PRELIMINARY INVENTORY OF THE CARTOGRAPHIC RECORDS

OF THE PANAMA CANAL

P.I. 91

(Record Group 185)

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FOREWORD

To analyze and describe the permanently valuable records of the Federal Government preserved in the National Archives Building is one of the main tasks of the National Archives. Various kinds of finding aids are needed to facilitate the use of these records, and the first step in the records-description program is the compilation of preliminary inventories of the material in the 270-odd record groups to which the holdings of the National Archives are allocated.

These inventories are called "preliminary" because they are provisional in character. They are prepared as soon as possible after the records are received without waiting to screen out all disposable material or to perfect the arrangement of the records. They are compiled primarily for internal use, both as finding aids to help the staff render efficient reference service and as a means of establishing administrative control over the records.

Each preliminary inventory contains an introduction that briefly states the history and functions of the agency that accumulated the records. The records themselves are described series by series, that is, by units of records of the same form or that deal with the same subject or activity or that are arranged serially. Other significant information about the records may sometimes be given in appendixes.

When the record group has been studied sufficiently and the records have been placed in final order, the preliminary inventories will be revised and the word "preliminary" dropped from the title of the revision. Meanwhile, as occasion demands and time permits, special reports, indexes, calendars, and other finding aids to the record group will be prepared.

Several finding aids that give an overall picture of materials in the National Archives have been published. A comprehensive Guide to the Records in the National Archives (1948) and a brief guide, Your Government's Records in the National Archives (revised 1950), have been issued. Forty-four Reference Information Papers, which analyze records in the National Archives on such subjects as transportation, small business, and the Middle East, have so far been issued. Records of World War I have been described in the Handbook of Federal World War Agencies and Their Records, 1917-1921, and those of World War II in the two-volume guide, Federal Records of World War II (1950-51). Many bodies of records of high research value have been edited by the National Archives and reproduced on microfilm as a form of publication. Positive prints of some 4,700 rolls of this microfilm, described in the List of National Archives Microfilm Publications (1953), are now available for purchase.

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INTRODUCTION

After early explorations had failed to uncover a natural waterway across Central America from the Atlantic to the Pacific Ocean, numerous plans, schemes, and financial arrangements were developed for digging a canal. In 1869 President Grant instructed the Chief of the Bureau of Navigation to organize expeditions for surveying possible isthmian canal routes. These surveys were made during the period 1870-75 by Navy personnel and on March 15, 1872, the President appointed an Interoceanic Canal Commission to appraise the survey reports. On February 7, 1876, the Commission announced a unanimous decision in favor of a route across Nicaragua.

In 1881 the Republic of Nicaragua awarded to the Provisional Interoceanic Canal Society the right to construct a canal which, after 99 years, would revert to Nicaragua. This concession was allowed to lapse, but another was obtained in 1887, in favor of the Nicaragua Canal Association, which concession was in turn assumed by the Maritime Canal Company of Nicaragua, a privately financed company incorporated by the United States Congress on February 20, 1889. The latter company was directed to report annually to the Secretary of the Interior, but its work was suspended in 1893 when no more funds were available.

President Cleveland then appointed a United States Nicaragua Canal Board, popularly known as the Ludlow Commission (its Chairman was Lt. Col. William Ludlow), to investigate and report on the technical and financial aspects of constructing a Nicaraguan canal. The Board advised a re-examination of the canal route. On July 29, 1897, President McKinley appointed a Nicaragua Canal Commission, which completed its surveys of various routes in February 1899. On June 10, 1899, he created the Isthmian Canal Commission to decide which of several possible canal routes would be most feasible. At first the Commission reported in favor of the Nicaragua route, but when the French, after futile attempts to construct a canal, offered the United States their rights and property in Panama for $40 million the Commission reversed its decision in favor of the route across Panama.

It was in 1876 that the Société Civile Internationale du Canal Interoceanique was organized in Paris to make surveys and explorations for a canal across the Isthmus of Panama. In May 1879 an international congress under the auspices of Ferdinand de Lesseps, builder of the Suez Canal, met in Paris and decided to build a sea-level canal in Panama. On March 3, 1881, the Compagnie Universelle du Canal Interoceanique, headed by de Lesseps, was incorporated under French law. Further investigation showed that a sea-level canal could not be built in Panama and plans for a lock-type canal were approved, but the Compagnie Universelle was soon bankrupt and a liquidator was appointed early in 1889. He was empowered to continue the construction work if possible, or to cede the assets to any new company. Work was finally suspended on May 15, 1889.

On October 20, 1894, the Compagnie Nouvelle du Canal de Panamá was incorporated with the assets and property of the old Compagnie Universelle. By 1898, however, the new company was ready to give up the seemingly insurmountable task and its work had practically ceased. It was in the following year that the French offered to the United States their rights and property in Panama.

The Spooner Act of June 28, 1902 (32 Stat. 481), authorized the President to purchase the assets of the Compagnie Nouvelle du Canal de Panamá, including its shares in the Panama Railroad Company, at not more than $40 million, and to appoint a new Isthmian Canal Commission to construct the canal and necessary works.

The Hay-Bunau-Varilla Treaty between the United States and the new Republic of Panama, which granted in perpetuity to the United States the use, occupation, and control of a 10-mile wide strip across Panama, was proclaimed on February 26, 1904, and on May 4 of that year the United States took possession of the canal site. A new Isthmian Canal Commission was then named.

On January 8, 1908, Lt. Col. George W. Goethals was appointed Engineer-in-Chief and Chairman of the Isthmian Canal Commission, subject only to the Secretary of War and the President. Under his leadership construction steadily advanced and the Panama Canal was opened to commercial traffic on August 15, 1914.

The Panama Canal Act of 1912 (37 Stat. 560) provided that the 10-mile wide strip of land be designated the Canal Zone and the canal within it the Panama Canal. The act authorized the President, when he believed the canal sufficiently near completion, to discontinue the Isthmian Canal Commission and to establish the government for the canal and the Canal Zone. Effective April 1, 1914, an Executive order abolished the Commission and put into effect the organization provided for by the 1912 act. The Commission Chairman, Lieutenant Colonel Goethals, became the first Governor of the independent Government agency known as The Panama Canal and the President of the Panama Railroad Company.

An act of September 26, 1950 (64 Stat. 1038), provided that The Panama Canal be henceforth known as the Canal Zone Government, and that its functions be limited to maintaining the civil government (including health, sanitation, and protection) of the Canal Zone. The operation and maintenance of the canal itself was charged, by the same act, to the Panama Canal Company, which replaced the Panama Railroad Company and continued its functions of conducting business operations incident to the operation and maintenance of the canal and incident to the civil government of the Canal Zone. The Governor of the Canal Zone is also president of the Panama Canal Company. A list of the Governors of The Panama Canal and the Canal Zone appears at the end of this introduction.

In addition to the property and rights, the United States was ceded the archives of the two French companies. When the Americans took over the Panama Administration Building about half the French records there were destroyed to make available additional working space. The destruction was halted by Maj. Gen. George W. Davis, a member of the Isthmian Canal Commission. Classification and consolidation of the remaining records was begun in 1914 by the Record Bureau of the Panama Canal.

The cartographic records described in this inventory are only a part of the records in Record Group 185, Records of The Panama Canal, in the National Archives. As of July 1, 1955, they numbered approximately 9,240 items and amounted to about 125 cubic feet in volume. The textual records of The Panama Canal, in the same record group, are described in an unpublished inventory compiled by Richard Giroux.

Within each entry of the inventory the series of records is described only in general terms. The title of each entry includes the number of items and their measurement in terms of linear feet or inches. In appendix I, however, the individual items or groups of items comprising each series are listed in the order of their arrangement with the file designation and a brief description for each. Appendix II consists of three alphabetical indexes (each for a different geographical area) to places named in the identifications given in appendix I.

Related records in the National Archives are in Record Group 19, Records of the Bureau of Ships; among the cartographic records in Record Group 37, Records of the Hydrographic Office; in Record Group 59, General Records of the Department of State; among records of the Patents and Miscellaneous Division in Record Group 48, Records of the Office of the Secretary of the Interior; and among the cartographic records in Record Group 77, Records of the Chief of Engineers.

Governors of The Panama Canal and the Canal Zone

Lt. Col. George W. Goethals	1914-17
Lt. Col. Chester Harding	1917-21
Col. Jay J. Morrow	1921-24
Col. Meriwether L. Walker	1924-28
Col. Harry Burgess	1928-32
Col. Julian L. Schley	1932-36
Col. Clarence S. Ridley	1936-40
Maj. Gen. Glen E. Edgerton	1940-44
Brig. Gen. J. C. Mehaffey	1944-48
Brig. Gen. F. K. Newcomer	1948-52
Brig. Gen. John S. Seybold	1952-

CARTOGRAPHIC RECORDS OF THE PANAMA CANAL

Records of the Compagnie Universelle du Canal Interoceanique

This organization was incorporated March 3, 1881, under the directorship of Ferdinand de Lesseps. It purchased a 99-year concession obtained earlier by Lucien N. B. Wyse from Colombia, and spent the next few years in surveys and other preliminary work. By 1887 it became apparent that a sea-level canal was not feasible and De Lesseps resigned. Plans for a lock-type canal were approved in the same year and work continued until the company was declared bankrupt and was dissolved by judgment of the Tribunal Civil de la Seine on February 4, 1889.

GENERAL MAPS OF THE PANAMA CANAL ROUTE. 1881-1900. 2 ft. 154 items. 1

Large-scale general maps, contour maps, progress maps, harbor plans, and cross sections and profiles of terrain, mostly manuscript. Many of the items were prepared during preliminary surveys of the route for the proposed sea-level canal and a large part of the maps are of the rivers that were to be utilized in building that type of canal. A number of maps bearing dates after 1889 would indicate that the Compagnie Nouvelle du Canal de Panamá interfiled many of its maps with those of the earlier company. As this unit of records was already arranged in an alphabetic-numeric system when it arrived at the National Archives, no attempt has been made to rearrange them. For a listing of the records in this and the following series, see appendix I.

DETAILED MAPS AND PLANS OF THE PANAMA CANAL. 1881-97. 51 ft. 6,620 items. 2

Manuscript topographic maps, geological profiles, progress maps, townsite plans, harbor plans and soundings, cross sections and profiles of excavations, and plans of dams, locks, hospitals, shops and other buildings, equipment, and machinery. This series contains the more detailed working maps and plans for the canal. Again, many of the items appear to belong more properly to the period of the Compagnie Nouvelle, but it has not been deemed advisable to break up a series of records already arranged in a satisfactory numerical sequence. See list starting at p. 14 plus 1978 accretions at end

Records of the Compagnie Nouvelle du Canal de Panamá

The Compagnie Nouvelle was incorporated on October 20, 1894, with the assets and property of the Compagnie Universelle. After 5 years of inactivity work on the Panama Canal was resumed on a limited scale.

Because of mounting financial difficulties which were aggravated by the likelihood that the United States would construct a canal across Nicaragua, the directors decided to sell the property and rights, if possible, to the United States for $40 million. The transaction, at that figure, was completed, and the United States occupied the site of the canal on May 4, 1904.

CROSS SECTIONS, PROFILES, AND AREA MAPS OF THE PANAMA CANAL. 1889-95. 10 in. 493 items. 3

Manuscript maps of the Panama Railroad line and various areas near the canal, and cross sections, plans, and profiles of dams, locks, excavations, and terrain. Many of the cross sections and profiles are from the interim period between the first and second French companies when work was carried on by a liquidator appointed by the Tribunal Civil de la Seine. Arranged numerically.

PROFILES OF PANAMA CANAL EXCAVATIONS. ca. 1897. 4 in. 85 items. 4

Manuscript profiles of canal excavations drawn at close intervals from kilometer 0.0 (the Atlantic coast) to kilometer 68.13 (the Pacific coast). Arranged in a numerical sequence.

SECTIONAL MAPS OF THE PANAMA CANAL AREA. ca. 1899. ½ in. 46 items. 5

Large-scale published sectional maps showing the route of the canal and the locations of towns, dams, locks, watercourses, and topographical features. A small-scale annotated map serves as an index to the area covered by each of the sectional maps. Arranged numerically.

PUBLISHED PORTFOLIOS AND REPORTS OF THE TECHNICAL COMMITTEE. 1899. 3 in. 44 items. 6

Contain general maps, plans, profiles, and cross sections showing the progress of construction on the canal, and plans, profiles, and other drawings illustrating such projects of the company's Technical Committee as locks, dams, and railroads. Arranged for the most part numerically.

MAPS OF LAGO DE ALHAJUELA. ca. 1898. ½ in. 5 items. 7

Large-scale manuscript maps of Lago de Alhajuela, showing topographic contours of the surrounding area. Arranged numerically.

MAPS OF LAGO DE BOHIO. ca. 1898. ½ in. 7 items. 8

Large-scale manuscript maps of Lago de Bohio, showing topographic contours of the surrounding area. Arranged numerically.

AREA MAPS OF THE PANAMA CANAL. 1894-99. 4 in. 50 items. 9

Mainly manuscript and published maps of limited areas along the canal route, but including also plans and charts indicating the progress of dredging in the port of La Boca. Many of the maps are in color and most of them depict contour lines. Arranged numerically.

Records of the Nicaragua Canal Commission

On July 29, 1897, the Nicaragua Canal Commission was appointed by President McKinley, pursuant to an act of June 4, 1897 (30 Stat. 59), to re-examine the proposed canal route and prepare an estimate of construction costs.

The Commission, popularly known as the first Walker Commission, was composed of Rear Adm. John G. Walker as Chairman, Lewis M. Haupt, professor of civil engineering at the University of Pennsylvania, and Capt. O. M. Carter, of the Corps of Engineers, who was later replaced by Col. Peter C. Hains.

The Survey was completed in February 1899 and in the following month the Commission reported to the President that a canal across Nicaragua would cost an estimated $118,113,790.

RECORDS OF THE SURVEYS OF PROJECTED CANAL ROUTES ACROSS NICARAGUA.
1895-99. 4 in. 125 items. 10
Mainly published and manuscript maps, profiles, and cross sections of the routes proposed by the Child, Haupt, Lull, Menocal, and Walker surveys. Also included is a unit of 20 large-scale manuscript sectional maps, with an index map, of the entire Nicaragua Canal area, showing the Child, Lull, and Menocal routes. Arranged numerically.

MAPS AND OTHER RECORDS RELATING TO PROJECTED CANAL ROUTES ACROSS NICARAGUA. 1895-99. 1 ft. 322 items. 11
Manuscript and blueprint cross sections, profiles, and maps of the Child, Ehle, Evans, Lull, and Menocal routes; profiles of dams, embankments, and wasteways; harbor plans for Greytown (San Juan del Norte) and Brito; sounding records made by the U. S. S. Newport in Greytown Harbor and along the Caribbean coast; excavation notes; technical estimates and computations; rainfall statistics; and what appear to be fragmentary records of the Maritime Canal Company of Nicaragua. Arranged numerically, N-1 through N-165.

Records of the Isthmian Canal Commissions

On March 3, 1899, Congress authorized President McKinley to have an exhaustive series of investigations made to determine the most practical canal route that should be owned and controlled by the United States.

Accordingly, on June 10, 1899, he appointed the first Isthmian Canal Commission, popularly known as the second Walker Commission. Like the Nicaragua Canal Commission it was composed of Rear Adm. John G. Walker as Chairman, Prof. Lewis M. Haupt, and Col. Peter C. Hains.

The Commission was to investigate the Nicaragua, Panama, Darien, and San Blas canal routes. Because of the amount of work involved other Commissioners were later appointed, as follows: Alfred Noble, George S. Morrison, and William H. Burr (all civil engineers); Lt. Col. Oswald H. Ernst, Corps of Engineers; ex-Senator Samuel Pasco of Florida; and Emory Richard Johnson, an economist and transportation expert.

In its report of November 1901 the Commission narrowed the choice to the Nicaragua and the Panama routes and recommended the Nicaragua route. Cost of the Nicaragua project was estimated at $189,864,062; cost of the Panama project, at $144,233,358, plus the cost of concessions and the purchase of the rights and property of the Compagnie Nouvelle. In December the liquidator of the Compagnie Nouvelle offered to sell the French rights and property to the United States for $40 million and on January 18, 1902, the Commission issued a supplemental report recommending that the French offer be accepted and that the Panama rather than the Nicaragua route be utilized.

The Spooner Act of June 28, 1902, authorized President Theodore Roosevelt to buy out the French company for $40 million and to appoint a new Isthmian Canal Commission to supervise actual construction of the canal. Three separate commissions were sucessively appointed pursuant to the act. Rear Adm. John G. Walker headed a commission that served from 1904 to 1905; Theodore Perry Shonts was chairman of a second commission from 1905 to 1907; and Lt. Col. George W. Goethals headed the third commission, under which most of the heavy construction work took place, from 1907 to 1914.

Most of the cartographic records described below are those of the first Isthmian Canal Commission (the second Walker Commission), 1899-1902, although some records from the later commissions are included.

MAPS, PROFILES, AND CROSS SECTIONS OF THE NICARAGUA CANAL ROUTE. 1899-1900. 3 in. 240 items. 12

Manuscript and blueprint maps, cross sections, and profiles of areas along the entire proposed canal line, from Greytown Lagoon to Brito Harbor; plans of proposed dams; boring records; and technical estimates and computations. Arranged numerically.

MAPS, PROFILES, AND CROSS SECTIONS OF THE EASTERN DIVISION OF THE NICARAGUA CANAL ROUTE. 1899-1901. 11 in. 304 items. 13

Manuscript and published maps and manuscript profiles and cross sections of the Eastern Division (Caribbean Sea to Caño Tigre) showing in color the topography of areas along the proposed canal route; cross sections and plans of proposed dams, locks, embankments, and wasteways; boring records; and boat sheets showing soundings in Lago de Nicaragua. Arranged numerically, 1-61.

MAPS, PROFILES, AND CROSS SECTIONS OF THE MIDDLE DIVISION OF THE NICARAGUA CANAL ROUTE. 1899-1901. 6 in. 196 items. 14

Manuscript and published maps (some of which show topography), and manuscript cross sections and profiles of the Middle Division (Caño Tigre to Las Lajas) of the proposed canal route; boring records; and tables of distances and alignments. Arranged numerically, 80-119, with some gaps.

MAPS, PROFILES, AND CROSS SECTIONS OF THE WESTERN DIVISION OF THE NICARAGUA CANAL ROUTE. 1899-1901. 2 in. 84 items. 15

Manuscript and published maps, and manuscript cross sections and profiles of the Western Division (Las Lajas to the Pacific Ocean) of the proposed canal route; cross sections and profiles of locks, diversions, and wasteways; and boring records. Arranged numerically, 201-227.

MAPS, PROFILES, AND CROSS SECTIONS OF THE PANAMA CANAL ROUTE. 1899-1901. 4 in. 158 items. 16

Manuscript general maps and profiles of the Panama Canal and adjacent areas; cross sections of the canal excavations, of locks, dams, spillways, and diversions, and of Colón Harbor; maps of the Republic of Costa Rica; and what appear to be records of the French companies, used and in some cases annotated by personnel of the Isthmian Canal Commission, including tide gauge records for Panamá (city), 1882-87, and for Colón, 1881-87. Arranged numerically.

MAPS, PROFILES, AND CROSS SECTIONS OF PROPOSED CANAL ROUTES THROUGH THE ISTHMI OF DARIEN AND SAN BLAS. 1899-1901. 3 in. 96 items. 17

Manuscript and blueprint maps, and manuscript profiles and cross sections of surveys along the Atlantic coast and of various proposed canal routes through the Isthmi of Darien and San Blas; cross sections for a proposed ship tunnel for the Darien routes; and a group of 12 manuscript sketches of the Atlantic coast from Río Mangle to Isla Piton (see also entry 20). Arranged numerically.

BORING RECORDS FOR THE NICARAGUA AND PANAMA CANAL ROUTES. 1899-1901. ½ in. 66 items. 18

Manuscript maps showing the locations of bore holes for the Nicaragua and Panama canal routes, and manuscript profiles and cross sections of the borings. Heaviest concentrations of borings seem to be in the vicinity of proposed locks and dams. Arranged numerically, 28-42.

* PLANS OF CANAL LOCK CONSTRUCTION. 1900-1912. ½ in. 33 items. 19 *

Manuscript and blueprint plans and drawings of Bohio, Gatún, Miraflores, and Pedro Miguel locks in Panama; manuscript drawings of lock machinery in use at the Champlain Canal in New York State; and computations concerning retaining walls. Arranged alphabetically, A-G and S-U.

MANUSCRIPT MATERIALS FOR PLATES TO ACCOMPANY THE REPORT OF THE FIRST ISTHMIAN CANAL COMMISSION. 1901. 1 in. 88 items. 20

Manuscript maps, profiles, and cross sections of the proposed Nicaragua, Panama, and Darien canal routes; a manuscript map showing active and extinct volcanos in Central America; records showing rainfall data in Panama; maps showing world trade routes and how they would be affected by an isthmian canal; maps depicting the resources and industries of the nations most likely to be affected by the construction of an isthmian canal; tracings of Greytown Harbor from 1832 to 1898; and a group of manuscript sketches, in color, of the Atlantic coast of the Isthmus of Darien from Río Mangle to Isla Piton (see also entry 17). Arranged numerically.

MANUSCRIPT MATERIALS FOR PLATES TO APPEAR IN THE APPENDIXES OF THE REPORT OF THE FIRST ISTHMIAN CANAL COMMISSION. 1901. ¼ in. 13 items. 21

Cross sections of locks for proposed Panama and Nicaragua canals, with technical drawings and charts, to be used in appendixes A, E, G, and H of the Commission's report. Arranged by appendix.

PLATES SHOWING THE ROUTE OF THE PANAMA CANAL. 1913. ¼ in. 6 items. 22

Colored plates published by the last Isthmian Canal Commission showing the route of the canal and the topography of the adjacent area. Arranged numerically, P4 to P9.

Records of The Panama Canal

Effective April 1, 1914, the Isthmian Canal Commission was abolished and a permanent organization known as The Panama Canal was established by Executive Orders 1885 (January 27, 1914), 1888 (February 2, 1914),

* See Item listing after this PI

and 1897 (March 2, 1914). The orders were issued in accordance with provisions of the Panama Canal Act of August 24, 1912 (37 Stat. 560).

The Panama Canal was to serve as the permanent governing agency for the Panama Canal, the Panama Railroad Company, and the territory of the Panama Canal Zone. The chairman of the last Isthmian Canal Commission, Lt. Col. George W. Goethals, was named the first Governor of The Panama Canal. The Governor serves concurrently as President of the Panama Railroad Company.

Only a very small fraction of the cartographic records of The Panama Canal are in the National Archives.

MAPS AND PLANS OF PANAMA CANAL LOCKS. 1931. ¼ in. 6 items. 23

Blueprint maps and cross-sections showing locations of Gatún, Miraflores, and Pedro Miguel locks; and blueprint plans and profiles of projected new locks. Unarranged.

APPENDIX I

LISTS OF CARTOGRAPHIC RECORDS OF THE PANAMA CANAL

The following lists give a brief identification either of each numbered item or each group of items that comprise the series of records described in the preceding pages. The number in the right-hand margin, opposite the title of the list, corresponds to the entry number in the inventory. The alphabetic-numeric designations at the left of each item or group of items are those under which the items are filed.

List of General Maps of the Panama Canal Route 1

A	9	Contour map, Paraiso to Matachin
	10	Plan, Ancon hospital farm, 1884
	11	Contour map, Valle del Río Grande, K. 55.5-57.6
	15	Map showing status of excavation at time work was suspended, Tabernilla section, 1889
	17	Contour map, upper Río Aguardiente and affluents, right side of Río Chagres
	18	Plan and geological profile, La Boca and vicinity, 1881-95
	20	Chart showing direction of winds, Colón Harbor, 1881-87
	28	Plan, Río Camacho, 1894
	29	Plan showing original surface of the fill, Punta Cristobal, 1887
	30	Plan showing original surface, K. 65.2-68.0
B	1	General plan of canal works, Culebra section, May 1895
	2	Topographic map, Río Gigante, curve 22
	6	Map, Panama Isthmus
	15	General progress map (incomplete), Mar. 25, 1896
	25	Cross sections, Culebra Cut (original surface)
	31	Plan, Colón Harbor, showing proposed dock at Cristobal, 1895
	41	Map, Islas Perlas
	44	Plan, Mamei diversion
	45	Contour map showing status of excavation at time work was suspended, Colón to Bohio
	50	Contour map, Empire section
C	1	Contour map, Río Obispo diversion, Matachin to Carabali, 1885
	2	Triangulation, Río Grande, 1881
	7	Soundings, Colón Harbor
	10	Progress map, Culebra section, Mar. 25, 1888
	19	Cross sections, K. 53.4-54.241
	26	Map showing status of excavation at time work was suspended, San Pablo section, 1889
	34	Contour map, Río Gigante spillway
D	25	Map, Isla Naos and buildings thereon, 1907
	30	Plan, La Otre Banda estate, Taboga

E	2	Plan, Bohio and Río Gigante
	3	Plan of canal, Paraiso to Miraflores
	8	General plan, Colón Harbor
	9	Survey, Río Sinu, 1887
	15	Profile, lowest cut at Culebra, May 1899
	17	Plan of canal, Paraiso to Corozal
	22	Contour map, Cucuracha slide, 1895
	22½	Contour map, Cucuracha slide, 1888
	30	Map, port of Colón, 1895
	31	Profile of canal, Colón to Bas Obispo, 1896
	33	Profile, Valle de Conga at Paraiso, and sounding data
	38	Plan, various installations at Gatún
	40	Contour map, dumping grounds at Culebra
	46	Plan, Río Juan Diaz aqueduct for Panamá (city), 1897
	48	Contour map, K. 37.4-45.0
	50	Contour map, Matachin to Miraflores
	51	Map, La Boca and channel to Isla Naos, Mar. 25, 1888
F	2	Plan, Alhajuela dam; and contour map, Alhajuela to Dos Bócas
	3	Plan, road between Bas Obispo and Alhajuela, left side of Río Chagres, 1900
	5	Map, Lago de Alhajuela
	7	Map, Río Pequeñi and part of Lago de Alhajuela, 1896
	9	Map, Lago de Alhajuela
	11	Plan, upper Río Chagres, 1900
	14	Road plan, Santa Barbara to Chillibrillo
	15	Contour map, upper Río Chagres
	19	Maps, Ríos Chillibre, Chillibrillo, and Cabulla
	19½	Maps, Ríos Chillibre, Chillibrillo, and Cabulla
	20	Map, Juan Mina and Cantadora regions, upper Río Chagres, 1881
	28	Map, upper Río Chagres, 1884
	29	General plan, Lago de Alhajuela
	32	Survey, the divide ridge between the watersheds of the Ríos Chillibre and Juan Diaz
	34	Map, upper Río Chagres from Matachin to Alhajuela
	35	Map, road between Cruces and Panamá (city)
	36	Contour map, Río Aguardiente and Planque, right side of Río Chagres
	37	Map, Río Pequeñi; and study for a spillway on the upper lake
	39	Contour map, Matachin to Alhajuela
	40	Contour map, Gamboa to Alhajuela
	42	Profile, Lago de Gamboa
	44	Plan, upper Río Chagres
	60	Contour map, Río Chagres from Matachin to Las Campañas
	62	Contour map, Alhajuela dam site
	63	Contour map, Ríos Chagres and Pequeñi
G	4	Topographic map, mountain chain between Río Gigante and Agua Clara
	15	Plan of feeding conduit and supplementary study upstream

G	16	Contour map, left side of Río Chagres above Gamboa
	24	General plan, Colón section
	34	Plan, slides in Culebra Cut, 1889
	39	Contour map of left side of canal, Gamboa to Río Grande
	40	Contour map of left side of canal, K. 6.0-16.0, 1889
	41	Map, left side of canal, K. 16.0-22.0, 1889
	42	Progress map of work on canal, 1886-88
	43	General map, Panama Canal, 1894
	44	General progress profile showing all contracts
	47	Plan, Río Obispo diversion between Gamboa and Culebra
	48	Plan, Valle del Río Chagres from Gatún to Matachin
H	2	Map, Bohio section, left side of canal, 1896
	3	Contour map, Río Bohio
	16	Map, region of Lago de Bohio spillways
	20	Survey, Río Agua Bendita, curve 35
	33	Map of borings, Atlantic Ocean to Bohio, 1900
I	1	Contour map, Paraiso section, 1883
	3	Plan, Río Gigante spillway
	4	Map showing status of excavation at time work was suspended, La Boca section
	6	Plans, swamps at Agua Clara and Agua Blanca
	12	General map, Bohio section
	13	Map showing deviation of the Panama Railroad, Tabernilla to San Pablo
	14	Map of canal, K. 0.0-16.3
	15	Map of maritime channel, La Boca Harbor, 1899
	24	Contour map, Valle del Río Caimitillo, 1891
	26	Plan, railroad tracks at Emperador
	27	Map, Bas Obispo diversion
	28	Contour map, Corozal section, 1884
	30	Plan, 6-ton Appleby crane, 1887
	31	Map, road from Aguadulce to Río Santa María, June 24, 1905
	32	Map, confluence of Río Palo Blanco with Río Aguadulce, June 27, 1905
J	1	Map, Panama Canal and adjacent territory
		(a) Atlantic Ocean to Mindi, K. 0.0-5.2
		(b) Mindi to La Bruja, K. 5.2-14.1
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The brief glossary below identifies an abbreviation and several Spanish words that appear in the following indexes:

Bahía: bay
Boca: mouth (of a stream or body of water)
Calle: waterway
Caño: sluggish stream
Cerro: hill
Estero: creek
Golfo: gulf
Isla: island
K. kilometer
Lago: lake
Laguna: lagoon
Loma: small hill
Puerto: port
Punta: point (of land)
Quebrada: brook
Río: river
Valle: valley

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