



Canadian Arizona Business Council

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AMA Board Member**



**ARIZONA
MINING ASSOCIATION**



Overview

- History
- About the AMA
- Goals and Purpose

History



**ARIZONA
MINING ASSOCIATION**



1965



About the AMA



**ARIZONA
MINING ASSOCIATION**

Arizona Mining Association Founding Members



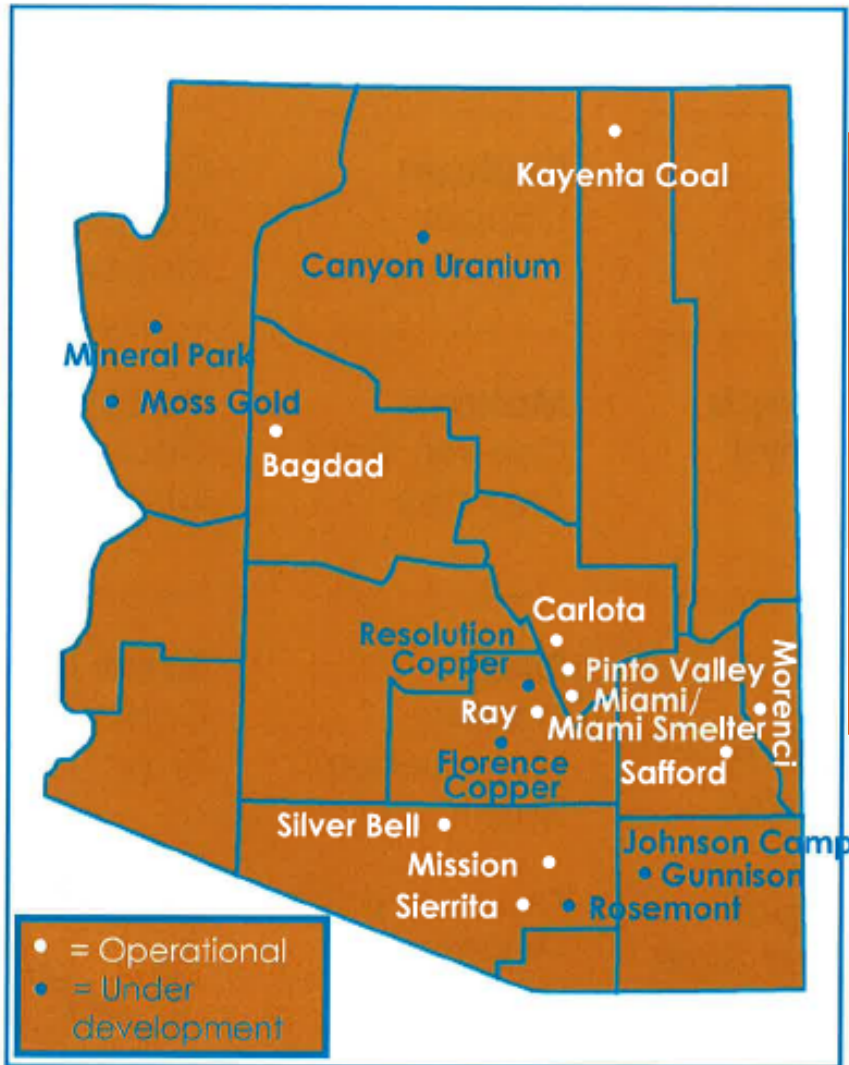
BHP



Membership

- Mining Member Companies: 19
- Consultant Member Companies: 18
- Supplier Member Companies: 58

Current Mining Environment



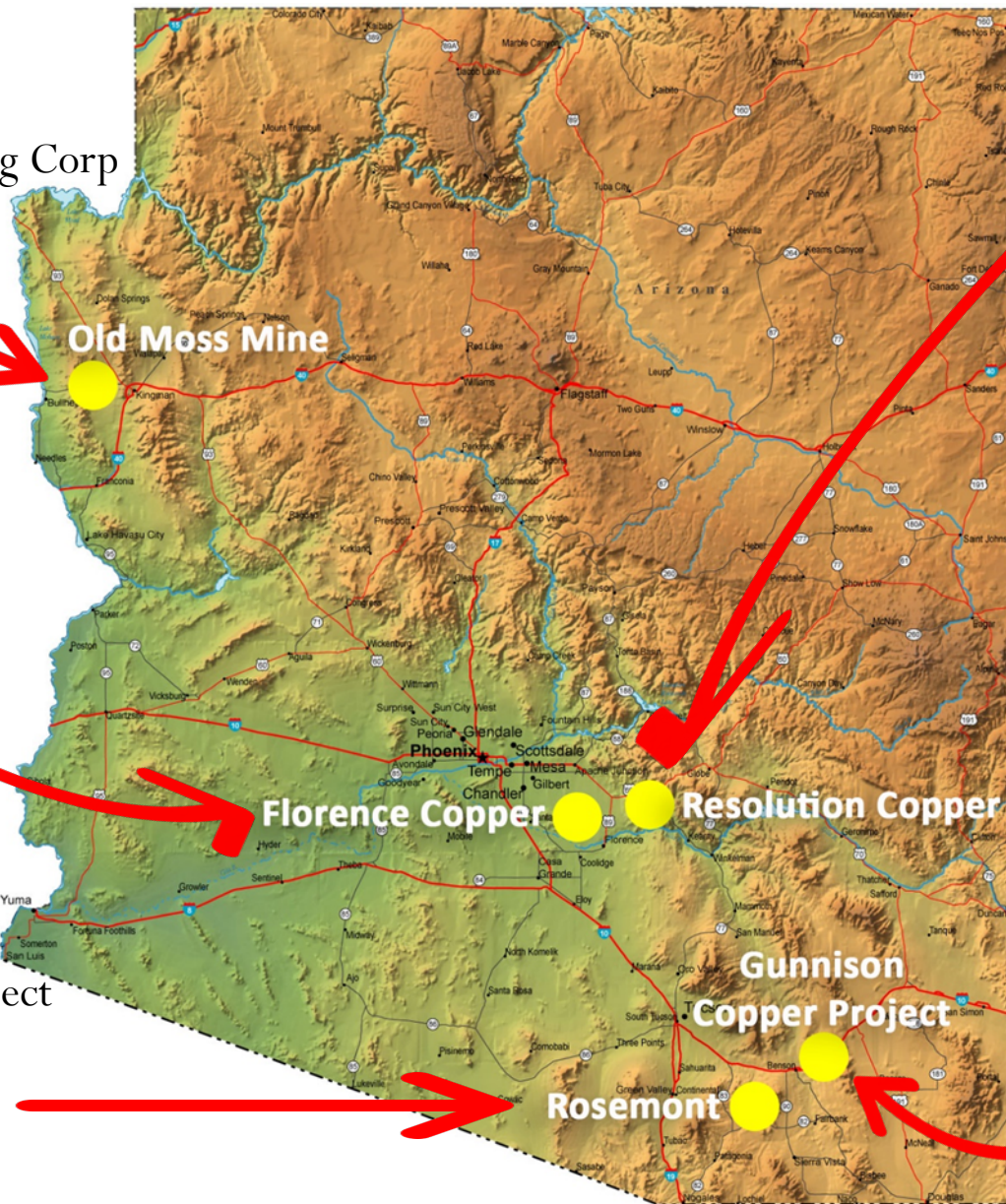
- 12 Major Operational Mines
- 5 Major Developing Mines
- 2 Copper Smelters

Source: Arizona Mining Association, 2015

Moss Mine
Gold & Silver
Northern Vertex Mining Corp
Vancouver, BC

Florence Copper
Copper
Taseko Mines Ltd.
Vancouver, BC

Rosemont Copper Project
Copper
Hudbay Minerals, Inc.
Toronto, ON



Resolution Copper
Copper
Rio Tinto/BHP
London, UK
Melbourne, AU

Gunnison Copper
Project
Excelsior Mining Corp
Copper
Vancouver, BC

Source: Arizona Mining Inc., 2017

Hermosa & Taylor Projects
Zn/Pb/Ag
Arizona Mining
Vancouver, BC



Goals and Purpose

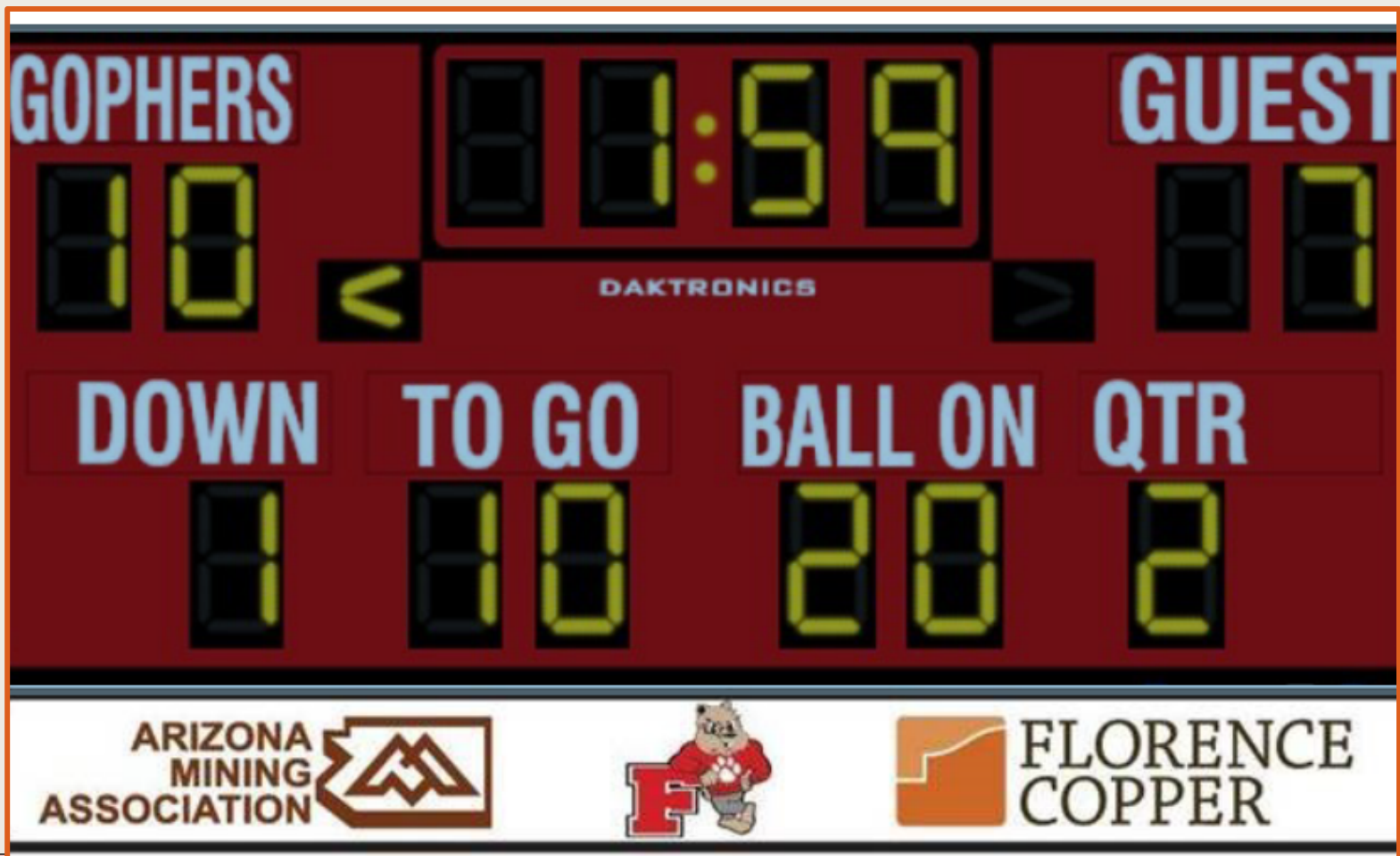
- Legislative
- Education
- Community Relations





2018 Mining Day at the Capitol

Clint Sundt, Sundt Construction, teaching 5th grade students about the different metals and minerals in automobiles.



Florence High School Football Scoreboard

AMA Suppliers Committee worked together to collect funds to purchase a electronic scoreboard to replace its 30 year old predecessor.

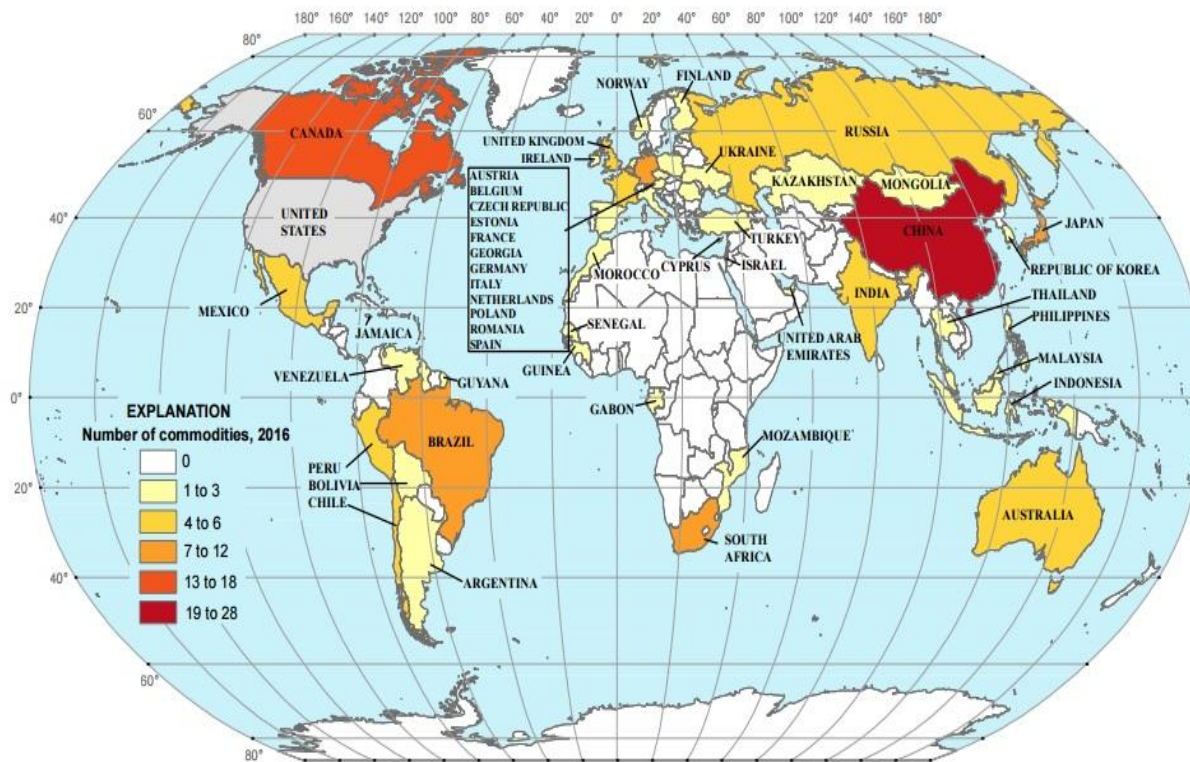
An aerial photograph of a large-scale open-pit mine. The mine features prominent terraced levels and a central pond with dark blue water. The surrounding landscape is arid and hilly, with some distant structures and roads visible.

FENNEMORE CRAIG

ATTORNEYS

U.S. Net Import Reliance

**MAJOR IMPORT SOURCES OF NONFUEL MINERAL COMMODITIES
FOR WHICH THE UNITED STATES WAS GREATER THAN 50% NET IMPORT RELIANT IN 2016**



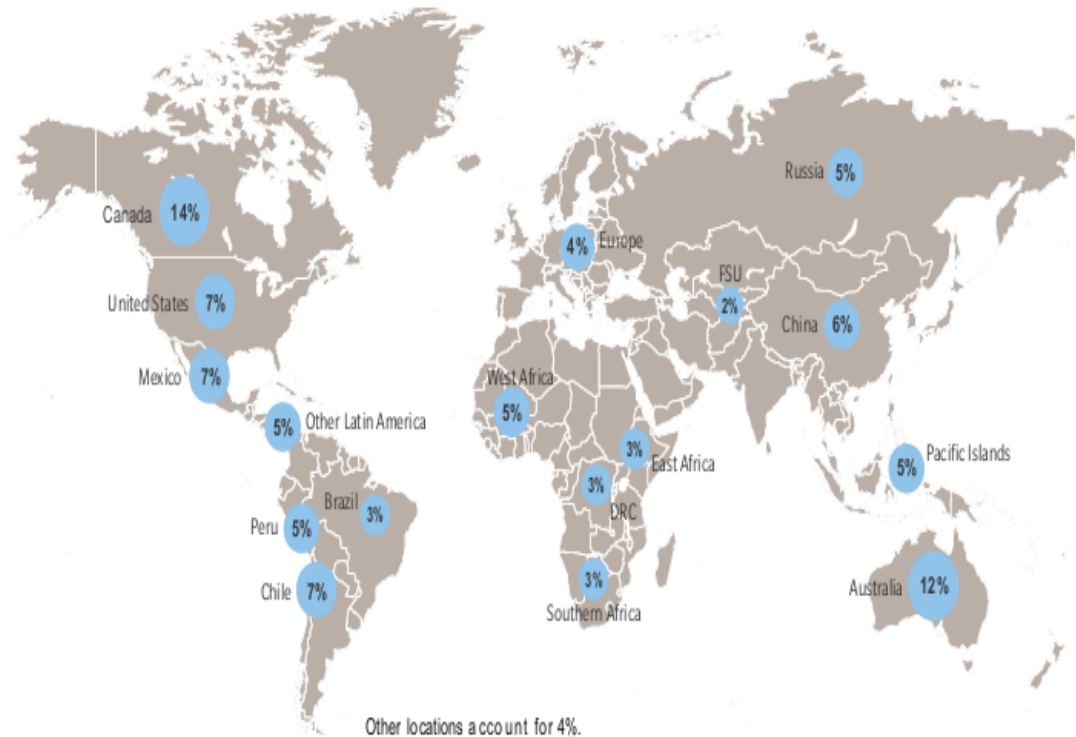
Source: U.S. Geological Survey

Source: USGS, *Risk and Reliance: The U.S. Economy and Mineral Resources* (April 2017).

Mining Industry Overview

Map 1: Top Destinations for Nonferrous Exploration, 2014

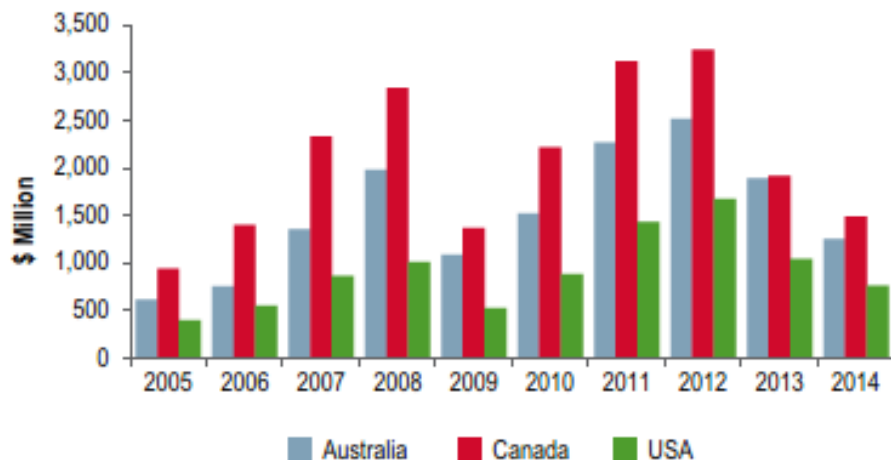
- In U.S., demand for defense, advanced energy and high-tech electronics is high BUT production of the minerals needed to supply these industries is low.
- U.S. mining industry is currently reliant on mature mining projects.
- U.S. accounts for only 7% of worldwide spending on mineral exploration and production.



Sources: The National Mining Association, *Permitting, Economic Value, and Mining in the United States* (June 2015); SNL Metals and Mining, *World Exploration Trends 2015*.

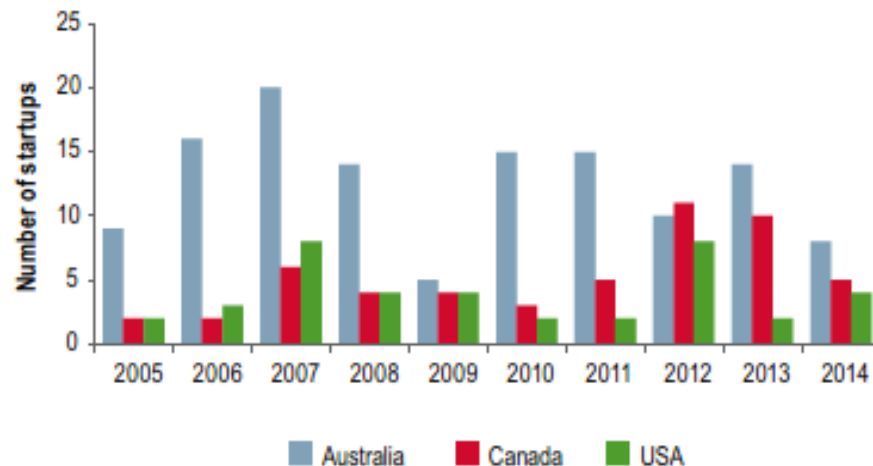
Mining Investment Exploration and Production

FIGURE 9 MINERAL EXPLORATION BUDGETS



Source: SNL Metals & Mining

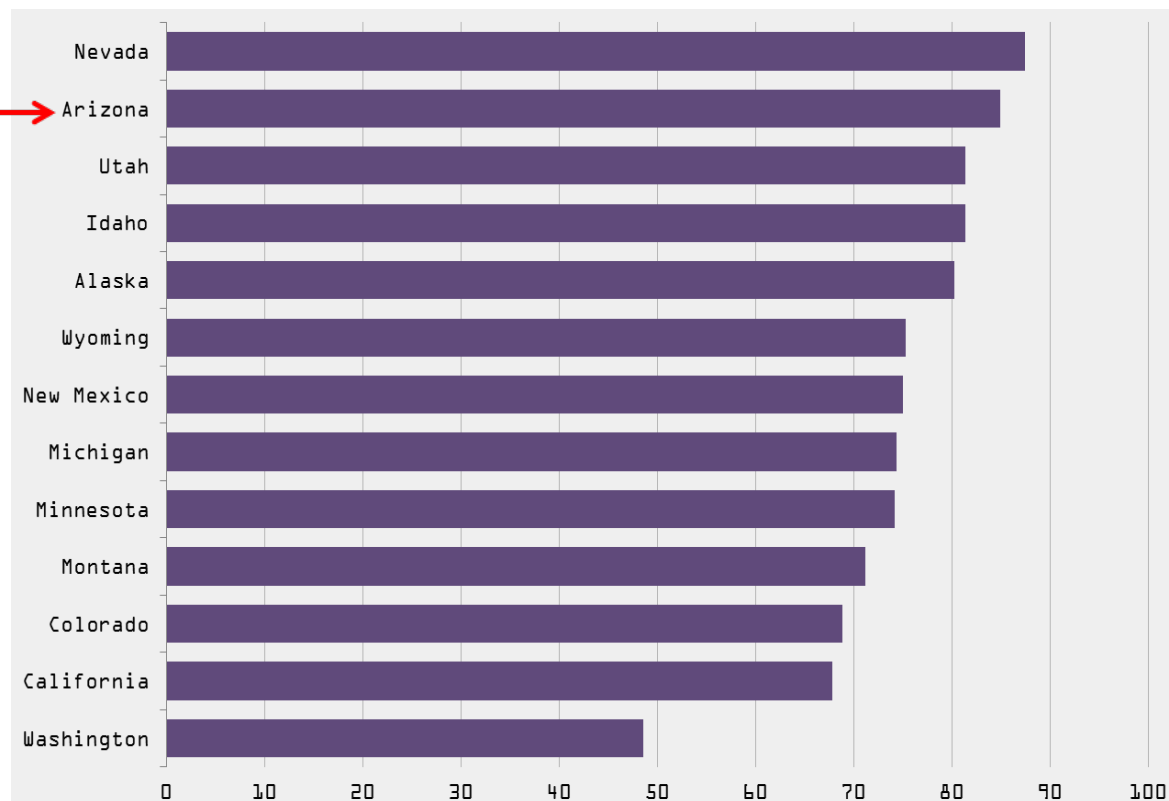
FIGURE 10 MINES STARTING PRODUCTION (2005-2014)



Source: SNL Metals & Mining

Sources: The National Mining Association, *Permitting, Economic Value, and Mining in the United States* (June 2015); Nick Karl & David Wilburn, U.S. Geological Survey, *Global Nonfuel Mineral Exploration Trends 2001-2015* (April 2017).

Investment Attractiveness Index-United States

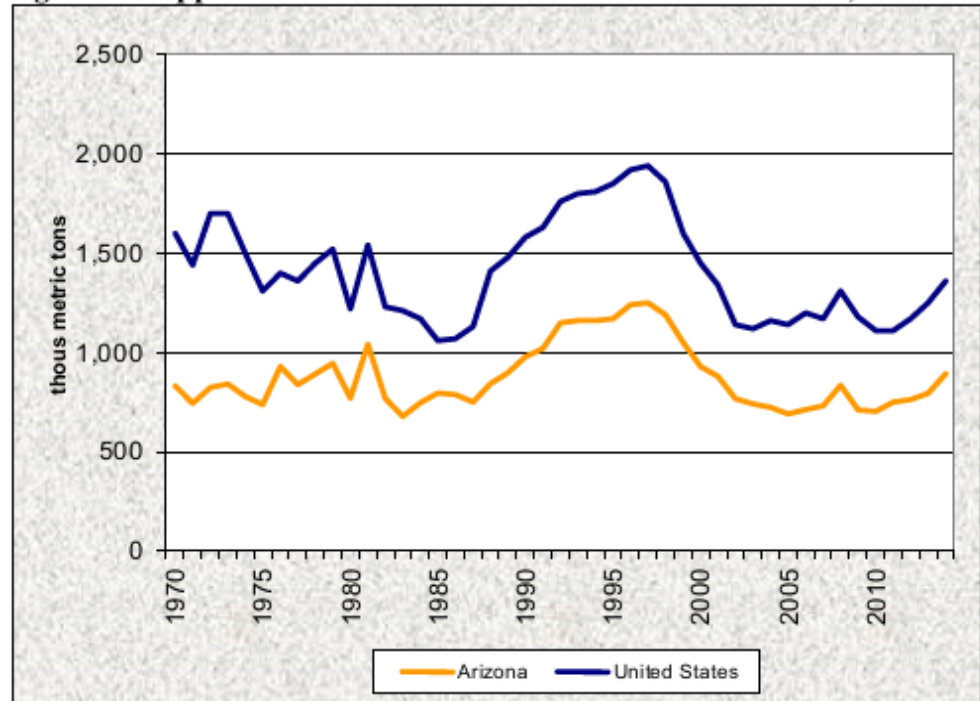


Source: The Fraser Institute,
Annual Survey of Mining Companies
2016 (February 2017)

Copper

- U.S. is #4 in copper production.
- U.S. is #5 in 2016 copper reserves.
- 66% of U.S. copper is mined in Arizona.
- Copper represents 89% of Arizona's mining output.
- In 2014, Arizona produced 2 billion pounds of copper.

Figure 2: Copper Production in Arizona and the United States, 1970-2014

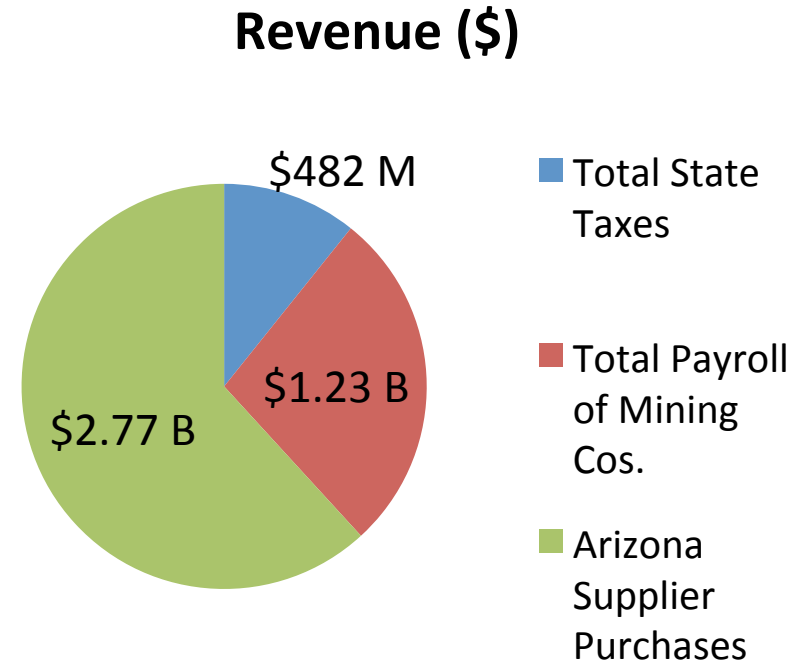
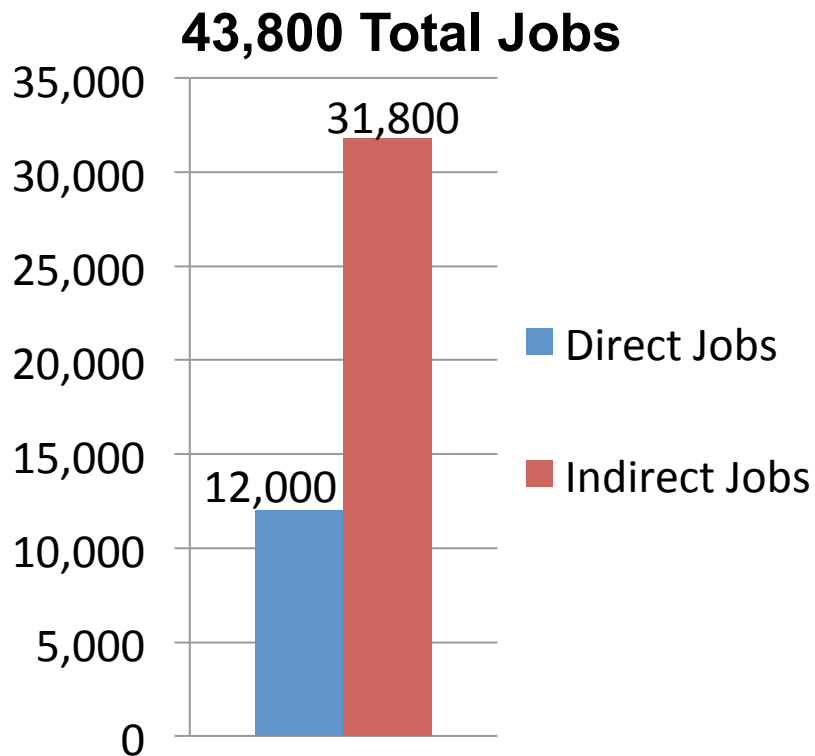


Source: U.S. Geological Survey

Sources: L. William Seidman Research Institute, W.P. Carey School of Business at Arizona State University, *The Economic Impact of the Mining Industry on the State of Arizona 2014* (Sept. 2015).

Economic Impact in Arizona

A \$4.29 Billion Industry



Sources: L. William Seidman Research Institute, W.P. Carey School of Business at Arizona State University, *The Economic Impact of the Mining Industry on the State of Arizona 2014* (Sept. 2015).

Arizona Mines-Employment Statistics

Operational

Mine	Company	Employees
Morenci	Freeport-McMoran, Inc.	3,350
Pinto Valley	Pinto Valley Mining Corp.	588
Mission	ASARCO, LLC.	572
Carlota	Carlota Copper Co.	43

Under Development

Mine	Company	Employees
Resolution Copper Project	Rio Tinto Group	3,700
Rosemont Copper Project	Hudbay	450
Florence Copper	Florence Copper Inc.	170
Johnson Camp/Gunnison	Excelsior Mining Corp.	108

U.S. Permitting Barriers

- Extent of federal land in western U.S.
- Multiple agencies = multiple permits
- In the U.S. – average of 10 years to secure permits and commence operations
- In Canada and Australia (with similar stringent permitting processes) – average of 2 years

There are a range of permits and authorizations required within the U.S., granted by federal, state and local authorities. These include the following federal requirements:

- U.S. EPA Clean Air Act Permit
- U.S. EPA Clean Water Act Section 502 (discharge) Permit
- U.S. EPA Safe Drinking Water Act (UIC) Permit
- USACOE Clean Water Act Section 404 (Dredge and Fill) Permit
- USACOE Rivers and Harbors Act Section 10 Permit
- U.S. DOI or FS Plans of Operations
- Appropriate Federal Agency Completion of the National Environmental Protection Act process
- Appropriate Federal Agency Completion of National Historic Preservation Act Section 106 Consultation
- USFWS Endangered Species Act Consultation

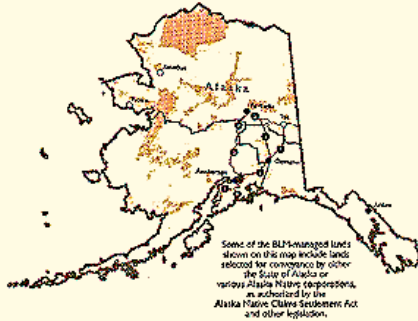
U.S. Regulatory Burden



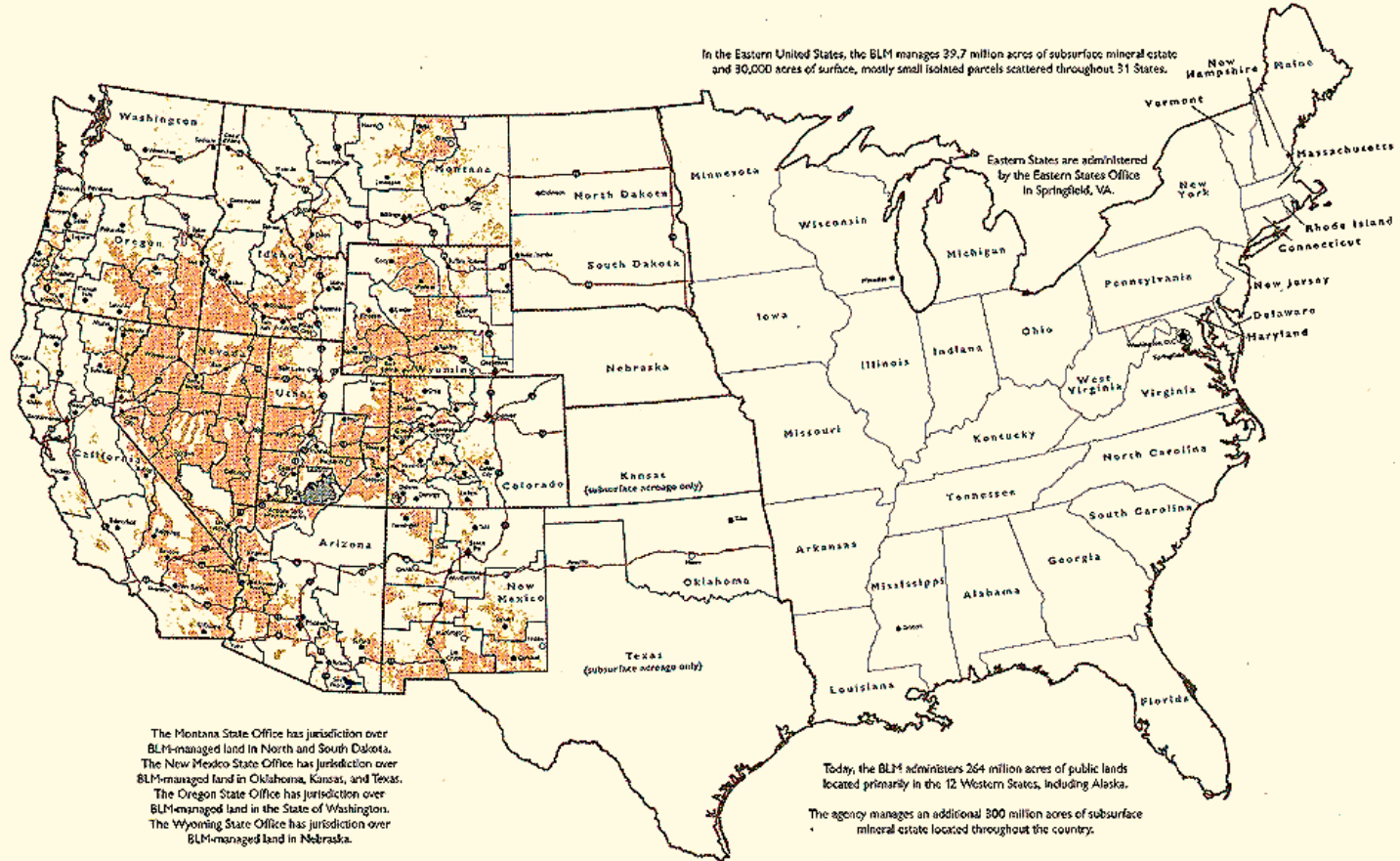
Time is Money

- Permitting delays
 - impair and discourage mining project investment
 - reduction in value
 - missed commodity cycles can lead to a project becoming financially unviable

Public Lands Managed by the Bureau of Land Management (BLM)



- LEGEND**
- BLM-Managed Lands
 - BLM Headquarters
 - BLM State Office Locations
 - BLM Field Office Locations
 - BLM Field Station Locations
 - BLM National Training Center
 - BLM National Centers
 - Yaguina Head Outstanding Natural Area Interpretive Center
 - National Interagency Fire Center
 - National Historic Oregon Trail Interpretive Center
 - Anasazi Heritage Center
 - San Pedro Riparian National Conservation Area Project Office
 - BLM State Office Jurisdictions
 - BLM Field Office Boundaries
 - State Boundaries
 - Major Highways
 - Grand Staircase-Escalante National Monument

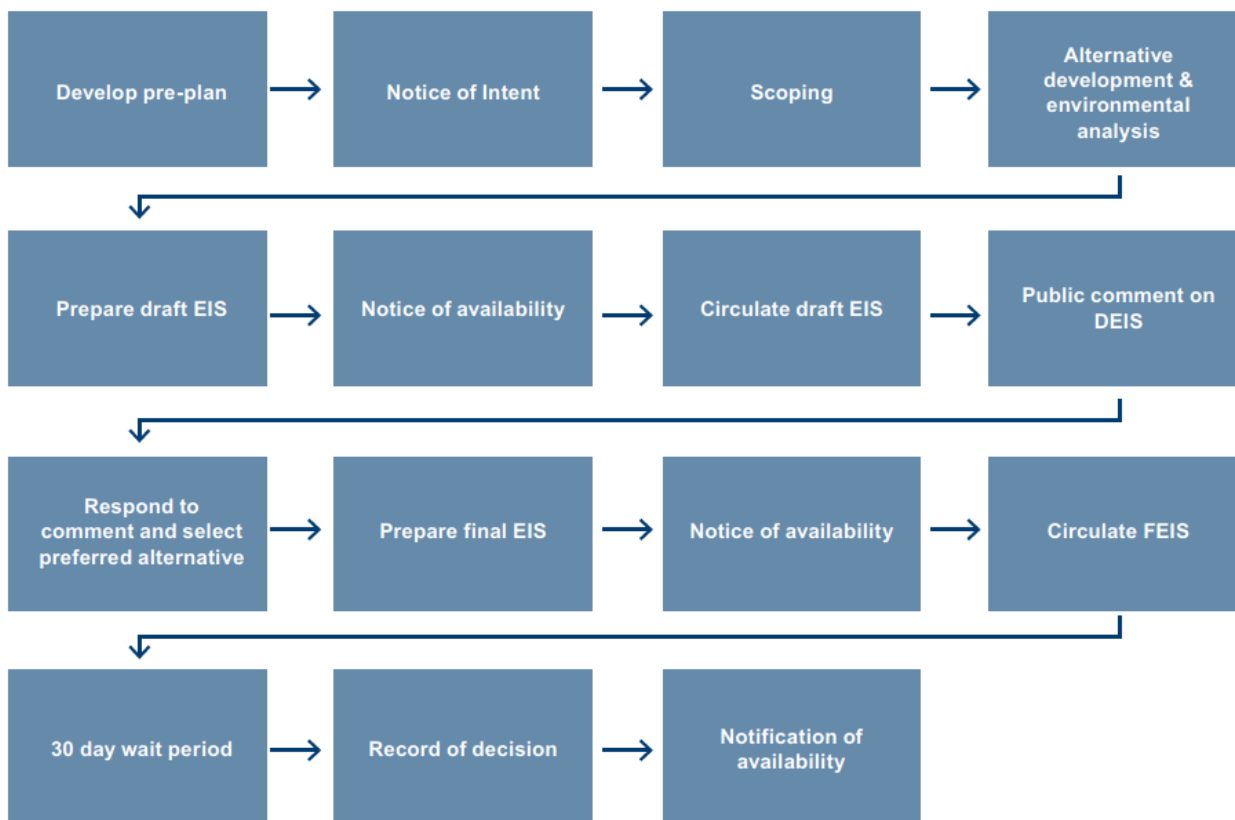


National Environmental Policy Act “NEPA”

- Requires federal agencies to assess the impact of their actions on the human environment (i.e., federal actions include issuing permits, loan guarantees or funding)
- Implemented by Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508) and guidance

NEPA

FIGURE 11 EIS PROCESS IN THE U.S.



Source: BLM Manual, 2008

Source: The National Mining Association, *Permitting, Economic Value, and Mining in the United States* (June 2015).

Case Study- Rosemont Copper Mine

- Owned by Hudbay Minerals, Inc.
 - Open-pit Cu/Mo/Ag deposit located in Southeastern, AZ.
- Projected to be one of the largest copper mines in U.S.
- Could account for 10% of current U.S. copper production.
- Original planned start-up in 2010.
- Current status: Awaiting final Corps' ROD



Sources: The National Mining Association, *Permitting, Economic Value, and Mining in the United States* (June 2015); <http://blogs.nelson.wisc.edu/es112-311-2/mining/> (image).

NEPA Reform

- Sector Specific Legislation
 - FAST Act
 - Covered infrastructure projects (\$200M + EIS +2 or more agencies)
 - Improved processes/enhanced state and local participation
- Statutory/Regulatory Reform
 - Mandatory timeframes for analysis completion
 - Shorten statute of limitations to sue on decisions
 - Expanded use of exemptions/categorical exclusions