

No. 11873

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**MEXICO**  
**and**  
**UNITED STATES OF AMERICA**

**Treaty to resolve pending boundary differences and maintain the Rio Grande and Colorado River as the international boundary between the United Mexican States and the United States of America (with annexed maps). Signed at Mexico City on 23 November 1970**

*Authentic texts: Spanish and English.*

*Registered by Mexico on 17 July 1972.*

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**MEXIQUE**  
**et**  
**ÉTATS-UNIS D'AMÉRIQUE**

**Traité relatif au règlement des différends frontaliers existants et au maintien des fleuves Rio Grande et Colorado comme frontière internationale entre les États-Unis du Mexique et les États-Unis d'Amérique (avec cartes annexées). Signé à Mexico le 23 novembre 1970**

*Textes authentiques: espagnol et anglais.*

*Enregistré par le Mexique le 17 juillet 1972.*

TREATY<sup>1</sup> TO RESOLVE PENDING BOUNDARY DIFFERENCES AND MAINTAIN THE RIO GRANDE AND COLORADO RIVER AS THE INTERNATIONAL BOUNDARY BETWEEN THE UNITED MEXICAN STATES AND THE UNITED STATES OF AMERICA

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The United Mexican States and the United States of America,  
Animated by a spirit of close friendship and mutual respect and desiring to:

Resolve all pending boundary differences between the two countries,

Restore to the Rio Grande its character of international boundary in the reaches where that character has been lost, and preserve for the Rio Grande and Colorado River the character of international boundaries ascribed to them by the boundary treaties in force,

Minimize changes in the channels of these rivers, and should these changes occur, attempt to resolve the problems arising therefrom promptly and equitably,

Resolve problems relating to sovereignty over existing or future islands in the Rio Grande,

And finally, considering that it is in the interest of both countries to delimit clearly their maritime boundaries in the Gulf of Mexico and in the Pacific Ocean,

Have resolved to conclude this Treaty concerning their fluvial and maritime boundaries and for such purpose have named their plenipotentiaries:

The President of the United Mexican States, Antonio Carrillo Flores, Secretary of Foreign Relations, and

The President of the United States of America, Robert H. McBride, Ambassador of the United States of America to Mexico,

Who, having communicated to each other their respective full powers, found to be in good and due form, have agreed as follows:

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<sup>1</sup> Came into force on 18 April 1972 by the exchange of the instruments of ratification, which took place at Washington, in accordance with article IX.

*Article I*

In order to resolve the pending boundary cases of the Ojinaga-Presidio Tracts, the Horcon Tract, Beaver Island, and islands, in which the territory of one of the Contracting States has been placed on the opposite bank of the Rio Grande, and to restore this river as the international boundary, Mexico and the United States have decided to modify the position of the Rio Grande in certain reaches, in accordance with the following terms:

A. To change the location of a section of the channel of the Rio Grande in the area of the Ojinaga-Presidio Tracts, so as to transfer from the north to the south side of the Rio Grande an area of 650 hectares (1606.19 acres). This relocation shall be effected so that the middle of the new channel follows the alignment shown on the map of the International Boundary and Water Commission, United States and Mexico (hereinafter referred to as the "Commission"), entitled Relocation of the Rio Grande in the Presidio-Ojinaga Tracts,<sup>1</sup> attached to and forming a part of this Treaty.

B. To change the location of the channel of the Rio Grande upstream from and near Reynosa-Hidalgo, so as to transfer from the south to the north of the Rio Grande an area of 194.93 hectares (481.68 acres). This relocation shall be effected so that the middle of the rectified channel follows the alignment shown on the Commission's map entitled Relocation of the Rio Grande Upstream from Hidalgo-Reynosa,<sup>1</sup> attached to and forming a part of this Treaty.

C. To change the location of the channel of the Rio Grande downstream from and near Ojinaga-Presidio, so as to transfer from the south to the north of the Rio Grande an area of 101.98 hectares (252 acres). This relocation shall be effected so that the middle of the rectified channel follows the alignment shown on the Commission's map entitled Relocation of the Rio Grande Downstream from Presidio-Ojinaga,<sup>1</sup> attached to and forming a part of this Treaty.

D. Once this Treaty has come into force and the necessary legislation has been enacted for carrying it out, the two Governments shall determine, on the basis of a recommendation by the Commission, the period of time appropriate for each of them to carry out the following operations:

- (1) The acquisition, in conformity with its laws, of the lands to be transferred to the other and of the rights of way for the new river channels;

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<sup>1</sup> See insert in a pocket at the end of this volume.

- (2) The orderly evacuation of the occupants of the lands referred to in paragraph D (1) of this Article.

E. The changes in location of the Rio Grande referred to in paragraphs A, B and C of this Article, shall be executed by the Commission as soon as practical in accordance with the engineering plans recommended by it and approved by the two Governments. The cost of these changes in location shall be equally divided between the two Governments, through an appropriate division of work recommended by the Commission in the same engineering plans.

F. On the date on which the two Governments approve the Commissions' Minute confirming the completion of the relocations of the channel of the Rio Grande provided for in paragraphs A, B and C of this Article, the change of location of the international boundary shall be effected in each case and the middle of the new channels of the Rio Grande and of the present channels north of the Horcon Tract and north of Beaver Island shall become the international boundary, and consequently the following territorial adjustments shall take place:

- (1) By reason of the rectification referred to in paragraph A of this Article, there shall pass from the north to the south of the Rio Grande within the territory of Mexico, 650 hectares (1606.19 acres) in the Ojinaga-Presidio Tracts.
- (2) By reason of the rectification referred to in paragraph B of this Article, there shall pass from the south to the north of the Rio Grande 194.93 hectares (481.68 acres) to form a part of the territory of the United States. This transfer is in recognition of the fact that the Horcon Tract and Beaver Island, located south of the Rio Grande, comprising a total area of 194.93 hectares (481.68 acres) now under the sovereignty of the United States shall pass to and become part of the territory of Mexico.
- (3) By reason of the rectification referred to in paragraph C of this Article, there shall pass from the south to the North of the Rio Grande 101.98 hectares (252 acres) to form a part of the territory of the United States. This transfer is in recognition of the fact that, upon the adoption of the new boundary in accordance with Article II of this Treaty, Mexico will receive a greater number and acreage of islands than the United States.

### *Article II*

In order to resolve uncertainties relating to the sovereignty over islands and to restore to the Rio Grande its character as the international boundary

in those locations where this character has been lost between the Gulf of Mexico and its intersection with the land boundary, the Contracting States agree that:

A. Except as provided in Articles I (F), III (B) and III (C) of this Treaty, from the date on which this Treaty enters into force, the international boundary between Mexico and the United States in the limitrophe sections of the Rio Grande and the Colorado River shall run along the middle of the channel occupied by normal flow and, where either of the rivers has two or more channels, along the middle of the channel which in normal flows has the greater or greatest average width over its length, and from that time forward, this international boundary shall determine the sovereignty over the lands on one side or the other of it, regardless of the previous sovereignty over these lands.

B. For the purposes of this Treaty, the Commission shall in each case determine the normal flows, which shall exclude flood flows, and the average widths, referred to in the preceding paragraph of this Article.

C. The Commission, on the basis of the surveys which it shall carry out as soon as practical, shall with appropriate precision delineate the international boundary on maps or aerial photographic mosaics of the Rio Grande and of the Colorado River. In the future, the Commission shall make surveys as frequently as it may consider justifiable, but in any event at intervals not greater than ten years, and shall record the position of the international boundary on appropriate maps. Each of the Governments shall bear half of the costs and other expenses determined by the Commission and approved by the two Governments for the surveys and maps relating to the boundaries.

### *Article III*

In order to minimize problems brought about by future changes in the limitrophe channels of the Rio Grande and the Colorado River, the Contracting States agree that:

A. When the Rio Grande or the Colorado River moves laterally eroding one of its banks and depositing alluvium on the opposite bank, the international boundary shall continue to follow the middle of the channel occupied by normal flow or, where there are two or more channels, it shall follow the middle of the channel which in normal flow has the greatest average width over its length.

B. (1) When the Rio Grande or the Colorado River, through movements other than those described in paragraph A of this Article, separates from one Contracting State a tract of land, which might be composed of or include islands, of no more than 250 hectares (617.76 acres) and with an established population of no more than 100 inhabitants, the Contracting State from which the tract of land has been separated shall have the right to restore the river to its prior position and shall notify the other Contracting State, through the Commission, at the earliest possible date whether or not it proposes to restore the river to its prior position. Such restoration must be made at its own expense within a period of three years counted from the date on which the Commission acknowledges the separation; however, if such restoration should have been initiated but not completed within the period of three years, the Commission, with approval of both Governments, may extend it for one year. The boundary shall remain in its prior location during the periods herein provided for restoration of the river, notwithstanding the provisions of Article II (A) of this Treaty.

(2) If at the conclusion of the periods herein provided the river has not been restored to its prior position, the international boundary shall be fixed in accordance with the provisions of Article II (A) of this Treaty, and sovereignty over the separated tract of land shall, as of that date, pass to the Contracting State on whose side of the river the separated tract is then located. Should the Contracting State from whose territory the tract was separated notify the other Contracting State of its intention not to restore the river to its prior position, the international boundary shall be fixed in accordance with the provisions of Article II (A) of this Treaty, and sovereignty over the separated tract shall change as of the date on which notification is given through the Commission.

(3) When a tract of land passes from the sovereignty of one Contracting State to the other in accordance with paragraph B (2) of this Article, its area shall be ascertained and recorded by the Commission as a credit in favor of the Contracting State from which it was separated, for later compensation by an equal area in a natural separation of a tract of the other Contracting State which is not restored or in a future rectification recommended by the Commission and approved by the two Governments in the same river. The costs of such rectifications shall be divided equally between the Contracting States and, upon completion, the middle of the new channels shall become the international boundary and the Commission shall cancel the corresponding credit.

C. When the Rio Grande or the Colorado River, by movements other than those provided in paragraph A of this Article, separates from one Contracting State a tract of land, which might be composed of or include islands,

having an area of more than 250 hectares (617.76 acres) or an established population of more than 100 inhabitants, the international boundary shall remain in its prior position and sovereignty over the separated tract of land shall not change, notwithstanding the provisions of Article II (A) of this Treaty. In such cases the Commission shall restore the river to its prior channel as soon as practical, equally dividing the costs between the Contracting States. As an alternative procedure the Commission, with the approval of the two Governments, may rectify the channel of the river in the same section in which the separation occurred, so as to transfer an equal area to the Contracting State from which the tract of land was separated. The costs of these rectifications shall be divided equally between the two Governments and, upon their completion, the middle of the new channels shall be the international boundary, as defined in Article II (A) of this Treaty.

D. The Commissioners shall exchange all information coming to their attention about possible or actual separation of lands as referred to in paragraphs B and C of this Article. The Commission shall promptly make the necessary surveys and investigations in all cases of separation and determine, in accordance with the provisions of paragraphs B and C of this Article, which type of separation has taken place.

E. Pending any changes in sovereignty brought about by the application of paragraphs B or C of this Article, each Contracting State shall extend to the nationals of the other such facilities for transit through its territory as may be necessary to permit the use and enjoyment of separated tracts as before the separation, including such exemption from customs duties and immigration procedures as may be necessary.

F. When in the limitrophe reaches of the Rio Grande and Colorado River, a part of the channel temporarily loses its character as the boundary by reason of the changes contemplated in paragraphs B and C of this Article, the international character of the use and consumption of those waters, in the order established under Article 3 of the Treaty of February 3, 1944,<sup>1</sup> shall not be modified.

#### *Article IV*

In order to reduce to a minimum the shifting of the channels of the Rio Grande and the Colorado River in their limitrophe sections, and the problems that would be caused by the separation of tracts of land, the Contracting States agree that:

<sup>1</sup> United Nations, *Treaty Series*, vol. 3, p. 313.

A. Each Contracting State, in the limitrophe sections of the Rio Grande and the Colorado River, may protect its bank against erosion and, where either of the rivers has more than one channel, may construct works in the channel or channels that are completely within its territory in order to preserve the character of the limitrophe channel provided, however, that in the judgment of the Commission the works that are to be executed under this paragraph do not adversely affect the other Contracting State through the deflection or obstruction of the normal flow of the river or of its flood flows.

B. (1) Both in the main channel of the river and on adjacent lands to a distance on either side of the international boundary recommended by the Commission and approved by the two Governments, each Contracting State shall prohibit the construction of works in its territory which, in the judgment of the Commission, may cause deflection or obstruction of the normal flow of the river or of its flood flows.

(2) If the Commission should determine that any of the works constructed by one of the two Contracting States in the channel of the river or within its territory causes such adverse effects on the territory of the other Contracting State, the Government of the Contracting State that constructed the works shall remove them or modify them and, by agreement of the Commission, shall repair or compensate for the damages sustained by the other Contracting State.

C. (1) The Commission shall recommend to the two Governments the execution of works it may consider advisable and practical for improvement and stabilization of the channels of the Rio Grande and of the Colorado River in its limitrophe sections, including among others the following measures: clearing, channel excavations, bank protection and rectifications. The Commission shall include in its recommendations an estimate of the costs of constructions, operation and maintenance of the works, and a proposal for the division of the work and costs between the Contracting States.

(2) As soon as may be practical, after the two Governments approve the Commission's recommendations, each of the Contracting States shall execute, at its expense, its share of the construction, operation and maintenance referred to in paragraph C (1) of this Article.

#### *Article V*

The Contracting States agree to establish and recognize their maritime boundaries in the Gulf of Mexico and in the Pacific Ocean in accordance with the following provisions:



A. The international maritime boundary in the Gulf of Mexico shall begin at the center of the mouth of the Rio Grande, wherever it may be located; from there it shall run in a straight line to a fixed point, at 25°57'22.18" North latitude, and 97°8'19.76" West longitude, situated approximately 2,000 feet seaward from the coast; from this fixed point the maritime boundary shall continue seaward in a straight line the delineation of which represents a practical simplification of the line drawn in accordance with the principle of equidistance established in Articles 12 and 24 of the Geneva Convention on the Territorial Sea and the Contiguous Zone.<sup>1</sup> This line shall extend into the Gulf of Mexico to a distance of 12 nautical miles from the baseline used for its delineation. The international maritime boundary in the Gulf of Mexico shall be recognized in accordance with the map entitled *International Maritime Boundary in the Gulf of Mexico*,<sup>2</sup> which the Commission shall prepare in conformity with the foregoing description and which, once approved by the Governments, shall be annexed to and form a part of this Treaty.<sup>3</sup>

B. The international maritime boundary in the Pacific Ocean shall begin at the westernmost point of the mainland boundary; from there it shall run seaward on a line the delineation of which represents a practical simplification, through a series of straight lines, of the line drawn in accordance with the principle of equidistance established in Articles 12 and 24 of the Geneva Convention on the Territorial Sea and the Contiguous Zone. This line shall extend seaward to a distance of 12 nautical miles from the baselines used for its delineation along the coast of the mainland and the islands of the Contracting States. The international maritime boundary in the Pacific Ocean shall be recognized in accordance with the map entitled *International Maritime Boundary in the Pacific Ocean*,<sup>2</sup> which the Commission shall prepare in conformity with the foregoing description and which, once approved by the Governments, shall be annexed to and form a part of this Treaty.<sup>3</sup>

C. These maritime boundaries, as they are shown in maps of the Commission entitled *International Maritime Boundary in the Gulf of Mexico* and *International Maritime Boundary in the Pacific Ocean*, shall be recognized as of the date on which this Treaty enters into force. They shall permanently represent the maritime boundaries between the two Contracting States; on the

<sup>1</sup> United Nations, *Treaty Series*, vol. 516, p. 205.

<sup>2</sup> See insert in a pocket at the end of this volume.

<sup>3</sup> In an exchange of notes dated at Mexico, D.F. on 18 December 1970 and at Tlatelolco, D.F. on 21 December 1970 the two Governments informed each other of their approval of the maps entitled "*International Maritime Boundary in the Gulf of Mexico*" and "*International Maritime Boundary in the Pacific Ocean*", as prepared by the International Boundary and Water Commission, United States and Mexico. The said maps are deemed to be annexed to and forming a part of the Treaty of 23 November 1970.

north side of these boundaries Mexico shall not, and on the south side of them the United States shall not, for any purpose claim or exercise sovereignty, sovereign rights or jurisdiction over the waters, air space, or seabed and subsoil. Once recognized, these new boundaries shall supersede the provisional maritime boundaries referred to in the Commission's Minute No. 229.

D. The establishment of these new maritime boundaries shall not affect or prejudice in any manner the positions of either of the Contracting States with respect to the extent of internal waters, of the territorial sea, or of sovereign rights or jurisdiction for any other purpose.

E. The Commission shall recommend the means of physically marking the maritime boundaries and of the division of work for construction and maintenance of the markers. When such recommendations have been approved by the two Governments the Commission shall construct and maintain the markers, the cost of which shall be equally divided between the Contracting States.

#### *Article VI*

A. The lands and improvements which, upon relocation of the international boundary under the provisions of Articles I, III and IV of this Treaty, are transferred from one Contracting State to the other, shall pass to the respective Contracting State in absolute ownership, free of any private titles or encumbrances of any kind; compensation to the owners of the lands to be transferred shall be the responsibility of the delivering Contracting State. No payments shall be made between the two Governments for value of the lands and improvements transferred from one Contracting State to the other as a result of the change of location of the international boundary.

B. The relocation of the international boundary and the transfer of portions of territory or any other provision of this Treaty shall not affect in any way:

- (1) The legal status with respect to citizenship laws, of those persons who are present or former residents of the portions of territory transferred;
- (2) The jurisdiction over legal proceedings, of either a civil or criminal character, which are pending on the date on which the relocation is effected or which were decided prior to that date;
- (3) The jurisdiction over acts or omissions occurring within or with respect to the said portions of territory prior to their transfer;

(4) The law or laws applicable to the acts or omissions referred to in paragraph B (3) of this Article.

C. (1) All materials, implements, equipment and repair parts intended for the construction, operation and maintenance of the works required to carry out the provisions of this Treaty shall be exempt from taxes relating to imports and exports. For this purpose, each Section of the Commission shall furnish verification certificates covering all materials, implements, equipment and repair parts intended for such works.

(2) The personnel employed either directly or indirectly on the construction, operation or maintenance of the works required to carry out the provisions of this Treaty shall be permitted to pass freely from one country to the other for the purpose of going to and from the place or location of the works, without any immigration restrictions, passports, or labor requirements. For this purpose, each Section of the Commission shall furnish adequate means of identification to the personnel employed by it on the aforesaid works.

#### *Article VII*

The boundary on international bridges which cross the Rio Grande or the Colorado River shall be shown by an appropriate monument exactly over the international boundary determined by this Treaty at the time of demarcation. When in the judgment of the Commission the variations of the international boundary should warrant that the monument on any bridge should be relocated, it shall so recommend to the two Governments and with their approval may proceed to the reinstallation. This monument shall denote the boundary for all the purposes of such bridge. Any rights other than those relating to the bridge itself shall be determined, in case later changes occur, in accordance with the provisions of this Treaty.

#### *Article VIII*

The following agreements shall be terminated as of the entry into force of this Treaty, without prejudice to any right, title or interest which has accrued thereunder except as otherwise provided in this Treaty with respect to such right, title or interest:

A. the Convention Touching the International Boundary Line, signed on November 12, 1884;<sup>1</sup>

<sup>1</sup> De Martens, *Nouveau Recueil général de Traités*, deuxième série, tome XIII, p. 675.

- B. the Convention for the Elimination of Bancos in the Rio Grande, signed on March 20, 1905;<sup>1</sup>  
and
- C. to the extent that they are inconsistent with this Treaty:
- (1) Article V of the Treaty of Guadalupe Hidalgo, signed on February 2, 1848;<sup>2</sup>
  - (2) Article I of the Mesilla (Gadsden) Treaty, signed on December 30, 1853;<sup>3</sup>
  - (3) Article IV of the Convention establishing the International Boundary Commission, signed March 1, 1889;<sup>4</sup> and
  - (4) Article VI of the Convention on Rectification of the Rio Grande, signed February 1, 1933;<sup>5</sup> and
- D. any other agreement, or any part thereof, between the United Mexican States and the United States of America which is inconsistent with this Treaty, to the extent of that inconsistency.

*Article IX*

The present Treaty shall be ratified in accordance with the constitutional processes of each Contracting State and the instruments of ratification shall be exchanged in Washington, D.C. as soon as possible. It shall enter into force on the date of the exchange of ratifications.

DONE at the City of Mexico, the twenty-third day of November, nineteen seventy, in the Spanish and English languages, each text being equally authentic.

For the United Mexican States:

For the United States of America:

[Signed]

ANTONIO CARRILLO FLORES

[Signed]

ROBERT H. MCBRIDE

<sup>1</sup> De Martens, *Nouveau Recueil général de Traités*, troisième série, tome I, p. 299.

<sup>2</sup> *Ibid.*, tome XIV, p. 7.

<sup>3</sup> *Ibid.*, deuxième série, tome I, p. 1.

<sup>4</sup> *Ibid.*, tome XVIII, p. 553.

<sup>5</sup> *British and Foreign State Papers*, vol. CXXXVI, p. 755.

## RELOCALIZACIÓN DEL RÍO BRAVO EN LOS CORTES DE OJINAGA-PRESIDIO

*Tabla de coordenadas de la poligonal*

Esta tabla forma parte del plano titulado « Relocalización del Río Bravo en los cortes de Ojinaga-Presidio », fechado el 19 de noviembre de 1970. <sup>1</sup>

Estación	Coordenadas en metros *		Coordenadas en pies *	
	Norte	Este	Norte	Este
1	209 008.07	81 418.18	685 722.00	267 120.00
2	208 834.94	81 487.88	685 153.99	267 348.68
3	208 461.91	81 774.74	683 930.16	268 289.82
4	204 815.36	86 647.60	671 966.39	284 276.90
88	204 492.40	86 863.08	670 906.82	284 983.87
89	204 016.35	86 983.82	669 344.98	285 380.00
90	204 132.18	86 868.00	669 725.00	285 000.00
91	204 163.89	86 819.91	669 829.03	284 842.22
92	204 216.00	86 836.91	670 000.00	284 898.00
93	204 327.99	86 904.78	670 367.41	285 120.68
94	204 374.50	86 982.30	670 520.00	285 375.00
95	204 453.74	86 988.40	670 780.00	285 395.00
96	204 517.61	86 935.64	670 989.54	285 221.91
97	204 569.57	86 868.00	671 160.00	285 000.00
5	204 593.28	86 827.35	671 237.80	284 866.63
6	204 609.19	86 794.85	671 290.00	284 760.00
7	204 648.82	86 648.54	671 420.00	284 280.00
8	204 638.15	86 482.43	671 385.00	283 735.00
9	204 564.92	86 341.54	671 144.75	283 272.78
10	204 581.76	85 945.07	671 200.00	281 972.00
11	204 459.46	85 522.26	670 798.76	280 584.83
12	204 725.02	85 444.58	671 670.00	280 330.00
13	204 720.44	85 168.74	671 655.00	279 425.00
14	204 744.83	85 007.20	671 735.00	278 895.00
15	205 095.35	84 973.67	672 885.00	278 785.00
16	205 257.16	84 836.36	673 415.87	278 334.50
17	205 605.89	84 112.61	674 560.00	275 960.00
18	205 726.28	83 973.92	674 955.00	275 505.00
19	205 663.80	83 797.14	674 750.00	274 925.00
20	205 860.40	83 620.36	675 395.00	274 345.00
21	205 956.41	83 460.34	675 710.00	273 820.00
22	205 804.01	83 291.17	675 210.00	273 265.00
23	205 910.69	83 036.66	675 560.00	272 430.00
24	206 049.37	83 083.91	676 015.00	272 585.00
25	206 079.85	83 149.44	676 115.00	272 800.00
26	206 040.23	83 288.12	675 985.00	273 255.00
27	206 073.76	83 371.94	676 095.00	273 530.00
28	206 229.20	83 416.14	676 605.00	273 675.00

\* Coordenadas Lambert Zona Sur Central de Texas.

<sup>1</sup> See insert in a pocket at the end of this volume — Voir hors-texte dans une pochette à la fin du présent volume.

## RELOCATION OF THE RIO GRANDE IN THE PRESIDIO-OJINAGA TRACTS

*Table of coordinates of traverse points*

This table forms a part of the map "Relocation of the Rio Grande in the Presidio-Ojinaga Tracts" dated November 19, 1970.<sup>1</sup>

Station	Coordinates in feet *		Coordinates in meters *	
	North	East	North	East
1	685,722.00	267,120.00	209,008.07	81,418.18
2	685,153.99	267,348.68	208,834.94	81,487.88
3	683,930.16	268,289.82	208,461.91	81,774.74
4	671,966.39	284,276.90	204,815.36	86,647.60
88	670,906.82	284,983.87	204,492.40	86,863.08
89	669,344.98	285,380.00	204,016.35	86,983.82
90	669,725.00	285,000.00	204,132.18	86,868.00
91	669,829.03	284,842.22	204,163.89	86,819.91
92	670,000.00	284,898.00	204,216.00	86,836.91
93	670,367.41	285,120.68	204,327.99	86,904.78
94	670,520.00	285,375.00	204,374.50	86,982.30
95	670,780.00	285,395.00	204,453.74	86,988.40
96	670,989.54	285,221.91	204,517.61	86,935.64
97	671,160.00	285,000.00	204,569.57	86,868.00
5	671,237.80	284,866.63	204,593.28	86,827.35
6	671,290.00	284,760.00	204,609.19	86,794.85
7	671,420.00	284,280.00	204,648.82	86,648.54
8	671,385.00	283,735.00	204,638.15	86,482.43
9	671,144.75	283,272.78	204,564.92	86,341.54
10	671,200.00	281,972.00	204,581.76	85,945.07
11	670,798.76	280,584.83	204,459.46	85,522.26
12	671,670.00	280,330.00	204,725.02	85,444.58
13	671,655.00	279,425.00	204,720.44	85,168.74
14	671,735.00	278,895.00	204,744.83	85,007.20
15	672,885.00	278,785.00	205,095.35	84,973.67
16	673,415.87	278,334.50	205,257.16	84,836.36
17	674,560.00	275,960.00	205,605.89	84,112.61
18	674,955.00	275,505.00	205,726.28	83,973.92
19	674,750.00	274,925.00	205,663.80	83,797.14
20	675,395.00	274,345.00	205,860.40	83,620.36
21	675,710.00	273,820.00	205,956.41	83,460.34
22	675,210.00	273,265.00	205,804.01	83,291.17
23	675,560.00	272,430.00	205,910.69	83,036.66
24	676,015.00	272,585.00	206,049.37	83,083.91
25	676,115.00	272,800.00	206,079.85	83,149.44
26	675,985.00	273,255.00	206,040.23	83,288.12
27	676,095.00	273,530.00	206,073.76	83,371.94
28	676,605.00	273,675.00	206,229.20	83,416.14

\* Texas State Lambert Projection, South Central Zone.

<sup>1</sup> See insert in a pocket at the end of this volume.

Station	Coordinates in feet *		Coordinates in meters *	
	North	East	North	East
29	676,515.00	273,015.00	206,201.77	83,214.97
30	677,135.00	272,500.00	206,390.75	83,058.00
31	677,795.00	271,805.00	206,591.92	82,846.16
32	678,100.00	271,890.00	206,684.88	82,872.07
33	678,605.00	271,815.00	206,838.80	82,849.21
34	678,660.00	271,580.00	206,855.57	82,777.58
35	678,480.00	271,345.00	206,800.70	82,705.96
36	678,460.00	271,095.00	206,794.61	82,629.76
37	678,195.00	270,915.00	206,713.84	82,574.89
38	678,155.00	270,725.00	206,701.64	82,516.98
39	678,578.00	270,455.00	206,830.57	82,434.68
40	678,540.00	270,225.00	206,818.99	82,364.58
41	678,370.00	270,120.00	206,767.18	82,332.58
42	678,085.00	270,310.00	206,680.31	82,390.49
43	677,955.00	270,260.00	206,640.68	82,375.25
44	677,790.00	270,000.00	206,590.39	82,296.00
45	677,810.00	269,705.00	206,596.49	82,206.08
46	678,060.00	269,455.00	206,672.69	82,129.88
47	678,075.00	269,310.00	206,677.26	82,085.69
48	677,855.00	269,100.00	206,610.20	82,021.68
49	677,480.00	269,045.00	206,495.90	82,004.92
50	676,895.00	269,175.00	206,317.60	82,044.54
51	676,590.00	269,435.00	206,224.63	82,123.79
52	676,385.00	269,820.00	206,162.15	82,241.14
53	676,500.00	270,360.00	206,197.20	82,405.73
54	676,195.00	270,500.00	206,104.24	82,448.40
55	676,005.00	270,435.00	206,046.32	82,428.59
56	675,840.00	270,155.00	205,996.03	82,343.24
57	675,895.00	269,305.00	206,012.80	82,084.16
58	676,050.00	268,390.00	206,060.04	81,805.27
59	676,735.00	267,710.00	206,268.83	81,598.01
60	677,350.00	267,585.00	206,456.28	81,559.91
61	677,695.00	267,730.00	206,561.44	81,604.10
62	678,065.00	267,550.00	206,674.21	81,549.24
63	678,285.00	267,090.00	206,741.27	81,409.03
64	678,440.00	266,930.00	206,788.51	81,360.26
65	678,345.00	266,725.00	206,759.56	81,297.78
66	678,400.00	266,630.00	206,776.32	81,268.82
67	678,645.00	266,630.00	206,851.00	81,268.82
68	679,260.00	267,260.00	207,038.45	81,460.85
69	679,615.00	267,930.00	207,146.65	81,665.06
70	679,870.00	268,265.00	207,224.38	81,767.17
71	680,255.00	268,225.00	207,341.72	81,754.98
72	680,685.00	267,725.00	207,472.79	81,602.58
73	681,040.00	267,050.00	207,580.99	81,396.84
74	681,425.00	266,185.00	207,698.34	81,133.19
75	681,810.00	265,875.00	207,815.69	81,038.70
76	682,515.00	265,785.00	208,030.57	81,011.27
77	683,140.00	265,920.00	208,221.07	81,052.42

\* Texas State Lambert Projection, South Central Zone.

Station	Coordinates in feet *		Coordinates in meters *	
	South	East	South	East
78	683,415.00	266,105.00	208,304.89	81,108.80
79	683,765.00	266,020.00	208,411.57	81,082.90
80	683,995.00	266,070.00	208,481.68	81,098.14
81	684,150.00	266,335.00	208,528.92	81,178.91
82	684,125.00	266,605.00	208,521.30	81,261.20
83	684,310.00	266,990.00	208,577.69	81,378.55
84	684,620.00	267,165.00	208,672.18	81,431.89
85	684,865.00	267,215.00	208,746.85	81,447.13
86	685,220.00	267,200.00	208,855.06	81,442.56
87	685,535.00	267,105.00	208,951.07	81,413.60

AREA: 1606.19 acres = 650.00 hectares

\* Texas State Lambert Projection, South Central Zone.

#### DESCRIPTION OF RELOCATION CHANNEL OF THE RIO GRANDE IN THE PRESIDIO-OJINAGA TRACTS

This description forms a part of the map entitled "Relocation of the Rio Grande in the Presidio-Ojinaga tracts," dated November 19, 1970.

The center of the new channel of the Rio Grande begins at Point 1, with coordinates North 685,722.00 feet and East 267,120.00 feet; thence 612.30 feet along a tangent bearing South 21°55'48" East to Point 2, the beginning of a curve, with coordinates North 685,153.99 feet and East 267,348.68 feet; thence with a circular curve to the left with length of 1,563.19 feet and radius of 2,865.03 feet to Point 3, the end of curve, with coordinates North 683,930.16 feet and East 268,289.82 feet; thence 19,967.95 feet along a tangent bearing South 53°11'28" East to Point 4, the beginning of a curve, with coordinates North 671,966.39 feet and East 284,276.90 feet; thence with a circular curve to the right with length of 1,298.64 feet and radius of 1,909.86 feet to Point 88, the end of curve with coordinates North 670,906.82 feet and East 284,983.87 feet; thence 1,611.29 feet along a tangent bearing South 14°13'55" East to the end of relocation at Point 89 with coordinates North 669,344.98 feet and East 285,380.00 feet. The total length of the relocation of the Rio Grande is 25,053.38 feet.

Coordinates are on Texas State Lambert Projection, South Central Zone.



## RELOCATION OF THE RIO GRANDE UPSTREAM FROM HIDALGO-REYNOSA

*Table of coordinates of traverse points*

This table forms a part of the map "Relocation of the Rio Grande upstream from Hidalgo-Reynosa" dated November 19, 1970.<sup>1</sup>

Station	Coordinates in feet *		Coordinates in meters *	
	South	East	South	East
1	104,809.98	234,477.37	31,946.08	71,468.70
2	103,806.50	233,463.13	31,640.22	71,159.56
3	102,484.42	233,268.94	31,237.25	71,100.37
4	101,437.77	233,403.03	30,918.23	71,141.24
5	100,994.62	233,865.43	30,783.16	71,282.18
6	100,971.30	234,672.51	30,776.05	71,528.18
7	102,535.54	236,307.09	31,252.83	72,026.40
8	103,224.31	236,789.71	31,462.77	72,173.50
9	103,352.07	237,209.72	31,501.71	72,301.52
10	103,896.59	237,413.36	31,667.68	72,363.59
11	103,919.16	238,263.10	31,674.56	72,622.59
12	103,289.05	238,679.47	31,482.50	72,749.50
13	102,093.83	238,898.47	31,118.20	72,816.25
14	101,228.55	238,947.58	30,854.46	72,831.22
15	100,765.78	239,311.56	30,713.41	72,942.16
16	100,453.88	239,806.83	30,618.34	73,093.12
17	100,483.11	240,463.00	30,627.25	73,293.12
18	101,014.31	241,132.52	30,789.16	73,497.19
19	101,998.46	241,339.64	31,089.13	73,560.32
20	102,903.97	241,353.16	31,365.13	73,564.44
21	104,901.94	241,531.24	31,974.11	73,618.72
22	105,534.91	242,063.03	32,167.04	73,780.81
23	104,070.28	237,869.43	31,720.62	72,502.60
24	105,695.54	234,563.66	32,216.00	71,495.00

AREA: 481.68 acres = 194.93 hectares

\* Coordinates with origin at R.P. "E", Roma, Texas.

DESCRIPTION OF RELOCATION CHANNEL OF THE RIO GRANDE  
UPSTREAM FROM HIDALGO-REYNOSA

This description forms a part of the map entitled "Relocation of the Rio Grande upstream from Hidalgo-Reynosa," dated November 19, 1970.

The center of the new channel of the Rio Grande begins at Point 24, the beginning of a curve, with coordinates South 105,695.54 feet and East 234,563.66 feet; thence northeasterly with a circular curve to the right with length of 4,100.07 feet and radius of 2,585.30 feet to Point 23, the end of curve with coordinates South 104,070.28 feet

<sup>1</sup> See insert in a pocket at the end of this volume.

and East 237,869.43 feet; thence 4,442.00 feet along a tangent bearing South 70°44'52" East, to Point 22, the end of relocation with coordinates South 105,534.91 feet and East 242,063.03 feet. The total length of the relocation of the Rio Grande is 8,542.07 feet.

Coordinates with origin at Reference Point " E ", Roma, Texas.

#### RELOCATION OF RIO GRANDE DOWNSTREAM FROM PRESIDIO-OJINAGA

##### *Table of coordinates of traverse points*

This table forms a part of the map " Relocation of the Rio Grande downstream from Presidio-Ojinaga " dated November 19, 1970. <sup>1</sup>

##### TRACT NO. 1

Station	Coordinates in feet *		Coordinates in metres *	
	North	East	North	East
1	665,605.00	285,825.00	202,876.40	87,119.46
2	664,761.06	286,564.60	202,619.17	87,344.89
3	664,590.00	286,410.00	202,567.03	87,297.77
4	664,615.00	286,215.00	202,574.65	87,238.33
5	664,895.00	285,850.00	202,660.00	87,127.08
6	665,435.00	285,855.00	202,824.59	87,128.60

AREA: 7.75 acres = 3.13 hectares

##### TRACT NO. 2

Station	Coordinates in feet *		Coordinates in meters *	
	North	East	North	East
2	664,761.06	286,564.60	202,619.17	87,344.89
7	664,850.00	286,645.00	202,646.28	87,369.40
8	665,000.00	286,720.00	202,692.00	87,392.26
9	665,085.00	287,085.00	202,717.91	87,503.51
10	664,845.00	287,525.00	202,644.76	87,637.62
11	664,925.00	288,005.00	202,669.14	87,783.92
12	665,100.00	288,350.00	202,722.48	87,889.08
13	665,070.00	288,620.00	202,713.34	87,971.38
14	664,900.00	288,880.00	202,661.52	88,050.62
15	664,580.00	289,115.00	202,563.98	88,122.25
16	664,295.00	289,235.00	202,477.12	88,158.83
17	663,965.00	289,270.00	202,376.53	88,169.50
18	663,435.00	289,105.00	202,214.99	88,119.20
19	662,920.00	289,085.00	202,058.02	88,113.11
20	662,423.33	288,613.33	201,906.63	87,969.34

AREA: 92.32 acres = 37.36 hectares

\* Texas State Lambert Projection, South Central Zone.

<sup>1</sup> See insert in a pocket at the end of this volume.

## TRACT NO. 3

Station	Coordinates in feet *		Coordinates in meters *	
	North	East	North	East
20	662,423.33	288,613.33	201,906.63	87,969.34
21	661,189.21	289,694.89	201,530.47	88,299.00
22	660,799.56	290,604.80	201,411.71	88,576.34
23	660,264.94	290,109.83	201,248.75	88,425.48
24	660,270.00	289,300.00	201,250.30	88,178.64
25	660,910.00	288,450.00	201,445.37	87,919.56
26	661,140.00	288,350.00	201,515.47	87,889.08
27	661,835.00	288,320.00	201,727.31	87,879.94
28	662,255.00	288,445.00	201,855.32	87,918.84

AREA: 52.90 acres = 21.41 hectares

## TRACT NO. 4

Station	Coordinates in feet *		Coordinates in meters *	
	North	East	North	East
1	660,520.00	293,290.00	201,326.50	89,394.79
2	658,580.00	295,095.00	200,735.18	89,944.96
3	658,700.00	294,890.00	200,771.76	89,882.47
4	658,770.00	294,230.00	200,793.10	89,681.30
5	658,865.00	293,910.00	200,822.05	89,583.77
6	659,155.00	293,675.00	200,910.44	89,512.14
7	659,810.00	293,640.00	201,110.09	89,501.47
8	660,000.00	293,590.00	201,168.00	89,486.23
9	660,290.00	293,475.00	201,256.39	89,451.18

AREA: 19.37 acres = 7.84 hectares

## TRACT NO. 5

Station	Coordinates in feet *		Coordinates in meters *	
	North	East	North	East
1	658,023.27	295,604.35	200,565.49	90,100.21
2	657,910.00	295,800.00	200,530.97	90,159.84
3	657,850.00	296,080.00	200,512.68	90,245.18
4	657,855.00	296,395.00	200,514.20	90,341.20
5	658,075.00	296,735.00	200,581.26	90,444.83
6	658,740.00	297,025.00	200,783.95	90,533.22
7	659,040.00	297,035.00	200,875.39	90,536.27
8	659,330.00	296,800.00	200,963.78	90,464.64
9	659,640.00	296,925.00	201,058.27	90,502.74
10	659,780.00	297,115.00	201,100.94	90,560.65
11	659,740.00	297,340.00	201,088.75	90,629.23
12	659,545.00	297,990.00	201,029.32	90,827.35
13	659,390.00	298,230.00	200,982.07	90,900.50
14	658,860.00	298,530.00	200,820.53	90,991.94

\* Texas State Lambert Projection, South Central Zone.

N° 11873

Station	Coordinates in feet *		Coordinates in meters *	
	North	East	North	East
15	658,080.00	298,795.00	200,582.78	91,072.72
16	657,495.00	298,730.00	200,404.48	91,052.90
17	656,635.00	298,220.00	200,142.35	90,897.46
18	656,045.00	298,295.00	199,962.52	90,920.32
19	655,839.23	298,291.44	199,899.80	90,919.23

AREA: 132.78 acres = 53.73 hectares

#### TRACT NO. 6

Station	Coordinates in feet *		Coordinates in meters *	
	North	East	North	East
19	655,839.23	298,291.44	199,899.80	90,919.23
20	654,984.90	299,342.59	199,639.39	91,239.62
21	654,910.00	299,165.00	199,616.57	91,185.49
22	654,905.00	298,905.00	199,615.04	91,106.24
23	655,100.00	298,515.00	199,674.48	90,987.37
24	655,460.00	298,285.00	199,784.21	90,917.27

AREA: 9.31 acres = 3.77 hectares

#### TRACT NO. 7

Station	Coordinates in feet *		Coordinates in meters *	
	North	East	North	East
20	654,984.90	299,342.59	199,639.39	91,239.62
25	655,180.00	299,805.00	199,698.86	91,380.56
26	654,935.00	300,705.00	199,624.19	91,654.88
27	655,035.00	301,010.00	199,654.67	91,747.85
28	655,036.94	301,221.92	199,655.26	91,812.44
29	654,571.94	302,496.92	199,513.53	92,201.06
30	654,255.00	302,825.00	199,416.92	92,301.06
31	653,860.00	303,040.00	199,296.53	92,366.59
32	653,585.00	303,110.00	199,212.71	92,387.93
33	653,120.00	303,110.00	199,070.98	92,387.93
34	652,275.00	302,920.00	198,813.42	92,330.02
35	651,982.00	303,037.11	198,724.11	92,365.71

AREA: 116.23 acres = 47.04 hectares

\* Texas State Lambert Projection-South Central Zone.

#### DESCRIPTION OF RELOCATION CHANNEL OF THE RIO GRANDE DOWNSTREAM FROM PRESIDIO-OJINAGA

These descriptions form a part of the map entitled "Relocation of the Rio Grande downstream from Presidio-Ojinaga," dated November 19, 1970.

N° 11873

*Tracts 1, 2 and 3*

The center of the new channel of the Rio Grande begins at Point 1, with coordinates North 665,605.00 feet and East 285,825.00 feet; thence 5,871.56 feet along a tangent bearing South 41°13'50" East to Point 21, the beginning of a curve, with coordinates North 661,189.21 feet and East 289,694.89 feet; thence with a circular curve to the left with length of 1,023.51 feet and radius of 1,145.92 feet to Point 22, the end of curve and relocation, with coordinates North 660,799.56 feet East 290,604.80 feet. The total length of the relocation of the Rio Grande is 6,895.07 feet.

*Tract 4*

The center of the new channel of the Rio Grande begins at Point 1, with coordinates North 660,520.00 feet and East 293,290.00 feet; thence 2,649.84 feet along a tangent bearing South 42°56'08" East to Point 2, the end of relocation with coordinates North 658,580.00 feet and East 295,095.00 feet.

*Tracts 5, 6 and 7*

The center of the new channel of the Rio Grande begins at Point 1, with coordinates North 658,023.27 feet and East 295,604.35 feet; thence 9,578.25 feet along a tangent bearing South 50°53'46" East to Point 35, the end of relocation with coordinates North 651,982.00 feet and East 303,037.11 feet.

The total length of the three reaches of the relocations of the Rio Grande is 19,123.16 feet.

Coordinates are on Texas State Lambert Projection, South Central Zone.