
ARIZONA HISTORICAL SOCIETY

949 East Second Street
Tucson, AZ 85719

Library and Archives
(520) 617-1157

ahsref@azhs.gov

**MS 1031
Dr. James Douglas Collection
1863 - 1935**

DESCRIPTION

This collection relates to Dr. James Douglas and early mining development in Southern Arizona. It contains business and personal correspondence, mining reports, manuscripts, and photographs attributable to Douglas and his activities. A few manuscripts feature topics of Canadian mining interests, and religious views but the majority of materials commence in Arizona in 1881. The collection is especially rich in biographical materials of Douglas, his life, work and business interests. A draft copy of an autobiography of over 300 pages is present. Mining reports feature the various copper mines Douglas was sent to Arizona to investigate in 1881-1883 for the Phelps, Dodge, & Company for possible investment purposes. Photographs depict both interior and exterior views of mining operations both in southern Arizona mines and in Sonora Mexico.

10 Boxes, 6 linear ft.

ACQUISITION

Donated by Walter Douglas III in 1988 and 1990.

ACCESS

There are no restrictions on access to this collection.

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Requests for permission to publish material from this collection should be addressed to the Arizona Historical Society, Tucson, Archives Department.

PROCESSING

The collection was reprocessed by Dave Tackenberg in November 2005.

BIOGRAPHICAL NOTE

Dr. James Douglas was born in Quebec, Canada on November 4, 1837. His father James Douglas Sr., a native of Scotland, was an eminent surgeon and manager of the Quebec Asylum for the Mentally Ill. His mother, Elizabeth Ferguson, was also a native of Scotland. Dr. James Douglas graduated from Queen's College, Kingston, Canada in 1858 and continued his studies at the University of Edinburgh. He studied both medicine and theology with the intent of becoming a minister but was never ordained. For several years he served as professor of chemistry at Morrin College, Quebec, and in 1864 became managing director of the Harvey Hill Copper Co. in Quebec. In 1875 he moved to the United States to take charge of the copper works at Phoenixville, PA.

In 1881 the Phelps, Dodge & Co. sent Dr. Douglas to Morenci, Arizona to evaluate several mines in Arizona. Dr. Douglas' report on Morenci was so favorable that William E. Dodge and Daniel James decided to finance William Church's proposed smelter near Morenci, Arizona. Douglas was also enthusiastic over the copper mining possibilities in the Bisbee area. At his suggestion the Phelps, Dodge partners purchased the Atlanta Claim on June 21, 1881. This led to the purchase of other claims including the neighboring Copper Queen Mine. These claims had huge deposits of high-grade ores that produced a virtual torrent of copper upon which the fortunes and growth of Phelps, Dodge Co. was based. Douglas Arizona was named for his contributions to southern Arizona.

Dr. Douglas became president and general manager of the Copper Queen Consolidated Mining Co., the United Verde Mining Co., the United Globe Mining Co., the Detroit Copper Mining Co., the Commercial Mining Co., the Montezuma Mining Co., and the Nacozari mines in Sonora, Mexico. He was also influential in the development and operation of over 400 miles of railroad and became the president of the El Paso and Southwest Railroad, the Nacazari Railroad, and the Morenci Southern Railroad.

With T. Sterry Hunt Dr. Douglas was involved with many experiments in the hydrometallurgy of coppers and devised what is known as the Hunt-Douglas process for extracting copper from its ores. Douglas was also the inventor of several other improvements in the mining industry consisting of the invention for calcining ores (1884), a furnace for calcining ores (1898), a process for extracting copper from cuprififerous nickel ore (1892), a process for separating and recovering copper (1896), and an improved smelting furnace in 1897.

In addition to being president of numerous mining companies Douglas was also president of the American Institute of Mining Engineers (1899-1901), president of the Quebec Literary and Historical Society, and a member of various other societies associated with mining and minerals. He authored numerous pamphlets and essays dealing with mining, copper, and Canadian politics. Douglas received an honorary degree of LL.D from McGill University, Montreal, Canada, in 1899.

Dr. Douglas married Naomi Douglas (no relationship) from Scotland in 1860. Naomi Douglas' father (Walter Douglas) was a captain of the Cunard Steamship Line. Dr. Douglas and Naomi had 6 children, four of which survived. The four children include Elizabeth Douglas, Walter Douglas, James Douglas, and Edith Douglas. Dr. James Douglas died in June 1918.

SCOPE AND CONTENT NOTE

This collection related to Dr. James Douglas' life and mining experiences in southern Arizona. The collection is a valuable source of information on the discovery, growth, and organization of early Arizona copper mining. Personal information on the life and accomplishments of Dr. Douglas provide the heart of the materials. Present are both personal and business correspondence between 1881 and 1898. During the early portion of this period Douglas was employed for the Phelps, Dodge & Co. to research possible mining opportunities in southern Arizona. Many mining reports are contained on locations visited by Douglas from this 1881-1883 period in their original hand-written form and typed copies. Twelve folders provide materials associated with Douglas' death in 1918 and reviews of his life including condolence cards and messages, funeral remarks, newspaper clippings, and telegrams. Numerous pamphlets and essays are present in the collection focusing on copper, mining activities, and Canadian politics.

Manuscript materials were originally processed soon after the collection was received in the late 1980s but a grouping of photographs received at the same time were not included and never processed. Recently a decision was made to process these images and incorporate them into the Douglas Collection. These images include views of mining operations in many southern Arizona and Mexico locations with which Douglas had dealings. Photographs include both exterior and interior views of smelting and processing facilities in Bisbee, Globe, and Cananea, MX. Three scrapbooks of images are also present in the collection. These books appear to have been produced as possible promotional items. The scrapbooks cover the processing works at Cananea Mexico, the El Pasco & Southwestern Railroad in El Paso, Texas, and the Gadsden Hotel in Douglas, Arizona. A copy of the original finding guide has been retained with the collection.

The Douglas Collection was reorganized into seven series to facilitate research. These series include: Biographical Materials (1914-1935), Correspondence (1881-1898), Manuscripts (1863-1916), Mine Reports (1881-1886), Mining Documents and Information (1882-1896), Misc. Papers, and Photographs.

Box and Folder Listing

Box 1

Series 1: Biographical Materials, 1914 - 1935

- Folder 1-4 James Douglas Autobiography Manuscript (Draft)
f.5-7 James Douglas Autobiographical Chapters (Earlier Drafts)
f.8 James Douglas Autobiography Notes
f.9-10 James Douglas Autobiography Notes and Essays
f.11 Essay – “James Douglas” in *Engineering and Mining Journal* 1918
f.12 Essay – “Biographical Notice of James Douglas” in *Bulletin of
the American Institute of Mining* 1918

Box 2

- f.13 Communications with Cyclopedia of American Biography 1914-1917
f.14 Communications with Encyclopedia America 1916-1921
f.15 Newspaper Clippings 1918/1935
f.16 Newspaper Clippings – Death of James Douglas 1918
f.17 Death Announcements for James Douglas 1918
f.18 Card List for Death of James Douglas 1918
f.19-24 Letters of Condolence to Family on Death of James Douglas 1918
f.25 Letters of Condolence to Walter and James Douglas Jr. 1918
f.26 Telegrams of Condolence on Death of James Douglas 1918
f.27 James Douglas Funeral Remarks 1918
f.28 Copies of Condolence from Telegrams and Messages 1918

Box 3

Series 2: Correspondence, 1881 – 1898

- f.29-40 James Douglas Correspondence 1881-1898

Box 4

Series 3: Manuscripts, 1863 - 1916

- f.41 “Hope the Heritage of the Race” by James Douglas
f.42 “The Gold Fields of Canada” by James Douglas 1863
f.43 “The S.S. ‘Unicorn’ & Memoranda on Early Transatlantic
Steamship Service” by James Douglas
f.44 Excerpt from “A Deputation at Hawarden” by James Douglas 1895
f.45 Letter to Editor of *The Spectator* by James Douglas 1916
f.46 “Syndicalism or Co-operation?” by James Douglas 1913
f.47 “The Copper Queen Mine, Arizona” by James Douglas 1899
f.48 “Paper on Progress of Metallurgy of Copper” by James Douglas
f.49 “The Cupola Smelting of Copper in Arizona” by James Douglas 1885
f.50 “Notes on the Development of Phelps Dodge & Company and
Railroad Interests” by James Douglas 1906
f.51 Manuscript on Trip to Sudbury by James Douglas

f.52	“The Late Professor Blackie” by James Douglas	
f.53	Manuscript on Introduction to the West by James Douglas	
f.54	“The Advance of Age” by James Douglas	
f.55	“The Labor Question” by James Douglas	
f.56	“A Visit to the Krupp Works” by James Douglas	
f.57	Manuscript on Business Wealth by James Douglas	1913/1914
f.58	Manuscript on Wealth, Corporations, and Labor by James Douglas	1914
f.58A	Manuscript on Copper Metallurgy in the Southwest	1914
f.58B	“Romances of Great Mines” from <i>Copper, Curb & Mining Outlook</i>	1914
f.59	Pamphlet: Copper Queen Mine Mining Company	1882
f.60	“Later Story of the Copper Queen Mine”	
f.61	Manuscript on Copper in Maryland	1909
f.62	Manuscript on the Labor Strike at Cananea, Mexico	
f.63	“Trusts and Their Tendencies”	1889
f.64	Letter to Editor of <i>Montreal Gazette</i>	1913
f.65	Letter to Editor on American and England Relations	
f.66	Manuscript on Statistics on Copper Production	
f.67	“Snow Slide in the Rocky Mountains”	
f.68	Manuscript on History of Phelps, Dodge & Company	
f.69	“For John Fritz Medal Meeting”	
f.70	Manuscript on Trusts and Wealth (Draft)	
f.71	“Notes on the Development of the Transportation Interest of Phelps Dodge”	
f.72	Manuscript on Canadian Mining	
f.73	Manuscript on Production of Copper in United States	
f.74	First Lecture Notes on Smelting Ores	
f.75	Manuscript on Library Usage	
f.76	“Appendix No. 1” (Railroad Development on the Border)	

Box 5

f.77	“The Engineer Was Here” by Frank Alex	
f.78	“1,000 Mile System Founded on Copper” in <i>Railroad Man’s Magazine</i>	
f.79	Address on Changes in Smelting Operations	
f.80	Misc. Draft Notes on Manuscripts	
f.81	Page 4 of Unidentified Manuscript	
f.82	Speech for John Edson Sweet	1914

Series 4: Mine Reports, 1881 - 1886

f.83	Report on Clifton Mines	1882
f.84	Report on Sudbury District (Canada)	1886
f.85	Report on Snake River Copper Mines (Idaho)	1887
f.86	Report on Copper Queen Mine (Bisbee)	1881
f.87	Report on Copper Queen Mine (Bisbee)	1882
f.88	Report on Globe, AZ Mines	1881
f.89	Report on Copper Basin Mining Property (Prescott)	1882/1883
f.90	Report on Detroit Mining Company (Clifton)	1881
f.91	Report on Longfellow Mines (Clifton/Morenci)	1880
f.92-94	Report on Mines at Clifton, AZ	1881-1882
f.95	Report on Detroit Mining Company (Clifton)	1882

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| f.96 | Report on "Little Daisy" of United Verde Extension
Mining Co. (Jerome) | |
| f.97 | Report on the Mines of the Arizona Copper Company | 1882 |
| f.98 | Report on Planet Group Mines (Yuma County) | |
| f.99 | Report on Dakota Tin Mines (Montana) | 1886 |

Series 5: Mining Documents and Information, 1882 - 1896

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|-------|--|----------------|
| f.100 | Furnace Equipment at Bisbee | |
| f.101 | Expenditures at Detroit Copper Mining Co. | 1882 |
| f.102 | Ores and Slag Analysis at Longfellow, Copper Mountain, and
Yankey Mines (Three Small Notebooks) | |
| f.103 | Estimated Costs of Detroit Copper Co. | |
| f.104 | Bills/Account Listings for San Carlos Mines | 1884 |
| f.105 | Prospectus for Arizona Copper Company | 1882 |
| f.106 | Expenses at Bisbee, AZ | 1882/1885-1886 |
| f.107 | Correspondence Regarding Litigation with Arizona Prince
Copper Company | 1884 |

Box 6

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|-------|--|-----------|
| f.108 | Alphabetical Mine Listing Report | |
| f.109 | Application for Baxter Mining Claim | 1882 |
| f.110 | Letter to Secretary of Interior on Deer Creek Coal Field, AZ | 1885 |
| f.111 | Agreement on Cave Mining Claim | 1884 |
| f.112 | Maps of Copper Queen Mining Area (Hand Drawn) | |
| f.113 | Atlanta Mining Claim (Bisbee) | 1882-1884 |
| f.114 | Agreement for Copper | 1888 |
| f.115 | Lease to Mine Claim | 1896 |

Series 6: Misc. Papers

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|-------|--|-----------|
| f.116 | Census Bulletins | 1891-1893 |
| f.117 | Letter on International Inventions Exhibition | 1885 |
| f.118 | Note Cards/ Train Ticket/ Business Cards | |
| f.119 | Invitations and Menues | |
| f.120 | Map of Grass Valley Mining District (California) | |
| f.121 | Original File Index Sheets | |
| f.122 | Original Folder Listings | |

Series 7: Photographs

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|-----------|---|------|
| f.123-124 | Bisbee, Arizona
Copper Queen Smelter and Power House Interior Views | |
| f.125 | Morenci, Arizona
Town Scenes
Exterior Views of Mine Buildings
Longfellow Incline | |
| f.126 | Clifton, Arizona
Flood Damage to Town and Mine | 1906 |

Box 7

- f.127 Clifton, Arizona
Flood Damage to Town and Mine 1906
- f.128 Metcalf, Arizona
Shannon Mine
Metcalf Incline
Distant View of Mine Buildings
- f.129 Jerome, Arizona
Montana Hotel in Jerome
- f.130 Globe, Arizona
Grey Mine Incline Road
Old Dominion Smelter
Exterior Views of Mine Buildings
Group of Miners
- f.131 Storm Damage to Moctezuma Copper Company 1925
Damaged Railroad Tracks
Washed Out Bridges
- f.132 Sierra de Cobre Mine Area
Buildings in Hills
Distant View of Valley
Dust Storm
Horse Drawn Wagon
Distant View of Mine Buildings
- f.133 Mexican Mining Scenes
Mines in Front of Building at Cananea, MX
Mexican Burial
- f.134 Mexican Mining and Railroad Scenes
Mine Buildings at Nacasari, Sonora
Railroad Train
Wrecked Railroad Track
- f.135 Stage Setting at Dawson, New Mexico
Two Images of Stage Set For Play or Performance
- f.136 Misc. Images
Cartes de Visite of Walter Douglas (James Douglas Son) dated 1899
Cup Presented to James Douglas
Image of Nevada Miners
Veta Grande Mine
- f.136 Unidentified Mine Construction Scenes
Smelter Smoke Stack Under Construction
Buildings with Steel Framing
- f.137-140 Unidentified Mining Views (Exterior)
Mine Buildings Beside Railroad Tracks
Town and Mine Scenes
Distant Views of Mining Valley
Large Masonry Blocks for Building Foundations
Pack Burros Beside Building

- f.141 Unidentified Mining Views (Interior)
 - Smelter Scenes
 - Ore Buckets
 - Workers in Smelter Operations
- f.142 Misc. Photos (Not Mining Related)
 - Sail Boat on Large Body of Water
 - Bridge Construction Over Gila River
 - Various Buildings
 - Large Tent with Wooden Foundation
 - Three Men Seated with Horse and Buggy

Box 8 Scrapbook of Photos – Cananea Mexico

- Images of Mine Buildings at Cananea Mexico
- Ore Being Processed in Buildings
- Workers Inspecting Ore on Conveyor Belts
- Large Furnace Area
- Men Walking on Planks Above Ore Bins
- Exterior Views of Buildings
- Workers Riding Lift to Next Level of Plant

Box 9 Scrapbook of Photos – Gadsden Hotel at Douglas, AZ

- Interior Lobby View
- Exterior Views of Building with Men on Street Corner
- Bar Room
- Barber Shop Area
- Curio Room with Items For Sale
- Clerk's Desk
- Stairway from Lobby
- Entrance to Dining Room
- Billiard Room
- Hotel Room
- Lobby and Mezzanine Areas
- Dining Room
- Kitchen Area
- Bedroom Views
- Room Suite Views

Box 10 Oversized Items

- Folder #1: Maps (Hand Drawn)
 - Map of Copper Queen Mine
 - Unidentified Mine Tunnels
 - Southern Arizona Around Tombstone and Fairbanks Arizona
- Folder #2: Certificates and Memberships
 - American Institute of Mining Engineers
 - Association for the Protection of the Adirondacks
 - North American Institute of Mining and Mechanical Engineers
 - Institute of Mining & Metallurgy
 - The Blue Pencil Club of the State of New York

Iron and Steel Institute
The American Academy of Political and Social Science
Folder #3: Photo of Morenci Open Pit Mine Operations (Color)

**Outside Item - Scrapbook of Photos – El Paso & Southwestern Railroad Buildings
Located in El Paso, TX**

Exterior View of Completed Building	1907
Phases of Construction of Building	Nov. 1906 – Jan. 1907
Railroad Powerhouse Engine Room	1906
Interior View of Machine Shop	1906
Exterior View of Smith Shop and Power House	1906
Interior Views of Smith Shop and Machine Shop	1906
Man Shoveling Coal Into Furnace in Power House	1906
Exterior Views of Building Complex	1906

Outside Items - Certificates

Two Large Poster Certificates to James Douglas and Copper Queen Mining Company for Participation in French Exposition in 1900
Two Large Poster Certificates to James Douglas for Exhibitions of the Douglas Revolving Calciner and a Model of a Revolving-Cylinder Calcining Furnace with a Central Flue at the 1893 Chicago World's Columbian Exposition.