took place from the downtown districts of El Paso and Juarez.²² These adjacent urban zones, connected by three international bridges linking the urban communities and labeled as “new ports of entry,” are in close proximity and linked with a continuous commercial strip. In comparison to Bowie Senior High School and the simulation of context that was constructed there, a distinctive site existed less than two miles away, operating in reality as an international joint between the two nations. When given the choice between real site and abstracted reproduction, federal administrators chose the latter. The Chamizal ceremony could just as easily have taken place on a Hollywood sound stage in lieu of the international border.

Perhaps a generic symbol of binational cooperation was the point intended, a site that could stand in for a range of geographies on the U.S. federal agenda. The Chamizal was just one of many locations mentioned by Lyndon B. Johnson in his dedication speech that afternoon. Johnson initially linked to broader territory with the phrase, “We have found peaceful roads to the solution of differences from Chamizal to Panama,” and then quickly spiraled to address a host of global others: Africa, the Middle East, Israel, China, Japan, Eastern Europe, Western Europe, Moscow, Cyprus, Viet-Nam, Congo, Cuba, Greece, Turkey, and Lebanon.²³ The local history of Mexico and the United States at the Chamizal was subsumed by the larger concern of

²¹ Mohr, Charles. “Johnson Says U.S. Won’t Spark War: In El Paso, He Vows Not to Frighten Other Nations—Meets Mexican Chief,” *New York Times*; Sep 26, 1964. p 1

²² Crowds from El Paso and Juárez were estimated between 100,000 to 250,000 people. *Ibid.*

²³ Johnson, Lyndon B. “Remarks in El Paso at a Ceremony Marking the Settlement of the Chamizal Dispute. September 25, 1964,” p 1118-1119



Figures 7-8. Postcards from the Centro Pronaf in Juarez, Mexico, 1960s. The Museo de Arte e Historia (pictured lower left) designed by Mexican modernist Pedro Ramírez Vázquez, constructed in 1964.



Figures 9-11. Unmarked images from the El Paso Times Media Archive. Reports on the Chamizal ceremony were published in a range of local and national newspapers including the El Paso Times, New York Times, Washington Post, Los Angeles Times, Boston Globe, and Chicago Tribune.

Cold War politics.²⁴ For Johnson, the event was a symbol “to all the world that the most troublesome of problems can yield to the tools of peace,” but more importantly to the Soviet Union that Mexico (and the larger frontier of Latin America) was in cooperation with the United States in the midst of the Cold War.²⁵ This further complication of the Chamizal site, as a singular location symbolically expanded ad infinitum, leads to a reading of multiplicity by means of the various territories, borders, events, and monuments it embodied or was institutionally framed to represent.

For Adolfo López Mateos the dedication was a testament to the ongoing urban development of Mexico’s northern border, spearheaded through his federal program *Programa Nacional Fronterizo* or PRONAF.²⁶ In the year of 1965 alone, head architect of the program Mario Pani designed “regulatory” masterplan developments and architectural projects for eight of twelve Mexican border cities including Juárez. The full urban ambition for Juarez was published in a 1958 issue of *Arquitectura/México* featuring plans for an economic “free zone” (the “Zona PRONAF”) to promote United States tourism (Fig. 6-8).²⁷ The development plans depict El Paso and Juárez as a single urban development, connected by a network of infrastructure spanning both sides of the international boundary.

²⁴ The speech of Adolfo López Mateos also privileged Cold War rhetoric over the local territorial implications of the Chamizal, focusing on the international relationship with the United States following WWII. See “Discurso del presidente López Mateos en la ceremonia de la entrega de Chamizal,” p 195

²⁵ The Wall Street Journal reported on the Chamizal in relation to Cold War politics in 1963 stating, “Mainly with a push from the Communists, the Chamizal issue has been put forth in Latin countries as concrete evidence of ‘Gringo imperialism.’ For example, Cuban emissaries have used it to inflame feelings against the U.S. in Venezuela, where President Betancourt’s pro-U.S. regime is being pounded severely by leftists.” Blundell, William E. “Chamizal Struggle: U.S. Hopes for a Cold War Gain From Giving in to Mexico in Old Border Dispute,” *Wall Street Journal*; Feb. 28, 1963. p 16

²⁶ English translation: *National Border Program*. For further reading see: Rodriguez, Marisol and Hector Rivero, “ProNaF, Ciudad Juarez: Planning and urban transformation,” *ITU*, Vol. 8, No. 1, 2011. p 196-207

²⁷ Detailed urban redevelopment plans for Ciudad Juárez can be found in “Plano regulador de Ciudad Juárez,” *Arquitectura/México*, 1965, p 62-75.

Performance

The act of political imagination that took place at the Chamizal Ceremony was by no means unique. Following the press conference, on the very same day, Lyndon B. Johnson also traveled to dedicate the Eufala Dam, visit the Oklahoma State Fair at Oklahoma City, and dedicate the John F. Kennedy Square in Texarkana, with photo ops and speeches “at every stop during his 15-hour day.”²⁸ The handshake at the border of El Paso and Juarez was just one of many he offered that Friday in a revolving press circuit of actions documented as socially binding contract.

A series of images from the Chamizal Ceremony, stored in the *El Paso Times Media Archive*, depict alternative views from that of the main press photograph (Fig. 9-11).²⁹ Offering a range of focal depths and taken at oblique angles and moments throughout the day, they provide valuable information as to the federal scenic design and broader context of the event. The archival *El Paso Times* images, unedited and without organization, sit between the constructs of government and press to offer a distinct perspective.³⁰ “Unmarked image No. 179” reveals the backdrop map to be a thin plane, reminiscent of a grounded billboard positioned within an expansive crowd. Likely supported by steel trusses from behind, it is just large enough to fill the frame of a frontal photograph and block the background of buses, trees, and onlookers.

An expanded view of the crowd in relation to both presidents and First Ladies Claudia Alta Taylor Johnson and Eva Sámano de López Mateos is provided in another unmarked series image. Taken from above the heads of an applauding public, the composition is centered on Lyndon Johnson holding the hand of Adolfo López

²⁸ “Johnson, Lopez Mateos Meet at El Paso Today,” *Los Angeles Times*; Sep 25, 1964. p 4

²⁹ The photographic archive of the El Paso Times contains 240 images of the event, a selection of which can be found online. The complete series was first published in 2013 after unmarked photographic negatives of the event were found. T. Long, “Archive photos: Previously unpublished 1964 Chamizal treaty settlement,” *El Paso Times Media Center*, Sep 25, 2013, accessed October 3, 2014.

³⁰ Azoulay notes that the photographer is often on the edge of the institution of which he or she is documenting; the images produced resist control by any one party. Azoulay, p 116.

Mateos in the air. A reporter stands on an elevated platform to document the scene and political placards are raised in the distance. The obelisk monument that served the proud focus of the main press photograph barely registers, mirroring adjacent figures at the base only to stand out above the crowd. The alternate images make clear a construction of place that could only be represented as total environment through an equally constructed photographic image, framed by a privileged and unobstructed frontal viewpoint.

The form and operative position of the Chamizal Monument can be traced to the late nineteenth century. Measuring six-feet nine-inches tall and one-foot wide at the base, it was the same scale and proportion as border monuments deployed in a joint 1891 international survey but was of a different material and construction type. The original monuments were designed in heavy cast-iron as material markers, sequentially numbered and intervisible from one lateral view to next along the entire length of the US-Mexico border west of the Rio Grande.³¹ These artifacts of visual reference operated as a set of standardized, engineered points, placed with geographic precision and objective finality.³² Their placement was inextricably linked to the constitution of sovereign limits, with the international seam bound to their exact location.

A copy of the 1891 border markers, The Chamizal Monument was a material artifact operating within a system of malleable signs. It simultaneously represented and denied a geographically specific location. Rather than constructed or placed the monument was *revealed* to an awaiting audience, exposed from under a white sheet by the combined effort of Johnson and Mateos (Fig. 12-13). In comparison to the

³¹ For additional information see: International Boundary Commission, *Report of the Boundary Commission upon the survey and re-marking of the boundary between the United States and Mexico west of the Rio Grande, 1891-1896*. 3 vols. Washington: Government Printing Office, 1898. A comparable Mexican report is titled: International Boundary Commission, United States and Mexico (1882-1896). *Memoria de la Sección Mexicana de la Comisión Internacional de Límites entre México y los Estados Unidos que restableció los monumentos de El Paso al Pacífico; bajo la dirección de México del ingeniero Jacobo Blanco, jefe de la Comisión Mexicana*. Nueva York: Impr. De J. Polhemus y Compañia, 1901.

³² "Our Southern Boundary: Report of Col. Barlow of the International Commission," *Los Angeles Times*; Nov. 29, 1896, p 11

original material of rough cast-iron, the Chamizal Monument was one-of-a-kind and produced in gleaming chromium-plated steel. Reflecting actions immediately adjacent in sharp clarity and the surrounding atmosphere with rippled distortion, the finish was atypical and deserves consideration. One could imagine that without the context of political fanfare the monument would simply reflect its natural surroundings and effectually disappear, an anti-monument of sorts. Though the artifact had binational inscriptions, it was not numbered in relation to the existing monuments west of the Rio Grande. It sat in obscured isolation, a single self-referential point that had no visual connection to a larger context.

Further, soon after the Chamizal Ceremony concluded the obelisk was removed to make way for the reconstruction of the Rio Grande. The monument had been placed purely as temporal political prop. The international survey line between El Paso and Juárez was constituted in reality through an urban-scale landscape-engineering project that would materialize the boundary by means of a continuous concrete channel. It was precisely the acts of engineering that governed the reconstitution of international limits—in relation to survey location, monument, and channel construction—that were denied visual presence at the Chamizal Ceremony. Referencing back to the consideration of alternative realities, the *El Paso Times* press photograph may be considered through the unseen element of engineering.

The concrete channel that redirected the Rio Grande back on its historic course was 4.5-miles long, 116-feet wide, and required 78 million dollars to construct.³³ An aerial image from 1966 midway through construction shows the full scale of the project (Fig. 14). The view looks east, laterally down the borderline with El Paso labeled on the left and Ciudad Juárez on the right. The freeform course of the Rio Grande zigzags vertically down the image, in close proximity to Mexican urban development. The nascent path of the new channel reaches to the sports fields of Bowie Senior High School, captured in this one moment as if terminating directly on

³³ Sheehan, Neil. "Johnson and Diaz Ordaz Shift Rio Grande Into a Concrete-Lined Channel," *New York Times*; Dec 14, 1968. p 18.



Figure 12. Monument sheathed...



Figure 13. "President Johnson and President Lopez Mateos pull ropes to draw the covering from a special monument marking the new boundary agreed to in the Chamizal Treaty. Site is at Bowie High School."

the past site of the Chamizal Ceremony. A comparable view from 1968 pictures the project complete (Fig. 15). The straight-edged lines and tight curves of the concrete channel, rendered as an engineered super-highway, boldly upstage the last remnants of the natural riverbed. Sitting side-by-side, the new channel is a streamlined sign of the old. The formerly disputed Chamizal territory sits between, vacant and restricted from development after being designated a national park and historic site in 1966.³⁴ If the *El Paso Times* press photograph represents a social fiction of place and placing, then the aerial images of the Rio Grande channel provide evidence of the realized alternative.

Postscript

On December 13, 1968 United States President Lyndon Johnson and Mexican President Gustavo Diaz Ordaz traveled to the border of El Paso and Juárez to celebrate the completion of the Rio Grande channel. They met at the center of the newly built Santa Fe International Bridge, where the Chamizal Monument had been stripped from its base and relocated (Fig. 16). In a repeat performance of the 1964 Chamizal ceremony with modified actors, location, and object, the two presidents clasped hands in front of the monument, symbolically atop the abstract survey line. Again, the ritual was documented as binding social contract by international press. The profile of Lyndon Johnson, reflected in chromium-plated steel, can be seen in a grainy archival image from the *New York Times* (Fig. 17).³⁵

The finale of the ceremony was orchestrated as a display of federal control over nature and the riverbed. After shaking hands, Johnson and Ordaz approached a platform with a raised red button. A simultaneous compression by both presidents was rigged to detonate an earth dam by dynamite a half-mile away, allowing the river

³⁴ Texas Historical Commission. "Chamizal National Memorial," *Texas Historic Sites Atlas*, Feb. 2, 1974.

³⁵ See: Sheehan, Neil. "Johnson and Diaz Ordaz Shift Rio Grande Into a Concrete-Lined Channel," *New York Times*; Dec 14, 1968. p 18



Figure 14. New Rio Grande Channel under construction, 1965.

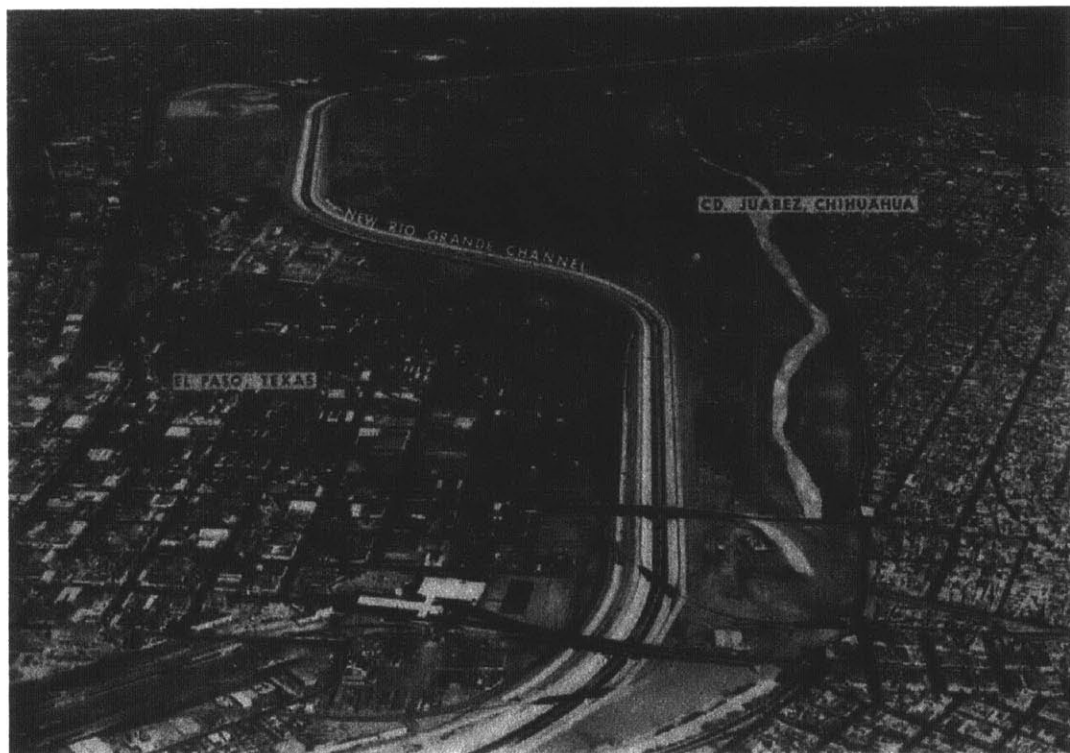


Figure 15. New Rio Grande Channel completed, 1967.



Figure 16. The Santa Fe International Bridge, linking El Paso to Ciudad Juarez.

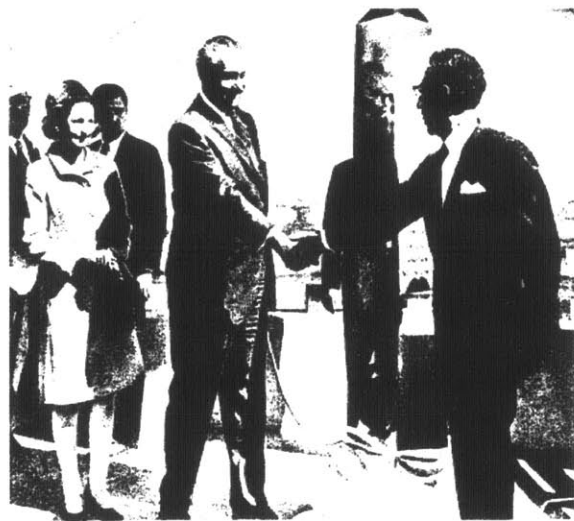


Figure 17. Lyndon Johnson and Gustavo Diaz Ordaz shake hands in front of the Chamizal Border Monument, on the Santa Fe Bridge between El Paso and Juarez. *New York Times*, Dec. 14, 1968.

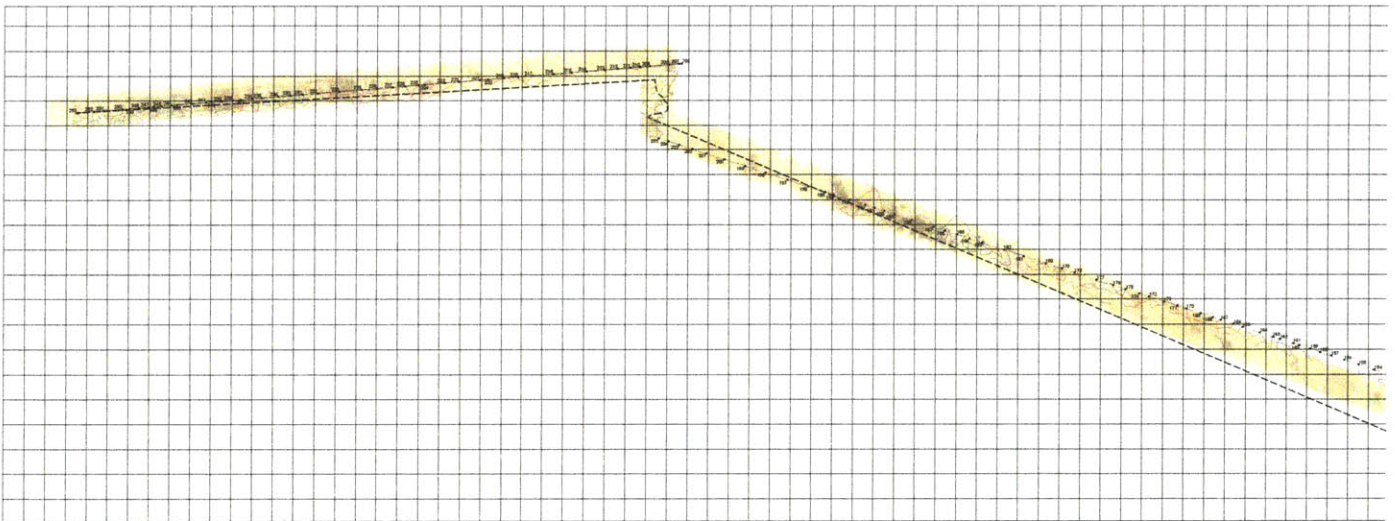
behind to surge through its new course. However, the performance of wilderness tamed ended in anticlimax: An insufficient blast resulted in a “trickle” of water to emerge instead of a mighty current.³⁶ In a final moment of failed rupture, the federal act of engineering that reshaped sovereign limits was not even allowed presence through the choreographed act of simulation, and was represented solely by the malfunction of a single button.

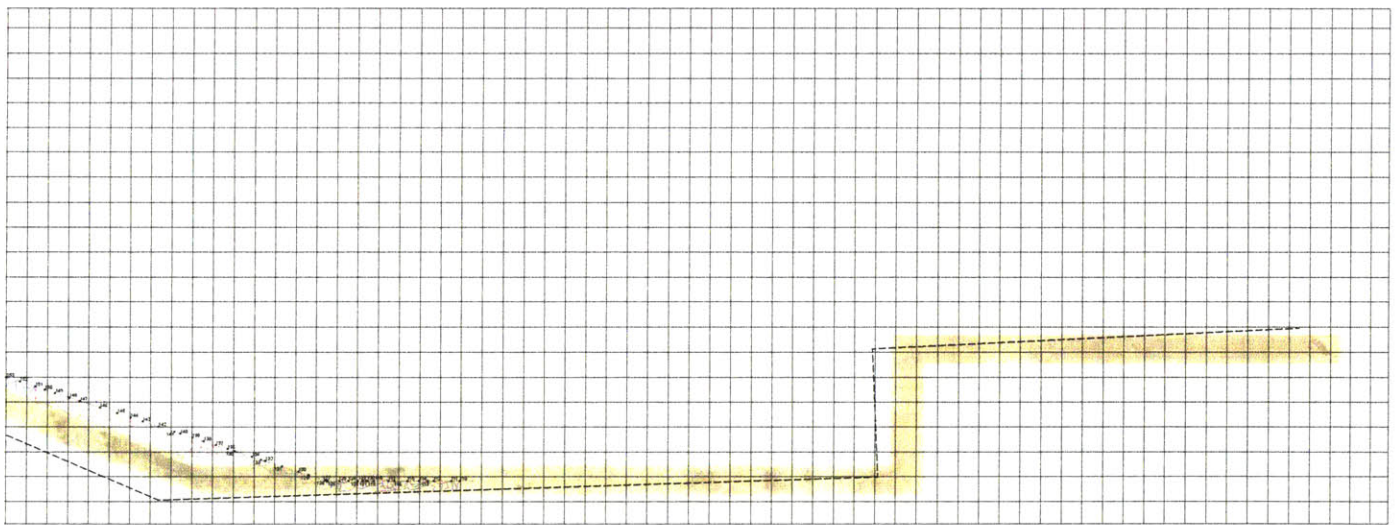
³⁶ Ibid.

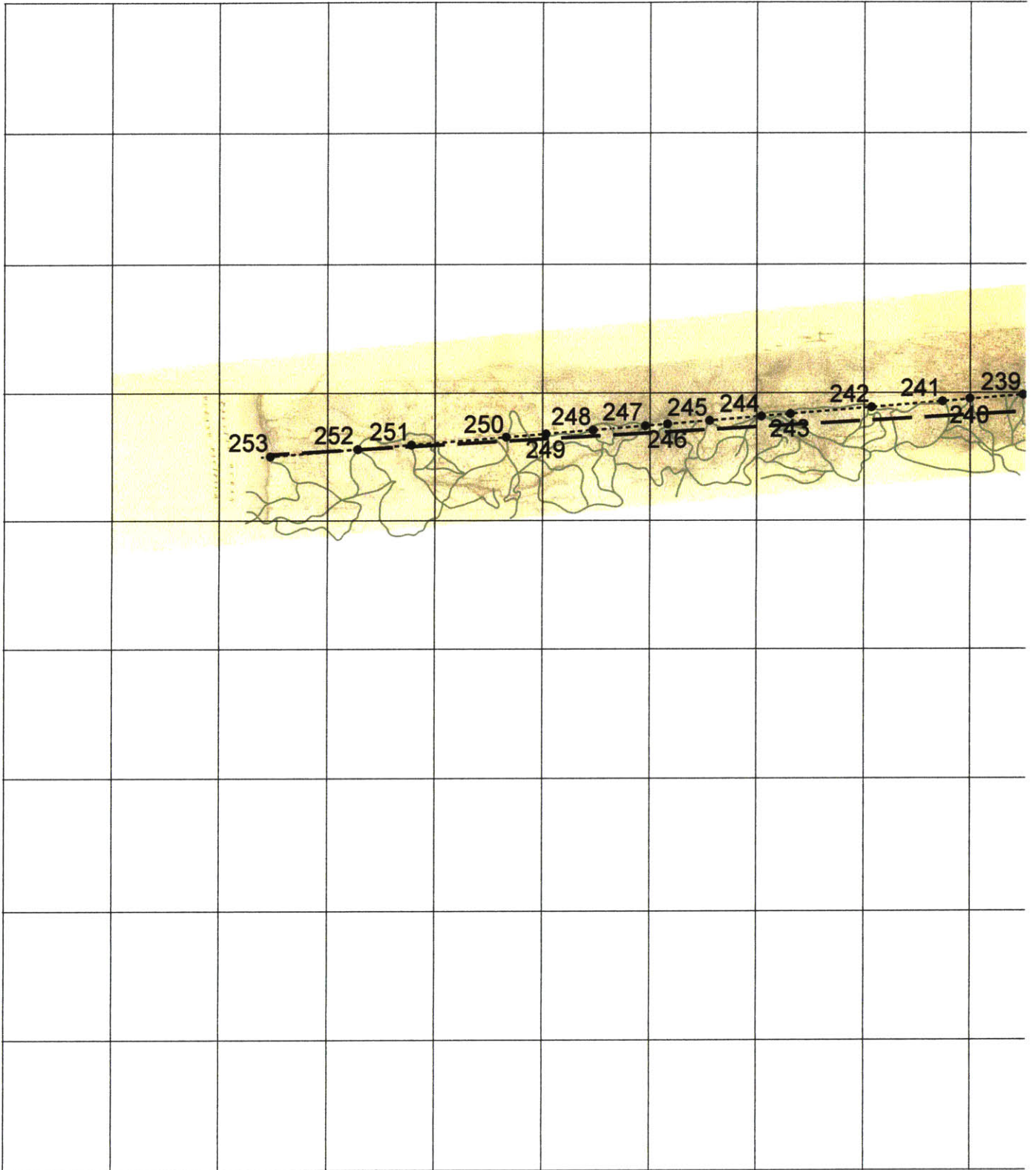
Map: Boundary Overlay

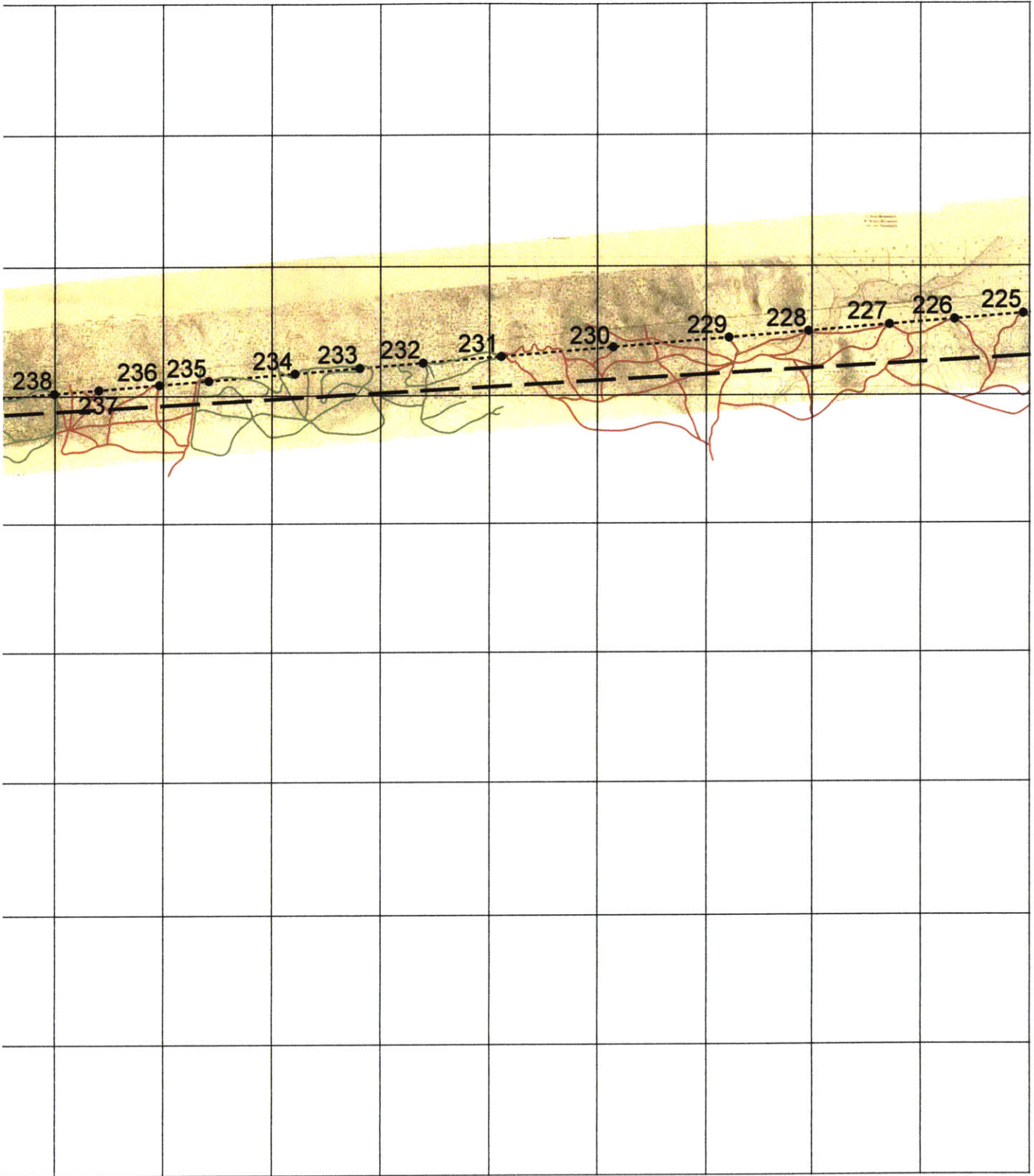
The third project is a map displaying three different federal representations of the line overlaid. (1) The 1855 line documented after the Gadsden Purchase, (2) the official boundary commission map series from the 1889 survey, and (3) the "footpath" maps published in the 1901 Mexican national report.

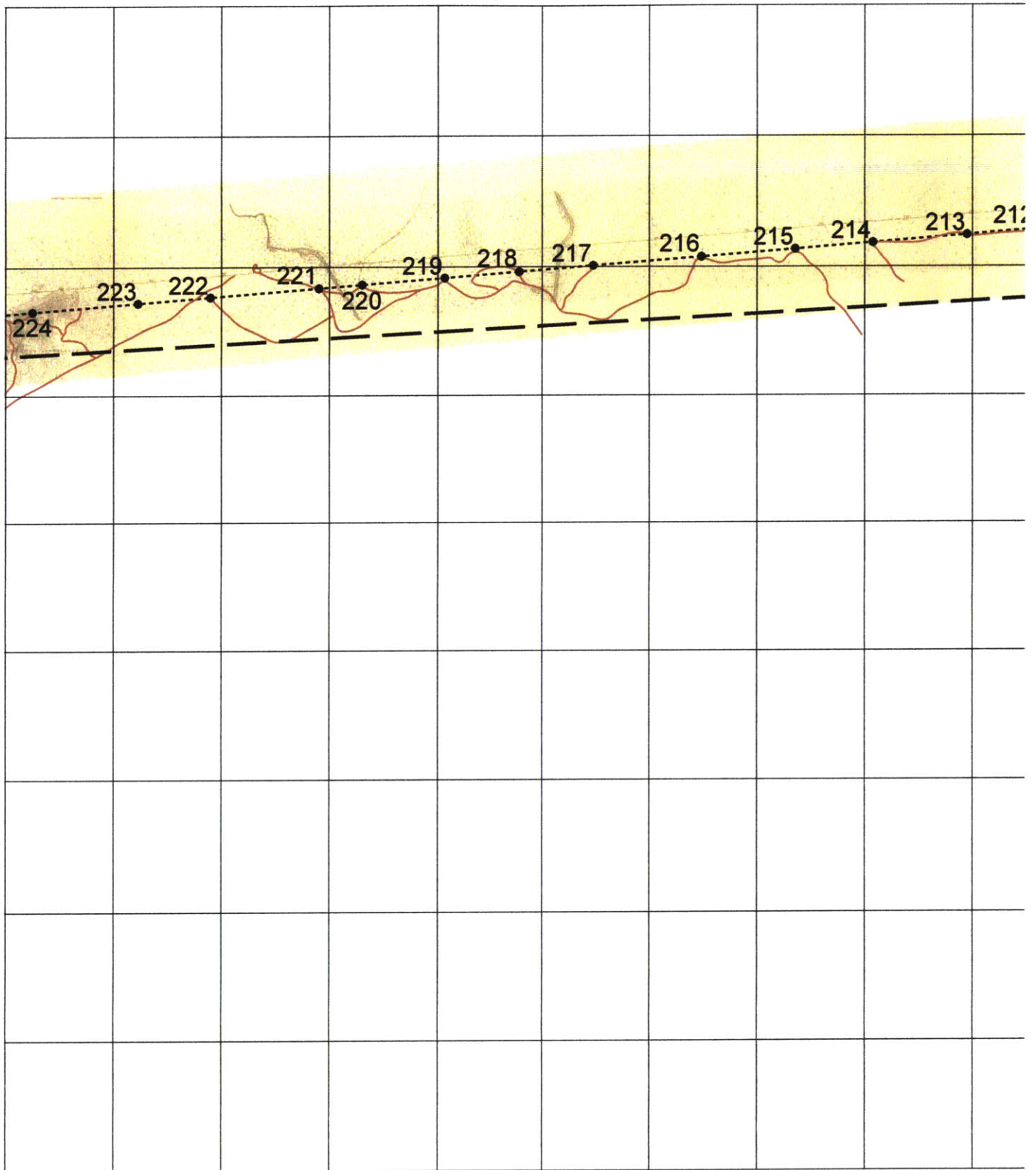
The lines are all pinned to start at the same location on the Pacific coast, the original Initial Point, and then run out their respective paths. In addition to a basic reference for the geographic placement of monuments and the international boundary, the map provides supporting evidence that an exact and consistent position of the line only exists as a theoretical construct. The boundary is represented as an accumulation of varied viewpoints, all different yet each with a history of federal authority at a particular moment in time.

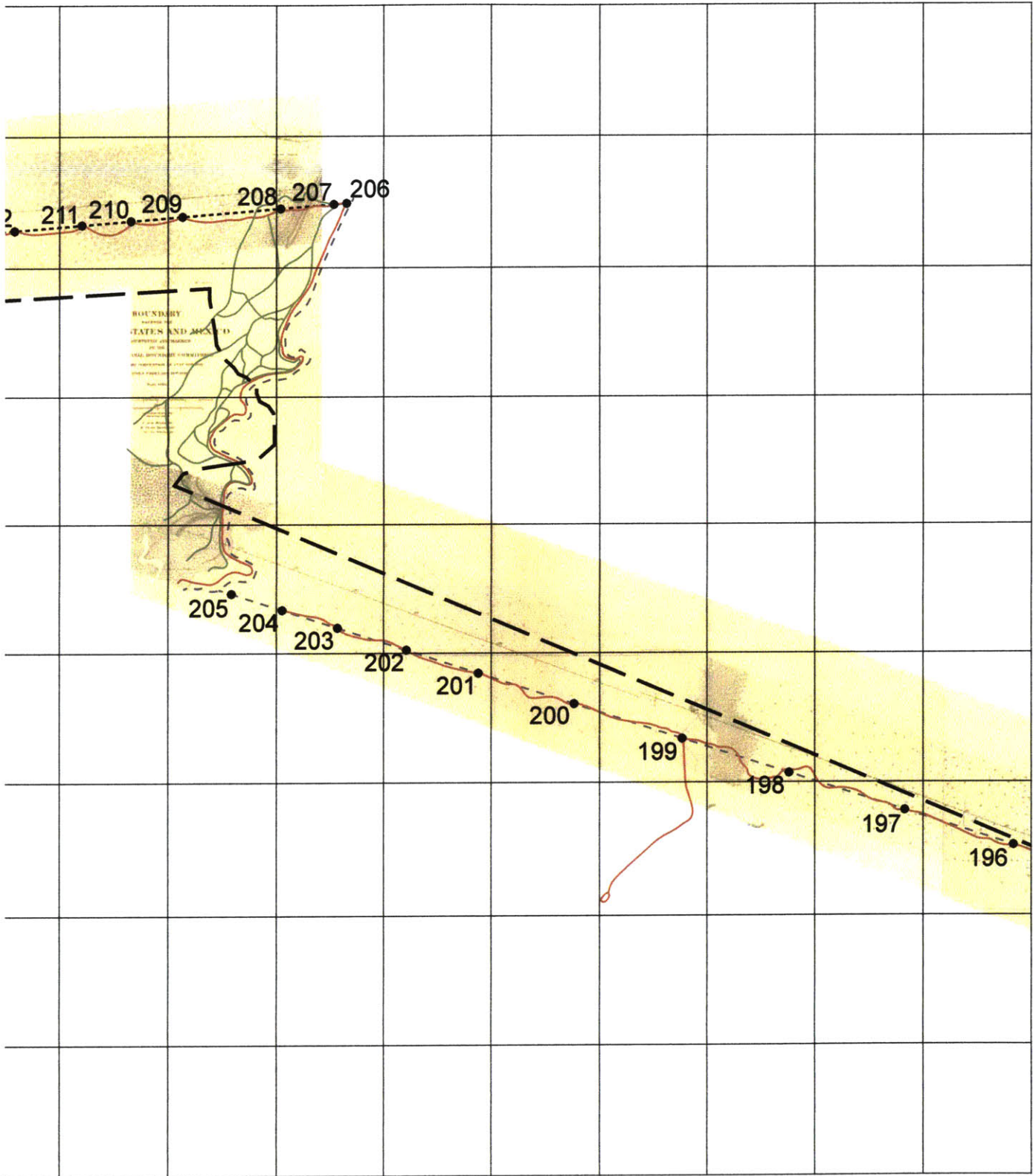


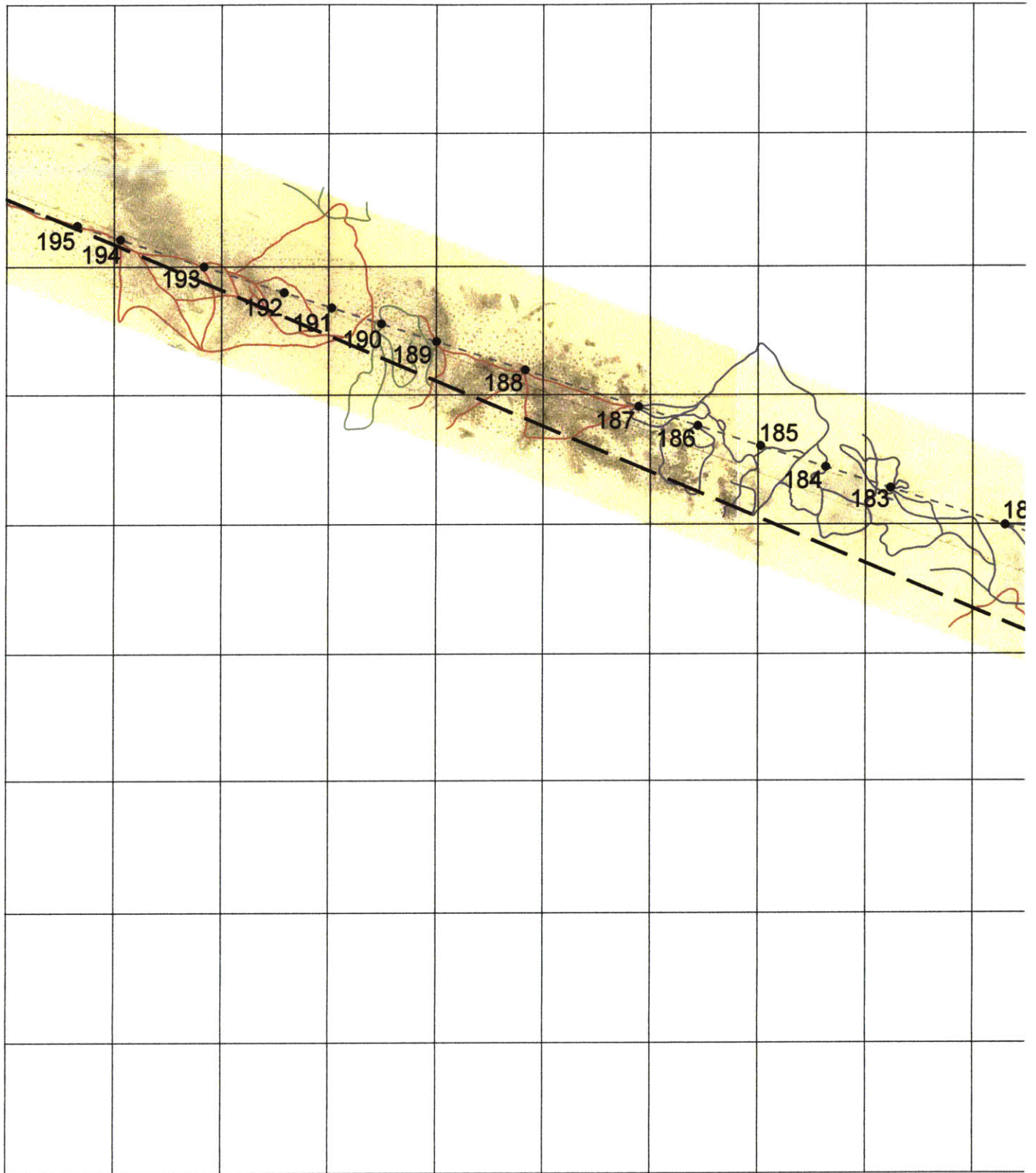


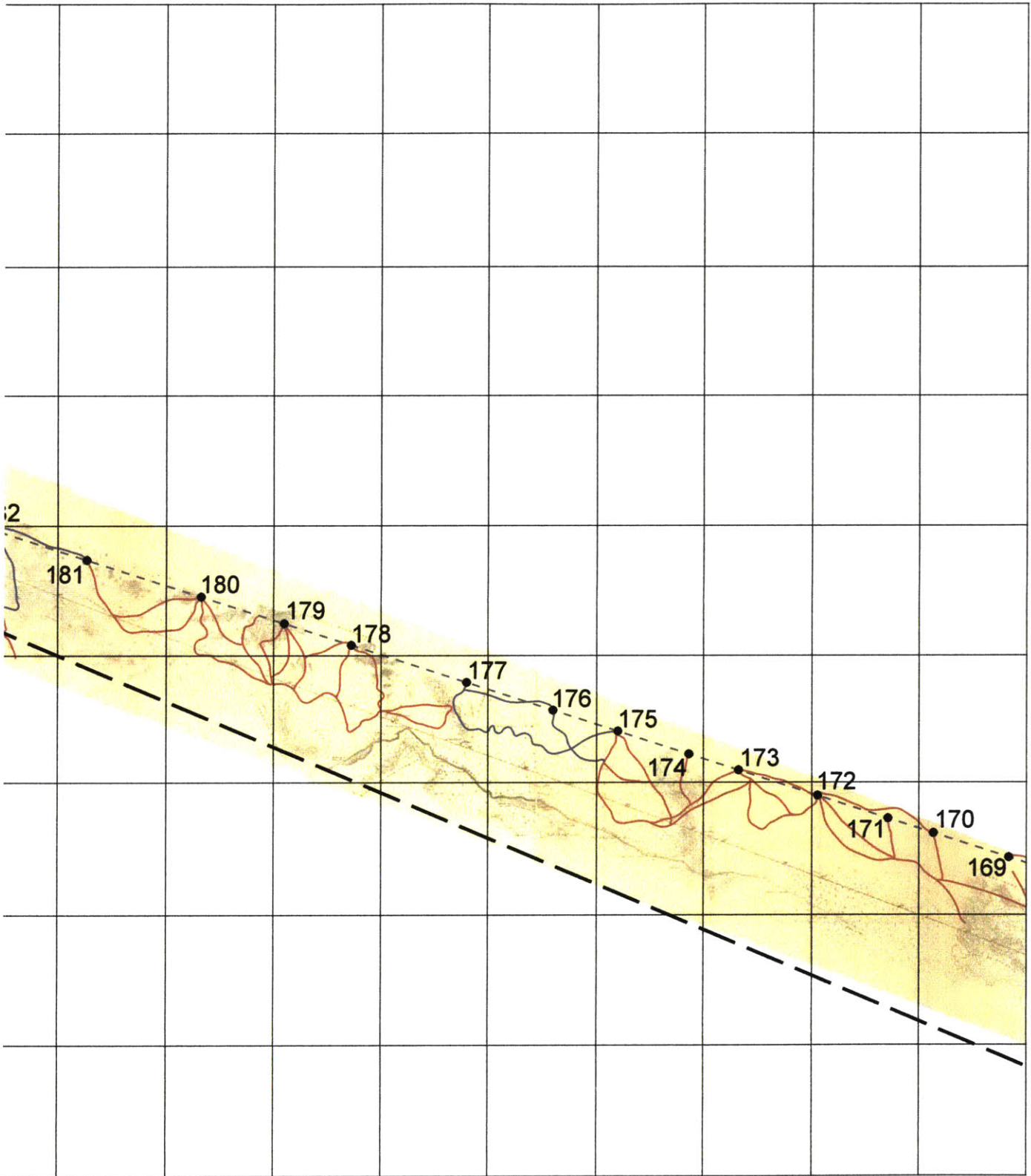


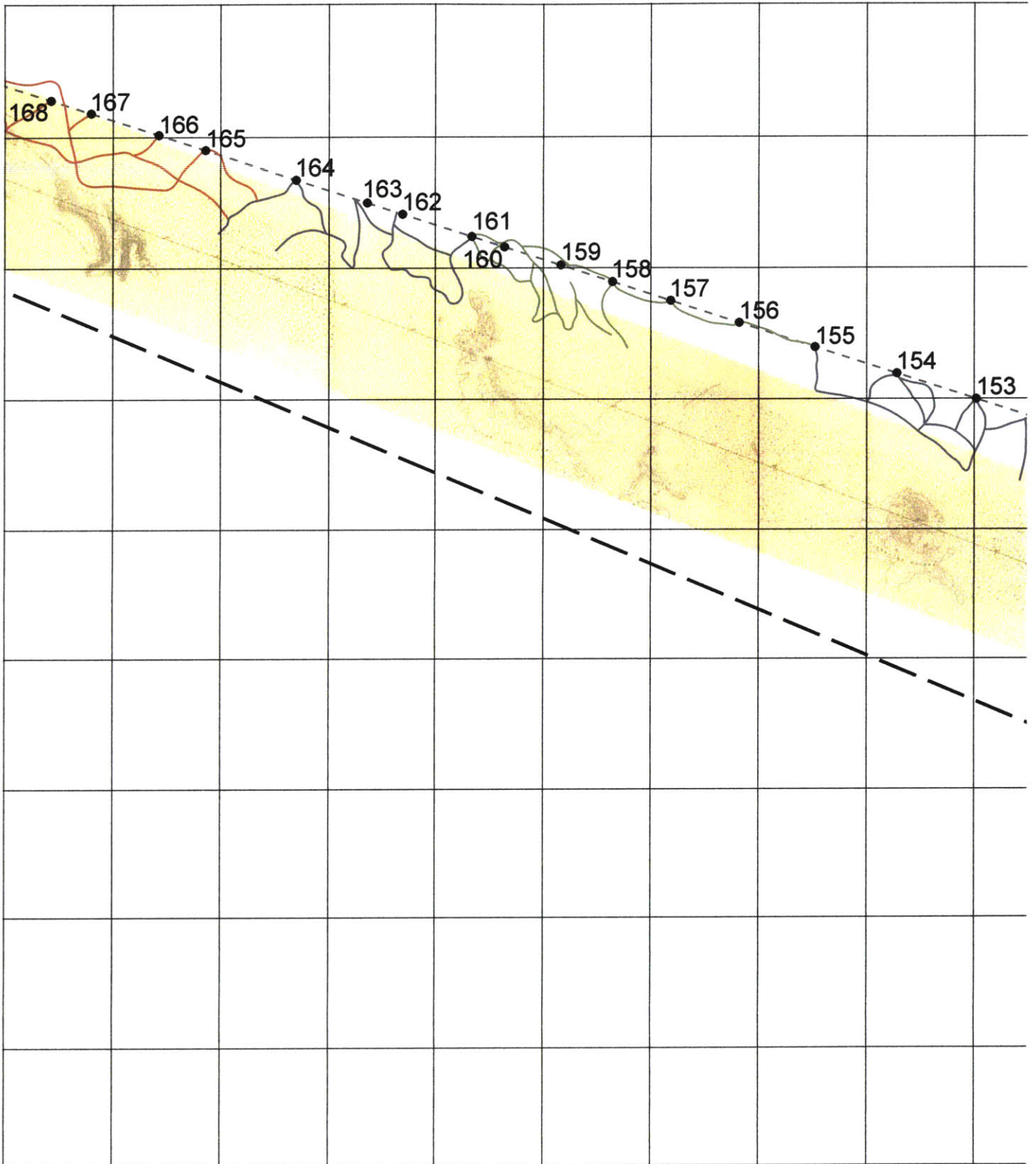


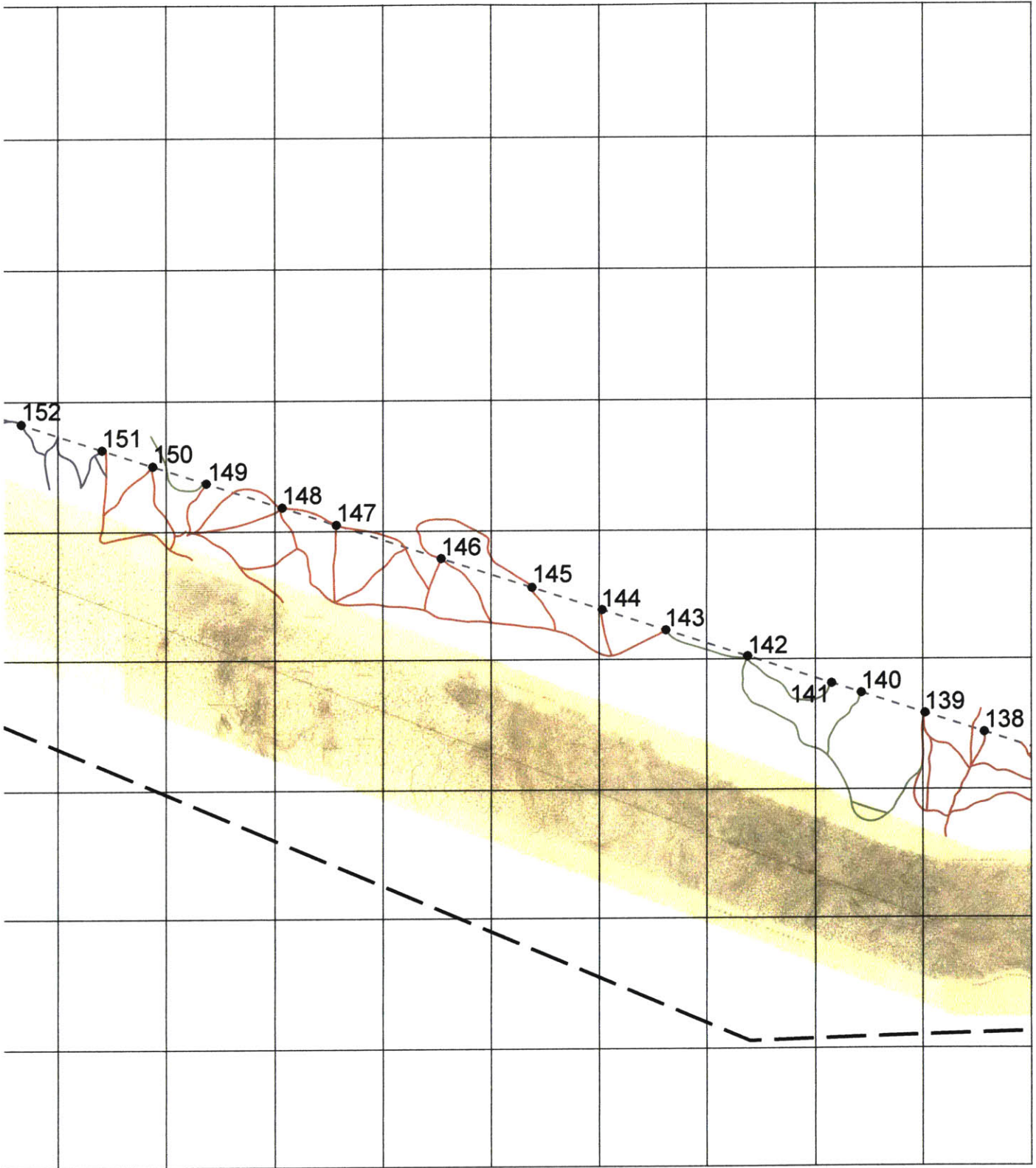


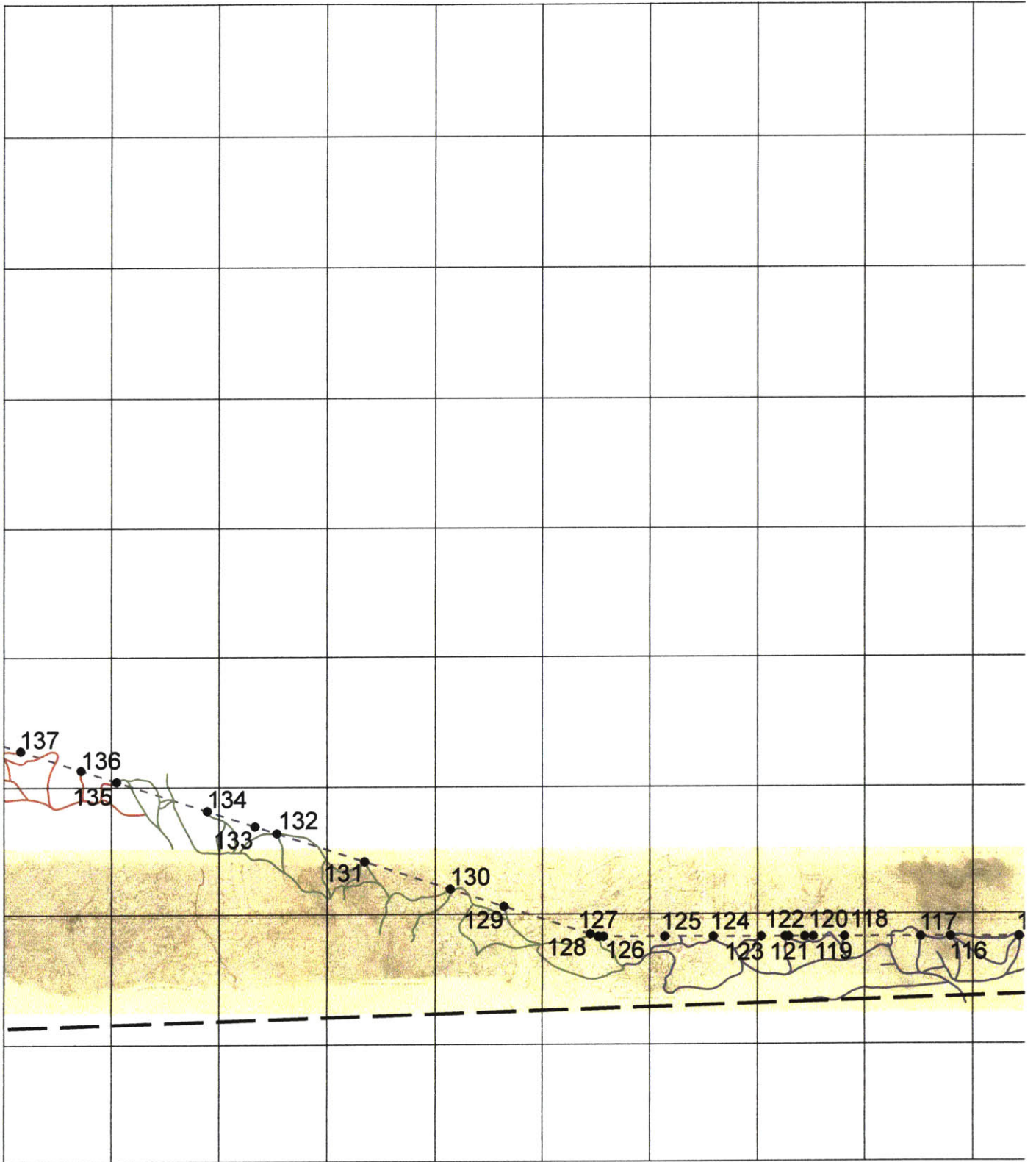


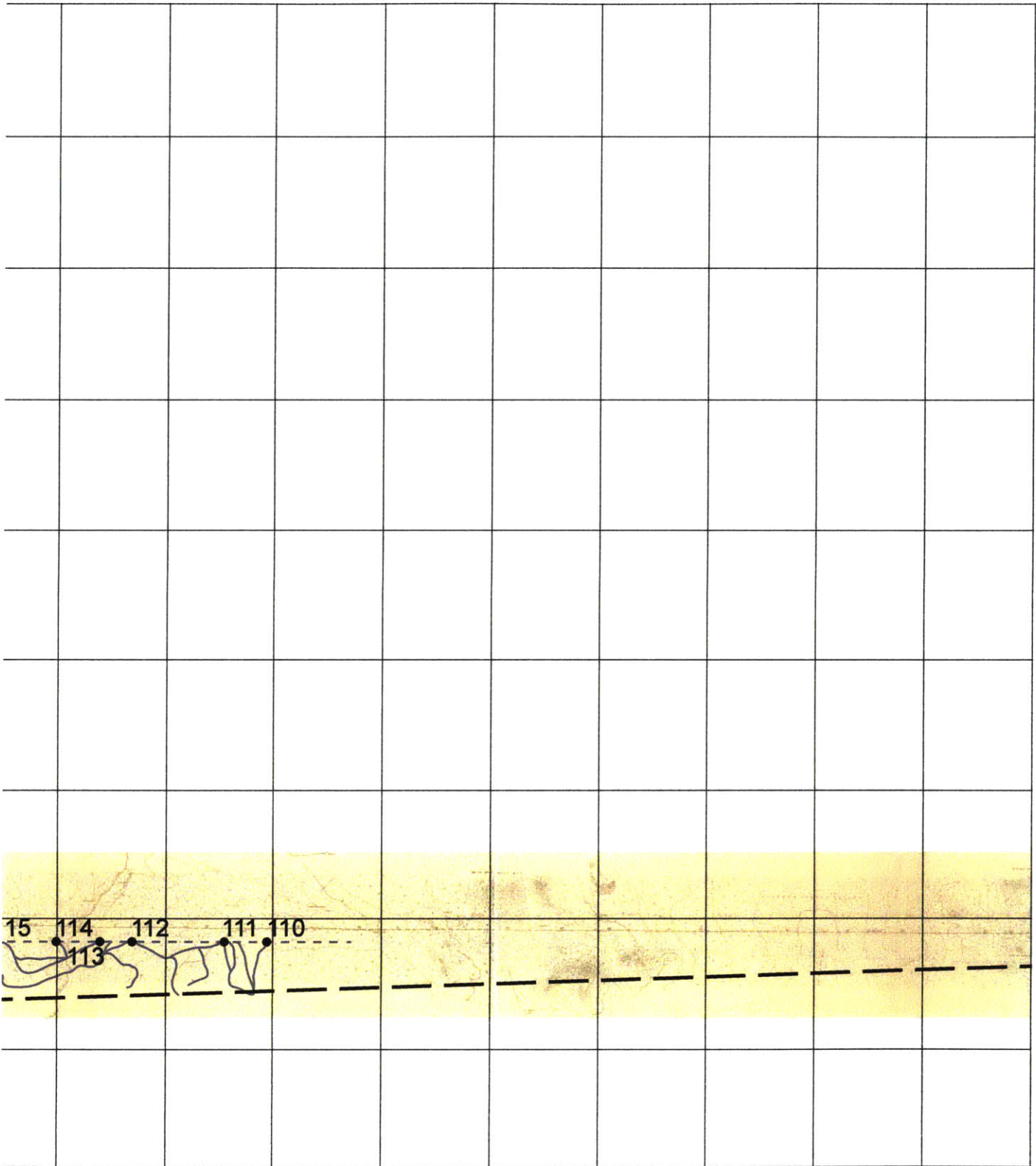


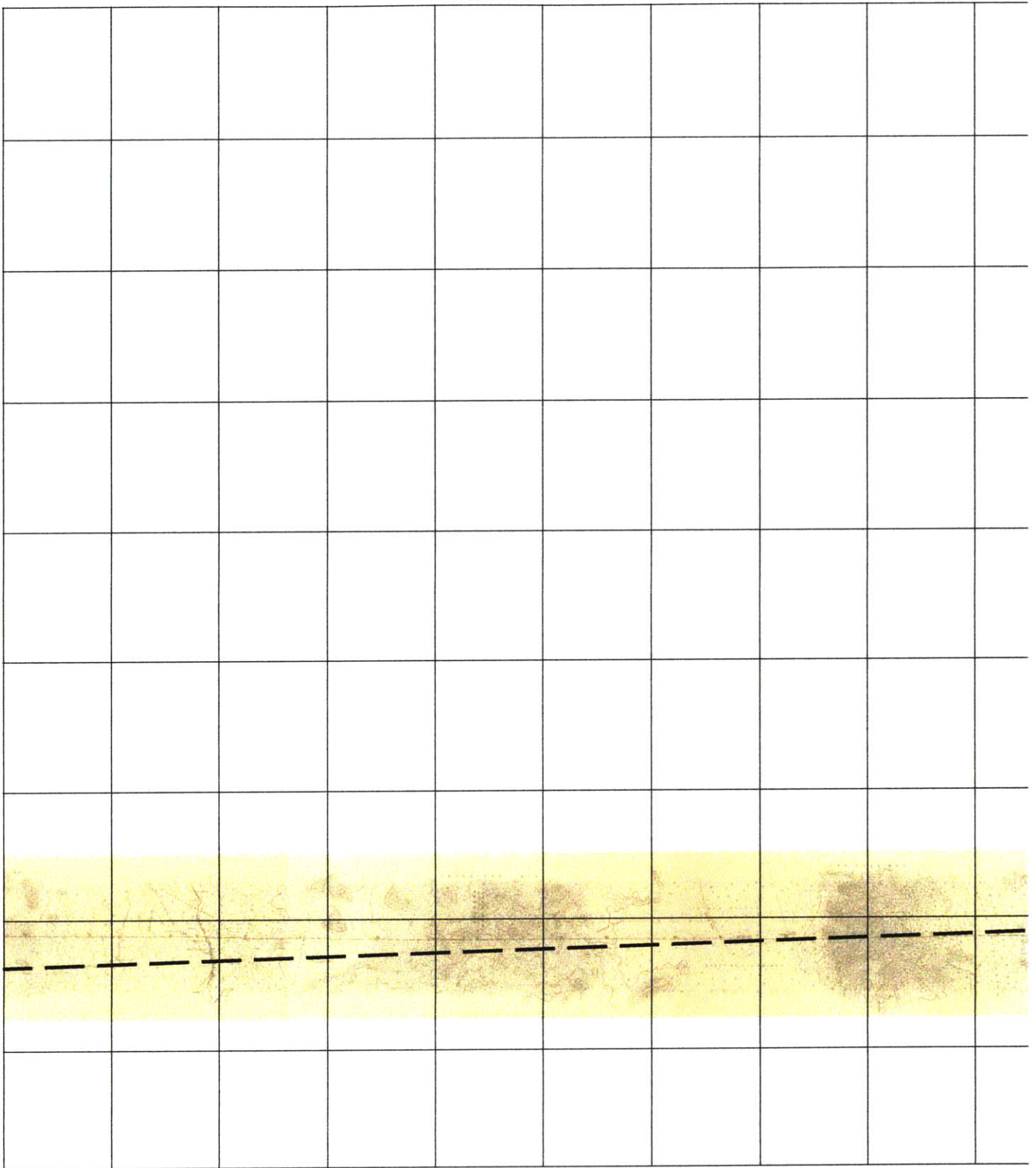


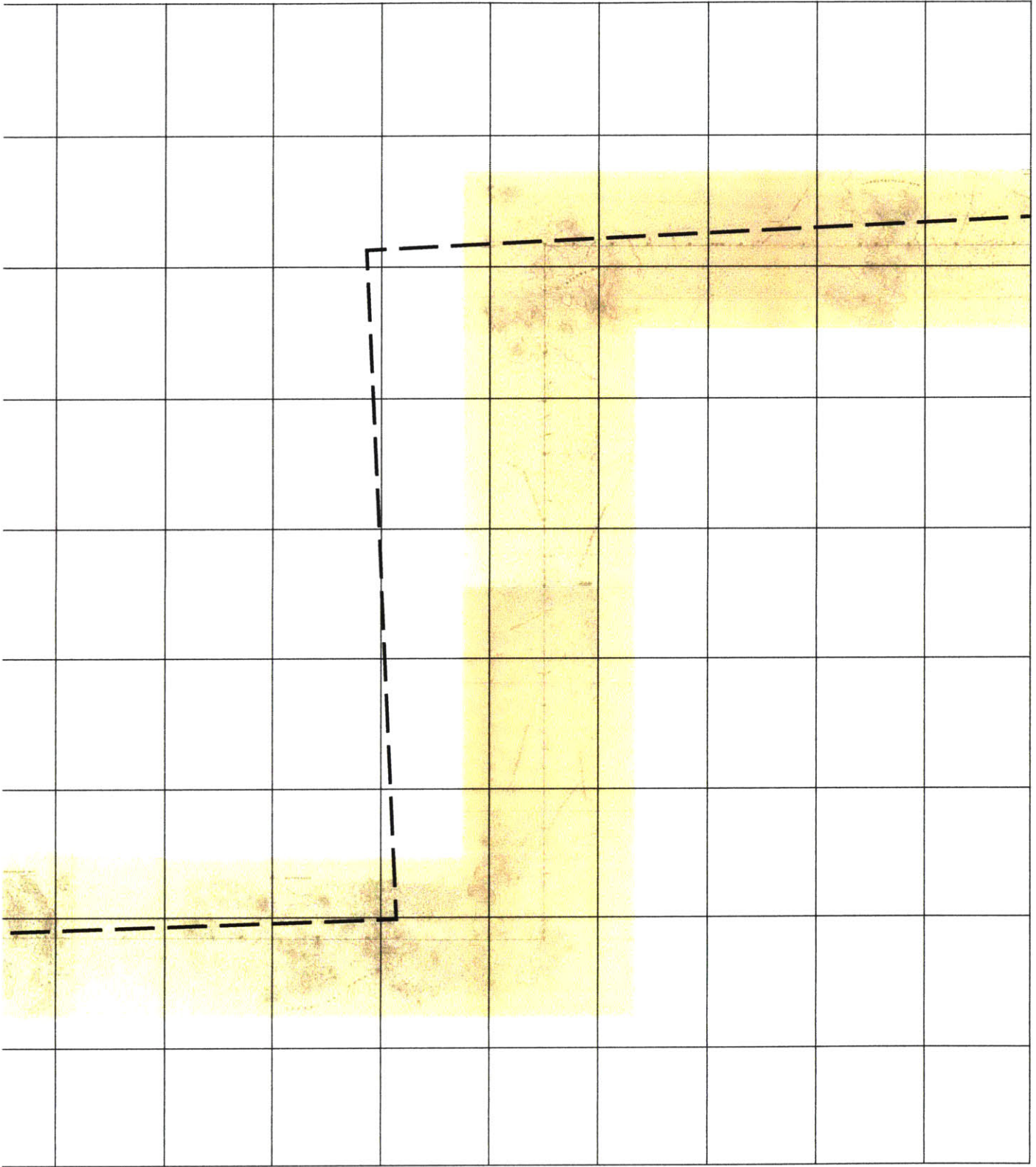


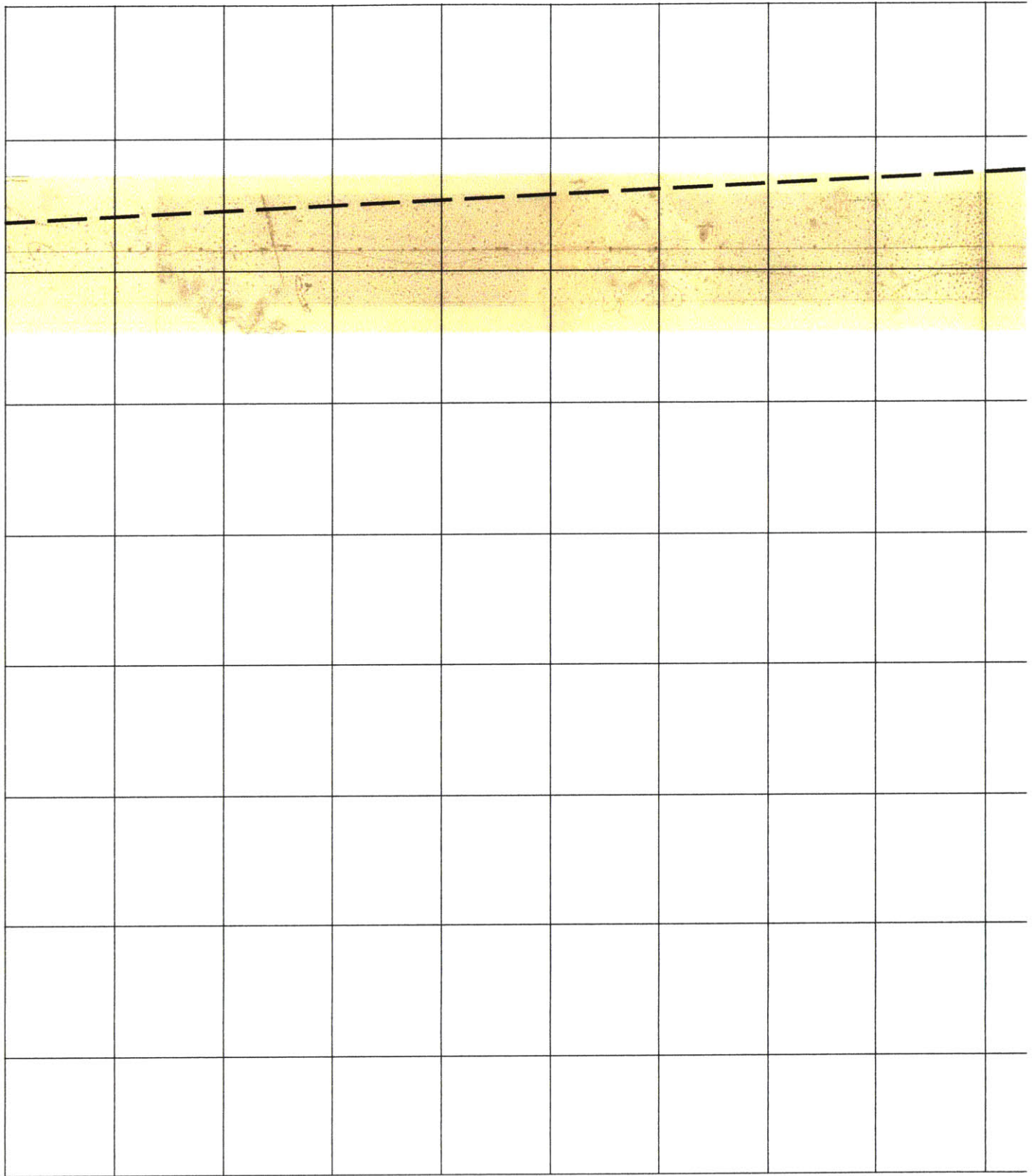


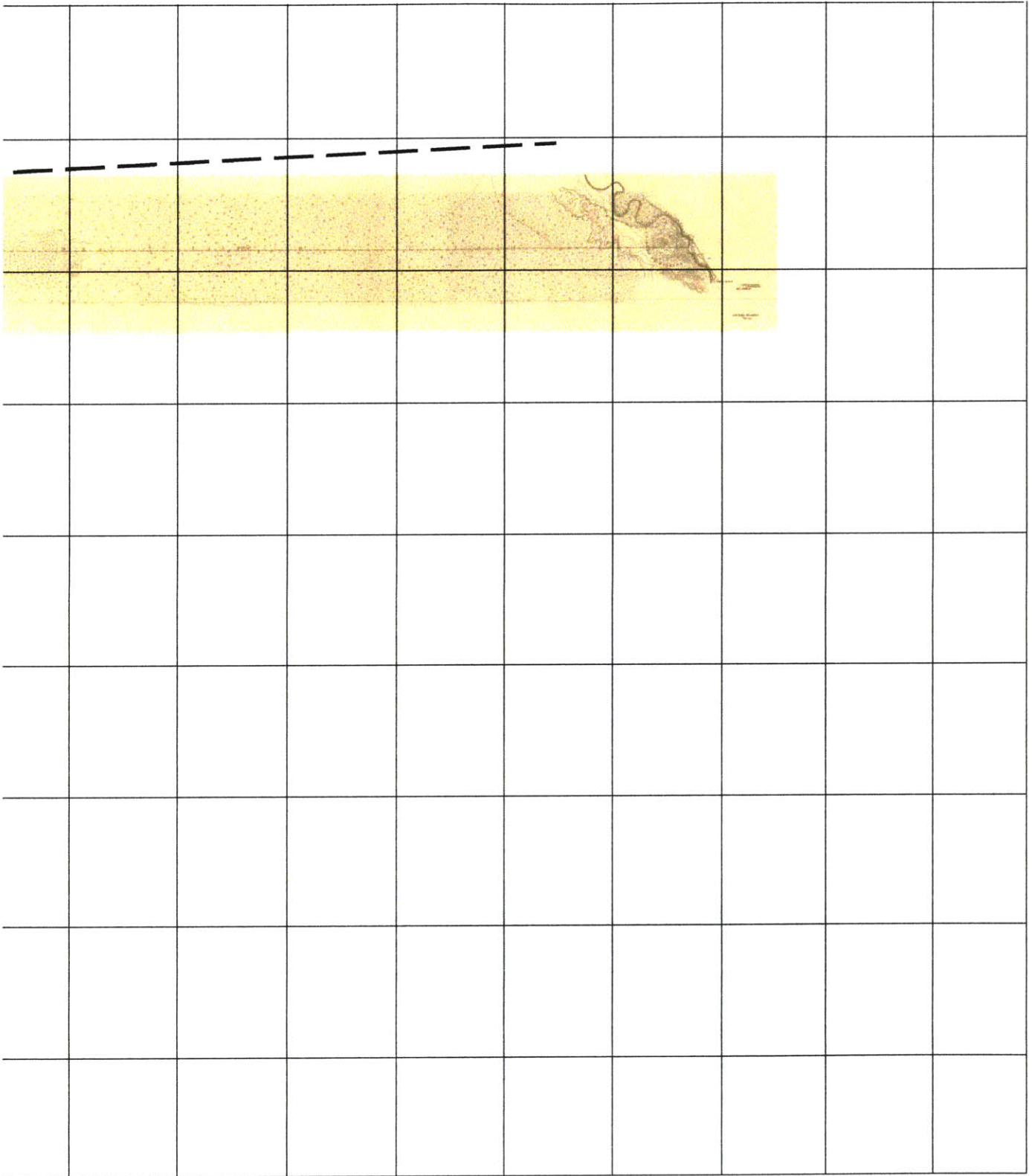


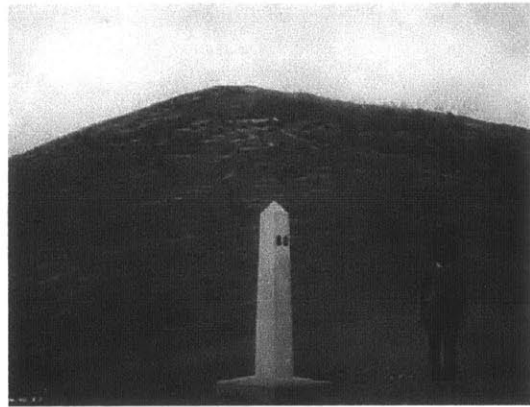
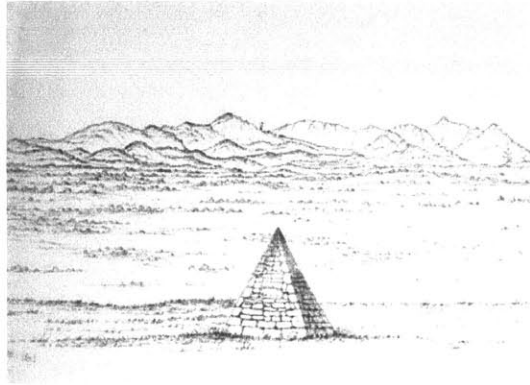












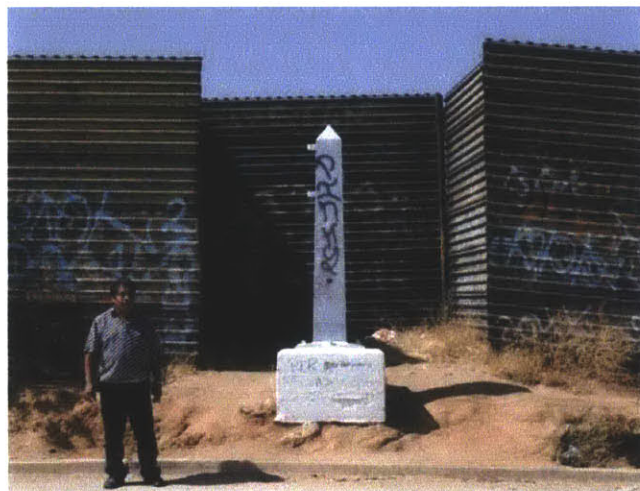
Conclusion

In closing, views that have historically served as evidence of the United States-Mexico boundary are presented in triptych form. The first an 1857 sketch by Weyss documenting the line in a new frontier landscape, the second a large-format photograph by Payne placing monument No. 80 in 1889, and the third a 35mm *El Paso Times* press photograph of the 1964 Chamizal Ceremony. Each view is rendered by a different representational paradigm: drawing; survey; and mediated photograph. While separated by over a century of technological, urban, and political developments on the international border, the compositional elements of each—and the method by which evidence is constructed and conveyed—remain consistent. Together, they share a central border monument symbolizing geographic precision and bilateral agreement; a distant horizon line and regional landscape linking a geographic focal point to a larger context; and a formal symmetry that presents an idealized division between the United States and Mexico while maintaining an even representation of national territory. Border monuments mobilize these views. They inform agents where to look, stand, meet, as well as dictate the vantage point and focus of the outside observer. The monuments are instrumental to the constitution of the international border, bridging between geographic reality and hypothetical construction. The gap between these realms remains consistent over time, a limit calibrated and rehearsed through evolving regimes of representation, each engaging reality with a slightly different complexion. The border is constituted first as abstract line, then as an inhabited space with texture and dimension, and finally as geopolitical territory.

Today, border monuments continue to organize the line. The border fence, a unilateral element located entirely in United States territory, is offset three feet north of their position. Thus, monuments sit south of the fence, marking a slender belt of United States territory that is only visible from Mexico. A 1944 treaty specifies the joint maintenance of shared infrastructure on the boundary, including the preservation

of historic landmarks.¹ In compliance, an access door through the corrugated steel sheeting of the fence is required at every monument location. Once every two years the doors are unbolted for a federal team to attend the material reality of the border—to clean and repaint the monuments.

¹ See: “Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande + Treaty between the United States of American and Mexico,” signed at Washington, February 3, 1944, Article 20.



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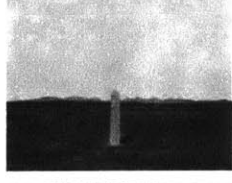
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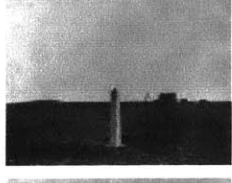
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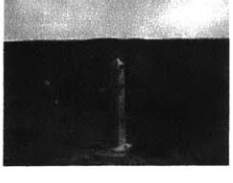
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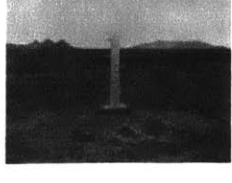
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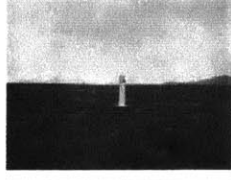
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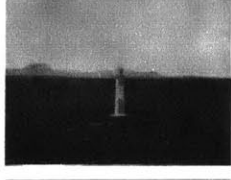
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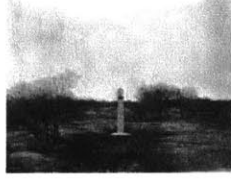
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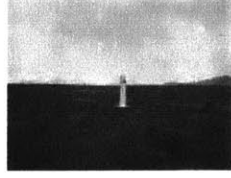
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