William H. Emory entered military service through West Point. He distinguished himself mapping the Texas border in 1844, and published his scientific findings with a map in Notes of a Military Reconnaissance from Fort Leavenworth in Missouri to San Diego, California, published by the Thirtieth United States Congress in 1848.

During the Mexican-American war, he served as the Chief Topographic Engineer and adjutant general in the Army of the West. After the war, Emory surveyed the U.S.-Mexico boundary between 1846-1855 in his capacity of designated astronomer. The difficulty of this survey, and the lack of support from the government clearly frustrated Emory, while at the same time he took pride in his accurate work. That his supervisor, John Bartlett, made him sign off on a misplaced marker, putting the boundary in the wrong place, clearly rankled. His vindication came in 1855 when he replaced John Bartlett as the head of the International Boundary Commission.

After he left the southwest, Emory continued to lead a distinguished career, surveying the U.S.-Canada border, fighting for the Union in the Civil War, and assisting with Reconstruction.
The states of Texas, New Mexico, and Chihuahua meet here, at a marker originally established by Lieutenant William H. Emory, the American Commissioner of the second International Boundary Commission, and José Salazar y Larregua, the Mexican Commissioner. The monument was later rebuilt, and can today be seen in Keystone Park, in the city of El Paso.

Quote: (31 January 1855) RIO GRANDE, LATITUDE 31° 47', January 10, 1855.

On the 9th of January, both commissioners having finished the observations necessary to determine the initial point of the boundary on the Rio Grande, met this day to compare results. The necessary measurements being made to connect the two observatories, and also the observatory established at Frontera in 1851-'52, it was ascertained that the difference between the determinations of the parallel of 31° 47', made by the two commissions, was eighty-four hundredths of one second. It was then mutually agreed to take the mean between the two results; and the point thus ascertained was marked on the ground in presence of both commissioners, as the point where the parallel of 31° 47' strikes the river; that is to say, the point where the boundary under the treaty of December 30, 1853, leaves the river to run westward.

The commission adjourned, to meet to-morrow at 10 o'clock a.m.

JOSE SALAZAR Y LARREGUI

W. H. EMORY

...
January 31, 1855.

The commission met, according to agreement, at meridian. The chief officers of the vicinity, military and civil, from both sides of the line, being present, the foundation of the monument was laid. The following paper--one copy in English, the other in Spanish-- was signed by the two commissioners and by the persons aforesaid, placed in a glass bottle, and deposited, at the depth of five feet, under the centre of the monument:

COPY OF THE PAPER.

We, the undersigned, have this day assembled to witness the laying of the foundation of the monument which is to mark the initial point of the boundary between the United States and the Republic of Mexico, agreed upon, under the treaty of Mexico, on the part of the United States by William Hemsley Emory, and on the part of the Republic of Mexico by Jose Salazar y Larregui, latitude 31° 47’.

W. H. EMORY, U. S. Commissioner.

JOSE SALAZAR Y LARREGUI. [Emory, William H.]

Images:

Boundary with Kansas, Utah, California

1850

The stretch across the southern Rockies was left indefinite on this map, as the directions are slightly vague. This area was surveyed in 1868 and 1878. Today, New Mexico’s northern border goes straight across at the 37th North Parallel.

Quote: ...[from 38º North latitude); thence west with said parallel to the summit of the Sierra Madre; thence south with the crest of said mountains to the thirty-seventh parallel of north latitude; thence west with said parallel to its intersection with the boundary line of the state of California; thence with said boundary line to the place of beginning- be, and the same is hereby, erected into a temporary government, by the name of the territory of New Mexico. [Statutes at Large, vol. 9 (1851), pp. 446-458, 462-465, 467-68.]

International Border with Mexico

1853-1857

The Boundary Commission headed by Emory and Salazar completed an epically-heroic task in surveying nearly 2000 miles of the Mexican-American border from the Gulf of Mexico to the Pacific Ocean.

They were hampered by bureaucratic inefficiency and difficulties in communicating with Washington, rough terrain, extreme weather, depredations by hostile tribes, and defective instruments (in the case of the Mexican survey team).

Emory clearly takes pride in the precision of his observations, and draws stark contrasts between the Commission he heads, and the original commission headed by John Bartlett, who purportedly spent a half a million dollars and still picked the wrong starting place on the Rio Grande, but whose widely-read tale of adventures in the southwest influenced popular opinion favorably towards him.

Quote: (15 August 1854) On the 15th August, 1854; I received from the President of the United States, through the Hon. Eobt. McClelland, Secretary of the Interior, the appointment of commissioner " to survey and mark out upon the land the dividing line between the United States and the republic of Mexico, concluded on
the 30th of December, 1853, the ratifications of which were exchanged in the city of Washington on the 30th day of June, 1854." At the same time I received special instructions from the Secretary of the Interior, and a copy of the treaty... [Emory, William H]

**Quote:** On arriving at the cañon about seventy miles below El Paso, I left my escort and train, with directions to proceed slowly up the river, while I went to make such arrangements with the Mexican commissioner as would enable me to move the parties directly on the new line, and commence operations.

I accomplished this with the Mexican commissioner satisfactorily; although winter had now set in with severity, and the small-pox showed itself in our camp, and we had just accomplished a journey of sixteen hundred miles [on foot and mule], every assistant and man took the field as cheerfully as if he had just left his barracks.

Each one of the principal assistants was selected upon the estimate of his professional abilities, derived from personal knowledge, and I had no reason to make any changes of importance from the beginning to the end of the work. My own expectations, and I hope those of the government, were entirely fulfilled in the manner in which the work was accomplished.

Under all circumstances—during the cold winter exposed upon the bare ground of the bleak plains, and in the summer to the hot sun blazing over the arid desert—every order was executed with fidelity, and the work was completed within the time, and largely within the amount appropriated by Congress.

We passed the entire width of the continent and returned with the loss only of two men, and without losing a single animal, (except those worn out by service), or suffering a stampede by the Indians; at the same time that our co-operators on the Mexican commission were twice robbed of every hoof by the Apaches, and extensive losses were sustained by other detachments of United States troops, and by our citizens traversing this region. [Emory, William H]

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**Images:**

- Emory’s camp in the mountainous region near Fort Davis, Texas
- First map of a series of 52, made by Emory to show the border.
- One of the rough stone monuments Emory built, on the boundary of the bootheel

**Links:**

National Archives: Monuments, Manifest Destiny, and Mexico --

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**Line Agreed on by Condé and Bartlett**

1850

The Treaty of Guadalupe Hidalgo stipulated that the boundary described in the treaty be surveyed, but the map on which the treaty was based (Disturnell, 1847) proved to be inaccurate, and resulted in another two laws; one, the Boundary Compromise of 1850, specified the starting point, which Commissioners Conde and Bartlett tried to identify. But surveys done for the purpose of finding a southern transcontinental railroad route showed that the U.S. needed land just a bit farther south, which the nation eventually purchased from Mexico in 1853, in what is called the Gadsden Purchase.

The first boundary commission, for which Emory served as the American astronomer, was tasked with setting that line at 36º30'. As Emory points out, Condé and Bartlett actually set the line 36º22', which required later correction (marked as treaty line on the map).

**Quote:** Under the date of December 3d, 1850, I spoke of the meetings of the Joint Commission, and of the difficulties that lay in the way of a speedy agreement as to the boundary between the Rio Grande and the Gila, in consequence of two gross errors in the map [by Disturnell] to which the Commissioners were confined by the treaty. It was discovered that the Rio Grande was laid down on this map, more than two degrees too far to the eastward -- the river, where it is intersected by the southern boundary of New Mexico, being really in 106º40' west longitude, instead of 104º40'. The other error was in the position of the town of El Paso, which appears on this [Disturnell’s] map to be but seven or eight minutes below the 32nd parallel, while its actual
distance is thirty minutes further south. After several meetings, involving much discussion, the Joint
Commission agreed to fix the Initial Point on the Rio Grande at the latitude given by the map, without any
reference to its distance from El Paso; and to extend it westward from that point three degrees, without
reference to where the line so prolonged should terminate.

This being agreed upon, the acting Chief Astronomer, Lieutenant A. W. Whipple, on the part of the United
States, and Don Jose Salazar, the Chief Astronomer on the part of Mexico, were directed to “measure,
according to Disturnell’s Map, edition of 1847, the distance between latitude 32º and the point where the Rio
Grande strikes the Southern Boundary of New Mexico; and also the length of the Southern Boundary line of
New Mexico from that point to its extreme western termination,” and to report the result of their examinations
to the Commissioners at the earliest period practicable. [Bartlett, John Russell]

Quote: Mr. Bartlett’s principal achievement on the boundary was the agreement with General Conde, the
Mexican commissioner, fixing the initial point on the Rio Bravo, in the parallel of 32º 22’, instead of a point as
laid down on the treaty map about eight miles above El Paso, which would have brought it to the parallel of
31º 52’. That agreement is no less remarkable than the adroitness and success with which Mr. Bartlett
convinced the authorities at Washington of its correctness. 

I refused to recognize the act as that of the joint commission, and signed the map as the order directed,
carefully and studiously attaching a certificate that it was the initial point of the two commissioners; and to
prevent the possibility of misconstruction, an agreement in writing was entered into with Mr. Salazar, and our
signatures attested by witnesses, showing that the map was only that of the boundary agreed upon by the two
commissioners, and nothing else. This course, while it permitted me to obey a specific order in writing from a
superior, left the government free to act, and repudiate the agreement by the two commissioners, as it
subsequently did.

It is evident that any other course would have resulted in committing the government, irretrievably, to an
erroneous determination of our southern boundary. It is but just, however, to Mr. Bartlett, to state, that so far
as the facility for a route for a railway to the Pacific was considered, the line agreed to by him was no worse
than that claimed by his adversaries. My own reports, based upon previous explorations, had presented the
whole case very clearly to view.

Yet these reports were overlooked, and it was ignorantly represented that while Mr. Bartlett’s line lost the
route for the railway, the other line secured it. I will not here fatigue the reader by a topographical description
of the country, showing where the obstacles to a railway route exist; but he will see by a glance at the map,
that the practicable route so adjudged by myself, and by other officers who retraced my steps and re-surveyed
this country, is to the south of both these lines of boundary claimed under the treaty of Guadalupe
Hidalgo. [Emory, William H.]

Links:
Texas Archives: Daniel Webster’s copy of 1850 Boundary Act --
http://www.tsl.state.tx.us/treasures/earlystate/boundary-01.html
The Handbook of Texas Online: Bartlett-Garcia Condé Compromise --
http://www.tshaonline.org/handbook/online/articles/BB/nbb2.html

Texas Border

01 August 1850

In the Treaty of Velasco, signed after the decisive battle at San Jacinto but never ratified by Mexico, Texas had
claimed the Rio Grande as its western and southern boundary. After long and angry debates, Congress passed
the Boundary Compromise of 1850, which forgave Texian debt to the U.S. in exchange for dropping their claim
to the lands between the 100th meridian and the Rio Grande.

Emory surveyed the starting point of this line but not the rest of the border.

Quote: (01 August 1850) The state of Texas will agree that her boundary on the north shall commence at the
point at which the meridian of one hundred degrees west from Greenwich is intersected by the parallel of
thirty-six degrees thirty minutes (36°30’) north latitude, and shall run from said point due west to the
meridian of one hundred and three degrees west from Greenwich; thence her boundary shall run due south to
the thirty-second degree of northern latitude; thence on the said parallel of thirty-two degrees of northern latitude to
the Rio Bravo del Norte, and thence with the channel of said river to the Gulf of Mexico. [Statutes at Large,
vol. 9 (1851), pp. 446-458, 462-465, 467-68.]

Treaty Line

1848

This is apparently the line that Emory believes to be the true line designated by the Treaty of Guadalupe-
Hidalgo. By the time he had created this map, the treaty had already been superceded by the Gadsden
Purchase, so the inclusion of this line on the map seems to be mostly about scoring points against former
commissioner John Bartlett, who wrote unflattering things about Emory in his book, and who, in Emory’s view, failed to properly survey the line.

Quote: In reference to the importance of the point [at 36°22’, agreed on by Condé and Bartlett], I think it as well to state that the line agreed upon by the commission, April, 1851, is about 33’ north of the line contended for [in the Treaty of Guadalupe Hidalgo], as that laid down by Disturnell’s map, but it reaches about 16’ of arc further west; and as both lines run 3º of longitude west, the difference of territory is 3º of longitude multiplied by about 40’ of latitude, each having a middle latitude that may, for the purpose of computation, be assumed at 30º.

Neither line gives us the road to California, and the country embraced in the area of the difference, with the exception of a strip along the Rio Grande about nine miles long and from one to two wide, is barren, and will not produce wheat, corn, grapes, trees, or anything useful as food for man, or for clothing.

Neither line will give us a channel of communication for posts along the frontier, without which it is impracticable to comply with the XI article of the treaty, which enjoins the United States to keep the Indians out of Mexico.

When originally on the work, before the point was determined, having a knowledge of the country from previous reconnaissance, I had the honor of asking the attention of your predecessor to this very subject, in a communication dated April, 1849, San Diego, California, which was subsequently printed by the Senate. I then pointed out what I believed to be the only view taken of the treaty, which would have given us the road, it being, in truth, the only important matter involved in the question. [Emory, William H.]

Images:

Portrait of General William H. Emory at age 76

About this Map

William H. Emory: Map of The United States and Their Territories Between The Mississippi & the Pacific Ocean And Part Of Mexico : 1857

William H. Emory, Major, 1st Cavalry, and then United States Commissioner for the Boundary Survey directed preparation of this Map of the United States and Their Territories Between The Mississippi and the Pacific Ocean And Part of Mexico Compiled From the Surveys Made Under The Order of W.H. Emory...And from the Maps of the Pacific Rail Road, General Land Office, and the Coast Survey.

Emory's map was included with his Report on the United States and Mexican Boundary Survey submitted to the House of Representatives 34th Congress, Ex. Dox 135.

Atlas Citation: [Eidenbach, Peter]
Map Credits: Rumsey Collection Image Number 0263001

TIMELINE: AGE OF TECHNOLOGY

1846

President Polk declares war with Mexico; US forces led by General Stephen Kearny seize New Mexico, which surrenders without a shot being fired. Colonel Doniphan writes code for governing the Territory of New Mexico. New Mexico designated Ninth Military Department.

1847
Philip St. George Cooke blazed the first wagon road from New Mexico to the West Coast.

New Mexico formally annexed; slavery issues had prevented formal annexation until this point.

1848

Mexico signs the Treaty of Guadalupe Hidalgo, which cedes lands in California, Nevada, Utah, Colorado, Arizona, and New Mexico to the United States (Statute 922 App I). The international boundary designated as the intersection of 32° N and the Rio Grande to intersection of Choctaw Creek with Red River.

1849

Simpson made a map previously shows town of Rito- Rito is a ruin by the time Whipple arrives because the upstream people took all the water. He traveled through Albuquerque to Pueblo de la Laguna and passed Covero (Cubero), Mount Taylor (named by Simpson in 1849 for Zachary Taylor), and Agua Fria, the last spring before the Continental Divide. Whipple used Sigreaves' 1851 map as a reference also Walker’s 1851 map.

1850

New territories admitted, including New Mexico (including modern Arizona), purchase of additional lands from Texas, boundaries adjusted. El Paso becomes part of Texas.

1851

Simpson's official report, Report of an Expedition Down the Zuni and Colorado Rivers in 1851, was published in 1853. The report explored possibility of using this route for military transport.

1852 Survey

1st international boundary commission established in accordance with the Treaty of Guadalupe Hidalgo. Emory is the designated astronomer. The survey run into difficulties, which are resolved with the purchase of more land from Mexico.

Initial point on the Rio Grande (determined by Commissioners Condé and Bartlett according to the Treaty of Guadalupe-Hidalgo) proves to be in the wrong place. Surveyor AB Gray says 32° 22' is wrong, 31° 52' is right. Commissioners Emory and Salazar (astronomers from the first Boundary Commission) later determine the starting point of the line at 32º 47'.

1852

New Mexico legislature passed a single act creating two new counties, redefining five of the original counties to extend across the limits of the territory, and eliminating all non-county area.

1853

Gadsden Purchase from Mexico resolves boundary issues, and give the U.S. the land necessary to build a southern transcontinental railroad. (GP Statute 1031 App II).

1855 Survey

US Commissioner: William H. Emory
Mexican Commissioner: José Salazar y Larregui

Emory and Salazar survey the entire Mexican-American border, including the new area included by the Gadsden Purchase.

The Americans made nearly a dozen monuments along the border to mark the sites, but many were destroyed by surrounding tribes, so the Mexicans rebuilt many and added some. Later surveys added over two hundred more, and rebuilt them as more permanent monuments.

1855 railroad surveys

The U.S. Government commissioned a number of surveys, spaced along parallels, to determine the best route for a transcontinental railroad.

Emory & Parke: 32nd parallel
Whipple & Ives: 35th parallel
Beckwith & Gunnison: 38th-39 parallel

1857 and 1858

Ives’ Report upon the Colorado River of the West

1859

Marcy publishes The Prairie Traveler

1861
Colorado territory established; New Mexico's northern boundary reduced.

Residents of the Mesilla Valley declared their allegiance with the Confederacy and separated from the Union. They hoped the Confederacy would recognize them as the state of Arizona, which they imagined would reach to the Colorado River.

Civil War starts. Confederate troops gather at Fort Bliss and take Fort Fillmore. The plan is to seize New Mexico, and then march on to take the gold fields of Colorado or California. Indian raids on settlements step up as U.S. Army soldiers turn their attention to other matters.

1862

Homestead Act: free 160 acres offered after 5 years cultivation. Later modified to offer 320 acres, and the Desert Lands Act offered 640 acres.

Henry H. Sibley, commander of a brigade of mounted regiments from Texas, marched from Fort Bliss near El Paso up the Rio Grande: taking Fort Fillmore, defeating Union troops at Fort Craig, taking Albuquerque and Santa Fe, and finally defeating the Union troops at Glorieta Pass, near Pecos. By this time, the Confederate troops were starving and without clothes or ammunition, so they retreated back to Fort Bliss.

1862-1871

Railroad Land grants: the Federal government gives away 128 million acres of land to the railroad companies, as an incentive to build railway lines all over the country. The railroad companies sold many of these parcels to homesteaders.

1863

Arizona Territory created by the United States from the western portion of New Mexico Territory and a part of present Nevada. Present New Mexico-Arizona boundary established.

1864-1866

"Long Walk": Navajo and Mescalero Apache forcibly relocated to Bosque Redondo reservation; The Apache escaped, and the Navajo signed a treaty of nonaggression and returned to their homeland in 1868.

1864-1890

Indian Wars throughout the West. Destruction of the bison herds.

1867

Hayden, King, Wheeler, Powell Surveys map the west comprehensively, while cataloguing flora, fauna, and geology.

1868

Navajo chief Barboncito, along with numerous other leaders, sign a treaty with General William T. Sherman, agreeing to peace with the Americans in exchange for rights to return from Bosque Redondo to their new reservation: a small area within their traditional homeland.

1869

Fort Bliss renamed Fort Bliss.

Cochise and Apache guerrillas active 1871- 1879.

The war to save the buffalo 1874-1880.

1878-1879

Fort Bliss permanently established in current location.

1878

The Atchison, Topeka and Santa Fe (AT&SF) railroad crosses the Raton Pass into New Mexico, reaching Las Vegas, its first destination in New Mexico, in 1879.

1879

USGS established.

1880

The Southern transcontinental railroad traversed the region.

Geronimo & Chiricahua Apaches active in southern New Mexico and northern Mexico, 1880-1886.
New boundary treaty: the boundary, where marked by the Rio Grande, adheres to the center of original channel as surveyed in 1852 even if the course of the river changes. Boundaries on international bridges at center point.

1886

Geronimo surrenders to General Crook in southern New Mexico. The remaining members of the Chiricahua and Mimbres bands are removed first to Florida, and finally to Fort Sill, Oklahoma.

1889

US/Texas/ New Mexico/Mexico border resurveyed; discovered bancos or alluvial deposits changing land mass on either side of the border.

1891

Forest Reserve Law, designating forest preserves; forerunner of current National Forests.

1905

National Forest service created.

1906

Antiquities Act. Allows a president to protect areas of public land by executive order.

1905

New treaty with Mexico on water rights for irrigation

1912

New Mexico becomes the forty-seventh state of the Union.

1916

National Park Service created.

1924

Gila Wilderness established.

1925

U.S. Supreme Court decision in New Mexico v. Colorado dismisses New Mexico's claims and establishes current boundaries between the states.