

Ambrose E. Ring's Photo Record of AIME's 1916 Tour of Arizona Mines

Arizona History Convention
Chandler, Arizona

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Ambrose E. Ring

- Born in NYC in 1883
- Mining Engineer degree from Columbia University
- In mining business from 1905-1952, mostly with ASARCO
- Expert in evaluating mining prospects
- Left wonderful legacy of diaries and photos



American Institute of Mining, Metallurgical, And Petroleum Engineers (AIME)

- Professional Society to advance the worldwide mining and minerals community through information exchange and professional development via technical publications and meetings
- Founded in 1871
- Today has more than 90,000 professionals

Mining in 1916

- WWI raging in Europe since the summer of 1914; the U.S. would declare war on Germany in spring 1917
- Demand high for U.S. copper
- U.S. refining capacity could not keep pace with production of copper
- Role of labor in mining was dramatically changing
 - technology reducing need for traditional mining skills
 - issues of safety, working conditions, wage scale
 - ethnic tensions, nationalism, fear of sabotage
- Labor unions gaining strength – militancy and labor strikes were more common

AIME 1916 Tour Overview



Fort Bliss



Chino Open Pit Copper Mine – West Pit



Chino Open Pit Copper Mine –East Pit

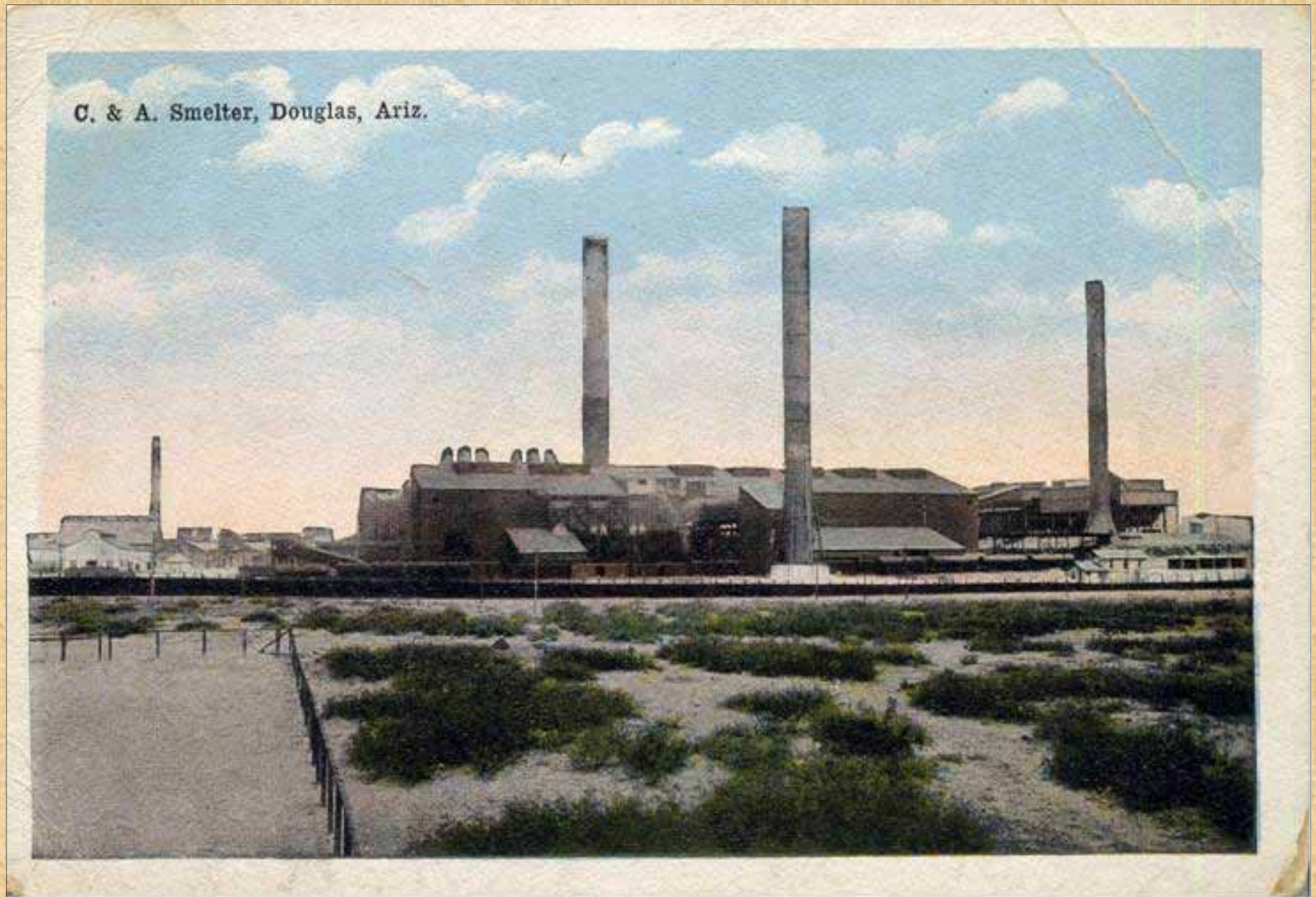


Empire Zinc Company

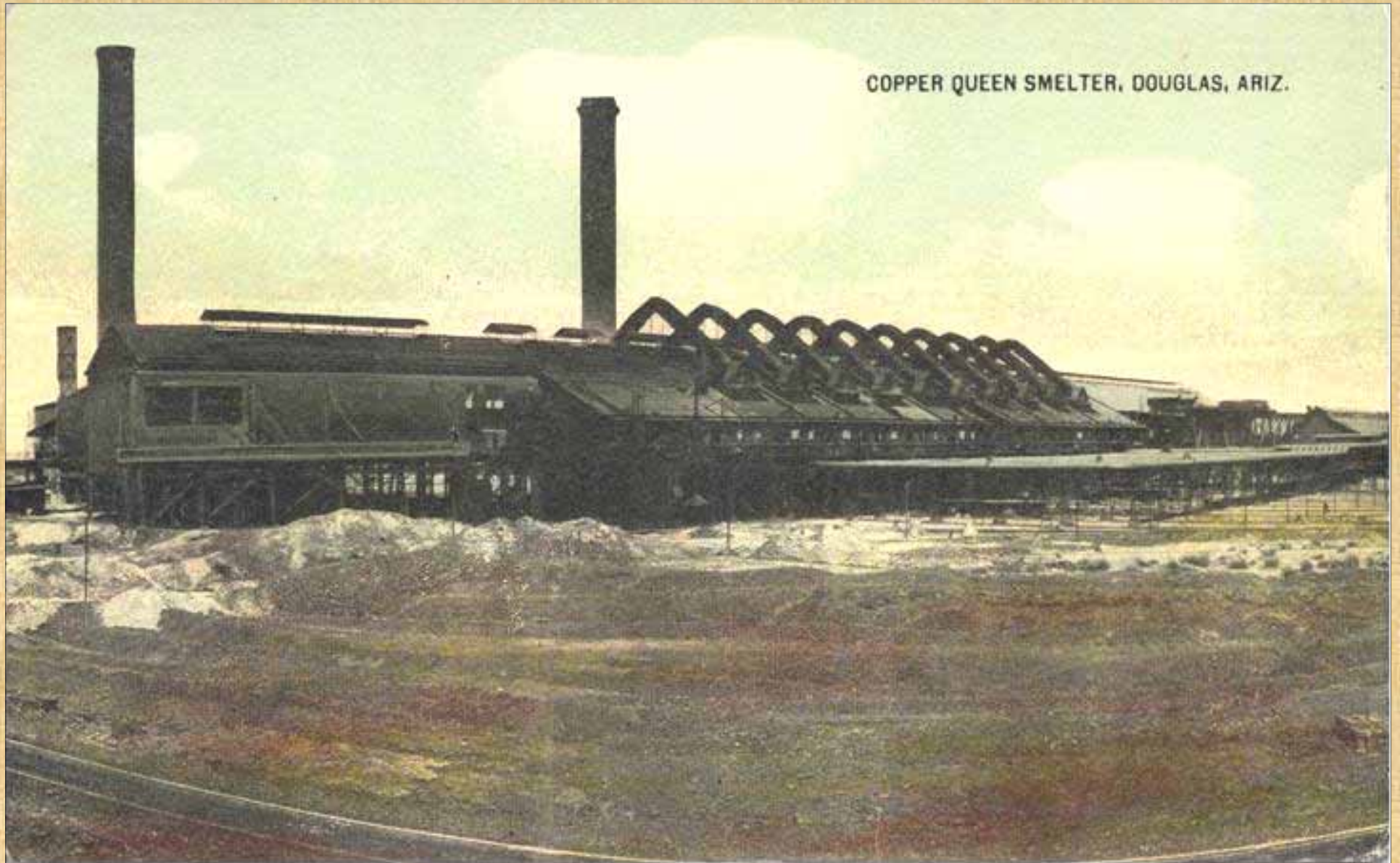
Circular Storage Bins for Separated Lead and Zinc



Bisbee-Douglas: Calumet & Arizona Smelter



Bisbee-Douglas: Copper Queen Smelter

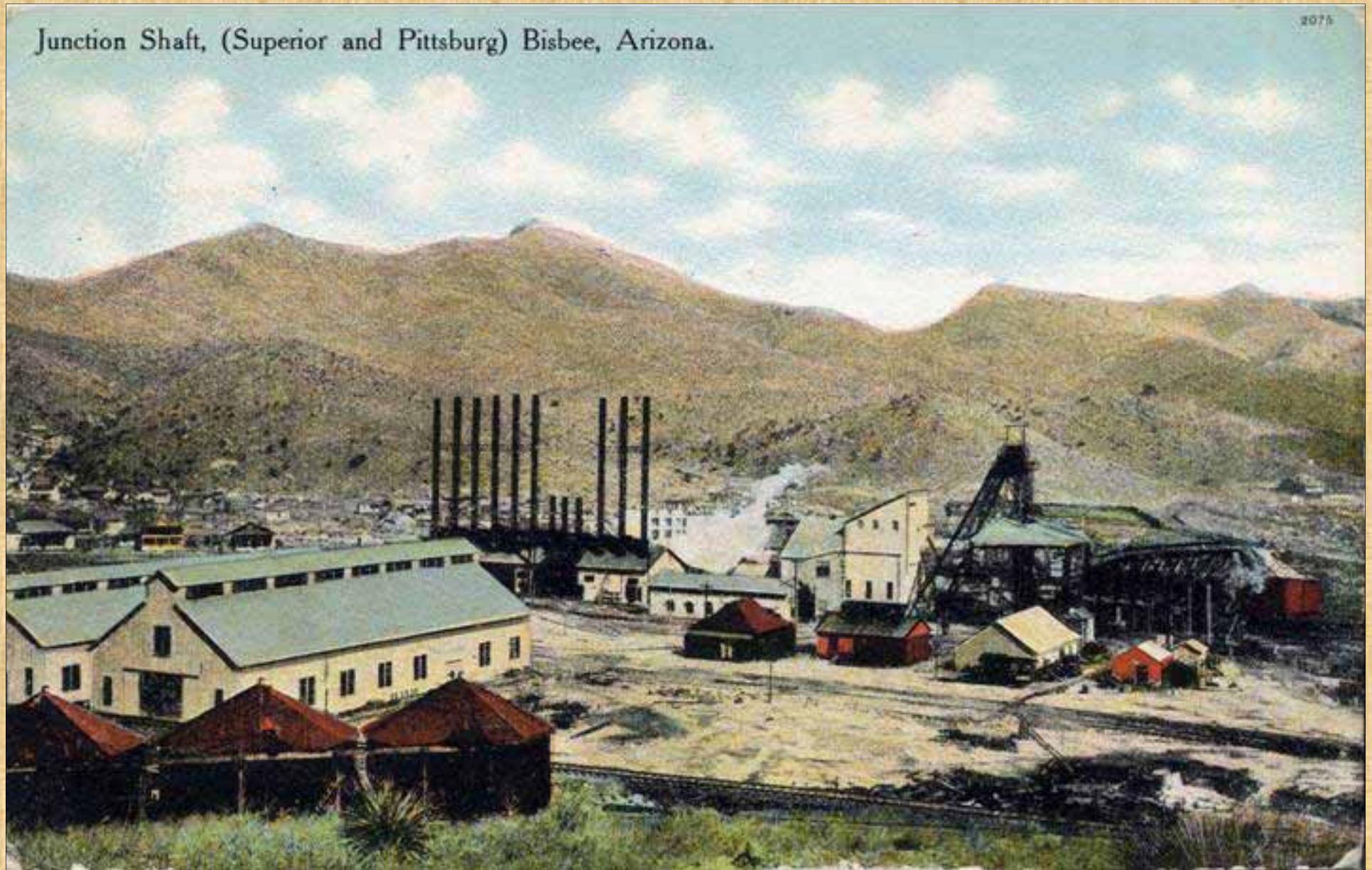


Bisbee-Douglas: Copper Queen Smelter

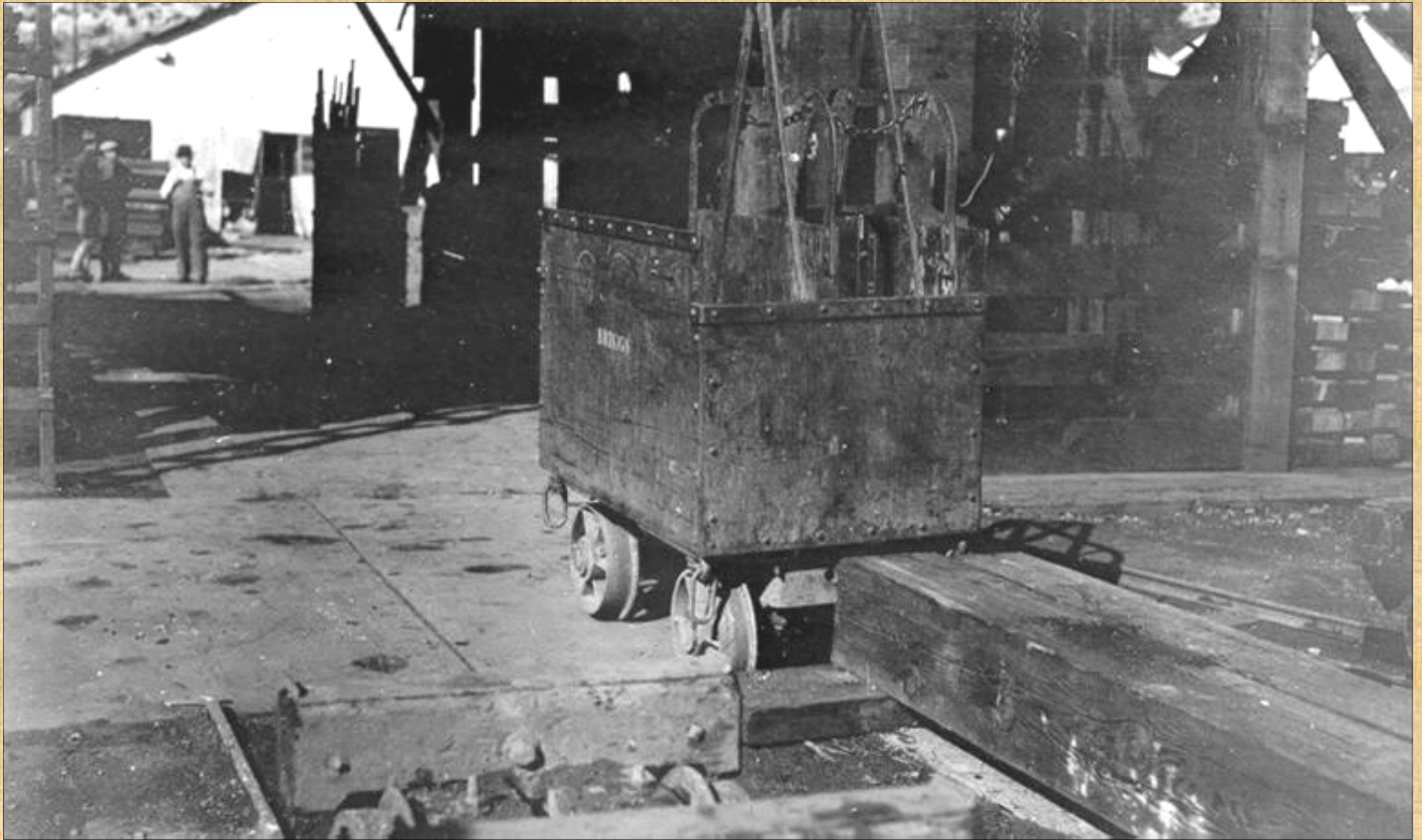
Spider-Like Casting Machine



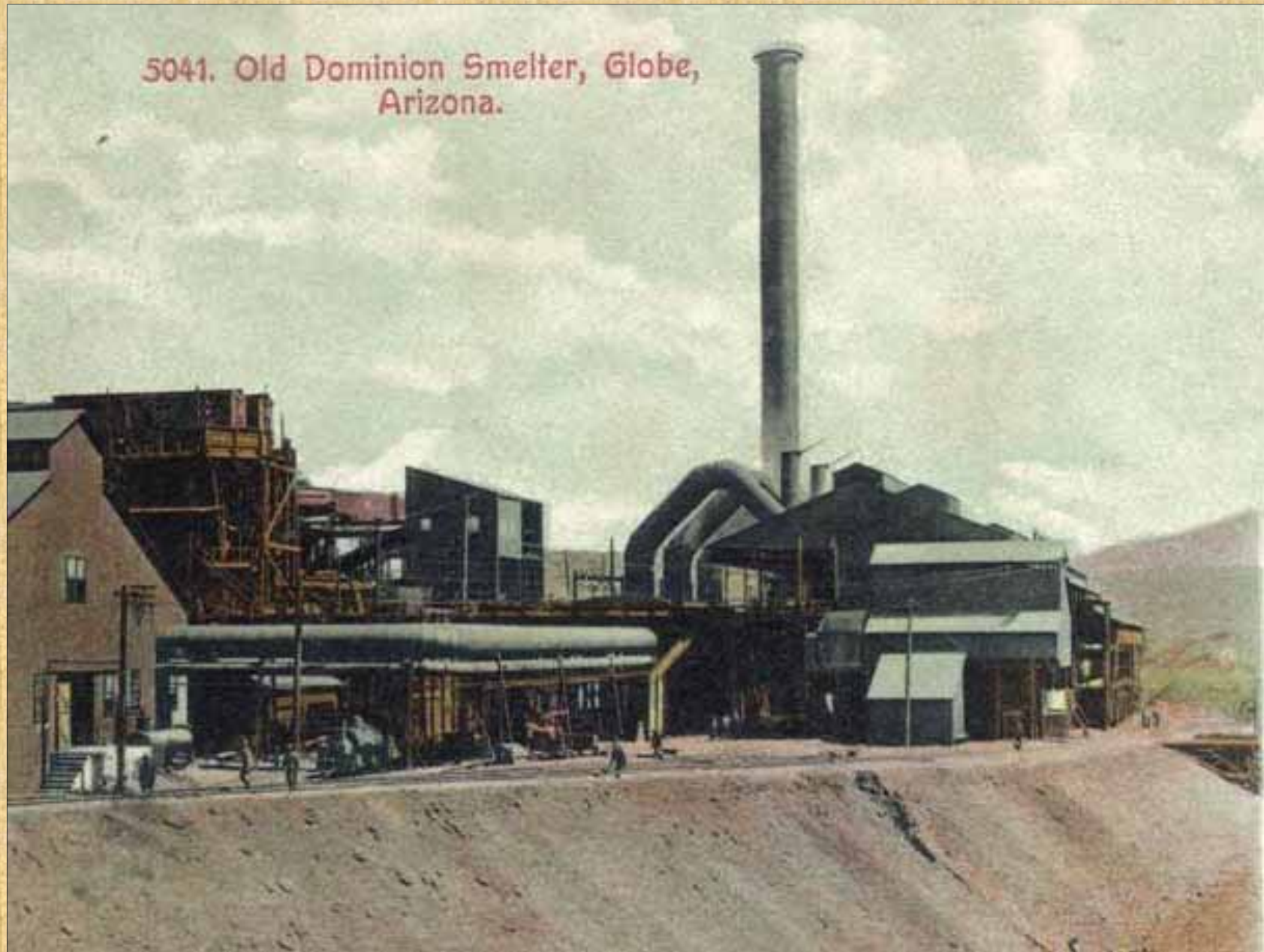
Bisbee-Douglas: Junction Shaft



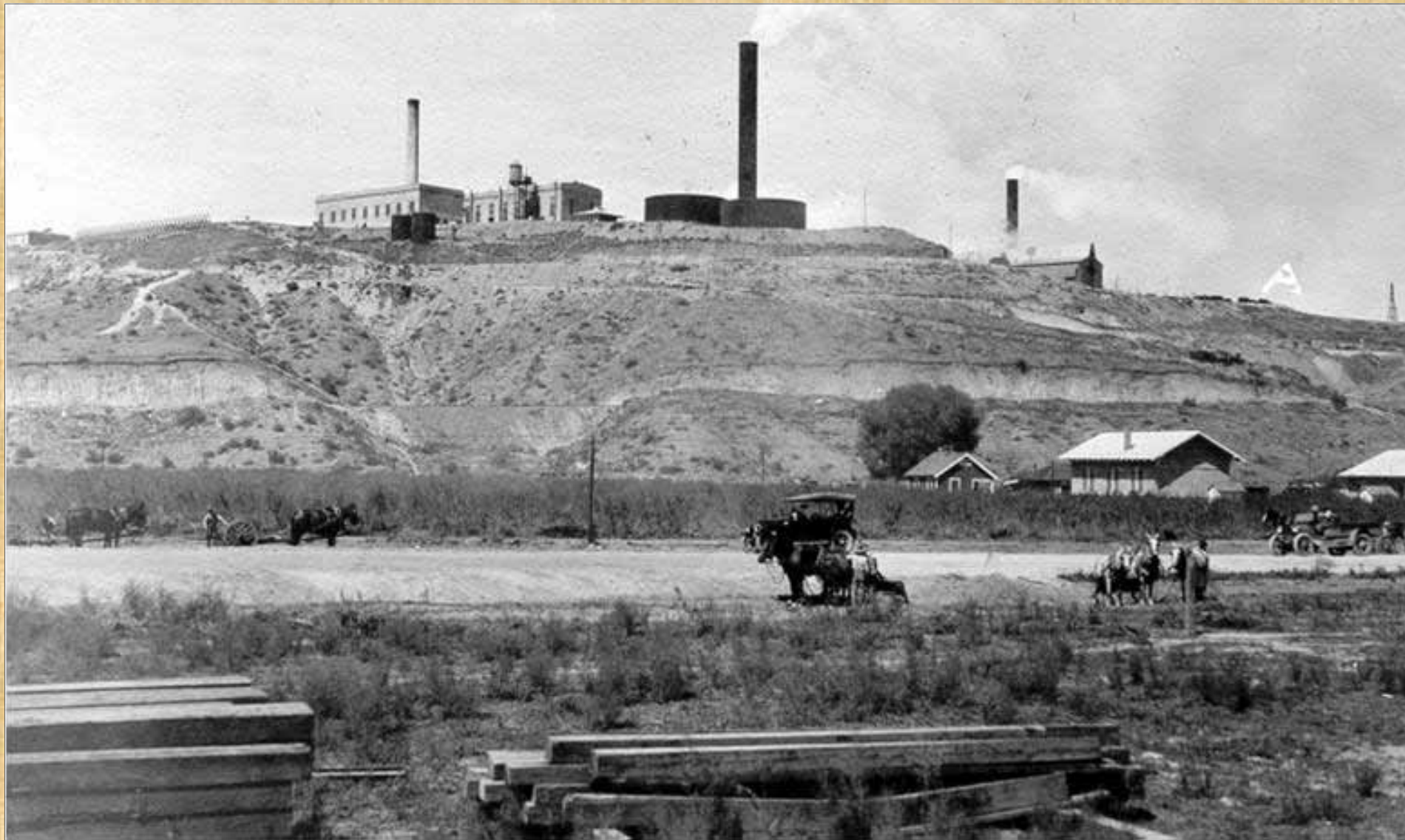
Bisbee-Douglas: Ore Cars at Briggs Shaft



Globe-Miami: Old Dominion Mine Smelter



Globe-Miami: International Smelting Company



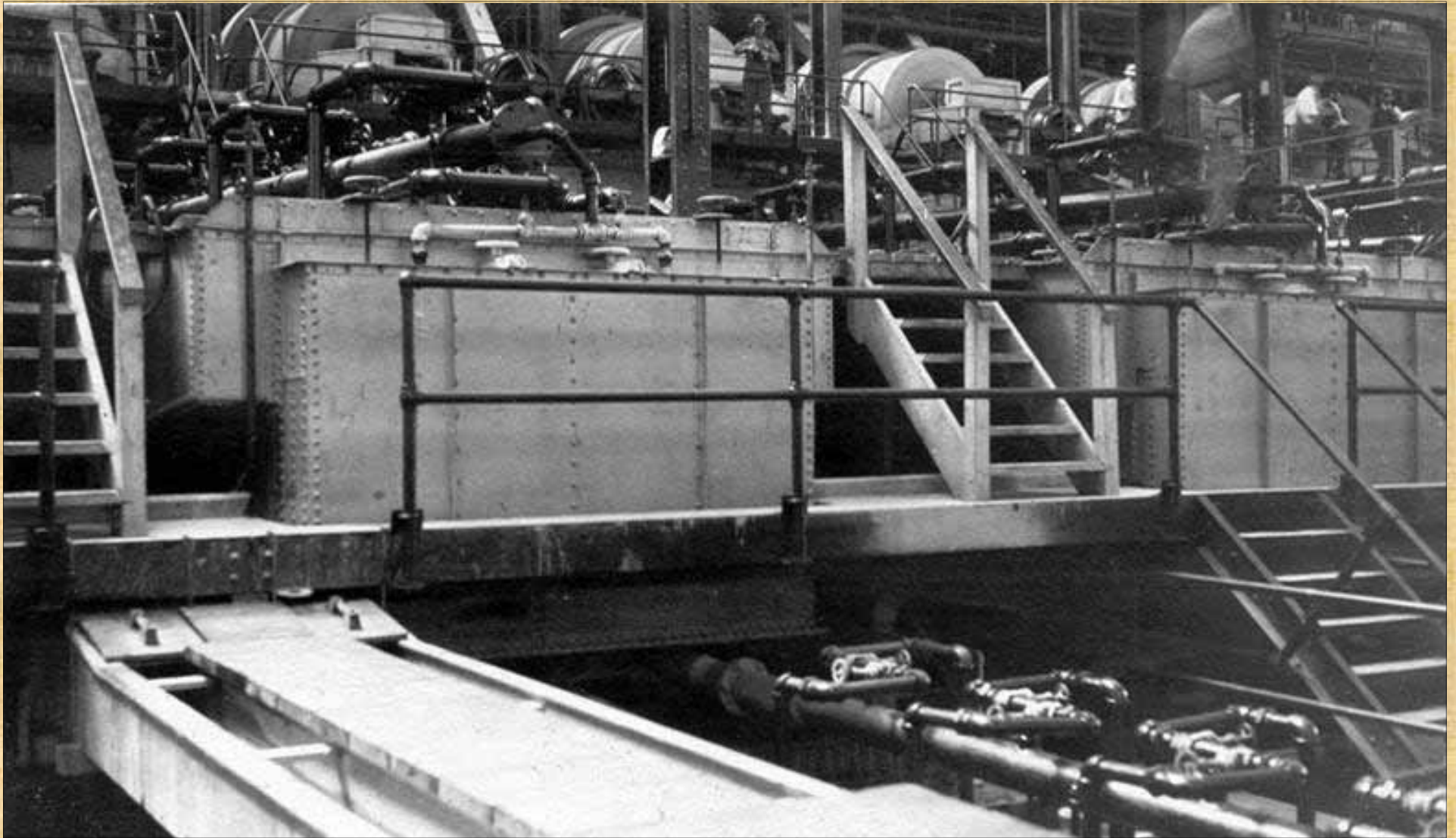
Globe-Miami: Inspiration Consolidated Copper Company



Globe-Miami: Inspiration Consolidated Copper Company - Entrance



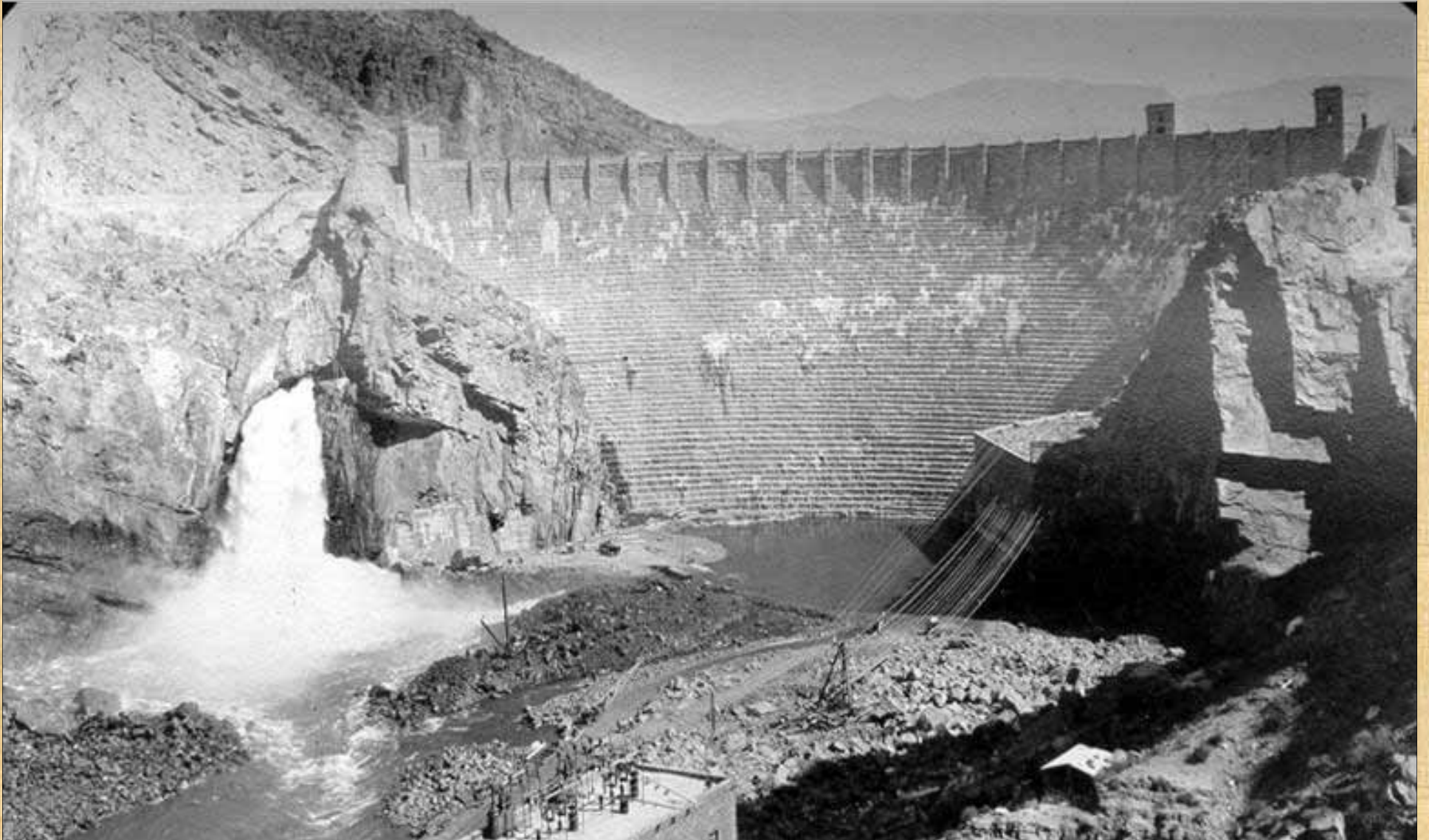
Globe-Miami: Inspiration Mill Flotation Machine to Chemically Separate and Concentrate Copper



Roosevelt Lake

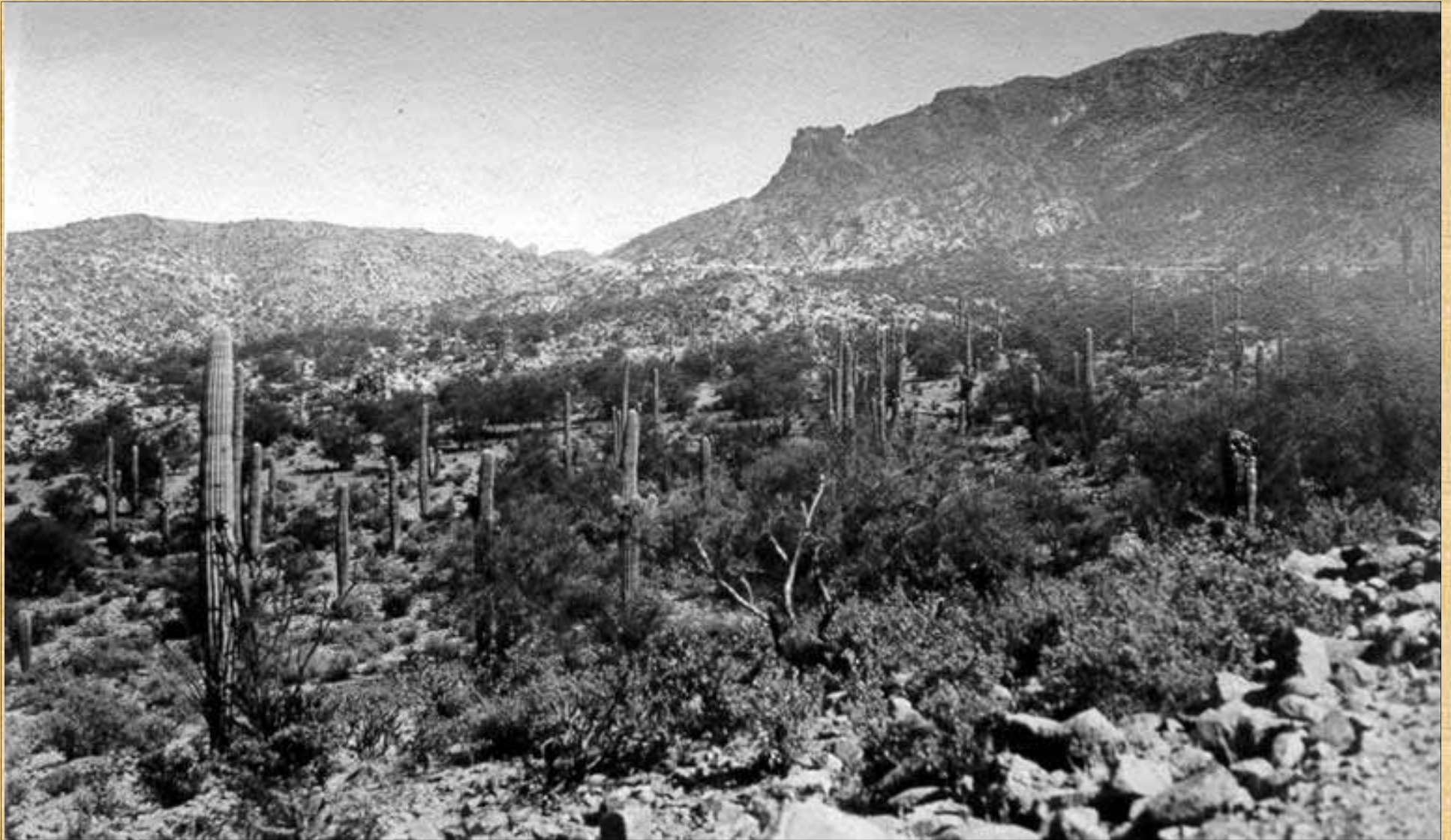


Roosevelt Dam



Apache Trail

Heading out of Fish Creek Canyon



Apache Trail Twists and Turns



Grand Canyon

The Grand Canyon from Bright Angel.



Grand Canyon: El Tovar Hotel



AIME Group at Bottom of Grand Canyon



Conclusions / Copper Mining Today in Arizona

- Full 1916 AIME tour documented in *Transactions of the American Institute of Mining Engineers, Volume LV, 1917*
- The copper mines of Chino and Miami are still active
- Other active Arizona copper operations today
 - ASARCO: Mission mine at Sahaurita, Silver Bell mine near Tucson, and the Ray mine near Hayden
 - BHP Billiton: Pinto Valley mine in Miami
 - Mercator Minerals: Mineral Park mine south of Kingman

In 2006 Arizona was leading copper producing state: \$5B

Pictorial Contents of Written Paper

- Fort Bliss: 6 AER photos**
- Santa Rita: 16 AER photos**
- Douglas/Bisbee: 15 ADR postcards, 14 AER photos**
- Globe/Miami: 12 ADR postcards, 17 AER photos**
- Roosevelt Dam/Apache Trail: 26 ADR postcards,
22 AER photos**
- Grand Canyon: 17 ADR postcards, 31 AER photos**

<http://ringbrothershistory.com>

Contact Bob Ring Contact Al Ring Contact Talia Cahoon

Ring Brothers History



Ruby, Arizona
Mining, Mayhem, and Murder

Welcome to the Ring brothers website. We are brothers Bob and Al Ring and the purpose of this website is to share our research on the mining history of south-central Arizona, family genealogy, and the "projects" that have resulted from our work. These projects include books, history papers, newspaper columns, and an extensive collection of historical materials, including thousands of old photographs. We produced some of these products with our "partner" Talia Pittimer Cahoon. Just "click" on the appropriate icon on the left (books) or right (projects) to find out more about what we've been up to. One thing you can count on - our research and writing will continue and we will periodically update this website.

Bob Ring is retired from the aerospace industry, where he worked for 35 years as both a technical contributor and a manager. He completed his aerospace career as a Senior Fellow at Raytheon Missile Systems in Tucson. Bob is a Professional member of the Society of Southwest Authors.



ST. MATTHEWS FIREFIGHTERS
A Year of Triumph

Al Ring was self-employed in Louisville, Kentucky for over 34 years, first in a retail business, then in sales and contracting companies. He also consulted for, or managed, several real estate offices and found time to volunteer as a firefighter. In 2004 Al published *St. Matthews Firefighters, 24 Years of Firefighting in St. Matthews, Kentucky*.

Natalia "Talia" Pittimer Cahoon is a second-generation Tucsonan who lived in Ruby as a youngster, during the mining camp's heyday in the 1930s. She is a retired teacher and has been conducting historical tours to Ruby for Pima Community College since 1994. For more information on Pima Community College's educational tours of Ruby, call 520-206-3952 or visit <http://www.pima.edu/personal/tcahoon/>



Frontier Lady of Letters
The Heroic Love Story of Inez Frazer

Sparked by family genealogy research, we are long-time investigators of the history of mining in Arizona's south-central borderland.

We are regular participants at Arizona History Conventions. We've presented papers ranging from the history of Warren, Arizona, a suburb of Bisbee, to the mining history of Oro Blanco and Ruby. At the 2005 Convention we took part in a Roundtable Discussion, "So You Want to Write a Book: Self Publishing Arizona History."

Since October 2003, we have written a bi-monthly newspaper column, "Along the Ruby Road," for the Green Valley News & Sun. The column highlights the colorful history of the Oro Blanco Mining District, with emphasis on the mining ghost town, Ruby.

In July 2005, we self-published our first book, *Ruby, Arizona - Mining, Mayhem, and Murder*.

We are currently exploring publishing opportunities for our second book, *Frontier Lady of Letters - The Heroic Love Story of Inez Frazer*.

Do you have any related documents, photos, or personal histories that you could share with us? If so, please contact: AlRingringat@comcast.net



From left to right:
Bob Ring,
Al Ring,
and Talia Pittimer Cahoon
at a book sale and signing for *Ruby, Arizona - Mining, Mayhem, and Murder*.

Latest From Al & Bob Ring

Arizona History Convention Papers

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This paper and much, much more on our Website.