

Ralph Arnold Photograph and Map Collection: Finding Aid

Finding aid prepared by Suzanne Oatey.

The Huntington Library, Art Collections, and Botanical Gardens

Photo Archives

1151 Oxford Road

San Marino, California 91108

Phone: (626) 405-2191

Email: reference@huntington.org

URL: <http://www.huntington.org>

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Overview of the Collection

Title: Ralph Arnold Photograph and Map Collection

Dates (inclusive): 1880-1954

Bulk dates: 1905-1935

Collection Number: photCL 311

Creator: Arnold, Ralph, 1875-1961

Extent: Approximately 16,000 photographs in 97 boxes: 64 photograph albums, lantern slides, glass and film negatives + 346 rolled maps.

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Abstract: A collection of photographs and maps compiled by American geologist and petroleum engineer Ralph Arnold (1875-1961), documenting his pioneering work in oil and mineral exploration, chiefly in the Western United States, Mexico and Venezuela, from 1900 to 1954, with the bulk of materials from 1905-1935.

Language: English.

Access

Open to qualified researchers by prior application through the Reader Services Department. For more information, contact Reader Services.

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Preferred Citation

[Identification of item], Ralph Arnold Photograph and Map Collection, The Huntington Library, San Marino, California.

Acquisition Information

Gift of Ralph Arnold, 1955-1961.

Custodial History

These materials were originally received with the Ralph Arnold papers (mssArnold papers) and were transferred to the Photo Archives Sept. 7, 1974.

In 2018, an additional 382 loose photograph album pages were transferred from Box 216 of the Ralph Arnold papers and reunited with the corresponding photograph albums in this collection.

Biographical Note

American geologist and petroleum engineer Ralph Arnold (1875-1961) was born in Marshalltown, Iowa, on April 14, 1875. His father, Delos Arnold (1830-1909), was a lawyer and Iowa state senator who became interested in the study of fossils after the discovery of crinoids fossils in LeGrand, Iowa. The Arnolds moved to Pasadena, California in 1886, and Ralph attended Pasadena High School and Throop Polytechnic School (now the California Institute of Technology) before receiving a B.A. in geology and mining from Stanford University in 1899. He also completed an M.A. (1900) and Ph.D. (1902) in geology and paleontology at Stanford. In 1899, Arnold married Frankie Winninette Stokes, the daughter of Frank and Oraletta Stokes, who had settled in South Pasadena in the 1880s. Ralph and Winninette Arnold had two daughters, Winninette (Noyes) and Elizabeth "Betty" (McKee), and they lived in a house at 1205 Wilson Avenue, South Pasadena (later San Marino).

Arnold worked for the United States Geological Survey (USGS) from 1900 to 1909, and from 1903-1909 published a variety of paleontological articles. He was active in petroleum surveys throughout the United States, and organized the Petroleum Branch of the U.S. Bureau of Mines. In 1910, he left the USGS and spent 1911-1916 leading a team in a landmark survey of petroleum resources in Trinidad and Venezuela, about which he published *The First Big Oil Hunt: Venezuela, 1911-1916* (1960).

After his successful South American explorations, Arnold conducted independent petroleum and mineral explorations from Canada to Mexico, including valuable surveys in Alaska, Arizona, California, Oklahoma, Oregon, Montana, Texas and

Washington.

In the 1920s Arnold's interests turned to politics, and he was active in the Herbert Hoover presidential campaign. He remained committed to the California Academy of Sciences, the Cooper Ornithological Society, and the Sierra Club, among other organizations. Arnold died in Santa Barbara, California, in 1961.

Scope and Content

This collection centers on 64 photograph albums compiled by Ralph Arnold that span 50 years of his life and work. The albums are arranged into subgroups of nine series based on Arnold's original schema. They are chiefly in chronological order. Photographs are accompanied by Arnold's typed captions identifying geological features; oil and mining activities; technical data; and dates and locations, i.e. often an oil or mining "district" or "field," such as "Sunset Field" (California). The first series of albums begins in 1904 and the ninth (and last) series ends in 1954. (See "Arrangement" for dates and locations for each series of albums.) Subject matter includes geological and topographical features such as rock formations, faults and schisms, mountain structure, geothermal activity, and open land with potential drilling or mining spots.

Earthquake faults are seen and described in many of Arnold's California investigations. There are also views of small and large-scale oil operations (by individuals and by organized companies); details of oil flow and reservoirs; asphalt; drilling equipment; workers and fields of oil wells. Arnold's work took him all over the Western United States, particularly California oil fields, but also Texas, Wyoming, Arizona, Alaska and other states. From 1911-1916 he was primarily in South America, and in the 1920s-1940s, mostly in the U.S., Canada and Mexico. The majority of photographs were taken by Arnold, with some by other geologists, whom Arnold credits.

Mining operations are the focus of some albums, showing investigations for tin, gold and other minerals; mines and shaft openings; piles of ore; and various methods of processing, all with detailed descriptions. Arnold also often photographed people: colleagues and business associates, oil lease owners on their properties; workers (particularly Black and Asian workers in Venezuela); and friends and family. Personal photographs are throughout the album, such as of his wife, Winninette, and their two daughters; Stokes family members (Winninette's family) in South Pasadena; and alumni of Pasadena High School and Stanford University. Arnold was an avid gardener and the albums contain detail views of cactus and tropical plants, and scenes of Arnold collecting wild orchids in Trinidad, Venezuela and Mexico.

Following the photograph albums (Series 1-9), are lantern slides (Series 10). The 193 slides were made from Arnold's photographs and were used by Arnold to accompany lectures 1914-1916. Most of the slides are grouped into themes such as Production, Technology, and Structure, and have handwritten captions. The Ralph Arnold papers, Box 132 (mssArnold) contain lectures he gave at Harvard University and Massachusetts School of Technology in 1915, and some say "with lantern slides," though it is unclear which slides were used for which lectures.

Series 11 is a group of glass negatives, approximately 1902 to 1904, which are mostly personal photographs made shortly after Ralph and Winninette Arnold were married. They are primarily of Arnold and Stokes family members and houses, and document travels to visit family and various universities. It is worth noting that Arnold was already interested in photography at this early date, using a large glass plate camera for his personal photographs.

Series 12 is a box of handwritten file cards with names of oil companies, arranged by district, in California. Some have names of people or numerical notations.

The maps and charts (Series 13) that belonged to Arnold made up part of the working tools of an early-20th century geologist and petroleum/mining engineer. The maps cover roughly the same geographical territory as the photograph albums, and most date from 1910s-1940s. They include machine-printed U.S.G.S. survey and contour maps, but also hand-drawn maps and charts of soil composition; layouts of mines; maps of oil fields and wells (with tracts and owner's names). They are useful for geographical research, as well as containing information on California ranchos and landowners, oil company-owned land, and land leased or owned by individuals. Some are in fragile condition and require special handling and/or curatorial approval.

- [Ralph Arnold papers](#) (mssArnold papers)
- [Ralph Arnold addenda](#) (mssArnold addenda)
- [Ralph Arnold Santa Barbara-South coastal area field notes, 1929.](#) (mssHM 83111)
- [The First Big Oil Hunt: Venezuela, 1911-1916 by Ralph Arnold, George A. Macready and Thomas W. Barrington \(New York: Vantage Press, 1960\).](#) (TN873.V4 A7) Huntington Library general collection

The 64 photograph albums are arranged into 9 series based on Arnold's original schema:

Series 1. Vols. 1-6. United States, 1904-1911

Series 2. Vols. 1-5. Curacao, Grenada, Trinidad, and Venezuela, 1912-1918

Series 3. Vols. 1-18. United States, Mexico, Trinidad, and Venezuela, 1910-1916

Series 4. Vols. 1-12. United States, Canada, Costa Rica, Cuba, Mexico, Panama, and Venezuela, 1901-1927

Series 5. Vol. 1. "Technical" (primarily California), 1913-1914
Series 6. Vol. 1. Harold Hannibal photographs, Pacific Coast and New Mexico, 1909-1915
Series 7. Vols. 1-3. "Graphite" (mining, primarily Texas), 1916-1919
Series 8. Vols. 1-9. United States, Canada, and Mexico, 1923-1935
Series 9. Vols. 1-9. United States, Canada, and Mexico, 1936-1954

Other materials are arranged into Series 10-13:

Series 10. Lantern slides, approximately 1905-1915
Series 11. Glass negatives, 1902-1904
Series 12. Card file of oil companies in California
Series 13. Maps and charts (rolled), 1880-1948

Indexing Terms

The following terms have been used to index the description of this collection in the [Huntington Library's Online Catalog](#).

Subjects

Arnold, Ralph, 1875-1961
Crocker, William H. -- Photographs
Hoover, Theodore J. (Theodore Jesse), 1871-1955 -- Photographs
Shackleton, Ernest Henry, Sir, 1874-1922 -- Photographs
Geological Survey (U.S.)
Faults (Geology)-- California -- Photographs
Geology -- United States -- Maps
Mines and mineral resources -- Canada -- Photographs
Mines and mineral resources -- Cuba -- Photographs
Mines and mineral resources -- Mexico -- Photographs
Mines and mineral resources -- South America -- Photographs
Mines and mineral resources -- West (U.S.) -- Photographs
Mines and mineral resources -- Canada -- Photographs
Mining engineers -- West (U.S.)
Oil fields -- Photographs
Oil wells -- Photographs
Orchids -- Mexico
Orchids -- Trinidad and Tobago
Orchids -- Venezuela
Petroleum -- Geology -- California -- Photographs
Petroleum -- Geology -- Canada -- Photographs
Petroleum -- Geology -- Cuba -- Photographs
Petroleum -- Geology -- Mexico -- Photographs
Petroleum -- Geology -- South America -- Photographs
Petroleum -- Geology -- United States -- Photographs
Petroleum -- Geology -- Venezuela -- Photographs
Petroleum geologists -- Photographs
Petroleum industry and trade
Petroleum workers -- Photographs
Prospecting
Surveying
Unskilled labor -- Venezuela -- Photographs
California -- Photographs
Mexico -- Photographs
Trinidad and Tobago -- Photographs

Venezuela -- Photographs
West (U.S.) -- Photographs

Forms/Genres

Photograph albums.
Photographs.
Film negatives.
Glass negatives.
Lantern slides.
Maps.
Topographic maps.

Series 1. Photograph Albums. Vols. 1-6. United States, 1904-1911

Physical Description: 6 photograph albums

Scope and Content Note

Each album in this series has a table of contents titled "Ralph Arnold Photo Book" and photographs are numbered sequentially through six volumes. The primary subject is California oil exploration during the years Arnold worked for the U.S. Geological Survey. Typed captions are on facing pages, opposite the photographs.

Box 1

Ser. 1/ Volume 1. Arizona, California, New Mexico, and Washington, 1904-1905

Physical description: 210 photographs. A few loose notes found inside album.

Arizona

- Overviews of the Grand Canyon and surrounding area.

California

- Primarily views and descriptions of topography and vegetation at the coast and inland, with some photographs of oil wells in Los Angeles and Fresno counties. Includes beaches, caverns; sand dunes; fossils from Santa Monica Canyon; Eagle Rock's namesake boulder; oil wells and oil production. Los Angeles oil district views include concretions in Miocene sandstone along Sunset Blvd. near Echo Lake; oil-bearing sandstone; bird's-eye-views of oil wells among houses in city. [See similar views in Ser. 1, Vol. 5 (Box 5)]. Companies: Central Oil Co.; Home Oil Co.; Murphy Oil Co. in Whittier oil district. Locations: Coalinga-McKittrick field; Eagle Rock; Kern County; La Brea Canyon district; La Jolla; Los Angeles; Monterey County; Olinda district; Pacific Beach; Pigeon Point; Puente Hills district; San Diego County; San Luis Obispo County; San Mateo County; Santa Cruz; Santa Monica Mountains; Temescal Canyon; Topanga Canyon; Whittier District. Others of note: No. 147: Cave petroglyphs at Canary Spring. No. 124: Mission San Miguel Arcangel. No. 129: Mission San Antonio de Padua. No. 165: Horse and buggy on empty beach at Morro Rock. No. 213, 219: Early houses on bluffs at La Jolla.

New Mexico

- Three photographs of desert topography.

Washington

- Clallum County and Lewis County. Views of mountain and coastline scenery, topography.

PDF of Album Series 1, Vol. 1

[CLICK HERE to see PDF of Album Series 1, Volume 1](#)

Box 2

Ser. 1/ Volume 2. Arizona and California, 1905-1906

Physical description: 192 photographs. "Ralph Arnold, Oct. 26, 1903" is written inside front cover but photographs date from 1905-1906. Some loose sheets of typed captions found inside album.

Arizona

- Overviews of the Grand Canyon.

California

- Views and descriptions of topography and vegetation, ranches, oil wells and oil production. Views around Los Angeles show oil wells; Eagle Rock boulder and surrounding land; La Brea Rancho oil wells, animal bones and lagoon; Salt Lake oil field and lagoon. Other views include "old Indian cistern" in Antelope Valley; basalt millstone from Mission San Antonio de Padua; earthquake fault cracks from Earthquake of 1906 around Portola Valley, near Stanford University and in Santa Maria. Companies: Bardsdale Oil Co.; Central Oil Co.; Gilmore Oil Co.; Graciosa Oil Co.; Tapo Oil Co.; Western Union Oil Co. Locations: Avenal Valley; Coalinga-McKittrick field; Del Mar; Eagle Rock; El Temblor Ranch; Fillmore; La Jolla; Los Angeles; Monterey County; Newhall; Orcutt; Pico Canyon; San Luis Obispo County; Santa Barbara; Santa Clara Valley field; Santa Maria field; Santa Paula; Simi Valley; Torrey Canyon field; Ventura. Others of note: No. 339: "Characteristic ranch deserted for lack of water, Kettleman Plains..." No. 449: "Hartnell No. 1 [well], the greatest producer in California..." Portraits of residents A. B. McRae and family in front of house in Casmalia, with geologists Robert Anderson and John Blakeman. Also Mrs. N. S. Stewart and children, Ranchita Canyon.

Box 3

Ser. 1/ Volume 3. California and Colorado, 1906

Physical description: 194 photographs. Some loose sheets of typed captions found inside album.

California

- Views and descriptions of topography and vegetation of the coast and inland; earthquake faults and fissures in the land; mines and mining company buildings; and many views of oil wells and oil production. Includes oil tanks and pump houses; asphalt mines; tar springs on the beach; fossils collected by geologist "Yates"; Fugler's Point asphalt mine; Mission La Purisima Concepcion; Mission Santa Ines. Companies: Los Alamos Oil and Development Co.; Pennsylvania Oil Co.; Standard Oil Co.; Union Oil Co. Locations: Carpinteria; Coalinga District; Fresno County; Orcutt oil field; Santa Barbara County; Santa Maria oil field; Sisquoc; Summerland; Zaca Canyon. Others of note: No. 529-532: Panoramic view of oil wells along the coast at Summerland, as seen from the end of the Southern Pacific Railroad wharf. Portraits of residents: C. H. Mitchell family; Jim Goodchild family; John Libeu family (of Lompoc); families of Adolph, Charles, and Hugo Kreyenhagen on porch of house.

Colorado

- One photograph: Grand River and canyon, Glenwood Springs (No. 542).

Box 4

Ser. 1/ Volume 4. California, 1907-1908

Physical description: 193 photographs. Some loose sheets of typed captions titled "Lantern slides" found inside album.

- Primarily views and descriptions of topography and vegetation throughout open land travelled by horseback, with some excellent views of oil wells and oil production. Views depict wells and operations; drilling rigs; "earthen oil reservoirs"; tar springs; camps of the U.S.G.S. survey team; Stone Canyon coal mine; earthquake rift at Palo Prieto Pass. Many detailed descriptions of geological features. Companies: Associated Oil Co.; Kern Trading and Oil Co.; Standard Oil Co. Locations: Agua Media Creek district; Antelope Valley; Bitterwater District; Carnaris Spring; Carrizo Plain; Coalinga oil field; Devils Den District; Fresno County; Kern County; McKittrick-Sunset District; Midway District; Monterey County; Palo Prieto Pass; San Luis Obispo County; Stone Canyon; Sunset District; Temblor District. Others of note: No. 683: Geologists next to "gem-bearing schist." No. 816, 817: H.R. Johnson and Ralph Arnold in field clothes at McKittrick.

Box 5

Ser. 1/ Volume 5. California, 1908-1910 + a few dated 1900

Physical description: 197 photographs. Includes a set of photographs dated "about 1900" of oil wells at Summerland. 14 loose photographs found inside album showing: a massive oil reservoir under construction near San Luis Obispo, Sept. 6, 1910; and Lakeview oil flow (Midway District).

- Views and descriptions of topography and dense oil fields, particularly along the Southern California coast. Also gypsum workings; oil wells and equipment; the "famous Lakeview gusher" at Midway. Includes views of Summerland oil field, Santa Barbara, approximately 1900, showing Treadwell Wharf under construction and coastline full of oil wells. Also several 1908 views of the Santa Barbara coastline with wharves and oil wells. Companies: Central Oil Co.; Giant Oil Co.; Los Alamos Petroleum Oil Co.; Standard Oil Co.; Union Oil Co.; Western Union Oil Co. Locations: Carrizo Plain; Coalinga District; Devils Den District; Fresno County; Hopper Canyon; Kern River District; La Graciosa Hills; Los Angeles County; Maricopa oil field; McKittrick District; Midway District; Oil City (Coalinga); Puente Hills District (vicinity of Whittier); San Luis Obispo County; Santa Barbara County; Sespe Canyon; Summerland oil field; Sunset District; Temblor District; Torrey Canyon; Ventura County. Others of note: No. 860, 861: Homer Hamlin, Los Angeles City Engineer, standing next to shale along roadside, Los Angeles. Pg. 211: Workers at Maricopa train depot with oil wells in background. Pgs. 184-211: Group of photographs titled "Arnold Trip, July 26-28, 1910" showing oil production at Cat Canyon oil field. Arnold is seen standing at reservoir of "famous Palmer Well #2" (pg. 190).

Box 6

Ser. 1/ Volume 6. Western United States and Illinois, 1906-1911

Physical description: 154 photographs. All appear to be by photographers other than Arnold.

Arizona

- Overviews of Grand Canyon.

California

- Views of oil fields and oil production in Kern County and Coalinga, showing Standard Oil Co. wells at Coalinga and members of the American Mining Congress (including president Ernest R. Buckley) touring Coalinga. Other views show the aftermath of the Earthquake of 1906, such as earthquake faults and fissures in Saratoga and vicinity; city destruction in San Francisco and Palo Alto; and damage to buildings at Stanford University. Locations: Berkeley; Coalinga; Kern River field; Palo Alto; San Francisco; Saratoga; Taft.

Illinois

- Views in Stoy of oil fields and busy "boom town" scenes with many saloons. Photographs by Harold Hannibal.

Oregon

- Coastal topography at Cape Blanco and Coos Bay. One view of whale jawbone washed up on beach.

Utah

- Vernal Valley scenery [photographs poor quality].

Series 2. Photograph Albums. Vols. 1-5. Curacao, Grenada, Trinidad, and Venezuela, 1912-1918

Physical Description: 5 photograph albums

Scope and Content Note

This series covers the years that Arnold and a team of geologists conducted extensive oil explorations in the northern part of Venezuela, South America, and the southern part of Trinidad, British West Indies. Many of these photographs were later published in a book co-written by Arnold, George A. Macready and Thomas W. Barrington: "The First Big Oil Hunt: Venezuela - 1911-1916" (New York: Vantage Press), 1960.

Each album in this series has a "V" on the spine, presumably for "Venezuela."

Box 7

Ser. 2/ Volume 1. Curacao, Trinidad, and Venezuela, 1912-1913

Physical description: 322 photographs. Some loose notes and typed captions found inside album.

Curacao and Trinidad

- (Small number of photographs, mostly city views.)

Venezuela

- Includes Merida; Caracas; Distrito Federal; Lara; Anzoategui; Naricual coal mines; Carabobo; Sucre; Monagas. Expedition photographs primarily show topography and vegetation; oil and gas seepages; coal mines; dam sites; bridges; asphalt deposits; geologists in the field and at camp; and local workers. There are also portraits of residents and their houses; laborers; village street scenes; churches; a bullfight; and steamships. Others of note: No. 66: "Poor people in front of our hotel at Coro, during famine." No. 218: Locomotive of Guanoco and La Brea Railroad.

Photographs stamped on back "Caribbean Petroleum Co." and some are credited to George G. Macready, R. A. Conkling, C. J. Peterson, and Floyd C. Merritt.

Box 8

Ser. 2/ Volume 2. Grenada and Venezuela, 1912-1913

Physical description: 278 photographs. 12 pages were removed from the album by Arnold when he was preparing his 1960 book "The First Big Oil Hunt: Venezuela - 1911-1916."

The loose pages were returned intact for the most part, but some have photographs and/or captions missing. The pages are in a folder with the album.

Grenada

- (Small number of photographs; mostly coastal town views)

Venezuela

- Includes Mendoza; Valera; Guanoco; Sucre; Monagas; Falcon; Paraguana; Maracaibo; El Isiro Dam and San Juan River. Expedition photographs depict topography; jungles; a mud volcano; pitch cones; laborers working in an asphalt lake; four views of oil wells at Guanoco; Bramon Estates Co. coffee estate in Tachir, and scenes of coffee drying and grinding; scientists in the field and at camp; and wild animal game. There are also views of residents; huts; market scenes; city buildings; a funeral procession in Valera; churches; a brick and tile production plant; and steamships. Others of note: Headquarters of asphalt operators New York and Bermudez Co. (no. 583) and Val de Travers Co. (no. 584). No. 600: Valera resident of Dutch descent, Don Juan [Johaana] Haack, posed with geologists.

Photographs stamped on back "Caribbean Petroleum Co." and some are credited to Charles R. Eckes, Bernard Hasbrouck, Jerome B. Burnett, and R. A. Conkling.

Box 9

Ser. 2/ Volume 3. Grenada, Trinidad, and Venezuela, 1913-1914

Physical description: 312 photographs. Some loose notes and typed captions found inside album.

Grenada

- St. George – Views of harbor and town; female black laborers shoveling coal brought in by boat.

Trinidad

- Oil wells; pump stations; black laborers covered in oil (no. 659); Brighton Hotel and pier.

Venezuela

- Includes Zulia, Falcon, Monagas; Guajira peninsula; Maracaibo; Colon District (Tana Hills, North Branch Cano Grande de Agua Caliente, others). Expedition photographs depict jungles; bridges; a dam under construction at Caujarao; a seep cone; hot springs; oil seepages; extensive scenes of Petroleum Development Co. oil wells flowing and workers; Silversteam Oilfields well; black and Indian laborers. There are also views of residents and street scenes; local boys practicing shooting with bows and arrows; a crowd at a watering hole; churches; plaza in Maturin; and Fort San Carlos. Others of note: No. 671-677: "General Lewis Fernando and family at his home near Castilletes." No. 780: The only photograph of Arnold in this album. No. 825: A camp site that was "abandoned when the Motilone Indians drove out the geologists."

Most photographs are stamped on back "Caribbean Petroleum Co." and some are credited to H. H. McKee, Charles R. Eckes, H. E. Boyd, A. F. Dixon, G. Jeffreys, Joslin-Merritt, G. A. Macready.

Box 10

Ser. 2/ Volume 4. Trinidad and Venezuela, 1914-1918

Physical description: 282 photographs. 16 pages were removed from the album by Arnold when he was preparing his 1960 book "The First Big Oil Hunt: Venezuela - 1911-1916."

The loose pages were returned intact for the most part, but some have photographs and/or captions missing. The pages are in a folder with the album.

Trinidad

- Includes Brighton; Tabaquite; Fyzabad; Chagonary Point; Devils Woodyard; Cedros; Parry Lands; Point Fortin. Expedition photographs show mud cones; mud volcanoes; Trinidad Leaseholds Ltd. wells and reservoirs; extensive views of Vessigny oil field showing oil production of Petroleum Development Co.; workers; pumps, drills and equipment; oil wells on "crown lands"; Trinidad Central Oil Fields Ltd.; Trinidad Oil Leases, Ltd.; United British Oilfields Ltd.

The back of the volume has several panoramic views showing the ruins of an asphalt plant fire in Brighton, February 1917, and of Pitch Lake. There are also many scenes of black laborers (men and women) at oil sites, asphalt sites and at a quarry; local residents with a seven-foot leatherback sea turtle captured on beach.

Some photographs by George A. Macready, A. H. Gilchreas, F. C. Merritt; McPherson.

Venezuela

- Includes Zulia; Rio del Oro; Mene Grande; Sucre; Guanoco; Delta of the Orinoco (i.e. Delta Amacuro). Photographs primarily show geologists and oil workers in group portraits and working at oil wells and reservoirs; several scenes of the wells and plant of the New York and Bermudez Co. at Guanoco. Drilling superintendent John A. ("Jack") Stokes and his wife are seen in several photographs with oil drillers at Mene Grande (no. 994-1018).

Box 11

Ser. 2/ Volume 5. Trinidad, 1918

Physical description: 25 photographs. (Mostly blank pages.)

- Brighton – Oil wells, drilling and active oil flows at Parry Lands and Brighton oil fields; scenes at Pitch Lake. One view of an elevated cable tram carrying loads of asphalt to harbor.

Series 3. Photograph Albums. Vols. 1-18. United States, Mexico, Trinidad, and Venezuela, 1910-1916

Physical Description: 18 photograph albums

Box 12

Ser. 3/ Volume 1. California and Mexico, 1910

Physical description: 229 photographs, including a few cyanotypes. Handwritten index of oil companies and locations at beginning of album.

California

- Views and descriptions of topography: visible earthquake faults, granite, canyons and hills. Also oil fields and oil production; oil company camps and workers' bunkhouses; ranch houses such as "White's Camp." Views of the legendary Lakeview Gusher of 1910, a pressurized oil well in the Midway-Sunset Oil Field in Kern County that spewed 378 million gallons of oil in the largest accidental oil spill in California history. Companies: California Oilfields, Ltd.; Central Oil Co.; Coalinga-Kettleman Oil Co.; Coalinga-Mohawk Oil Co.; Coalinga Peerless Oil Co.; Fulton Oil Co.; Midway Union Oil Co.; Peerless Oil Co.; Standard Oil Co.; Turner Oil Co.; Union Oil Co. (operator of first two producing wells in Cat Canyon); W. K. Oil Co. Locations: Arroyo Grande oil field; Cat Canyon field; Eastside Coalinga field; Kern River field; Lonoak oil district; Los Angeles County; Maricopa; Newhall oil field (and Towsley Canyon); Panorama Hills; Puente Hills district; San Emidio district; San Lorenzo River; Sunset oil field; Temblor Range; Tujunga Canyon; Ventura County. Others of note: No. 46: Oil spring discovered in a dry stream bed, Humboldt. No. 64: American Stage Co. stagecoach loaded with geologists and cargo. No. 89-92: Ralph Arnold and family members.

Mexico

- (5 photographs) No. 37-41: Baja California - lava; sandstone cliffs; Ralph Arnold and colleagues.

Box 13

Ser. 3/ Volume 2. California and Mexico, 1910-1911

Physical description: 222 photographs. Handwritten index of oil companies and locations at beginning of album. Some loose notes and typed captions titled "Lantern Slide Descriptions" found inside album.

California

- Views and descriptions of topography; oil production and equipment; oil company camps and workers' bunkhouses; reservoirs and storage tanks; water pump stations used by oil refineries. Companies: Adeline Consolidated Road Oil Co.; B. A. T. Oil Co.; Central Oil Co.; Coalinga-Kettleman Oil Co.; Coalinga-Western Oil Co. (St. Elmo property); Esperanza Consolidated Oil Co.; Eureka Canyon Oil Co.; Gates City Oil Co.; Kern River Drillers Oil Co.; Midway-Union Oil Co.; Montebello Oil Co.; Nevada Midway Oil Co.; Redlands Oil Co.; Sibyl Oil Co. Locations: Carrizo oil district; Coalinga district; Elk Hills oil field; Kern River field; Kettleman Hills field; Los Angeles field; Los Meganos Ranch; Midway field; Puente Hills district; Santa Maria field; Sulphur Mountain district; Ventura County; Whittier field. Others of note: No. 270: County water well in the Kettleman Plain, showing an automobile carrying a water barrel. No. 313: Derrick Avenue at Coalinga, showing a miles-long row of oil wells. No. 312, 317, 318: Members of the American Mining Congress touring sites with J. A. Holmes, Director of the U.S. Bureau of Mines.

Mexico

- (12 photographs) No. 348-359: Desert at Mascarena Ranch, Sonora.

Box 14

Ser. 3/ Volume 3. California and Mexico, 1911

Physical description: 292 photographs.

California

- Beginning of album shows members of a British oil syndicate travelling with Arnold and Wendell Hammon to various oil and dredging locations in California. Views include coastline and beaches; ranches; oil production and dredging operations; a rock crusher; oil flow; tar seepage; electrical towers used as part of oil production process; water wells and tanks; oil company buildings, camps, equipment, and workers' housing. Companies: Anglo-Californian Oil Syndicate, Ltd.; Brooks Oil Co.; California Oil Fields Ltd.; California Oil and Gas Co.; Coalinga-Monterey Oil Co.; De Luxe Oil Co.; Henderson Oil Co.; January Oil Co.; July Oil Co.; Kern Trading and Oil Co.; Midway Union Oil Co.; Nevada Petroleum Co.; Orcutt Oil Co.; Pacific Oil Fields, Ltd.; Palmer Oil Co.; Republic Oil Co.; Shawmut Oil Co.; Union Oil Co.; Yuba Construction Co.; Yuba Consolidated Gold Fields; Zier Oil Co. Locations: Cat Canyon oil field; Chaffee Canyon; Coalinga field; Hammonton; Lompoc Valley; Los Angeles oil district; Marysville; Midway district; Natomas; Packard Ranch and Estate; Santa Maria district; Santa Ynez Ranch; Summerland district; Sunset oil field; Vallecitos district. Others of note: No. 468-469: Bird's-eye-views of town of Coalinga. No. 620: "View on Fourth Street, Los Angeles, showing one of the oil delivery wagons running oil [under sidewalk] to a boiler room of the Van Nuys Hotel." Scenes of Wendell P. Hammon, the "California Gold-Dredger King" and his home and orchard in Palermo, California. No. 478, 487: William H. Crocker (1861-1937), president of Crocker Bank. No. 520: "Mrs. Whittier" [most likely Joanna E. Whittier (1872-1923), wife of Mericos "Max" Whittier.] Ralph Arnold appears occasionally, and men identified by surnames only: Blake, Dahl, Watson, Young, Kimball, Dyer, Guiberson, Hazeltine, Requa, Find, McCloud, Griffin, Moncur, Feather, Van Ee, Marshall, Clark.

Mexico

- [Second half of album] Views of topography; oil refineries; asphalt production; tank farms; water pump stations; laborers and oil company housing for American employees and resident laborers; villages with thatched-roof huts; wells of Huasteca Petroleum Co. and Mexican Petroleum Co. Locations: Cardenas; Casiano; Chijol; Ebano Hill; Esperanza; Huasteca oil tract; Juan Felipe; Micos; San Geronimo; San Luis Potosi; Torreon.

Box 15

Ser. 3/ Volume 4. California, Wyoming, Mexico, and Trinidad, 1911

Physical description: 196 photographs. 28 loose pages are in a folder with the album.

California

- (3 photographs) Simi Oil Co. wells in Ventura County.

Wyoming

- (Small number of photographs) Castle Creek anticline and Castle Creek Oil Co.; Salt Creek oil field and wells of the Midwest Oil Co.; Tisdale anticline.

Mexico

- Oil production and worker camps; storage tanks; active oil seepages and springs; tropical vegetation; canals used for water transportation. Oil fields shown: Cerro Azul; Cerro Viejo; decimated area of "once famous Dos Bocas Well"; Ebano; Huasteca; Oja de Brea; Tampico; Zacamixtle. Companies: American Oil Co.; East Coast Oil Co. (Southern Pacific Railroad); Huasteca Petroleum Co.; Mexico Petroleum Co., Ltd.

Trinidad

- Beaches and tropical vegetation; oil production and wells; employee housing; mud volcanoes and craters; Indian and black laborers (men and women); residents and scenes in villages. A few scenes in Barbados. Locations include Cedros; Forest Reserve; San Fernando. Companies: Guapo Oil Co.; South Naparima Oil Co.; Trinidad Forest Reserve Oil Co.; Trinidad Lake Oil Co.; Trinidad Oil Fields Ltd. Others of note: No. 855: Oil well with caption "a characteristic Canadian outfit." No. 801, 871: Ralph and Winninette Arnold in group photographs. No. 880: Manjak Mine.

Personal

- No. 920-979: Ralph and Winninette Arnold sightseeing in England and Ireland.

Box 16

Ser. 3/ Volume 5. California and Trinidad, 1911

Physical description: 281 photographs. Handwritten index found inside album.

California

- Views and descriptions of topography featuring mountains, canyons, creeks and discovery of oil springs; oil and water storage tanks; oil wells and oil production equipment; workers; "James Shiells lease" of the Montebello Oil Co.; wells of Union Oil Co. Some unidentified oil fields at back of album. Locations: Ventura County (Santa Clara Valley and Piru); Fullerton field (geologist William Orcutt in one photograph, No. 1198); Midway field.

Trinidad

- Photographs begin on pg. 33 with heading: "Trinidad Lake Petroleum Co., Ltd., Trinidad B. W. I. - To accompany report by Ralph Arnold, Dec. 20, 1911." Views of oil fields and company buildings; pitch cones; mud craters; mud cones; oil seepages; residents; black and Indian laborers and laborer's huts; road-building; geologists in field; Constabulary headquarters in Port of Spain; Arnold and others on steamship (No. 1260). Locations: Brighton; Forest Reserve; Pitch Lake; Port of Spain; Oropuche; Mud Volcano Island.

Box 17

Ser. 3/ Volume 6. California, Utah, and Mexico, 1912-1914

Physical description: 299 photographs. Handwritten index of oil companies and locations at beginning of album. Note and 2 loose photographs found inside album: views of shale cuts, with writing on back: "Harbor Boulevard at about Third Street" and "North side of Sixth St. about 100 feet east of Centre Street." [Los Angeles or Orange County, California?]

California

- Detail views of oil flow and descriptions of rate of flow; extensive views of oil fields; company buildings; oil workers; bunkhouses; also topography and vegetation. Some unidentified oil fields [Los Angeles?] at back of album. Companies: American Oilfields Co.; American Petroleum Co.; Arica Oil Co.; Associated Oil Co.; Bankers Oil Co.; Edmunds Oil Co.; Engineers Oil Co.; Esperanza Oil Co.; Gillmore Oil Co.; Inca Oil Co.; Kern Four Oil Co.; Kern Trading and Oil Co.; Maricopa Consolidated Oil Co.; Mexican Petroleum Co.; Midland Oil Co.; Montebello Oil Co. (leases of Shiells; Horton; Burson; Calumet; Elkins); Sespe Consolidated Oil Co.; Sunset Monarch Oil Co.; Union Oil Co.; Universal Oil Co.; West Shore Oil Co. Locations: Brea Canyon oil field; Coalinga oil district; Fillmore; Fullerton field; Kern River field; Lost Hills district; Midway district; Sespe Canyon; Sunset field; Ventura County. Others of note: No. 1413: Thomas O'Donnell (1870-1945), prominent California oil pioneer.

Utah

- (1 photograph) No. 1501: "Gilsonite vein at Dragon, Utah" (1913).

Mexico

- Baja California - Expedition photographs, including geologists with pack mules; descriptions of topography and vegetation; Jose Osuna's ranch and family at La Purisima.

PDF of Album Series 3, Vol. 6

[CLICK HERE to see PDF of Album Series 3, Volume 6](#)

Box 18

Ser. 3/ Volume 7. California; Mexico; Grenada, Trinidad, and Venezuela, 1912

Physical description: 301 photographs. Handwritten index of oil companies and locations at beginning of album. 14 loose pages are in a folder with the album.

California

- Views and descriptions of topography and vegetation; oil production; storage tanks; refinery power plant; details of machinery. Companies: Monte Cristo Oil Co.; Pacific Crude Oil Co.; Petroleum Development Co.; Wellman Oil Co.; West Shore Oil Co. Locations: Bixby Ranch (Orange County); Cebrian Ranch (San Luis Obispo County); Kern River field; Sunset field; Midway field.

Mexico

- Pgs. 18-49: Geologists examining mud volcanoes and hot sulphur springs in the Colorado River Delta. No. 1640: Arnold looking into mud volcano. Pgs. 93-113: "Mr. Garfias' Mexican trip, Aug. 1912" and "Mexico International Oil Co." Titles written in index at front of album; no captions.

Grenada

- Pgs. 225-227: Steamships and waterfront at Georgetown.

Trinidad

- Pgs. 115-116: views from steamship; pg. 206: oil production at Brighton.

Venezuela

- Mostly topography and vegetation; some oil seepages; laborers; asphalt lake. Other scenes include Custom House, Spanish fort at Salinas, villages and residents. Locations: Delta Del Orinoco [Orinoco River]; Margarita Island; Monagas; Nueva Esparta; Sucre.

Box 19

Ser. 3/ Volume 8. California and New Mexico; Curacao, Grenada, and Venezuela, 1912-1914

Physical description: 283 photographs. Handwritten index of oil companies and locations at beginning of album. 32 loose pages are in a folder with the album.

California

- Oil wells and production at Sunset field and Maricopa field. Includes wells of Maricopa Northern Oil Co. and Maricopa Consolidated Oil Co. (No. 2146-2159).

New Mexico

- Topography, vegetation and oil production views. Includes men visiting well site and testing oil flow; Dayton Petroleum Company workers installing well on the Cass-Hammond property; drilling in desert. Locations: Dayton and Rocky Arroyo. Others of note: No. 2193-2196: Marker in desert for proposed well of Southwestern Petroleum Co. No. 2197: Drilling rig of Carlsbad Oil and Gas Co., near Carlsbad, N.M.

Curacao

- Views of harbor; steamship passengers and crew; street scenes; panama hat makers.

Grenada

- Pgs. 1-24. Waterfront at Georgetown; residents; street scenes; steamship passengers, including Winninette Arnold.

Venezuela

- Expedition photographs of topography and vegetation; harbors; residents; city street scenes; fossils on beach; coconut and hyacinth groves; village public water fountain; churches; monuments. Locations: Carabobo; Caracas; Distrito Federal; Falcon; Porto Cabello; Zulia.

Box 20

Ser. 3/ Volume 9. Curacao and Venezuela, 1913

Physical description: 258 photographs. 62 loose pages are in a folder with the album.

Curacao

- Views of harbor; steamship passengers and crew; residents; street vendors.

Venezuela

- Jungle vegetation; "coal seams" in rock; oil seepages; asphalt cones; insects; coffee plants; harbors; villages; residents; churches; Central Vannina sugar mill. Locations: Puerto Rico; San Juan Harbor; Tachira; Zulia. Others of note: No. 2201, 2232: Winninette Arnold, crew and others on board steamship. No. 2303: Arnold and other geologists removing ticks from their bodies. [See another view in folder in Box 21.]

Box 21

Ser. 3/ Volume 10. Panama; Venezuela and Caribbean Islands, 1913

Physical description: 228 photographs. 34 loose pages are in a folder with the album.

Panama

- Panama Canal gates and locks; topography and vegetation; "Culebra cut" site of fault and landslide; laborers using drilling equipment and spraying pesticide; workers' housing and camps. Also views in Panama City of churches, street scenes.

Venezuela

- Expedition photographs of topography and vegetation; geologists examining asphalt and coal deposits; oil seepages; desert cactus and sand dunes; jungle and coconut groves. Other views include residents; adobe houses; churches; plazas; and a group portrait of Arnold and other Caribbean Petroleum Co. geologists at Maracaibo. Locations: Carabobo; Distrito Federal; Falcon; Maracaibo; Zulia.

Caribbean Islands (personal)

- Sightseeing photographs by Winninette Arnold, mostly taken from a ship, of Antigua, Curacao, Dominica, Martinique, Nevis, Puerto Rico, St. Lucia, St. Vincent.

Ser. 3/ Volume 11. United States and Panama, 1913-1914

Physical description: 289 photographs. Handwritten list of contents and list of captions.

California

- Views of oil refineries showing coolers, plants, pipes, tanks, wells, chemical laboratories; Lakeview Gusher No. 1 well in Kern County. Companies: American Oilfields Co.; American Petroleum Co. Locations: Coalinga oil field; Midway field; Sunset field. Others of note: No. 2894-2899: Members of the California Petroleum Corporation at Midway Field: Dr. Norman Bridge, J. C. Anderson; G. G. Henry, H. H. Wehrhane, F. Y. Dalziel, Joe Feeder, H. L. Duer, T. A. O'Donnell and Ralph Arnold.

Colorado

- Mountains and canyon views along the Denver and Salt Lake Railroad. Also scenes of Winninette Arnold and traveling party; town of Craig; coal mines; ranches (including Walker Ranch and Walker Mine).

Montana

- Topography of Glendive anticline; oil well of Midwest Oil Co.

Nevada

- Primarily views of the Horseshoe Mine in Fay, including interiors of mill and boiler room.

Wyoming

- Views include topography and vegetation; thermal oil springs; oil wells; drilling rigs; oil pumping equipment. Companies: Batrum Oil Co.; Big Horn Oil and Gas Co.; Franco Refining Co.; Midwest Oil Co.; Northwestern Oil Co.; Ohio Oil Co.; Wyoming Crude Oil Co.; Wyopo Co. Locations: Basin District; "Bird and Hanley property"; Casper; Dallas Field; Douglas Field; Dutton Basin; Fitzhugh Camp; Grass Creek District; Natrona County; Oil Mountain (or Riverton Field); Powder River oilfield; Salt Creek Field; Thermopolis. Others of note: No. 2959-2960: Ralph Arnold. No. 2967-2970: Ranch families: Littlejohn family at their ranch in Grass Creek Valley. No. 3012-3013: The E. L. Gwynn family and their log cabin.

Panama

- (1 photograph) No. 2735: A quarantine station at the coast.

New York (personal)

- The Arnolds with family and friends in Kennedy and Schenectady (home of Mrs. H. W. Peck; campus of Union College).

Box 23

Ser. 3/ Volume 12. United States; Canada; Trinidad and Venezuela, 1913-1914

Physical description: 310 photographs. Handwritten index of locations at beginning of album. 24 loose pages are in a folder with the album.

Illinois

- No. 3401-3425. Views of oil production and some personal photographs. Includes University of Chicago students viewing oil fields; Ohio Oil Co. operations near Lawrenceville; University of Illinois campus.

Montana

- (Small number of photographs) Glacier National Park scenery; oil seepage and well of the Butte Oil Co.

Canada

- Primarily views of topography and vegetation. Also coal mines; camp of the Canadian Geological Survey; oil wells and seepages; oil advertising signs on a street in Calgary during the oil boom (1914); marked oil claims. Companies: B. C. Coal and Oil Co.; British Alberta Oil Co.; Columbia Oil Co.; Howell Creek Syndicate (coal mining operation). Locations: Eastern and Western Alberta; Belly River; British Columbia (Flathead Oil District); Calgary.

Trinidad

- (Small number of photographs) Topography at San Fernando; street scenes in Port of Spain.

Venezuela

- Views of topography and jungle vegetation; asphalt refinery (Travers Asphalt Co.); oil seepages and wells; mud volcano; residents, villages and schoolchildren. Locations: Guanoco; Guanipa Concession; Guaraquen; Monagas; Orinoco Delta; Pedernales Concession; Pirital; Punceres; Sucre.

Box 24

Ser. 3/ Volume 13. Trinidad and Venezuela, 1913

Physical description: 244 photographs. Handwritten index of locations at beginning of album. 54 loose pages are in a folder with the album.

Trinidad

- No. 3204-3221. Detail views of oil wells and production at Brighton. Includes male and female laborers.

Venezuela

- Views and descriptions of topography and vegetation (forests, orchids, cactus); many large oil springs and seepages and the remains of birds and animals caught in seepages; asphalt flows; asphalt cones; craters; salt water springs; rock formations described in captions as "Badlands topography." Also oil production and wells at Guanoco, Maremare and Pauji, Sucre. Some views of residents and houses. Locations: Distrito Federal; Guanoco Concession; La Paz; Los Tablazos; Maracaibo; Maremare Concession; Pauji Concession; Pedernales Concession; San Timoteo; Sucre; Zulia. Others of note: No. 3130-3134: Geologists next to "Meme Grandisimo" cone, which Arnold calls "the largest asphalt cone in the San Timoteo seepages, and probably the largest in South America." No. 3187-3188: "Group of geologists at "the company's house in Maracaibo - Lewis; Sinclair; Wilde; Roy Merritt; Noehl; Dixon; McKee; Nash; Arnold; Donnelly; Clark; White." No. 3235: "Guajiro Indians near Guanoco Lake" (native children).

Ser. 3/ Volume 14. United States and Canada, 1914-1915

Physical description: 278 photographs.

California

- Views and descriptions of topography at coast and inland; Sulphur Mountain anticline; oil seepages; oil production in Ventura County, including a gasoline plant and Ventura Refining Co. plant under construction. Henry Hamilton, W. R. Hamilton and V. R. Garfias at Ventura. Also No. 3716-3721 and No. 3776-3777: San Fernando (Griffith Tract) topography views and oil wells. Others of note: No. 3812: Ralph Arnold sitting at his desk in his office, Ventura County. No. 3778: Panama-Pacific International Exposition, San Francisco - Petroleum committee jury: Charles E. van Barneveld, W. R. Hamilton, Charles T. Hutchinson, Anselmo Windhausen, R. P. McLaughlin, David T. Day, and Ralph Arnold. Personal photographs of Winninette Arnold; Ralph Arnold at his Stanford University class of 1899 reunion in group portraits with [Arthur?] Cathcart, John Maxson Stillman, others.

Massachusetts and Connecticut lecture trip

- No. 3734-3747. Photographs of university buildings, students and colleagues when Arnold visited to give lectures in 1915. Includes Geologist L. C. (Louis Caryl) Graton and family in Cambridge. Also students and geology buildings at Harvard University and Massachusetts Institute of Technology. No. 3741: Prof. Sayles of Harvard, Prof. Lane and President Bumpus of Tufts College, and Arnold. No. 3745: J. W. Woodworth, geology professor at Harvard University. No. 3747: Prof. J. W. (John Walter) Gregory and Prof. Max Farrand [Yale history professor who would later become the first director of the Huntington Library] in New Haven, Connecticut.

New Mexico

- (5 photographs) Albuquerque - Tourists taking photographs of Native Americans; portrait of Van H. Manning and F. G. Cottrell of the Bureau of Mines.

Oklahoma

- Views of numerous oil wells, tanks, pipes, boiler plants in Cushing Field, along Cimarron River. Companies: Devonian Oil Co.; McMann Oil Co.; North Pool Oil Co.; Quaker Oil Co. Others of note: No. 3748: Busy street scene at "Oilton, a new oil town only two or three months old." No. 3767: Main street of new oil boomtown of Drumright.

Wyoming

- Views and descriptions of topography and vegetation; oil wells and production; drilling rigs; workers; Washakie oil spring. Companies: Glen Rock Oil Placer claim (showing hole drilled by "jumper"); Greenlees-Howard oil well; Laurel Oil and Gas Co.; Montana-Wyoming Oil Co.; Ohio Oil Co.; Utah-Wyoming Oil Co.; Wyoming Consolidated Oil Co. Locations: Big Muddy Dome; Byron Dome; Cowley; Garland Dome; Grenville Dome; Lake Valley; Lander; Shoshone River Valley. Others of note: No. 3612, 3619: Ranch families, log cabin. No. 3729, 3842-3844: Oregon Trail monument.

Canada

- (No. 3646-3715) Western and Eastern Alberta - mostly views and descriptions of topography, with some oil wells.

Box 26

Ser. 3/ Volume 15. Curacao, Trinidad, and Venezuela, 1914

Physical description: 340 photographs. 50 loose pages are in a folder with the album.

Curacao

- (Small number of photographs) Harbor views.

Trinidad

- (Begins at No. 4236) Oil workers, equipment and wells at Lot One, Lot Five, Stollmeyer, and Vessigny oil fields. Detail views of asphalt and oil refineries, Brighton.

Venezuela

- Views and descriptions of topography and vegetation; oil wells and production equipment; asphalt flow; sump holes; oil workers and workers' housing; burros; tractors; Zumaya well No. 1 at Mene Grande. Other views show residents in daily activities in villages, street scenes; native houses made of bamboo and palm leaves; wild orchids; a cemetery; custom house at LaGuayra; Winninette Arnold and others at lavish houses. Locations: Cabo Blanco; Caracas; Distrito Federal; Inciarti; LaGuayra; LaPaz; Macuto; Maracaibo; Mene Grande field; Perija; Zulia. Others of note: No. 4058: "Bridge of the Point Iguana-Petroleo road, showing the Ford automobile which has been used so successfully in transporting passengers and light freight in this country."

Box 27

Ser. 3/ Volume 16. Curacao, Puerto Rico, Trinidad, and Venezuela, 1914-1915

Physical description: 309 photographs. 30 loose pages are in a folder with the album.

Curacao

- (Small number of photographs) Topography and vegetation; native huts; views of female black laborers.

Puerto Rico

- (Small number of photographs) Street scenes and Spanish forts in San Juan.

Trinidad

- Includes views of oil wells and oil production of United British Oil Fields; Trinidad Leaseholds Co. and Silver Stream Oilfields, Ltd. Other scenes show black and Indian laborers; workers' housing; oil company buildings; warehouses; orchid-gathering. Locations: Brighton; Lot One oil field; Lot Five oil field; Pitch Lake; Port of Spain; Silver Stream. Others of note: No. 4441: American diplomat Huntington Wilson (1875-1946) and consul Andrew J. McConnico. Several views of East Indian men, women and children at a festival in Port of Spain. Views on board steamships of Ralph and Winninette Arnold, other passengers and crew.

Venezuela

- Views and descriptions of topography and vegetation; oil wells; drilling rigs; pitch cones; oil seepages; geologists marking locations for wells. Other views show the harbor; residents; houses in villages; laborers; a lime kiln; gathering wild orchids. Locations: Bermudez Lake; Cristobal-Colon; Delta of the Orinoco (Pedernales); Guanoco; Maracaibo; Mene Grande; Pajaro Island; Perija; Sucre; Toas Island; Zulia.

Box 28

Ser. 3/ Volume 17. Curacao, Grenada, Puerto Rico, Trinidad, and Venezuela, 1915-1916

Physical description: 328 photographs. 28 loose pages are in a folder with the album.

Curacao

- Topography; laborers; Hato Ranch; Quarantine Station at Caracas Bay; street scene in Wilhelmstadt; residents and housing; black laborers loading coal in baskets on to steamship.

Grenada

- Street scenes, residents and local produce market in Grenville; topography and vegetation in Georgetown.

Puerto Rico

- San Juan Bay.

Trinidad

- Brighton field; oil wells; oil production; oil wells of Trinidad Oil Fields, Ltd.; sugar mill of "A. Laurie, Hindustan Estate, Princes Town"; mud volcano. Also camp and property of the Trinidad Central Oil Fields, Ltd. in Tabaquite oil field.

Venezuela

- Expedition photographs as well as views of residents in daily work and activity; villages; cocoa groves and cocoa processing; a sugar cane mill with workers and burros; railroad cars full of bananas. There are several portraits of residents and scenes of domestic life. Topography and vegetation views in Merida (boulders, forest and oil seepages). Locations: Bobures; Colon; El Castillo; La Ceiba; La Chama; La Cubo; La Guayra (i.e. La Guaira); La Paloma; Maracaibo; Merida; Onia; Santa Barbara; Tarra; Zulia. Others of note: No. 4723: Ralph Arnold working under mosquito net at the Company's house in Maracaibo. No. 4817: Portrait of Arnold in his field outfit. No. 4851: Brick and tile factory.

Box 29

Ser. 3/ Volume 18. Puerto Rico and Venezuela, 1916

Physical description: 189 photographs. 11 loose pages are in a folder with the album.

Puerto Rico

- San Juan Bay; Winninette Arnold and others on board steamship.

Venezuela

- Topography and vegetation, with many views of gravel and sandstone along a river; oil wells and oil production; a coal mine; oil seepages; buildings of the Venezuelan Oil Concessions, Ltd. at La Rosa. Other views include residents and villages; post office, church and street scenes in Maracaibo; wild orchids growing on trees; Arnold catching butterflies with net; a Guajiro Indian (Wayuu) woman. Locations: Bolivar; Colon; Consejo; La Rosa; Maracaibo; Puerto Palo; Rio Oro; Tarra; Zulia.

(Personal)

- Last photographs in album show Winninette Arnold with Stanford professor Thomas A. Storey, and visiting family in Maine.

Series 4. Photograph Albums. Vols. 1-12. United States, Canada, Costa Rica and Panama, Cuba, Mexico, and Venezuela, 1901-1927

Physical Description: 12 photograph albums

Ser. 4/ Volume 1. United States; Canada; Costa Rica and Panama; miscellaneous foreign, 1901-1914

Physical description: 254 photographs.

Scope and Content Note

This album contains photographs of oil fields and oil production across several states and in foreign countries, 1901-1914. The photographs were taken by people other than Arnold and Arnold does not appear.

Alaska

- (2 photographs) No. 186-187: Oil wells and tanks.

California

- Photographs include: No. 1-10: (1913) Wells of American Oilfields Co. and American Petroleum Co. Scenes in Midway oil field, Coalinga and Fellows. A "Mr. Duer" appears [geologist John Duer Irving?]. No. 166: (1901) A "primitive refinery" at McKittrick oil field. No. 63-76: (1913) Surveyors on horseback in Ventura County.

Illinois

- Lawrenceville oil field, 1914. Includes tank farm of the Standard Oil Co.; wooden tanks at New Murphy field.

Oklahoma

- No. 203- 205: Oil wells and topography views, 1913, by R. H. Wood. No. 214-215: Oil fields, Sapulpa. No. 235-254: Professional photographs of oil production in Drumright, depicting wells, oil workers, massive oil tanks and facilities under construction; smoke filling the air; gushing oil (approximately 1914).

Pennsylvania

- Oil wells in Mount Morris; Greene County and other locations, 1907. No. 190: "Site of Hukill well drilled in 1886. First producer of oil in the field."

Texas

- Spindletop oil field, 1902; oil production views near Electra, 1912.

Wyoming

- Topography and vegetation of Emigrant Gap Anticline. Also Shannon oil wells; Powder River oil field, 1909. Back of album has commercial photographs by the Gleason Studio, 1912, of oil refineries in Casper and the Salt Creek oil field.

Canada

- Topography in Sage Creek, British Columbia. No. 223, 224: Panoramic before-and-after views of the Frank Slide (landslide that buried town of Frank, Alberta, 1903). Pg. 201: Calgary street scenes showing advertising for "oil indications" and oil fields for sale, 1914. Some views of topography around Stimpson Creek.

Costa Rica and Panama

- Expedition photographs of topography and vegetation, craters around Chiriqui volcano. Also a coffee plantation; village street scenes; residents; cockfighting; petroglyphs at La Caldera. Villages include El Boquete, David, San Felix.

Misc. foreign

- Copies of photographs of oil fields and different methods of oil production in foreign countries: Romania, Austria, Italy, Russia (many views), Peru, Germany, Burma.

Box 31

Ser. 4/ Volume 2. United States and Venezuela, 1911-1915

Physical description: 271 photographs.

Scope and Content Note

This album contains many personal photographs of the Arnold and Stokes families and Arnold's professional associates.

California

- No. 39- 40. Topography around Piru Creek and Oat Mountain, Los Angeles County. No. 49-51. Oil gushers at Taft. No. 57-59. Oil-drilling rig at ranch of Joseph Holmes, San Bernardino. No. 74: Arnold in front of American Oilfields Co. well. No. 152-157. Santa Maria oil field and group of men identified as "Brown, Williamson, McNab, Barnes and Simmonds." Back of album has a few views of concretions and topography in Ventura County. There are several views of Winninette (Stokes) Arnold, Stokes family and J. W. Wood family members in South Pasadena. No. 143: Ralph and Winninette Arnold's house, South Pasadena. No. 27-31. Farming scenes on "Rancho del Rio," 1911. Back of album includes views of Mission San Diego, Mission San Luis Rey, and Mission San Juan Capistrano. Group portraits: No. 190. Paleontologists at the Hancock Ranch, Rancho La Brea, 1915. No. 199: "Ransome, Preston, Mr. and Mrs. Staunton, Mrs. Arnold, Mrs. Woolsey at Montebello." No. 206. Paleontologists "Clark, Dickerson, Osborn, Ulrich, Orcutt, W. B. Scott, John C. Merriam, W. B. Matthew, Bailey Willis, Weaver" at Berkeley, 1915. No. 207-215: Paleontologists Howard Robertson, F. S. Daggett, Phelps, Merriam, Cockerell, Matthew, Homer Hamlin, W. Z. Gilbert, Auger, Clute, Yabe, Benton, 1915.

Tennessee

- Gordonsburg phosphate mine and workings, 1915. Also views of phosphate rock in vicinity, and methods of processing phosphate.

Washington

- No. 157-159: Winninette Arnold and others at the Doody residence, Spokane.

Venezuela

- Funeral of geologist Walter R. Nobs, who died in Maracaibo in 1913.

Box 32

Ser. 4/ Volume 3. California, Tennessee, and Texas, 1915-1917

Physical description: 281 photographs. 50 loose photographs and notes found inside album.

California

- Mostly views of oil wells and oil production; water tanks; refinery buildings; drilling equipment; treatment plants; detail views in engine rooms. Some photographs of topography showing faults; mud springs; mud volcano. Companies: Fortuna Oil Co.; Palmer Union Oil Co.; Union Oil Co. (Newlove and Pinal Dome); Western Union Oil Co. Locations: Edison; Imperial Valley; Kern County; La Habra Hole tract; Los Angeles County; Rice Ranch; Riverside County; Santa Maria District; Ventura County. Others of note: No. 472-487: Panoramic views described as "desirable land" of the La Habra tract, Los Angeles County. No. 434-438: Land in Edison, Kern County "owned by Ralph Arnold." No. 455: One view of potash mine near Nuevo, Riverside County. Personal: No. 440-454: Stokes (and Arnold?) family members in group photographs at home of Frank Stokes (Winninette's father), 1605 Garfield Avenue, South Pasadena. Also views of potted orchids [most likely collected by Arnold in Venezuela]; travel scenes with the Mau family; San Diego and Mission San Juan Capistrano; and No. 527. Mr. and Mrs. Frank Stokes Jr. and baby in Covina.

Tennessee

- Phosphate mining operations in Mt. Pleasant, Gordonsburg, Centreville and Rockdale, showing "hydraulic method"; tunnel and "room" method; exposed limestone; treatment plants and equipment. Companies: Consolidated Phosphate Co.; Ferro-phos (J. J. Gray, Jr., owner); Ruhm Phosphate Mining Co.; Volunteer State Phosphate Co.

Texas

- Graphite mine operations of the Texas Graphite Co., near Burnet. Views of test pits, mill, workers, engine rooms; company buildings. Also views of mine operations on McCarty Moore property; Mr. Mau, Mr. and Mrs. Hamilton and Prof. N. J. Badu. [See also related photographs in Ser. 7, Vol. 1.]

Box 33

Ser. 4/ Volume 4. United States and Canada, 1917

Physical description: 259 photographs.

Alabama

- Graphite mine operations at Taber Mine, Conklin Mine, Jennings Mine, Greasmere Mine. Some interior views of factories and equipment.

California

- Views and descriptions of topography in El Toro (Orange County) and San Luis Obispo County. Personal photographs show Frank Stokes' South Pasadena garden and potted orchids from Venezuela on Ralph Arnold's patio; baby Frank Stokes III. No. 722-726: San Fernando Mission.

New York

- Graphite mine operations at the Hennen mine near Saratoga Springs; Hooper Mine near Whitehall; Dixon Mine at Hague; Rowland Mine near Johnsbury. No. 618: Ralph Arnold's desk, Room 1462, 120 Broadway.

Pennsylvania

- Graphite mine operations at Chester Springs.

Texas

- Photographs of oil production; graphite mining; topography and vegetation. Oil wells in Crowther Field and Hoskin's Mound, run by Texas Coast Development Co., showing wells and camp buildings. Also workers building a new graphite mill for Southwestern Graphite Co.

Canada

- Views and descriptions along a train trip from Lac La Biche to Christina River, Alberta. Primarily snow-covered land being surveyed for oil drilling by Canadian Oil Syndicate.

Box 34

Ser. 4/ Volume 5. United States and Canada, 1917-1919

Physical description: 261 photographs.

Arkansas

- Topography of Conway field, describing shale, sandstone and location of drilling site.

California

- Wells and operations of Peerless Oil Co. at Kern River field. Photographs of earthquake damage in Hemet and San Jacinto following earthquake of April 21, 1918. Coastal topography around San Juan Creek, Orange County, with Mr. Mau and Arnold. Back of album has 3 views of topography of San Juan Capistrano Canyon. Personal photographs include the Arnold, Stokes, Ehrhorn, and Wood family members at Frank Stokes' home and picnicking in Pasadena Glen. No. 838: Ralph Arnold's home, South Pasadena. Other friends and family throughout album include Elma Foster, Ora Stokes, Katherine Bagnall, Elvira Foster, Dr. J. P. Smith, Mr. and Mrs. Naramore. Many photographs of baby Winninette Arnold (Jr.) and parents Ralph and Winninette Arnold, including one image of Winninette breastfeeding.

New Mexico

- (8 photographs) No. 966-973: Oil operations of Wallace Power Co., with Arnold and F. B. Springer at site, Albuquerque.

Oklahoma

- Views and geological descriptions of Warner Dome, Texanna Dome, Vian Dome, Russellville Dome topography, featuring river, sandstone and dipping shale.

Group portraits in Missouri, New York and Washington D.C.

- No. 1032-1033: St. Louis: "Conference of leaders of work in connection with appraisal of oil properties for Internal Revenue Bureau." Ralph Arnold with "Mr. Glenn, Richardson, White, Johnson, DeGolyer, Fisher, Lewis, Savage and Miss Dorothy Schenk." In New York: No. 996-997: Arthur F. Meston, Dr. and Mrs. O. S. Lowsley, Dr. Otto Utsinger at Long Island. No. 1013-1017: Miss E. C. Joyce, Ralph Arnold and Mr. Small.

Canada

- Alberta and British Columbia scenery, continued from Vol. 4. Also oil-sand specimens; setting up camp and drilling rig for the Canadian Oil Syndicate. Other views show Hammerstein's Oil Works well in the Athabaska District; topography and asphalt deposits.

Box 35

Ser. 4/ Volume 6. United States; Canada; Cuba, 1919

Physical description: 309 photographs. 2 loose photographs and contents note found inside album.

Scope and Content Note

This album contains many personal photographs, with some oil and mining-related views.

California

- (Small number of photographs) Topography and vegetation in Riverside and Lake Elsinore.

Oklahoma

- Views of Eufaula Dome and Okemah Dome; J. P. Smith, R. J. Ketely and Ralph Arnold at Muskogee.

Texas

- Oil fields and oil production in Ranger. Also, No. 1099-1100: Stanford University delegation of the American Association of Petroleum Geologists, showing Arnold, "Severy, Bradley, Herrold, Beal, Ambrose" and unidentified.

Washington D.C. (personal)

- Many photographs of the Arnolds with their new baby Winninette (Jr.). Also, Ralph Arnold in his office in the War Industries Building and portraits of the Internal Revenue Bureau's Oil and Gas Section staff and J. F. Callan, Assistant to Commissioner.

Canada

- Views of vegetation, canals, trestles between the Florida Keys while traveling the Florida East Coast Railway.

Cuba

- Topography and vegetation views, showing limestone beds, jungle, canyons, rivers and oil wells on the "Williams lease" near Guanajay. Other general views of thatched-roof houses, street scenes in Havana, and Mr. and Mrs. W. F. Field, Barnum Brown and Ralph Arnold bathing at the Yacht Club. Some scenes in the Florida Keys precede the Cuba photographs.

Box 36

Ser. 4/ Volume 7. United States and Canada, 1919-1920

Physical description: 281 photographs.

Scope and Content Note

This is the first album containing photographs related to Arnold's involvement in politics and the Herbert Hoover campaign, 1920.

California

- Views and descriptions of topography and vegetation, showing anticlines, sandstone detail, seepages, and prospective oil land. Also oil and gas evidence in Cache Creek; geologists at asphalt mine at Sisquoc; earthquake faults in Kern County. Locations: Avenal Valley (Avenal Land and Oil Co.), Cache Creek, Chino, Kern County, Riverside, Santa Barbara County, Sisquoc, Tar Canyon (Dominion oil well), Ventura County, Yolo County.

Also: Arnold and Stokes family members at home and traveling, including No. 1612-1641: "Casa del Oso" ranch of Theodore J. Hoover (1871-1955), engineer and brother of President Herbert Hoover. Views of grounds, Hoover and wife Mildred Crew Brooke Hoover with their three daughters. Other views: No. 1642: John Casper Branner, geologist, and wife, Susan Kennedy Branner. No. 1643: Prof. John C. Merriam and wife, Ada Gertrude Little Merriam, in Berkeley.

Illinois

- Scenes at the headquarters for presidential candidate Herbert Hoover, Auditorium Hotel, Chicago, June 10, 1920. Group photographs of "Portion of 'Ruff Nek' club ... Mrs. Newall, Miss Keating, Miss Smith, Mrs. Koverman, Mr. Richey, Mr. Ely, Mr. Ellis [and Arnold]." "Hoover for President" signs seen in background. One view of exterior of Coliseum, Chicago, where Republican Convention was held.

Montana

- Kalispell - Topography views in Flathead Valley, showing exposed limestone, mountain slopes, lakes. No. 1539: "C. L. Emmons, George F. Stannard and Swenson, my associates on the Kalispell examination."

New Mexico

- Topography of Puertocito Basin and DeBaca County.

Texas

- No. 1573-1591. Vulcan Oil Co. headquarters and details of oil and gas wells.

Canada

- Alberta and Saskatchewan - Views and descriptions of topography and vegetation; oil and gas wells. No. 1418: Portrait of Ralph Arnold in leather field coat.

Box 37

Ser. 4/ Volume 8. United States; Cuba; Mexico, 1921-1922

Physical description: 348 photographs. Several loose photographs found inside album, showing San Emigdio Mountains, California (1921); oil field in Huntington Beach, California (1921); Canyon de Chelly and Native Americans at Chinle and St. Michaels, Arizona (1921); oil field in Kentucky (1922); and Rock Springs, Wyoming (1922).

Note: Film negatives exist for 96 prints in this album: pgs. 132-138, 140-167, 170; and loose prints. Negatives are housed separately in Box 82.

Scope and Content Note

This album begins "London Trip, Mar. 19, 1921" with scenes of Arnold and others aboard a ship that includes British explorer Ernest Shackleton (no. 1683).

Arizona

- Topography views of rock formations, cliffs, desert, Canyon de Chelly, cliff dwellings, Navajo Indian Reservation land. Two views of Native American children at Indian School, Fort Defiance.

California

- (6 photographs only) No. 1863-1868. Bolsa Chica No. 1 oil well, Huntington Beach; Chino oil well.

Cuba

- Views include ox teams carrying loads of sugar cane and used in farmwork with wooden plow; oil wells and camp of the Rosario Oil Co. at Teco Teco; several views of residents; asphalt mine of Oil Trust Ltd. near Mariel; oil seepages and asphalt exposures; Maruga oil well; native palm trees; Moro Castle. No. 1978. Stone ruins described in caption as "old slave pen."

Mexico

- [Majority of album.] Expedition photographs of topography and vegetation showing desert mesas, limestone shale, mountains, canyons, cactus; Arnold and geologists in field and in villages, posing with children. Other views show street scenes, residents, city and cathedral of Saltillo; shepherders at Hermanos; a rancher's thatched hut. Locations: Barril Viejo Dome; Coahuila; Cuatro Ciénegas; Hermanas; Monclova; Ocampo; Potrero del Berrendo; Puerto Sacramento; Saltillo; Tanque Falcon. People identified: Dr. Burton W. Clark; Seth T. Heney; Mario Blasquiz; Pancho "Francisco" Cardenas, Jr.; F. M. Cardenas; Carlos Plant, superintendent of Cardenas Ranch. Also No. 1859. Ralph Arnold in field clothes with camera.

Box 38

Ser. 4/ Volume 9. California and Hawaii, 1922

Physical description: 191 photographs.

California

- (Small number of photographs at back of album.) Dave Clancy observing oil flow at Coalinga and group portraits of unidentified men. Also Ralph Arnold and baby daughter Elizabeth ("Betty"); Arnold and Stokes family group portrait on steps of house; Republican Headquarters banner and information desk, downtown Los Angeles, Nov. 6, 1922.

Hawaii

- [Majority of album.] Primarily personal travel photographs of a trip to Hawaii, showing scenery and sights of interest. A traveling party of Ralph and Winninette Arnold, Mr. and Mrs. Will Cooper, Mr. and Mrs. Holmes, and sometimes others are shown visiting sights. The album begins and ends with scenes of the crowd at Los Angeles Harbor as the ship "City of Los Angeles" leaves and returns. Views include a pineapple farm owned by Will Cooper; Pauwela Pineapple Co. cannery; a sugar mill; Ralph Arnold in swimsuit on Waikiki Beach.

Ser. 4/ Volume 10. United States and Mexico, 1925

Physical description: 254 photographs.

California

- Views of oil wells and oil production; topography and vegetation; oil sand; oil seepages; geologists in field; and an expedition titled "Heney trip, Oct. 29, 1925" [Seth Heney].
Companies: General Petroleum Co.; Marland Oil Company; Snowolene Oil Co. Locations: Coalinga District; Fresno County; Kettleman Hills; Kings County; Porterville.

Montana

- Views of geologists observing topography and drilling sites near Alzada, Montana. Views of small towns, local residents, vast stretches of land. Includes roads between Wyoming, South Dakota and Montana; rancher Scott Bruce's home; sage cocks; city of Broadus, Montana; C. L. Emmons and his oil syndicate office, Shelby, Montana.

New Mexico

- Topography views showing rock formations, buttes and cliffs in Cutter Dome; Elephant Butte Dam and Lake; Gallup; Sierra County. Also: a Navajo Indian woman weaving and hogans "near Baker's Store" 15 miles from Gallup; a natural cave known as "Kit Carson's Cave."

Texas

- Oil and mining views: Rycade Oil Co. in Eagle Pass; hard limestone beds and shale; oil wells and camp of Boicourt Oil Co.; quarries of Texas Rock and Asphalt Co. and Uvalde Asphalt Co.; views and descriptions of mineral deposits in cliff beds; geologists examining land around San Antonio River.

Mexico

- [Begins at No. 2282.] Views of residents, villages, houses; topography of Coahuila; faults, asphalt and calcite, rivers, desert, cactus. No. 2323-2324. A. P. Anderson, I. N. Boicourt and Ralph Arnold on banks of Rio Grande, standing over a diagram drawn in sand. Views of geologists studying land on Texas side and Mexico side of Rio Grande. No. 2384. Pancho "Francisco" Cardenas, Jr. "our host on several delightful visits."

Box 40

Ser. 4/ Volume 11. United States and Canada, 1927

Physical description: 360 photographs.

California

- Colusa County topography and vegetation; steam escaping from well at Mullet Island, Imperial County; San Bernardino County "Tebo well" and views of oil sand near Chino. One view of Mission San Juan Bautista. Also, Arnold and Stokes family members in South Pasadena.

Colorado

- Oil wells in Las Animas County.

Montana

- Views of oil wells, coal beds, topography, exposed sandstone. Back of album has many detail views of Kevin oil field, showing workers' cabins, tanks, and interiors of compressor plant and boiler room. There are scenes of Arnold and Charles A. Mau, petroleum engineer, at "bringing in of their first well, Pondera No. 1," in Conrad, including group portraits of oil men and workers. [See also Series 8, vol. 3] Locations: Bannatyne field; Billings; Cat Creek Field; Conrad; Devil's Basin field; Great Falls; Ivanhoe; Kevin field; Kremlin; Pondera field; Rattlesnake Butte; Sweetgrass Hills; Winnecook. Others of note: No. 2443. "Typical deserted homesteader's cabin" in Brady. No. 2460: Charles A. Mau, President of Montana Pacific Oil Co. No. 2459: "Chessher, Battersby, Emrick, Fulton" at Pondera well. No. 2500. "Indian village, Blackfeet [Reservation]" [distant view of tepees]. No. 2615: Cat Creek Field, with "C. T. Lupton, who discovered this field, and E. B. Emrick ...over 3,750,000 bbls. of high grade oil taken out of 125 acres shown in this picture." Includes family vacation photographs of the Arnold family at Glacier National Park.

South Dakota

- Scenery around Custer State Park; South Dakota Senator Peter Norbeck, and Sally Norbeck (No. 27-161).

Wyoming

- No. 2619: L. D. Connolly's "wildcat" well. No. 2620: Group portrait of "Lupton (geologist), Rosenberg (financier), McKnight (driller), and Kirk (promoter) of Frannie Dome, Park County." One view of Ohio Oil Co. well.

Canada

- British Columbia - Sage Creek field and oil wells and camps of British Columbia Oil and Gas Co. and Glacier Oil Co.

Box 41

Ser. 4/ Volume 12. [Ferdig Oil Company album] 1926-1927

Physical description: 44 photographs.

Scope and Content Note

"Montana, Wyoming, Sage Creek, B.C." is written on the cover of this small album related to Ferdig Oil Co. All are duplicates of photographs in Series 4, Vol. 11 except (1 - 5), which show oil derricks of Ferdig Oil Co. including "Ferdig-Hughes-Anderson No. 6" well. The duplicate photographs are of oil operations in Kevin field, Banatyne field and Pondera field, Montana; Oregon Basin field, Wyoming; and Sage Creek field, British Columbia, Canada. No. 22 is a portrait of oilman Sylvester C. Ferdig.

Series 5. Photograph Album. Vol. 1. "Technical" (primarily California), 1913-1914

Physical Description: 1 photograph album

Box 42

Ser. 5/ Volume 1. "Technical" 1913-1914

Physical description: 175 photographs.

Scope and Content Note

This album contains photographs of the technical aspects of oil drilling. It is the only album with "T" and "Technical" written on spine of album. The first part of the album (pgs. 1-71) contains duplicate photographs from other albums depicting modes of transporting equipment and supplies; oil drilling machinery; workers; structures; and equipment, but are not identified. Many of these photographs were also made into lantern slides to accompany Arnold's lectures. "Technical" is a theme in several of the slide sets. See Lantern slides, Boxes 67-76.

The second half of the album contains photographs of California oil wells, with captions. Page 72 begins: "From here to page 93...views of the different phases of the work of building pipeline of General Petroleum Co. from Midway to San Pedro." The remaining pages show "technical" details: hauling water and fuel oil by mule-team; drilling for oil in Kettleman Hills; other equipment and machinery.

Series 6. Photograph Album. Vol. 1. Harold Hannibal photographs, Pacific Coast and New Mexico, 1909-1915

Physical Description: 1 photograph album. "Hannibal" and "MISC." written on spine.

Box 43

Ser. 6/ Volume 1. Harold Hannibal photographs, Pacific Coast and New Mexico, 1909-1915

Physical description: 257 photographs.

Scope and Content Note

Photographs are by Harold Hannibal, a geologist and paleontologist who co-wrote a paper with Arnold called "The Marine Tertiary Stratigraphy of the North Pacific Coast of America," *Proceedings of the American Philosophical Society*, 1913.

California

- Predominately views and descriptions of topography and geological features, with only two views of oil wells in Tapo Canyon, Simi Valley. At site are "Messrs. Wheat, DeFreest, Koeberle and Moore" examining rock (No. 188). Locations: Calaveras Valley; Carmel; Catalina Island; Contra Costa County; Corral Hollow; Crescent City; Dixieland; Eel River; Garbeville; Imperial Valley; Kettleman Hills; Marysville Buttes; Merced Falls; Monterey Bay; Mt. Diablo; Oroville; San Benito-Monterey County; San Bruno; San Diego; San Pedro Hills; Simi Valley. Others of note: No. 120: Oil wharf with pipeline, Monterey. No. 178-179: Chinese laborers at Calexico, Ca., waiting for train to take them to work in cotton fields at Mexicali, Baja. No. 209: Howard Hannibal standing next to "best fossil locality in the Monterey - 27-mile drive between Pebble Beach Lodge and Carmel."

New Mexico/Texas border

- Topography and vegetation views, showing mountains and springs, sandstone, dry river beds. One view of oil well in Rocky Arroyo, Carlsbad, New Mexico.

Oregon, Washington, Vancouver Island and Sooke Harbor, British Columbia

- Many views and descriptions of coastal topography, beaches and cliffs, particularly in the Olympic Peninsula. Others of note: No. 4-5: J. M. McDonald and Harold Hannibal at Oak Bay. No. 143-146: Native Americans (described as "Siwashes," most likely Coast Salish or Quinault) catching fish on beach at Taholah.

Series 7. Photograph Albums. Vols. 1-3. "Graphite" (mining, primarily Texas), 1916-1919

Physical Description: 3 photograph albums

Box 44

Ser. 7/ Volume 1. "Graphite 1," 1916-1918

Physical description: 269 photographs. "Graphite 1" written on spine.

Alabama

- Taber Mine; Conklin Mine (Conklin Graphite Company); Jennings Mine; Greasmere Mine; Western Star Mine.

New York

- Hennen Mine (graphite ore) near Saratoga Springs, showing mine openings supported by timber. Also quarries and operations of Hooper Mine near Whitehall; Dixon Mine near Hague; Rowland Mine near Johnsbury.

Pennsylvania

- Graphite mines and mills in Chester Springs - "Wood property"; Rock Graphite Co.; Lille Graphite Co.; Fontin Graphite Co.; Standard Carbon Co.

Texas

- Pg. 24-65: Texas Graphite Co. mining operation in Burnet County. Graphite mines, workers' camps and company buildings; graphite ore processing; quarries. Mines identified: Downman Mine; Dorbandt Graphite Mine; Lyman graphite property; McCarty Moore property. Others of note: Pg. 55: P.B. McCabe, president, and Dan McFarland, V.P., Texas Graphite Co. Pg. 61: Mr. C. A. Mau, Mr. and Mrs. H. L. Hamilton and Prof. N. J. Badu. [See also related photographs in Series 4, Vol. 3.] Pg. 112-228: Southwestern Graphite Co. ore mining operation near Granite Mountain and Burnet: demolition of old mill and siting of new mill; rock quarry; workers and processing methods. Pg. 118-121: Albert Doerr, superintendent, and other employees: H. H. Tucker, Fred Peck, Dan Stitt, Dr. Jon A. Udden. Pg. 147: H. H. Tucker, Ellingsworth (chemist), Andrews (mill construction foreman), Duaei [sic](bookkeeper and stenographer); Albert Doerr; Ralph Arnold.

Box 45

Ser. 7/ Volume 2. "Graphite 2," 1918-1919

Physical description: 74 photographs. "Graphite 2" written on spine.

Texas

- Continuation of Southwestern Graphite Co. ore mining operation near Granite Mountain and Burnet. Quarry scenes; mill operations; heavy equipment; aftermath of blasting rock; workers' housing; employees (H. B. Johnson, George L. Felt and several others); two views of Ralph Arnold.

Box 46

Ser. 7/ Volume 3. Graphite [duplicates], 1916; 1918

Physical description: 94 photographs.

Texas

- Duplicate photographs of graphite mining from previous two albums (Series 7, Vols. 1 and 2). Many without captions. The first portion (No. 266-282) are duplicates of Vol. 1 and the remainder appear in Vol. 2.

Series 8. Photograph Albums. Vols. 1-9. United States; Canada; Mexico, 1923-1935

Physical Description: 9 photograph albums

Box 47

Ser. 8/ Volume 1. California, 1923

Physical description: 40 photographs.

California

- Arnold and others locating the site of the first well of the Snowolene Oil Co. in Fresno County, April 10, 1923. Other scenes: paleontologist John C. Merriam and Prof. Miller inspecting tar at Brea Pit, Hancock Ranch, Los Angeles [i.e. La Brea Tar Pits, Hancock Park]. There are also group portraits at the American Institute of Mining Engineers luncheon in Ojai, including Dr. J. P. Smith, Harry Johnson, Walter Mendenhall, Hoyt Gale, and Ralph Arnold. Personal photographs show the Tournament of Roses parade, Jan. 1, 1923; Arnold's daughter Winninette (Jr.); Pasadena Pioneers picnic at the residence of J. R. Giddings, with a portrait of Mrs. Millie Watts and her four sons, including Harvey Watts, "first boy born in Pasadena," and Louise Conger. Also Stokes family group portraits at wedding of Ann Stokes to Charles Phillips.

Box 48

Ser. 8/ Volume 2. United States, 1926

Scope and Content Note

The first half of this album contains personal travel photographs, many unidentified. The remainder of the album are oil and mining related photographs.

Physical description: 389 photographs.

Alabama

- Graphite mining workers and operations.

Arizona

- Views labeled "Experimental plant - tailing dumps" showing mounds of processed rock and workers at Congress Mine, Yavapai County.

California

- Arnold and Los Angeles attorney Oscar Lawler inspecting sandstone conglomerate "below Hearst water tunnel" in Tuna Canyon and Topanga Canyon, Santa Monica Mountains. Captions say "water suit" [Arnold consulting on a lawsuit?]. Others of note: No. 384-395: Men setting spike in land at "Mitchell-Marland location," Coalinga district. No. 26-30. Portrait of Samuel C. Graham, oilman and economist. Also Stokes family members on porch of Frank Stokes' house, 1605 Garfield Ave., South Pasadena.

Montana

- Arnold and a group (captioned "rock and lease hounds") examining terrain, rock formations, sandstone, fossils. Also, W. S. Hawley and his oil refinery at Kevin oil field; Pondera oil field "Emrick Structure" [E. B. Emrick]; Fort Benton; a ranch family at Genou (and child with pet badger); No. 165. Log cabin at Marias River; No. 192-284. The Arnolds in Glacier National Park; No. 113. "McNair's old ranch," Great Falls.

Texas

- Construction at graphite mine, Burnet. Several views of oil wells, derricks and oil production at Borger; also main street and storefronts in town.

Box 49

Ser. 8/ Volume 3. United States and Mexico, 1926-1927

Physical description: 190 photographs.

California

- Views include bubbling, hot mud springs, Mullet Island, San Diego County; oil wells in Petaluma; Devil's Canyon anticline in Piru Creek, Ventura County, with A. W. Taylor, James H. Pierce, and E. C. Page; and J. M. Goodwin's well, Cob Canyon oil field, Santa Barbara. Also: Ralph Arnold in his garden at his home; his daughter Betty; travel scenes in Yosemite and Santa Barbara; and portraits of an African American couple and baby identified only as "Leon, his wife, and baby Charlene."

Montana

- Charles A. Mau, Ralph Arnold and William M. Fulton (driller) at Pondera oil well the "day it came in ... June 16, 1927." [See similar in Series 4, vol. 11]

Texas

- Southwestern Graphite Co. mining operation in Burnet. Views of quarry, mineral deposits in shale. Two views of an African American woman and her baby labeled "Jay's (cook) wife and baby."

Mexico

- Oil wells and topography views in Barril Viejo, Coahuila; wells of the Ohio Oil Co. and one photograph of Pancho "Francisco" Cardenas Jr.

Ser. 8/ Volume 4. United States, 1928-1930

Physical description: 421 photographs.

California

- Various topography and oil production views including oil seepages; earthquake faults in San Pedro; fossil beds in Imperial County; and detailed descriptions of marine mineral deposits on San Nicolas Island. Arnold is seen viewing fossils, shells and abalone on "Indian mounds." Captions explain variety of shells and their use by the native population. Locations: Edna Oil Field; Ellwood Terrace Field; Goleta oil field; Mullet Island; Newhall; San Luis Obispo County; San Nicolas Island (Channel Islands); San Pedro; Santa Barbara County; Ventura County Companies: Barnsdall-Rio Grande Oil Co. Others of note: No. 28-24. Santa Clara River wreckage on day of St. Francis Dam disaster (March 12, 1928). No. 28-38. Charles A. Son and his oil well, Goleta Field. No. 30-4. Petroleum geologist William W. Orcutt on Hill lease of Union Oil Co., Lompoc, Santa Barbara County. No. 30-21. Ralph Arnold collecting fossils on San Nicolas Island. Some views of Arnold family at home and in group portraits.

Idaho

- Arnold on horseback at Snake River, Black Mountain Dome.

Michigan

- Views and descriptions of topography around Long Lake formation and Black River anticline; men at Muskegan Oil Field marking location of well for Atlantic Exploration Co.; geologists examining Michigan Peninsula oil fields, Lake Huron shore, sandstone, shale beds.

Montana

- Gusher of oil from Pondera well, between Great Falls and Conrad. Also views of other wells on Pondera oil field: Chessher; Texas and Pacific Oil Co.; Fulton well; California Petroleum. Bannatyne oil field and Elk Basin oil field (partly in Wyoming). Ralph Arnold and C. T. Lupton in some photographs. Locations: Billings; Black Gulch Dome; Broadview Dome; Devils Pocket; Hidden Water Dome; Lake Basin Oil Field; Lost Creek Structure; Opheim Structure; Six Shooter Structure; Soap Creek; Sun River Dome; Toluca structure; Valley County; Whitetail; Woman's Pocket Dome. Others of note: No. 28-98. "Albert Nelson, Wiley, Schlichter, Archie" next to post that reads "Whitetail. Entrance to Oil Field." No. 28-136. H. F. Stewart and others at Lost Creek.

Washington D.C.

- White House bedroom where Arnold stayed as the guest of President and Mrs. Hoover, November 1930.

Wyoming

- Oil wells, test pits, workers at Frannie Structure; Westland Oil Co.; Alkali Dome, Gebo Structure; Black Mountain Structure (drilling site of Burham Exploration Co.). Topography views of Derby Structure, Fremont County and men standing at "drilling site for deep well on Derby Anticline" (No. 29-92).

Box 51

Ser. 8/ Volume 5. United States, 1931

Physical description: 420 photographs.

Arizona

- Mining; panning; gravel washing equipment; geologists in field on mules; topography and detail of ore veins in rock, etc. Locations: Antelope Valley; Mexican Gulch (gold deposits): Octave Mine; Signal; Yavapai County (Forback Mining Co.). A caption says some photographs reference information in "Beaudette's report, Dec. 1931." Group portrait of "mine owners at Signal - Bill Rogers, Kirkland, Judge Barnum, Wiston."

California

- Two oil sites: "Mack ranch" near Camp Kearny and Moody Gulch, Santa Clara County. The majority are mining views: mine tunnels and processing operations; quarries; prospecting; topography and oil saturated rock, etc. Locations: Several Mother Lode mines, including the large-scale operations of Plymouth Mine. Also mines in Calaveras, Inyo, Kern, Placer, Santa Barbara and Tuolumne counties. Views of the buildings and workings of Coliseum Mine, San Bernardino County, and gold ore above a mine tunnel. Other views show the "Stokes and Righetti properties," Casmalia, and "Righetti Sr., Righetti Jr., Stokes, Winninette Arnold, Bagg, Metcalf and Sanderson." (No. 31-310). There are detail views of mining tunnels and walls of quartz and ore for Tropico Mine and Fairview Mine in Rosamond, Kern County. Others of note: Men with fossils collected at Stanford University summer Geology Camp in Ventura County; Arnold's daughters and family friends.

Nevada

- Mining town of Hollywood and Beatty Mining Co. mining operations. Interior views of mine, hoisting equipment, compressors, mine workings; group portrait outside Beatty Gold Mines office.

Oklahoma

- Oklahoma City oil field dense with large-scale oil production. Topography views of Arbuckle Uplift and views of Viola limestone, sandstone, oil sand. Group portraits of men related to an oil lawsuit of Champlin Refining Co. vs. Corporation Commission of Oklahoma.

Texas

- Photographs of Arnold's trip through the East Texas oil field with geologist J. S. Hudnall, and main street of "oil town" of Kilgore.

Ser. 8/ Volume 6. United States and Canada, 1914-1920; 1932

Physical description: 473 photographs.

Arizona

- Mining scenes include "sluice box method" of sorting gravel in stream bed; surveying potential mining locations in Laguna Dam Placer; mining camps; Pauley Mine; Oro Grande Mine; Vulture Mountain Camp.

California

- Views of Stokes oil property, Casmalia, Santa Barbara County and oil operations in Ventura County, with interior views of shop and mill. There are topography views in the San Gabriel Mountains near Monrovia containing "red gold bearing thermal spring deposits," and men assessing fault cracks in San Pedro. Mining photographs show Colloidal Gold Mill near Monrovia residences. Also views of Mother Lode area, Kurtz Mill, showing machinery and operations; Peterson Mine and Central Eureka Mine, Amador County; Beebe Mine, China Hill, Golden Ophir, Frenchman's Mine, in El Dorado County; and Gaston Mine, Nevada County. Personal photographs show the Arnolds and their house and garden covered in a rare snow in San Marino. Others of note: No. 32-291. "All of the territory of this hill is high grade colloidal gold ore." No. 32-430. Ralph Arnold's office and desk in the Subway Terminal Building, Los Angeles.

Colorado

- Mines in Ohio City and Ward, showing tunnels and mining operations, including Chloride Mine Division.

Montana

- Dry Creek Oil Field - topography and workings of Ohio Oil Co.

Nevada

- Expedition views in desert of Las Vegas, with men examining gravel, Arden Anticline and Arden Dome areas. Also some mines.

Oklahoma

- Petroleum engineering laboratory at University of Oklahoma, and Drs. Monette and Decker. Ralph Arnold and Mr. and Mrs. Harry O. Glasser on a salt plain north of Enid. Also town views of Poteau and three different gold mines, with geologists taking samples of shale.

Texas

- East Texas oil fields. Views and descriptions of mechanics for measuring gas flow from wells.

Wyoming

- Views of Big Muddy Oil Field, Converse County; the O.B. Barber lease oil property; Texas Oil Co. refinery; and the Continental Oil Co. refinery.

Canada

- Oil wells in the Turner Valley Oil Field, Alberta, but primarily topography and investigation scenes in Alberta.

Box 53

Ser. 8/ Volume 7. United States, 1933

Physical description: 300 photographs.

California

- Oil and mining views primarily, and some investigations of geothermal activity at Coso Hot Springs, including a copper plate covered with quicksilver after being held over steam. Mining views show Arlington Mine, San Bernardino County, and the "cyanide plant" of the mine; details of molten sulphur flow; tunnels to mines; oil sands. Locations: Alpine County (Colossus Mine and Leviathan Sulphur Mine); Coalinga district; Kettleman Hills Oil Field and old well sites of Echo Oil Co.; Midway Peak Oil Field; Plumas-Eureka Mine; Standard Mine, Mojave. Others of note: No. 24-33. Frank Banks in office of "Arnold Exploration Company." No. 255-32. Group portrait of "people involved in Kettleman Hills vs. Elliott [lawsuit] on courthouse steps, Hanford, Ca., 1933." No. 184-33: "Roderick Burnham, Bierce, W. Q. Wright and H. B. Bardue" at Leviathan Mine.

Montana

- Scenes at several mines showing mills, ore bins, buildings, machinery, tunnel openings, and topography. One view of Ralph Arnold in snowshoes, out in field.

New Mexico

- Mines around the town of Golden and Ortiz Grant area, including an old mine "carried on by Thomas A. Edison about 40 years ago" and screens used in his experimental mill (No. 100-33). Also ruins of buildings in Dolores, and descriptions of how gold is naturally washed from the mountains into the bed of the Galisteo River.

Oklahoma

- Workers and operations at City oil field, Oklahoma City.

Washington

- "Mr. Bullock's ranch" near Seattle.

Ser. 8/ Volume 8. United States and Mexico, 1934

Physical description: 426 photographs.

Arkansas

- Views of El Dorado Refinery, showing MacMillan Petroleum Corp. oil storage and asphalt plant.

California

- Various scenes related to oil and mining operations, including oil sand samples being taken at Pioneer anticline, Kern County, "from which Midway Peak wells will get their oil"; Dudley Ridge oil field and a blown-out well; coal beds in hills; locating test wells in Napa County. Many views of large operations of the MacMillan Petroleum Corporation in Richmond, showing storage tanks, pipelines to wharf, tanks of oil on railroad-loading racks and boxes of Macmillan motor oil produced by plant. Also views of MacMillan oil refinery operations in Signal Hill, Long Beach, showing details of machinery, buildings and workings, and interior of a laboratory. In Iron Canyon, Kern County, views show gold-bearing gravel in hills and canyons and a man seen blowing dust from pan to reveal small specks of gold. Companies: Griffiths Oil Co.; Mileage Gasoline Co.; Panorama Oil Co.; San Joaquin Valley Coal Mining Co. Locations: Midway Peak oil district (San Luis Obispo County); Newhall, Long Beach, and Torrance-Redondo oil fields (Los Angeles County); Ventura County. Others of note: No. 34-388: "A typical gas station in Oakland." Also Arnold and Stokes families; the Arnolds and others at reunion of Pasadena High School's class of 1894.

Montana

- Mountain mining area of Granite County, showing Arnold and colleagues taking samples "to be sent to Universities" and the cabins they stayed in during expedition. Also Toro Mining Co. tunnels, shale, quartzite locations written on some photographs. No. 34-106: Ralph Arnold with bag of ore samples collectd from Mount Ora.

Mexico

- Mining views in Coahuila, Puebla and Zacatecas. Workers are shown with piles of extracted ore; carrying stones out of mine and at a smelter. At Noche Buena Mine in Zacatecas, loads of ore are transported on an incline tramway.

Box 55

Ser. 8/ Volume 9. California and Mexico, 1935

Physical description: 327 photographs. 3 photographs and a handwritten index found loose inside the album.

California

- This album contains mostly mining views, with a few oil-related photographs of Poso Creek oil field and wells in Kramer and Randsburg. Mining photographs show numerous working mines; buildings, camps and equipment; mine shafts; descriptions of values of ore taken from mines; descriptions of a reservoir that delivers water to mines at Soledad Mountain; and details of topography. Locations: Amador County mining camps; Baker; Eldorado County; Elsinore (Riverside County); Inyo County; Kern County; Neenach mining district (Los Angeles County); Placer County; Soledad Mountain; Sonora (Tuolumne County mining district). Some of the mines shown are Old Dominion Mine, Cimarron Mine, Stewart Placer Mine, Placers, Inc., Three Star Mine (Art Bardue and H. B. Bardue in photographs); Shan Tsz Mine; Golden Aster Mine. Others of note: No. 35-35: View of "tank through which miners were forced to swim after coming from mine ... to prevent the stealing of high grade ore." Also, Arnold's daughter Winninette (Jr.) entering Stanford University.

Mexico

- Mining views show topography; workers hand-sorting ore; mules carrying ore; mine operations; smelter plants; veins of ore in rock; gold and copper mining. Locations include Guerrero-Taxco District, showing ancient mines and current mines; Almoloya de Algeciras [i.e. Almoloya de Alquisiras] residents and huts; Las Minas mining district; Quitabac, Sonora; Carlos Pacheco Mine. Views include Ralph Arnold collecting wild orchids; "Dr. Jackson's mine"; Louis Estrada and his family; mine shafts from which many "thousands of dollars were taken"; gravel pits; women drawing water from old well. Also Aztec ruins and historic buildings in Teotihuacan, and street scenes, vendors, and ancient aqueduct in Zacualpan. Others of note: No. 35-55. Ralph Arnold at tunnel entrance to Dios Nos Guie Mine. No. 35-243: "Chief of the Papago Indians and family at Quitabac." No. 35-145: "V. E. Metcalf, Richards, Rupp and Ridings" holding 75 kilo lead-silver bar from mine in Southern Puebla. No. 35-182: Mr. and Mrs. V. E. Metcalf at their home in Puebla.

Series 9. Photograph Albums. Vols. 1-9. United States, Canada, and Mexico, 1936-1954

Physical Description: 9 photograph albums

Box 56

Ser. 9/ Volume 1. United States; Canada; Mexico, 1936-1937

Physical description: 203 photographs. Notes and drawings by Arnold, 3 photographs, and 2 letters (1937) from H. A. Gould to Ralph Arnold and B. N. Jackson regarding gravel property in Plymouth, California.

California

- Oil and mining views, including burning gas; gas bubbling from wells; sandstone quarries; views and descriptions of topography, with many panoramic views. Locations: Abandoned and active mining sites in La Panza District, San Luis Obispo County; oil in counties of Butte; Colusa; Contra Costa, Glenn; Humboldt; Inyo; Los Angeles (Puente Hills); Merced; Napa; Sacramento; San Joaquin; San Luis Obispo; Solano; Stanislaus; Sutter; Tehama; Yolo. Companies: Amerada Petroleum Co.; Coast Exploration Co.; Continental Oil Co.; Northern Counties Petroleum Co.; Orland Oil Syndicate Ltd.; Standard Oil Co. Others of note: Pg. 119: "core house" of the Milhan Co. at Tracy Front, San Joaquin County, with soil core samples laid out on racks. (see also pg. 109, 179 for core samples). Also Winninette (Jr.) and roommates (at Stanford?); Arnold family at San Marino home throughout the album.

Oklahoma

- Begins pg. 147 with heading "Oklahoma Trip, Feb. 27-37 [1937]." Several oil wells, no captions.

Washington

- Oil and mining views, including pg. 77: oil well and camp of the Peoples Oil and Gas Development Co., with caption: "showing the fine camp and up-to-date equipment [of] one of the best wildcat outfits I ever saw." Pg. 81: Mountain cave where ice is kept in summer.

Wyoming

- Views and descriptions of snow-covered topography; LaBarge oil district land; Big Piney Basin.

Canada

- Pg. 87: Wisteria, British Columbia. Group of Arnold, Clifford Harrison, A. E. Verner and Ed Harrison going out on backpacking expedition to Sibola Range; views of ore veins in rock.

Mexico

- Begins on pg. 13 with geologists surveying Angostura Gorge, Sonora; many photographs of mountains are written on with descriptions of fault lines and other characteristics. Two views of workers and camp of the Irrigation Commission.

Box 57

Ser. 9/ Volume 2. United States and Canada, 1938-1942

Physical description: 284 photographs.

Note: Film negatives exist for 62 prints in this album: pgs. 61-64, 70-73, 122-125, 134-143, 145-149, 152-157, 159. Negatives are housed separately in Box 82.

California

- Mostly topography views made while Arnold and others are conducting investigations, with a few oil wells and several mines identified by name only, such as Wooley's Mine (mine operations; equipment; digging; panning for gold; placer mining operations). Some photographs in the album are marked by Arnold to show where ore veins run and locations for prospecting. Some detail views of rocks extracted from open cuts in mountain; descriptions of proposed drill sites; old mines in Tustin; shale and sandstone along beach and Pacific Coast Highway at Dana Point. Other locations: Chatsworth Reservoir (Los Angeles County) showing open land, hills, shale, and investigation of an oil seepage; Costa Mesa; Newport Bay and San Joaquin Hills; Orange County and Riverside County mines; San Bernardino County. Others of note: Pg. 12: mud volcano area in Artesia, Los Angeles County. Pg. 118: "Party at Lucky Strike Mine - McIntyre - Hendrickson [and Arnold and two others] Nov. 30, 1941." Pg. 132. Portrait of geologist Seth Heney. Pg. 146: Tom Smith, Sid Grauman and Earl Lambert at Kernville. Others identified throughout album (some by surname only): Reiss; Walden; Hamilton; Hoag; Getzen[?]; Peterman; McKennis; Gottsch; Reynolds; Herbert Hoover Jr.; McPherson; E. J. Miley and William Gilbert. The Arnolds and daughters are seen in group portraits at home, and a group is seen at Arnold's office in Los Angeles: "Messrs. Randolph, Batton and Parsons and Miss Shellemiller in office, July 26, 1940."

Montana

- (Small number of photographs at back of album.) Arnold is shown with "Preston - attorney, J. Cleveland, and Sidney Armitage" in Billings, looking over oil district.

Utah

- Mostly topography views, and one mine. Very little caption information.

Canada

- Alberta - Oil wells in Lloydminster and Wainwright; Arnold and others visiting sites; posed with equipment.

Box 58

Ser. 9/ Volume 3. United States, 1942-1944

Physical description: 165 photographs. List of captions, notes, and 3 photographs found inside album.

Note: Film negatives exist for 78 prints in this album: pgs. 1-3, 12, 14-16, 21-24, 26-27, 31-34, 42-46, 48-51, 54-59, 61-64, 80, 82-84, 128-129, 132-135. Negatives are housed separately in Box 82.

Arkansas

- Pg. 137: Alfred MacMillan and others in Little Rock.

California

- Mostly views of sites for potential oil wells, with a few mining scenes; captions are sparse in this album. Includes Kern River Oil Field, showing plaque marking location of Discovery Well of 1899; Rickenbach Lease, Piru Canyon, Ventura County; oil wells at Niland, Imperial County; San Benito County fault zone. Others of note: Pg. 14. Group of geologists on field trip at Elysian Park, Los Angeles, 1943. Pg. 11. Mr. and Mrs. Mercado, Winninette Arnold and daughter Winninette (Jr.). Pg. 132-133. "[Pasadena High School?] Class Reunion, June 26, 1944." Group portrait of 11 men and women, including the Arnolds.

Nevada

- Oil wells in Las Vegas; no further information.

New Mexico

- Davis Dome, Otero County. Hueco limestone descriptions and unidentified scenes.

Oklahoma

- Two photographs of oil well on pg. 138: "Stroud's well, Aug. 10, 1944."

Oregon

- View of Charles L. Lull's lab in Grant's Pass (sign says "Assaying and Metallurgy"). Pg. 117. Geologists at Beryllman.

Utah

- Pg. 22-27. Rock formations and marking of new well site at Castle Dale Dome.

Box 59

Ser. 9/ Volume 4. United States, 1944-1947

Physical description: 234 photographs. Notes found inside album.

Note: Film negatives exist for 126 prints in this album: pgs. 4-5, 8-9, 12, 29-42, 46, 52-65, 68-69, 73, 78-84, 93-94, 99-115, 133, 135-151. Negatives are housed separately in Box 82.

California

- Arnold and others visiting a mine site at Blythe; Patrick Creek Mine; Webb Mine; placer mining in Redding. Other locations shown: Coalinga; Hooker Dome, Shasta County; Lancaster; Oak Spring Ranch; Madera Structure; Saugus. Personal photographs show the wedding of Arnold's daughter Elizabeth ("Betty"), 1944; Pasadena High School class of 1894 reunion; Arnold family and their baby granddaughter Ginny; and a portrait of man named Fred Gordon in an office.

Oregon

- Quicksilver Mine; "Lull's Plant"; Holcomb Mineral Spring; and views of rock, faults and sandstone at Ostrander Ranch, Carpenterville.

Texas

- Men "bailing oil out of old well on Wilson Ranch," Val Verde County.

Utah

- Panoramic landscape views and a group on site at Soldier Summit and Cache Valley. Oil wells and oil flowing into barrels at Rozelle, and a group of oil workers standing in front of derrick (pg. 143).

Box 60

Ser. 9/ Volume 5. California, Utah, and unidentified, 1947-1949

Physical description: 232 photographs. Notes and 5 photographs found inside album.

Note: Film negatives exist for 64 prints in this album: pgs. 3-7, 9-10, 12, 125-126, 128-162. Negatives are housed separately in Box 82.

California

- Men making carbon tetrachloride test of oil sand from slush box at Willette well, Mojave Desert, owned by Willette Oil Co. Inc. Views of a lime kiln; small landslide near Sargent; limestone quarry near Corona; flagstone plant at Redlands; old well in Chino; Strain's Camp at Mt. Wilson. Locations: Aptos; Cannon oil field; Capitola; Elmira; Hollister; Panorama Hills; San Bernardino County Several photographs in Santa Fe Springs, Los Angeles County: views of faults; examination of creek where citrus fruit spray oils polluted water and gave effect of oil seepage. Later in album, group at "Santa Fe Springs Well" - "Reed, Tevis, Morrow, Kane, Robin Willis." Also Tevis-Morrow oil well and East Santa Fe well. In San Pedro, group examining Timm's Point and Pliocene bluff and fossiliferous beds. Others of note: Pg. 115: portrait of Arnold (1948). Pg. 135: Dr. Cliff Wood. Pg. 156: Susan K. Branner, age 93, widow of John C. Branner of Stanford University. Also Arnold's daughter Elizabeth ("Betty"), her husband and baby; Arnold's daughter Winninette (Jr.) and husband, Dick Noyes.

Utah and unidentified

- Oil wells, oil workers, in photos labeled "River Bend, June 21, 1947." Other various photographs of mining claims: "Turtle Claim," "Rainbow Vein and Rainbow Camp," "Crow Vein," "Black Virgin camp," "Gilbert mine," "Rising Sun Claim." "Country Boy Claim" - descriptions of ore veins, rock and oil saturation.

Box 61

Ser. 9/ Volume 6. California and New Mexico, 1949-1950

Physical description: 212 photographs. 4 photographs found inside album.

Note: Film negatives exist for 141 prints in this album: pgs. 14-31, 33-44, 55-57, 69-86, 99-111, 114-115, 123, 128-129, 131-153, 156-159, 161-163. Negatives are housed separately in Box 83.

California

- Almost all photographs in Southern California, primarily oil scouting and groups investigating land. Some views of people, oil wells or well sites. No mining views. Oil field in San Bernardino County, with Martin Van Couvering and W. H. Decius standing next to well site marker. Also "Hesperia well of Dr. Justice and Flemming" and group of Arnold, Hart, Scoggins, and Dr. Justice. Other well sites shown: Percy Oates project near San Francisquito Creek; new drilling rig at Adelanto; A. P. Lantz in front of Lantz oil well; siting of new well in Chino; oil seepage at Chatsworth Reservoir; Richfield Co. wells and fault lines in Ventura County; oil scouting in Kern County. Other views in Los Angeles County show: "Ralph Arnold well on Rose Ranch," and sinking ground and faults nearby; oil well at Rosamond Lake, and Calabasas Well, showing well and mud pit covered with oil. Also Anthony Lawrence Fault and people gathered at Lawrence Ranch for drilling of oil well; Belvedere Structure and "old gas well." Others of note: Pg. 94: "House near Orcutt Canyon in which W. W. Orcutt [petroleum geologist] was born." Pg. 157: "Mallory and Marsh" at Marsh well, Mojave Desert. Also many views and descriptions of topography in Santa Paula and Santa Clara River Structure.

New Mexico

- La Joya ranch house of Gen. Tom Campbell and topography investigation views in desert.

(Personal)

- Arnold's daughters and their families: Walter "Bud" and Elizabeth "Betty" McKee with their children and other family members. Dick and Winninette (Arnold) Noyes and baby, Eric, in New York and Michigan. Pg. 86. Portrait of fossil collector B. H. Bean in Le Grande, Iowa.

Box 62

Ser. 9/ Volume 7. United States, 1950-1951

Physical description: 328 photographs. A few notes and photographs found inside album: "Healy" drawing oil from well in Goodsprings, Nevada, and oil operations in Ridgeway, Colorado, 1947-1948.

Note: Film negatives exist for 239 prints in this album: pgs. 1-23, 25-28, 30-32, 34-63, 65-66, 68-89, 91-107, 110-111, 126-135, 138-147, 150-163. Negatives are housed separately in Box 83.

Arizona

- Views and descriptions of topography, faults in Tucson.

California

- Almost all photographs in Southern California, showing oil production, details of oil in troughs and ditches, rock formations, topography, and groups of people at sites. Views include oil wells in Agoura; Palmdale; Simi Valley; Justice Flemming Well in Hesperia; Apple Valley ("high grade oil"); the Sears well in Cajon, with a group portrait of "Clark, West, Mr. and Mrs. Sears, Mr. and Mrs. Hart, Earl Johnson"; Standard Oil Co. well in Carrizo Plains. Views in Los Angeles County include topography in Calabasas and Ventura; the King well at Rosamond Lake (dry) and Ann Arnold's well (Ralph Arnold's sister?) at Sand Canyon (pg. 22 shows a group of women called "interested stockholders" at the well site.) Many views of Ann Arnold and others at Placerita Canyon site "Delano 80 acres" (Los Angeles County) at drilling site for new well. Also Hammon Oil Co. rig in Towsley Canyon; a ceremony erecting plaque in Midway Field, Kern County, that says "First Gusher - Midway Field." Pg. 102: Ralph Arnold at "high grade oil seepage" along San Andreas Fault in Palmdale; Western Gulf Oil Co. well and camp at Oak Canyon. Views and descriptions of parts of the San Gabriel Fault in Sand Canyon, Placerita and Delano. Ventura County - "Dorn lease" and well of Western Gulf Oil Co. Limestone quarry of Cadiz-Danby-Chubbock, San Bernardino County.

Florida

- John Culbreath and Hugh Culbreath at "old O'Guinn well" in Tampa. Portrait of Gen. Avery D. Andrews at his home in Winter Park: "Was a friend and classmate of General Pershing and was president and manager of operations of the Shell Company of the United States during the period I finished the work in South America." Pg. 79: Mr and Mrs. Albert J. Johannsen.

Nevada

- (Small number of photographs) Good Spring (i.e. Goodsprings) oil well - man named Healy. (See also loose photos in folder). Topography of Arden Dome, Las Vegas and one wildcat well (pg. 87).

Utah

- Begins p. 60. Zion Park Anticline and Virgin River Oil Field.

(Personal)

- Arnold's daughters and their husbands: Elizabeth "Betty" and Walter "Bud" McKee, and Winninette and Dick Noyes. Also: Alumni event with Stanford University president Wallace Sterling and wife, 1951. Alumni identified: Ned Sewall, Thomas G. and George Crothers, Harry B. and Jackson Reynolds, Leland Cutter, Tom Storke, Billy Q. Wright, E. H. Nutter, Mr. and Mrs. John C. Branner.

Box 63

Ser. 9/ Volume 8. Colorado, October 1951

Physical description: 17 photographs.

Note: Film negatives exist for 20 prints in this album: pgs. 1-9. Negatives are housed separately in Box 83.

- Ridgeway, Ouray County - descriptions of topography, mountains, valleys in fault zone.

Box 64

Ser. 9/ Volume 9. California and Utah, May-August 1954

Physical description: 36 photographs. Label on spine says "Santa Barbara, 1954."

California (personal)

- Three women named Monty Cline, Peggy and Irene Samson at a cottage in Pine Valley. Views of Arnold at his house and garden at 3162 Calle Fresno, Santa Barbara.

Utah

- Uranium mine called Utex Mine and descriptions of shale beds around Southern Utah. Pg. 18: Two views of the Atomic Energy Commission uranium plant and stockpile of uranium in Monticello, July 30, 1954.

Box 82

Film negatives for some photographs in Series 4, vol. 8 and Series 9, vols. 2, 3, 4, 5.

Access Information

RESTRICTED. Available with curator approval. Extended retrieval and delivery time required.

Box 83

Film negatives for some photographs in Series 9, vols. 6, 7, 8.

Access Information

RESTRICTED. Available with curator approval. Extended retrieval and delivery time required.

Series 10. Lantern slides, approximately 1905-1915

Physical Description: 365 lantern slides (3 1/4 x 4 in.) + 29 original lantern slide boxes

Scope and Content Note

These slides are primarily photographs, with some maps and charts, and date from approximately 1905-1915. They were used by Arnold to accompany his lectures related to geology and oil exploration. Most are slides of photographs taken by Arnold that also appear in the photograph albums and have handwritten numbers and caption information.

Arrangement

The slides have been kept in the order they were received. Most were in original slide boxes that were numbered sequentially and were marked with themes such as "Structure," "Surface Evidence," or "Reservoirs." These "slide sets" have been kept together, followed by loose slides, which are arranged by subject matter.

Related Material

See Ralph Arnold papers (mssArnold), Box 132, for copies of Arnold's lectures given at the University of Chicago, Harvard University, and Massachusetts School of Technology, 1914-1916. Some of his lecture notes say "with lantern slides" under the title, though it is unclear which slides were used for which lectures.

Examples of Arnold's lecture titles: "Oil Reservoirs (with lantern slides)," April 6, 1915; "Relation of Geologic Structure to Oil Deposits," April 8-9, 1915; "Surface Evidence of Petroleum and Its Significance," April 12-13, 1915.

Box 67

Slide set 1

Lantern slides in sets by topic

Structure (9 items)

Puente Hills District and Kern River Field, California (1910); Baja California, Mexico; unidentified

Slide set 2

Origin and Miscellaneous (5 items)

Midway field, California (1910); unidentified

Slide set 3

Surface Evidence (7 items)

Sunset District, California (1908); unidentified

Slide set 4

Structure (10 items)

Packard Ranch, California (1911); Huasteca oil fields, Mexico; Trinidad; unidentified

Box 68	Lantern slides in sets by topic
Slide set 7	Reservoirs (3 items) Trinidad
Slide set 8	Production and Location of Wells (7 items) Coalinga, McKittrick and Sunset districts, California (1908); Mexico oil fields; unidentified
Slide set 9	Production and Location of Wells (6 items) Ventura County, California (1911); Trinidad (1911)
Slide set 10	Structure and Surface Evidence (4 items) Coalinga Syndicate Oil Co. and Fullerton field, California; unidentified
Box 69	Lantern slides in sets by topic
Slide set 11	Production and Location of Wells - [illegible] Technology (7 items) Perforating machine (1914); Coalinga, Midway, Sunset fields, California (1912); unidentified
Slide set 12	Reservoirs (6 items) Dayton and Rocky Arroyo, New Mexico (1913); Panama (1913)
Slide set 13	Structure (8 items) Midway and Sunset fields, California (1913); Wyoming (1913); Panama (1913)
Slide set 14	Structure (9 items) Illinois (1914); Wyoming (1914); Trinidad
Box 70	Lantern slides in sets by topic
Slide set 15	Structure (9 items) Illinois (1914); Calgary, Alberta, and British Columbia, Canada (1914); unidentified
Slide set 16	Technology (7 items) Byron dome, Wyoming (1914); Alberta and British Columbia, Canada (1914)
Slide set 17	Technology (10 items) San Fernando, California (1915); Lander, Wyoming (1914); Western Alberta, Canada (1914); Trinidad (1914)
Box 71	Lantern slides in sets by topic
Slide set 18	Structure (5 items) (All maps and charts.) Lander oil field, Wyoming; Puente Hills and McKittrick fields, California; unidentified
Slide set 19	Reservoirs (6 items) Pico Canyon and Elsmere Canyon, Los Angeles (1906); Ventura County and Fresno County, California
Slide set 21	Surface Evidence (8 items) Coalinga and Midway districts, California; unidentified
Slide set 22	Mud Volcanoes (9 items) McKittrick oil district, California (1908); unidentified

Box 72	Lantern slides in sets by topic
Slide set 23	Production (9 items) McKittrick, Midway and Sunset oil districts, California (1908); Carrizo Plain, San Luis Obispo, California (1908); unidentified
Slide set 24	Structure (7 items) (Mostly maps and charts.) Coalinga District, California (1907); oil shales; mud volcano; unidentified
Slide set 25	Structure (12 items) (Mostly maps and charts.) Spindletop oil pool, Beaumont District, Texas (1902); Kern River oil field, California; Russia; Peru
Box 73	Lantern slides in sets by topic
Slide set 26	Surface Evidence (6 items) (All maps and charts.) Midway-Sunset oil field, California; Southwest Pennsylvania; Baku district, Russia
Slide set 27	Mud Volcanoes (8 items) Salt Creek oil field and Tisdale Anticline, Wyoming (1911); Trinidad
Slide set 28	Surface Evidence (5 items) (All charts of earth composition data.)
Slide set 29	Production and Location of Wells (6 items) (All maps and charts.) Coalinga field and Puente Hills oil district, California; Pennsylvania; Ohio
Box 74	Lantern slides in sets by topic
Slide set 31	Surface Evidence (6 items) (Mostly maps and charts.) Russia oil fields; other data
Slide set [36?]	Surface Evidence (5 items) (All maps and charts.) Salt Creek oil field, Wyoming; McKittrick-Sunset district, California (1908); other data
Box 75	Loose lantern slides, organized by location
	California - Coalinga District (6 items) Landscapes; horses pulling wagons of supplies; Producers Transportation Co. pump station; California Oil Fields, Ltd. shops, workers' camps and wells
	California - Contra Costa County (1 item) Standard Oil Co. refinery, Point Richmond
	California - Devils Den District (2 items) Oil workers at camp; Agua Media Creek (1908)
	California - Kern County (5 items) Carnaris Spring (1908)
	California - Kern River Oil District (4 items) Group portraits of members of Mining Congress (1910); tank farm of Standard Oil Co., Kern River oil field; portable engine and boiler.

California - Kings County (4 items)

Kettleman Hills and Kettleman Plains. Views of camps and equipment; Sunflower Valley.

California - La Brea Canyon District (1 item)

Landscape view (1905)

California - Los Angeles (7 items)

Oil delivery wagon running oil into receiving pipe which connects with boiler room, Van Nuys Hotel, 4th Street, downtown Los Angeles (1910); Central Los Angeles oil field views [oil derricks next to buildings and houses, 1st Street and Lake Shore Ave. (1905)]; View of oil bearing sandstone on Bellevue Avenue (1905); Salt Lake oil field (1906); Oil derricks among buildings in city; detail of sandstone near Los Angeles River

California - McKittrick District (6 items)

Landscape views (1908); oil derricks in landscape

California - Midway District (8 items)

Buena Vista Hills; Elk Hills; oil derricks and landscape views

California - Puente Hills District (1 item)

Oil workers with rotary rig

California - San Diego County (1 item)

Pacific Beach sandstone (1905)

California - San Luis Obispo County (3 items)

Palo Prieto Pass; Carrizo Plain (1908); Huge concrete reservoir built for Union Oil Co. at Tank Farm near San Luis Obispo (1910)

California - Santa Barbara County (3 items)

Graciosa Ridge and Orcutt oil field (1906); Los Olivos; Cat Canyon Field

California - Sunset District (8 items)

Landscape detail (1908); Lake View Gusher; Sunset oil field (1911)

California - Whittier District (4 items)

Oil wells of Home Oil Co.; Central Oil Co.; Murphy Oil Co. (1905)

California - Miscellaneous (4 items)

Associated Oil Co. pump station and buildings; Santa Fe Railway well and pumping equipment; Union Oil Co. tank wagon for distributing crude oil; Ralph Arnold in field clothes examining mud volcano.

Montana (2 items)

Glacier National Park: Oil derrick of Butte Oil Co. and detail view of an oil seepage (1914)

Washington (1 item)

Seattle Station, view of main plant from end of wharf (1910)

Canada - Alberta (2 items)

Oil billboard advertisement in city of Alberta; view of fault in Western Alberta

Mexico (11 items)

Colorado River Delta (1912); Casiano; Cerro Azul; Dos Bocas, Cerro Viejo; Ebano; Huasteca oil fields

Box 76

Loose lantern slides, by location

Trinidad (28 items)

Cedros; Mud Volcano Island (1911); Pitch Lake; mud volcano; craters; jungle. Also views of orchids and Ralph Arnold collecting orchids in the field (1914); orchid garden at "Murray home" in Caracas.

Box 76

Loose lantern slides, unidentified.

Unidentified slides, grouped by subject matter (51 items)

Buildings (industrial and residential); landscapes; oil fields and derricks; people and equipment

Series 11. Glass negatives, chiefly 1902-1904; 3 by photographer William H. Fletcher, 1885-1890s

Physical Description: 183 glass negatives, (5 x 7 in.) and (5 x 8 in.) + 130 original negative envelopes and 60 (later) contact prints.

Use restrictions:

Glass negatives may not be paged except by permission of the Curator of Photography. There are prints of 60 of the images, which should be paged in place of negatives when sufficient; see Box 65 at the end of this series.

Scope and Content Note

It appears most or all of the photographs were made by Ralph Arnold, except for three photographs of buildings in Los Angeles by William H. Fletcher. Arnold's views show Arnold and Stokes family members in South Pasadena and scenes from travels in the U.S., Mexico and Central America. Several universities are shown, including Stanford University where Arnold earned degrees in 1899, 1900 and 1902.

Dates and identifications have been taken from handwriting on the negative envelopes, which appears to be Winninette Arnold's, based on writing samples and the content of some captions. For example, her father, Frank Stokes, is identified as "Papa" and an image of Winninette's parents' home in Janesville, Minnesota, has the caption "where we children were born."

Arrangement

- Arnold family and travel photographs, ca. 1902-1904. (Boxes 77-81)
- William H. Fletcher photographs, ca. 1885-1890s. (Box 81)
- Original negative envelopes. (Box 65)
- Contact prints of 60 glass negatives (Box 65)

Box 77

Items (1-32)

Glass negatives. Arnold family and travel, approximately 1902-1904

Arnold family

Portraits of Ralph Arnold, Winninette Stokes Arnold, Delos and Hannah Arnold, and two houses: a large house labeled "Arnold home in Pasadena" and a small house labeled "Arnold Cottage." Another view labeled "The Shop, May 1903" shows shelves of shells and rock specimens (Delos Arnold's?). Also Arnold family and friends, family homes and in New York and Iowa. One view of John Lewis Childs' bird case, Floral Park, New York.

Items (33-40)

Stokes family

Group portraits of Winninette Stokes Arnold and her siblings, parents (Frank and Ora Stokes), uncle W. H. Stokes, and other family. One view of Frank Stokes' house in Alhambra, Calif. Also Stokes family homes in Minnesota and South Dakota.

Box 78

Items (41-45)

Glass negatives. Arnold family and travel, approximately 1902-1904

Stokes family, continued

Items (46-68)	<p>Miscellaneous</p> <p>Exteriors of two different houses and several interior views; "Capt. Burns" (a man holding chickens); stone church; vase of flowers; unidentified group at "Boulder Creek Gorge, July 1903."</p>
Items (69-80)	<p>Stanford University</p> <p>Stanford geologist Dr. J. P. Smith and family at their residence, Palo Alto. Stanford University campus and buildings.</p>
Box 79 Items (81-97)	<p>Glass negatives. Arnold family and travel, approximately 1902-1904</p> <p>Pasadena and other California</p> <p>Several rooftop-views in Pasadena showing houses, streets and mountains in distance. Item (81) shows the second Raymond Hotel in the distance (approximately 1904). Also San Gabriel Mission (Oct. 1904); Santa Barbara Mission; Redwood tree, Big Basin, Santa Cruz County (June 1903).</p>
Items (98-121)	<p>Universities, museums and points of interest, various states</p> <p>Campus buildings of Yale University; University of Chicago Geology building; Marshall Field Museum; Matthew Laflin Memorial, Chicago Academy of Sciences; Iowa State University Geology building and New Hall [Morrill Hall]; Iowa State Capitol, Des Moines; University of Iowa campus building; Grinnell College, Blair Hall; Johns Hopkins University, Geology building; Concord Bridge; Commonwealth Avenue, Boston. In New York, Columbia University Library and Geology building; and Cornell University campus and Geology building.</p>
Box 80 Items (122-137)	<p>Glass negatives. Arnold family and travel, approximately 1902-1904</p> <p>New York - Museums, landmarks, sightseeing</p> <p>American Museum of Natural History; horse and carriage stopped in front of Grant's Tomb; steamship on the Hudson River; West Point seen from the Hudson River; Milburn House, Buffalo, "where President McKinley died"; "Old Van Vleck house" near Jamestown, New York; Erie Canal, Canistota, New York [wooden storefronts and people along bank]; Lake Chautauqua; New York State Capitol, Albany; Niagara Falls.</p>
Items (138-143)	<p>Pennsylvania</p> <p>Philadelphia: Girard College; Independence Hall; Academy of Natural Sciences; University of Pennsylvania; Wagner Free Institute of Science. Pittsburgh: Carnegie Library and Museum.</p>
Items (144-157)	<p>Washington D.C. and Virginia</p> <p>Capitol Building; Library of Congress exterior and interior view of fireplace in Assemblyman's Reading Room; State, War and Navy Building [now Eisenhower Executive Office Building]; Smithsonian Institution and National Museum of Natural History; U.S. Geological Survey building; Washington Monument; White House. In Virginia, exterior of Mount Vernon and the gated entrance to Washington's tomb.</p>
Box 81 Items (158-179)	<p>Glass negatives. Arnold family and travel, approximately 1902-1904</p> <p>Central America and Mexico</p> <p>Scenes from one or more trips. Views show passengers on deck of steamship "City of Sydney" and views of Corinto, Nicaragua and Isthmus of Panama, on Chagres River. Other locations seen are the plaza and cathedral in Acapulco, Mexico; scenes in Guatemala City, Champerico, and Escuintla in Guatemala; the lighthouse and bay at Amapala Island, Honduras. There are also views of the steamship "Coptic" leaving San Francisco Wharf, Aug. 9, 1902.</p>
Box 81	<p>Glass negatives. William H. Fletcher photographs, 1885-1890s</p>

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- Item (180) **"All that remains of the Old San Gabriel Mission, near the river."**
Title hand-lettered on negative. Photograph shows a group of ruins.
- Item (181) **"Lordsburg College"**
Title and "W.H.F.-1174" hand-lettered on negative. This building is now the University of La Verne, La Verne, California.
- Item (182) **"Street in Pomona"**
Title and "W.H.F.-1182" hand-lettered on negative.
- Box 65 **Original glass negative envelopes**
130 envelopes with handwriting that appears to be Winninette Arnold's.
- Box 65 **Contact prints of 60 glass negatives**
60 photographic prints were made by the Huntington Library staff in the 1980s from the following negatives: 1, 5-13, 33, 36-37, 45, 48-50, 56-59, 69, 73-76, 78-96, 144-151, 153-155, 157, 180-182.

Series 12. Card file of oil companies in California

- Box 66 **Card file of oil companies in California**
Physical Description: 1 box of approximately 250 handwritten file cards, 3 x 5 inches
Scope and Content Note
A file of index cards with names of oil companies, arranged by California oil districts: Arroyo Grande, Carrizo, Casmalia, Coalinga, Devils Den, Lompoc, McKittrick, Midway, Monterey County, Orcutt, Sunset, Temblor, and Misc. Many cards include names and titles of company officials, and have numbers that may refer to map coordinates or field books; they do not seem to correspond to the photograph albums.

Series 13. Maps and charts (rolled), 1880-1948

- Physical Description:** 346 individual maps, charts or diagrams, approximately 43 x 60 in. and smaller. Related items that were received rolled together have been kept together.
Conditions of Use
OVERSIZED MATERIAL. Maps are rolled and many are oversize. May require special handling instructions.
Scope and Content Note
The maps, and some charts or diagrams, are primarily geological, but also include layouts of mines; tract maps with names of landowners and oil companies; and land maps showing oil fields and wells. Many were created by the United States Geological Survey (U.S.G.S.), and others were hand-drawn.
Arrangement
The maps are arranged geographically, beginning with the United States, followed by Canada, Mexico, Trinidad, and Venezuela. U.S. maps are arranged alphabetically by state.
- Arizona**
- Box 84 (1) **Geologic maps of Grand Canyon, Arizona (undated)**
[5 maps] C. E. Van Gundy, geologist.
- Box 84 (2) **Structure and topographic maps of Grand Canyon, Arizona (1927, 1937)**
[2 maps] U.S.G.S.
- Box 84 (3) **Coconino Plateau, Grand Canyon, Arizona (May 1906, reprinted 1932)**
[3 maps] Geologic maps with some penciled annotations. U.S.G.S.

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- Box 84 (4) **Geologic map and structure contour map of Bright Angel and Vishnu Quadrangles, Arizona and Algonkian rocks, Grand Canyon, Arizona (1937)**
[3 maps] C. E. Van Gundy, geologist.
- Box 97 **Geologic Atlas of the United States / Globe Folio (Folio 111) and Bisbee Folio (Folio 112), Arizona. (1904)**
Approximately 30 pgs. each. Fragile condition.
- Box 84 (5) **California - Amador County**
Fremont Consolidated Mines, Amador County, California (undated)
[2 maps] Surface map and map of underground mine tunnels. Fremont Consolidated Mining Co., San Francisco.
- Box 84 (6) **Mining maps, Amador County, Mother Lode (undated)**
[2 maps] Hand-drawn with simple illustrations. Shows mining depths for several mines, including Fremont mine.
- Box 95 (7) **California - Bakersfield, Kern County**
Map of Holdings of the Buick Oil Co. (June 1912)
[2 maps] Includes locations of wells and storage tanks. Also one sheet of well logs showing underground conditions. Surveyed and platted by A. T. Parsons, civil engineer, Bakersfield, Ca.
- Box 84 (8) **California - Coalinga Oil District**
Geologic maps and cross sections of Coalinga, California by Ralph Arnold (1910)
[7 sheets] Hand-drawn.
- Box 84 (9) **Cross sections of geological composition, property of Inca Oil Co. and British Consolidated Oil Corp. (Wabash lease) (1914-1915)**
Hand-drawn cross-sections or well logs, showing amount of oil sand. Coalinga oil field.
- Box 95 (10) **Coalinga oil field well logs (1908-1913)**
[6 sheets] Well logs for several oil companies with wells in Coalinga.
- Box 85 (11) **Coalinga oil field well logs (1909-1910)**
[2 sheets] Associated Oil Co. well logs: "Cross section of Row A, Section 36, Coalinga, Jan. 1910" and "Cross section of Row 1, Section 36 and Jefferson No. 1, Coalinga, Nov. 22, 1909."
- Box 85 (12) **Coalinga oil field well logs (ca.1910)**
[5 sheets] Cross sections showing underground conditions. By Ralph Arnold, to accompany report of March 1910.
- Box 85 (13) **Coalinga oil field well logs (1910)**
[6 sheets] All marked "to accompany report by Ralph Arnold."
- Box 95 (14) **Coalinga oil field well logs (ca. 1912)**
[6 sheets] Fragile condition. Hand-drawn cross sections ("well logs") of soil composition on graph paper. Sheets titled "Coalinga I - V."
- Box 85 (15) **Coalinga oil field well logs (1913)**
[3 sheets] Premier Oil Co.; Wabash and adjoining property; Traders and Premier property. Includes samples dated 1907.

California - Fresno County

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- Box 95 (16) **Panoche Area, Fresno County, California / Distribution of sand bodies, and structure contour map (undated)**
[2 maps] C. E. Van Gundy, geologist.
- Box 85 (17) **California - Midway-Sunset Oil Field (Kern and San Luis Obispo counties) Southeastern part of Midway-Sunset oil field, California (1945)**
"Oil and gas investigations, preliminary map 30." U.S.G.S.
- Box 85 (18) **Topographic map of the Midway-Sunset oil field, Kern and San Luis Obispo counties, California / Showing underground contours of the main producing oil sand, drawn from data furnished by various operating companies in the field... (1910)**
Wells, tracts, and "typical logs of wells in various parts of the field." Shows names of oil companies, landowners, including Southern Pacific Railroad. U.S.G.S. bulletin 406 by Ralph Arnold and Harry R. Johnson.
- Box 85 (19) **California - Kern County
Lost Hills, Kern County, California (undated)**
[2 maps] Grid map showing hand-drawn locations of oil wells, names of oil companies and owners. California Map and Blue Print Co.
- Box 85 (20) **Asphalt and Bituminous Sandstone Deposits of part of the McKittrick district, Kern County, California (1945)**
"Oil and gas investigations, preliminary map 35." U.S.G.S.
- Box 85 (21) **California - Kern River Oil District
Peerless Oil Co. well logs, Kern River District, California (1902-1906)**
[3 sheets (set 1)] Charts showing composition of earth below each numbered well - amount of oil sand; water sand; clay, etc.
- Box 85 (22) **Peerless Oil Co. well logs, Kern River District, California (1902-1906)**
[3 sheets (set 2)]
- Box 85 (23) **Peerless Oil Co. well logs, Kern River District, California (1902-1906)**
[3 sheets (set 3)]
- Box 86 (24) **California - Kettleman Hills, Kings County
Map showing land survey in the Kettleman Hills, Kings County, California (1910)**
Includes locations of wells drilled for oil; large tables of cross sections of geological composition of Kettleman Hills. Surveyed by Erle L. Veuve, Civil Engineer
- Box 86 (25) **California - Los Angeles and Orange counties
Los Angeles County and Orange County Ranchos (1924-1936)**
[7 large maps rolled together] Tract maps with names of subdivisions and landowners. Includes Rancho San Pedro, Rancho Santa Gertrudes, Rancho La Habra, East Whittier Rancho, Rancho Los Coyotes, "Bixby's Subdivision," Artesia, "Somerset Acres," "New Santa Fe Springs," etc. Los Angeles County Surveyors maps.
- Box 86 (26) **Seal Beach Oil Field, Los Angeles and Orange Counties, California (1933)**
Tract map showing locations of wells, names of oil companies, with notes in pencil. Inset detail of Alamitos Heights wells. State of California, Dept. of Natural Resources, Div. of Oil and Gas.
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- Box 86 (27) **Map showing the Whittier-Fullerton Oil Field, Los Angeles and Orange counties, Union Oil Co. of California, Los Angeles (Feb. 1913)**
Showing locations of wells and drilling, "producing" and "abandoned." Primarily a tract map, with names of landowners and oil company names. Writing on verso says "Puente - Fullerton Field. Union Oil Co."
- Box 86 (28) **Rancho Los Coyotes (June 1, 1936)**
[Los Angeles County and Orange County] Hand-drawn tract map showing landowner's names and wells. "Carmenita" written on verso. Ralph Arnold, Geologist.
- Box 86 (29) **La Puente Rancho, La Habra Rancho, Whittier and Puente oil fields, Los Angeles and Orange counties, California (undated, ca. 1900s[?])**
Tract map with landowner and oil company names, including "Graham-Loftus Oil Co." and "W. R. Rowland and Associates."
- Box 86 (30) **California - Los Angeles and Ventura counties
Geologic Map of Parts of Los Angeles and Ventura Counties, California (1924)**
Contour map showing sedimentary rock types, locations of oil wells. U.S.G.S.
- Box 86 (31) **California - Los Angeles region
Los Angeles Basin Oil Fields (1930; rev. 1936)**
Contour map with well sites, tank farms, landowners, oil companies named. Printed by California Map and Blue Print Co., Los Angeles.
- Box 87 (32) **Los Angeles Basin Oil Fields (1930; rev. 1932)**
Contour map with well sites, tank farms, landowners, oil companies named. Large red-ink lines drawn across map. Map wrinkled; condition fair. Printed by California Map and Blue Print Co., Los Angeles.
- Box 87 (33) **Map of San Fernando Valley, La Crescenta Valley, Burbank and Glendale [Los Angeles County] (undated)**
Street map with some handwritten notations.
- Box 87 (34) **Geology and Oil Possibilities of Puente and San Jose Hills, California [Los Angeles County] (1944)**
Geology map of oil and gas investigations. Very detailed analysis and cross section diagrams. U.S.G.S.
- Box 95 (35) **Maps of portion of Pacific Terminal (Tract No. 2016), Los Angeles (1914-1915)**
[8 maps] Maps show 7th, 9th, Grant streets; Pacific Electric Railway line. Includes contour maps and tract maps.
- Box 95 (36) **Methwold Villa Tract / Subdivision of New Main Street and Wilmington Avenue Tract; Eighty-Eighth Drive from Main Street to point 630 ft. east (1914)**
[2 tract maps]
- Box 95 (37) **Hacienda Park Sunken Garden Tract, West Hollywood (undated, ca. 1910s[?])**
Promotional real estate map by Hastings Bros. Shows tract bordered by Fountain Avenue, Sweetzer Avenue, Sunset Blvd. and Olive Avenue.
- Box 95 (38) **Map showing location of buildings, oil wells, etc. along the boundary line between the leases of the Arcturus Oil Co. and Salt Lake Oil Co., Los Angeles County (undated)**
[2 maps]
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- Box 95 (39) **Map of a portion of Rosedale Cemetery subdivision (undated)**
Tract map. (Downtown Los Angeles)
- Box 87 (40) **Map of the Dominguez Estate, being a portion of the Rancho San Pedro, Los Angeles County, California, showing distributing system of the Dominguez Water Company (1913)**
Tract map with names of landowners in Dominguez family.
- Box 95 (41) **Map of the Salt Lake Field of the Los Angeles Oil District (undated, ca. 1900s-1910s[?])**
Hand-drawn detail map showing tracts and oil company names, in vicinity of Wilshire Blvd. and La Brea Blvd. Some names on tracts are: Rodeo Oil Co., Samuel R. Hancock, La Brea Oil Co., Arcturas Oil Co. Accompanies report by Ralph Arnold.
- Box 87 (42) **Rancho Cienega o'Paso de la Tijera / owned by A. J. Hutchinson and E. J. Baldwin (June 1880)**
Poor blueprint copy - very faded. (Los Angeles County and vicinity.)
- Box 87 (43) **Deed for Tract No. 2661 / Being a portion of Lot B in the 8 Acre Allotment to Francisco Machado in the Rancho La Ballona... as recorded in Los Angeles County records (Sept. 18, 1914)**
Copy of Los Angeles County deed with signatures of Ralph Arnold and Stella Machado as "sole owners of, or interested in, the land..." Shows small drawing of land along Rose Avenue, bordered by Ballona Avenue and Lincoln Blvd. [now Venice, California]
- Box 87 (44) **Map of Pasadena, bird's-eye-views (1889, 1893)**
[3 maps] Lithograph views of Pasadena, 1889 (2) and 1893 (1). Condition fair to poor.
- Box 95 (45) **California - Merced County**
Das Palos area, Merced County, California / Surface geology map and map of proposed oil well locations, seen in cross section (undated)
Shows locations of drilling for: H. Bergman; Pacific Oil and Gas Co.; Milham Exploration Co.; E.B. Stone; "Ora Loma no. 1."
- Box 87 (46) **California - Monterey County**
Map of Monterey County, California (undated, ca. 1910s[?])
Poor condition. Promotional map with halftone photographs.
- Box 87 (47) **Geology and oil possibilities of the Salinas Valley, California (1944)**
"Oil and gas investigations, preliminary map 24." U.S.G.S.
- Box 87 (48) **California - Orange County**
Map of the Whittier-Fullerton oil fields (undated)
Primarily Orange County with part of San Bernardino County. Shows La Habra Rancho, La Puente Rancho, townsite of Chino, Bixby ranch, others. Detailed tract map, with names of landowners and oil companies. "Puente Hills" written on verso. Compiled and published by the Oil Age Publishing Co., publisher of "The Oil Age," Los Angeles, Ca.
- Box 87 (49) **Paleocene and Eocene Stratigraphy of Northwestern Santa Ana Mountains, Orange County, California (1945)**
"Oil and gas investigations, preliminary chart 12." U.S.G.S.
- Box 88 (50) **Buena Park Assessor's Map No. 59 (undated)**
Tract map. H.H. Henshaw, Laguna Beach written in pencil on map.

California - San Joaquin Valley

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- Box 88 (51) **San Joaquin Valley Oil Fields (1939)**
Contour map with well sites, tank farms, landowners, oil companies named. Includes geologic data.
- Box 95 (52) **Map of Vallecitos Valley Oil Fields (undated, ca. 1910s[?])**
Hand-drawn tract map. "John Ashurst's ranch" featured prominently. Shows well locations, proposed drilling locations.
- California - San Luis Obispo County**
- Box 95 (53) **Cross section of Huasna Region, San Luis Obispo County (1948)**
Shows cross section of well of Hancock Oil Co. Says "to accompany letter of Aug. 28, 1948 by C. E. Van Gundy."
- Box 88 (54) **Map of the County of San Luis Obispo, California (April 1890)**
Shows areas of Spanish grant lands, and number of acres sown to crop, number of livestock, value of real estate. "Carefully compiled from governmental and county surveys and drawn by Charles W. Henderson."
- Box 88 (55) **Geology of the Bituminous sandstone deposits near Edna, San Luis Obispo County (1944)**
"Oil and gas investigations, preliminary map 16." U.S.G.S.
- California - Santa Barbara County**
- Box 95 (56) **Summerland Wharf / Illustration of location of oil sands (undated)**
Hand-drawn illustration of clay and oil sand sections under wharf.
- Box 95 (57) **Santa Maria oil well logs (undated)**
[2 sheets] Shows composition of earth below each numbered well - amount of oil sand; water sand; clay, etc. Mentions: Associated Oil Co., Los Alamos Petroleum Co., Palmer wells, Henderson well, Dome wells, Bell wells, Brooks, Williams.
- Box 95 (58) **Map of portion of Santa Maria oil district (undated)**
Shows oil lands of Los Alamos Development Co.; Union Oil Co.; Federal Oil Co.; Todos Santos Oil Co. and others. To accompany report by Ralph Arnold.
- Box 88 (59) **Map of the Santa Maria oil fields, Santa Barbara County, California (Sept. 1910)**
Tract map with names of landowners, oil company names, ranchos, etc. Excellent condition.
- Box 88 (60) **Geology of oil-impregnated diatomaceous rock near Casmalia, and Santa Rosa Hills-Eastern Purisima Hills District, Santa Barbara County (1945)**
[2 maps] "Oil and gas investigations, preliminary maps 34 and 26." U.S.G.S.
- California - Ventura County**
- Box 88 (61) **Wiley Canyon and Shiells Canyon, Ventura County, California (1948)**
[6 maps] Hand-drawn topographic maps of oil sands, cross sections of wells of Hopland Oil Co., Wilshire Annex Oil Co., Oakridge Oil Co., others.
- Box 95 (62) **Tract maps of parts of Ventura and Santa Barbara counties (1924)**
[6 maps] Mussel Shoal Tract no. 1, Ventura County; La Conchita Del Mar; San Buenaventura; Rancho Rincon. Most have handwritten names of owners of tracts.
- Box 88 (63) **Map showing improvements on Shiell's lease of Montebello Oil Co. [Ventura County?] (Jan. 1912)**
Sketch map showing oil, water, gas and steam lines, and electric light poles.
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- Box 88 (64) **Map of Santa Clara Valley oil fields, Ventura County, California (1911)**
[2 versions, with different markings in pencil] Legend showing composition of soil.
Tract map with landowners, oil companies.
- Box 88 (65) **California (General)**
Geologic Map of Coastal Plain and Adjacent Areas / Upper Santa Ana Valley and Adjacent Areas [Los Angeles, Orange, Riverside and San Bernardino counties, California] (1934)
"Property of Mr. Aldrich" written on verso. Detailed legends showing geologic sections and descriptions. State of California, Dept. of Public Works, Division of Water Resources, South Coastal Basin Investigation.
- Box 88 (66) **Geomorphic Map of California (1938)**
Detailed legends. State of California, Dept. of Natural Resources, Division of Mines.
- Box 89 (67) **Oil and Gas Fields of California (1939)**
"C. E. Van Gundy" written in pencil on verso. U.S.G.S.
- Box 89 (68) **Geologic map of California (1938)**
[3 maps] Tables of detailed information about rocks and minerals; mineral products of California; salient geologic events in California. State of California, Dept. of Natural Resources, Division of Mines.
- Box 89 (69) **Outline Geologic Map of California showing oil and gas fields and drilled areas (1941)**
Includes index to oil and gas fields by name; historical chart showing crude oil production of California; significant historical events; major rock units and their significance to exploration for oil and gas. Has detail of Los Angeles Basin area, showing "oil and gas fields proved commercial." State of California, Dept. of Natural Resources, Division of Mines.
- Box 95 (70) **Panorama Hills and West Side Oil Fields and Topography Map of Temblor Range, California (1919, 1933)**
[5 maps] U.S.G.S.
- Box 89 (71) **California Oil Fields (1928, 1932; rev. 1934)**
Includes Belridge Oil Co., owned by Mericos "Max" Whittier. Well worn; torn on edges.
- Box 89 (72) **California Oil Fields, showing Coalinga, Devils Den, McKittrick, Midway and Sunset Districts and their respective fields and surroundings (1910)**
Tract map showing names of claim owners. Legend with details of mineral locations, state selections pending, wagon roads, oil pipelines, homestake entry pending, etc.
- Box 95 (73) **Oil production graph charts for 1909-1912, for six entities in California (1909-1912)**
[6 small sheets] Simple graph charts showing storage, production and purchases graphed over four years for Associated Oil Co., Kern Trading and Oil Co., Southern Pacific Oil Co., Union Oil Co., Standard Oil Co., Independent Oil Producing Co.
- Box 89 (74) **Map of Pipeline Routes between McKittrick, Midway and Avila Beach, California (Sept. 1910)**
Some land tracts shown.
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- Box 89 (75) **Maps showing oil land withdrawals and Naval Petroleum Reserves [California] (1914-1915)**
[2 maps] Primarily central California; includes Kern County, San Luis Obispo County, Fresno County. Shows locations of pipelines owned by various oil companies, including Associated Oil Co., Standard Oil Co. and Union Oil Co.
- Box 89 (76) **Bedford Reciprocating Motion Calcining Furnaces and Quicksilver Furnaces (undated, ca. 1910s-1920s[?])**
[4 sheets] Series of diagrams showing workings of mineral refining engines. "Testing Plant: International Mercury Corp., Los Angeles" printed at bottom.
- Box 95 (77) **Curves showing production of type wells selected from the different oil fields of California (April 12, 1910)**
[2 sheets]
- Box 90 (78) **Map of State of California (Compiled 1929; edition of 1940)**
U.S.G.S.
- Box 90 (79) **Map of State of California (1913)**
General topographical map, with legend detailing Indian reservations, forest land, military land, etc. Compiled from the official records of the General Land Office and other sources.
- Box 90 (80) **Map of State of California [Northern only] (1929)**
Red pencil marks show locations of oil fields and names of oil companies. References to locations of "axis of anticlines." Shows Northern part of state, from Alameda County to northern border. U.S.G.S.
- Box 90 (81) **Map of State of California [Northern only] (1929)**
Roughly covers San Jose to northern border. U.S.G.S.
- Box 97 **Geologic Atlas of the United States / Mother Lode District Folio, California. Folio 63. (1900)**
28 pgs. Fragile condition.
- Box 96 (82) **California coast ranges**
Table showing the classification of Igneous Rocks in the California Coast Ranges. Accompanied by chart of Correlation of Rocks, New York - Indiana - Arkansas - California (ca. 1901)
[2 sheets] Hand-drawn.
- Box 90 (83) **Colorado**
Carter Mine and Cortland Mine, Gunnison County, Colorado (Dec. 26, 1931)
[3 maps] Includes mine claims and diagrams of "vertical section of Volunteer and Chloride veins" and "Grand Prize workings." Maps labeled Exhibit A, B, C.
- Box 90 (84) **Carter Mine and Golden Islet Mine, Gunnison County, Colorado (ca.1931)**
[3 maps] Main haulage tunnel; cross sections in Grand Prize, Chloride and Volunteer veins. Maps labeled Exhibit D, E, F.
- Box 96 (85) **Delaware**
The Named Geologic Units of Delaware (1937)
[Table] U.S.G.S.
- Georgia**
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- Box 96 (86) **Topographic maps of Appling Quadrangle and Rocky Ford Quadrangle, Georgia (Surveyed 1917-1918; printed 1920; edition of 1921)**
[2 small maps] U.S.G.S.
- Box 96 (87) **Kansas and Nebraska**
Modern classifications of the Permian Rocks and Pennsylvanian Rocks of Kansas and Nebraska (Oct. 1936)
[2 sheets] U.S.G.S.
- Box 96 (88) **Montana**
Boyes Oil Structure, Great Falls, Montana (undated)
Box 96 (89) **Map of the Banatyne Structure, Teton and Pondera counties, Montana (1926)**
Box 90 (90) **Geologic map of Montana (1944)**
[2 sheets] "Oil and gas investigations, preliminary chart 25" in 2 sheets. U.S.G.S.
- Box 90 (91) **Properties of Troy Mines Co. at Troy, Montana (Nov. 1929)**
[4 maps] Includes chart showing tons of minerals removed by tunnel. Shows properties, diverted dams, creeks, locations of mines.
- Box 97 **Geologic Atlas of the United States / Butte Special Folio, Montana. Folio 38. (1897)**
20 pgs. Fragile condition.
- Box 90 (92) **Nevada**
Plat showing the main underground workings of the Quinn Mine, Silver City Mining District, Lyon County, Nevada and map of Silver City Locations [mining claims] (1880)
[3 maps]
- Box 90 (93) **Diagrams of Redwing Mercury Mines and Inman Quicksilver Mines, Lode and Placer workings (March 5, 1940)**
[2 maps]
- Box 90 (94) **Map of the Horseshoe Mining Co.'s Property, Fay, Lincoln County, Nevada (1902)**
Hand-drawn. Mines marked: "Horse Shoe No. 1, No. 2, No. 3, No. 4," "Bryan" and "Bryan Extension." Underground tunnels and shafts detailed. Very large/long map.
- Box 91 (95) **Townsite plat and cyanide plants (mining) of Fay, Lincoln County, Nevada (ca. 1902)**
[3 maps] Mining plants in Fay, Nevada. Ground plans for cyanide plants of the Horseshoe Gold M. and M. Co. and the Shawmut and Nevada Gold M. and M. Co., in Fay, Nevada.
- Box 91 (96) **New Jersey**
Forests of Northern New Jersey and relation to principal watersheds (1900)
[6 sheets forming one map; and one related map] Very fragile - tearing down middle. Geological Survey of New Jersey.
- Box 91 (97) **New Mexico**
Preliminary Map Showing Geologic Structure of the Southern Part of the San Juan Basin, including parts of San Juan, McKinley, Sandoval, Valencia, and Bernalillo counties, New Mexico (1933)
Contour map with detailed legend. "Compiled from results of field investigations, 1928, 1929, 1930, 1931." U.S.G.S.
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- Box 91 (98) **Sectional Map of Colfax and Mora counties, New Mexico (1889)**
Compiled from the original plats in the Surveyor General's office at Santa Fe, New Mexico and from private surveys by the Maxwell Land Grant Company.
- Box 91 (99) **Map of Dayton Oil Region, Eddy County, New Mexico (undated, ca. 1900s-1910s[?])**
[5 maps] Includes 3 small plat maps. Shows land of Dayton Petroleum Co.; Pecos Oil and Gas; Seven River Oil Co.; American Oil and Metals Syndicate.
- Box 91 (100) **Map of Prospective Oil Region West of Carlsbad, Eddy County, New Mexico (undated)**
[3 maps] Includes oil landowners Dan McFarland and Charles Mau.
- Box 91 (101) **New Mexico, Arizona and Utah**
Correlation of Basal Permian and older rocks in Southwestern Colorado, Northwestern New Mexico, Northeastern Arizona, and Southeastern Utah (1944)
"Oil and gas investigations, preliminary chart 7." Accompanied by U.S.G.S. report by N. W. Bass, 1944 (20 pages).
- Box 91 (102) **Oklahoma**
Structure contour maps of oil fields of Oklahoma (1913-1915)
[4 maps] Includes Osage lots 169-172, Wolverine Oil Co., Tulsa; The Boston Pool (area around Arkansas River); Untested dome near Muskogee. Includes 4-page explanatory memo signed by Fohs and Gardner, consulting geologists.
- Box 96 (103) **Maps and charts in matter of lawsuit over Phillips-Egermeier lease, 160 acres. (1937)**
[9 small sheets] Detail maps show areas drilled for oil, 1931-1937. Also mentions I.T.I.O. Little lease [Indian Territory Illuminating Oil Company, Osage, Oklahoma?].
- Box 96 (104) **Oregon**
Oak Mine, near Grant's Pass, Oregon (1930)
Includes 4-page survey summary by mining engineer, 1929.
- Box 91 (105) **Tennessee**
Geologic map of Tennessee (1915)
Detailed legends and tables. State of Tennessee, State Geological Survey.
- Box 91 (106) **Utah, Wyoming and Texas**
Geologic maps of gas field in Utah and Wyoming and cretaceous formations in Texas (1945)
[2 maps] Geologic and structure contour map of the clay basin gas field and vicinity, Daggett County, Utah and Sweetwater County, Wyoming. Second map titled "Correlation of lower cretaceous formations as revealed by deep wells in east and south Texas." U.S.G.S.
- Box 94 **Topographical and Geological Atlas of the District of the High Plateaus of Utah / To Accompany the Report of Capt. C.E. Dutton, U.S. Ordnance Corps, Assistant Geologist (1879)**
Material Specific Details: Folio has been rolled and is difficult to lay flat. Requires special handling.
[2 copies] 2 pages + 10 leaves of plates (sheets loose in covers). New York: Julius Bien, lith. At head of title: Department of the Interior. United States Geographical and Geological Survey of the Rocky Mountain Region, J.W. Powell in charge.

Wyoming

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- Box 96 (107) **Map of Lander Oil Field, Wyoming, with sections (1911)**
Map shows oil field within Shoshone Indian Reservation. Contour map. Torn, very fragile. E. G. Woodruff, U.S.G.S.
- Box 96 (108) **Geological maps and cross section data of Wyoming oil fields (undated)**
[7 sheets: 2 maps and 5 cross section sketches of geological composition] All say "to accompany report by Ralph Arnold." Includes map of Lake Valley Oil Field, Carbon County; Lander Oil District; Byron Garland District, Bighorn County; Ohio Oil Co., Garland District.
- Box 91 (109) **United States and North America**
Glacial Map of North America (1945)
[2 sheets that form one map.] Legend and footnotes. Geological Society of America.
- Box 96 (110) **Geology of the 49th Parallel by R.A. Daley (ca. 1912)**
[16 sequential sheets numbered 2-6, 9-17] Dated based on date of Daley's published work, "Geology of the North American Cordillera at the 49th Parallel" (1912), Ottawa, Government Printing Office, Canada. Sheets say "Reprinted by permission of chief astronomer to accompany Geological Survey Memoir 38."
- Box 91 (111) **United States**
Outline Map of the United States (Oct. 1934)
U.S. Coast and Geodetic Survey, Washington D.C.
- Box 92 (112) **United States Oil and Gas Fields in 1913 (Map dated 1910)**
[3 sheets form one map] Has red and green marks indicating gas and oil locations. Fragile (Very similar to no. 113)
- Box 92 (113) **United States Oil and Gas Fields in 1913 (Map dated 1914)**
[2 sheets form one map] Same as (no. 112) except map dated 1914. Oil and gas fields marked in red and green on map. (Very similar to no. 112)
- Box 96 (114) **United States contour map and base map (Dec. 1896; reprinted April 1904)**
[2 maps]
- Box 92 (115) **Geologic Map of the United States (1932)**
[4 sheets form one map] Detailed legends. U.S.G.S.
- Box 96 (116) **United States, showing Principal Meridians, Base Lines and Areas Governed thereby (1915)**
- Box 96 (117) **United States and Canada**
Tertiary deposits of the North Pacific Coast and adjacent portion of Vancouver Island by Ralph Arnold and Harold Hannibal
[5 sheets] Very detailed.
- Box 92 (118) **Canada**
Survey and Geological Maps of Canada (1891-1912)
[10 maps] Geological Survey of Canada.
- Box 96 (119) **Geological maps of portions of Alberta and Saskatchewan, Canada (1914)**
[7 maps, plates 1- 7] Includes cross section tables of rock "with special reference to oil" and showing "prospective oil territory."
- Mexico**
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- Box 92 (120) **Map of Oil Fields of North Veracruz and Vicinity, Mexico, Oil Commission (1919)**
(In Spanish.) Photocopy.
- Trinidad and Gulf of Paria**
- Box 92 (121) **Trinidad and Gulf of Paria geologic sections (1911)**
[2 maps] Geologic sections and base map to accompany report by Ralph Arnold.
- Box 92 (122) **West Indies / Trinidad Island and Gulf of Paria from British Surveys from 1866-1868**
"Extensive corrections 1891 and 1900."
- Box 92 (123) **Trinidad and Gulf of Paria / Maps of the Properties of Trinidad Lake Petroleum Co. Ltd. (1911)**
[6 maps] Maps titled Productive Territory, Structural Geology, underground contours, oil sands, surface geology, etc. To accompany reports by Ralph Arnold.
- Venezuela**
- Box 92 (124) **Topographic plan: Perija To Limon, Caracas, Venezuela (Dec. 1914)**
Oil wells indicated. To accompany report by Ralph Arnold.
- Box 96 (125) **Geologic sections of Perija-Limon district (1915)**
[4 maps] To accompany report of Ralph Arnold, July 1915.
- Box 93 (126) **Index map of the Limon and Perija Oil Fields (June 1914)**
Structural geologic map accompanying the report of Burton W. Clark. Caribbean Petroleum Co.
- Box 93 (127) **Topographic and Geologic Sketch Map of the Perija - Rio Limon - Maracaibo Region of Zulia, Western Venezuela, and Geologic map of Guanoco Oil District, Venezuela (1913, 1915)**
[2 maps] Compiled to accompany report by Ralph Arnold.
- Box 93 (128) **Topographic map of the Macoa Region, Caracas, Venezuela (undated)**
Contour map, hand-drawn. Penciled notes by G. Jeffreys.
- Box 93 (129) **Topographic Geologic Map of Region Between Paredones - Rodeo - Arimpia (undated)**
Contour map, hand-drawn.
- Box 93 (130) **Geological plans of parts of Venezuela: Northern Perija, Caracas; Cachiri seepages; Rio Tule and Cano Salado (1914, 1915)**
[3 maps] Contour maps, hand-drawn.
- Box 96 (131) **Key map of the northern part of Venezuela (1912)**
From El Plano Militar de Venezuela de 1909.
- Box 93 (132) **Map of the Northern Part of Venezuela / Showing oil field concessions and areas selected by the "Caribbean" and "Bermudez" companies, and Plan of Mene Grande (1915)**
[2 maps] Showing drilling areas; to accompany report of Ralph Arnold.
- Box 93 (133) **Geologic map of Pedernales and Guanipa oil districts, Venezuela (1914)**
To accompany report on the Bermudez Co. and the Caribbean Petroleum Co. Dec. 18, 1914 by Ralph Arnold.
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- Box 96 (134) **Parcel maps of plots in Zulia and Trujillo (1924)**
[9 maps] "Colonel I. Andrade, Hijo" written on verso. Has names of oil companies.
- Box 96 (135) **Geological cross section data for Guanoco concessions, Pauji concessions, Maremare concession, Venezuela (1913)**
[6 maps]
- Box 93 (136) **Geological plan of Pauji Region, Mene Grande Field, Caracas, Venezuela (June 1915)**
Hand-drawn contour map.
- Box 96 (137) **Sketch maps and geological charts of oil fields in Venezuela (1915)**
[3 maps] Sketch of "areas finally staked out in San Timoteo-Pauji field"; diagram of Physiographic Development in Region of Rio Misoa; geologic cross sections in Mene Grande Field. To accompany report by Ralph Arnold, Feb. 24, 1915.