

# MINERALS: AMERICA'S STRENGTH

Minerals provide the foundation for the American way of life. They inspire the innovation of new technologies, feed U.S. manufacturing and are vital to our national security. Minerals are put to use in lifesaving medical devices, our nation's infrastructure, defense technologies, and the computers and communication systems that connect us to the world. They propel our economy and enable America to compete globally.

## Mineral Facts

- Minerals** – The technologies that define innovation today all depend on a growing number of minerals. For example, computer chips were once made with a palette of 12 minerals. Today, as many as 60 different minerals or their constituent elements are used in fabricating the high-speed, high capacity integrated circuits that are crucial to this technology.
- Jobs** – 1.2 million American jobs are supported by minerals mining. 419,000 people are directly employed, and 734,000 are indirectly employed.
- Wages** – A job in U.S. metals mineral mining is one of the highest paying in the private sector with an average salary of over \$88,000 a year (68 percent higher than the combined average for all industrial jobs) and often climbing above \$100,000 for experienced workers.
- Value** – \$630 billion worth of processed mineral materials were used by sectors including construction, manufacturing and agriculture to add nearly \$2.5 trillion to the U.S. economy.

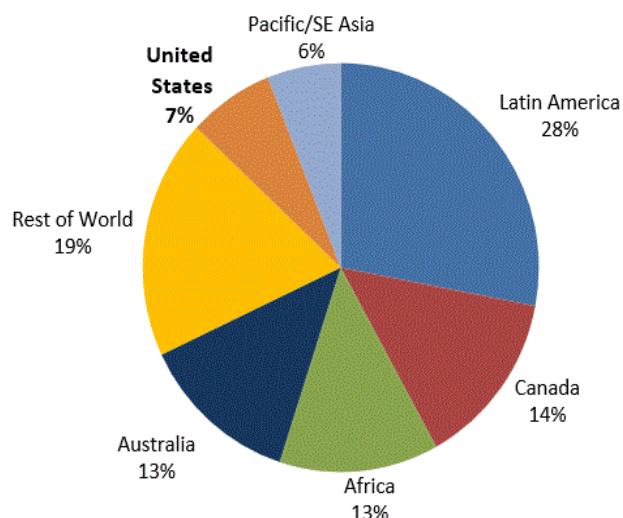
Despite the benefits provided by domestic minerals mining, the United States is not performing to its minerals potential. Though U.S. mines play an important role in meeting domestic demand, American manufacturers currently rely on foreign suppliers for more than half the minerals they use. Our ability to put our minerals to work is hindered by a costly and inefficient regulatory structure that thwarts investment and expansion.

## Consider:

- The percentage of worldwide exploration spending commanded by the U.S. for metals mining has dropped from 20 percent of total investments in 1993 to only 7 percent today.
- The U.S. is 100 percent dependent on imports for 20 different minerals and more than 50 percent import dependent for an additional 30 mineral commodities.

These trends are unsustainable in a highly competitive world economy in which the demand for minerals continues to grow and supply stability is a growing concern. The United States needs the public policies that will unlock the full potential of our immense mineral endowment. Most importantly, we need to address the length, complexity and uncertainty of the permitting process that is driving investment from U.S. shores. A duplicative permitting process that takes five to ten years to navigate puts the U.S. last among top mining countries when ranked on mining permitting delays.

## Declining U.S. Share of Worldwide Exploration Spending, 2016



Source: SME Mining Engineering Magazine, May 2017

## Metal Used in a Fighter Jet Engine

Metal	Amount (tons)	Import Dependence
Nickel	2.7	25%
Titanium (sponge)	2.7	41%
Chromium	0.9	58%
Cobalt	0.6	74%
Aluminum	0.5	52%
Niobium	0.1	100%
Tantalum	1.2 kg	100%



Sources: USGS Mineral Commodity Summaries 2017; British Geological Survey.

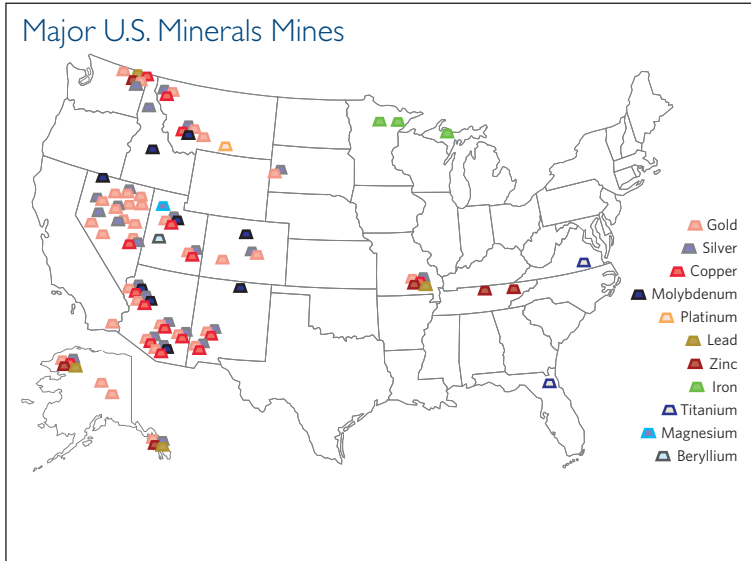
## Permitting Solutions Under Consideration in Congress:

H.R. 520 and a companion Senate Bill, S. 145, the National Strategic and Critical Minerals Production Act, were introduced in the early days of the 115th Congress. Previous versions of H.R. 520 passed the House five times in the last three congresses. The

legislation would establish a 21st Century permitting system for U.S. mining. These bills carefully and credibly address the pitfalls of our current outdated and underperforming system by:

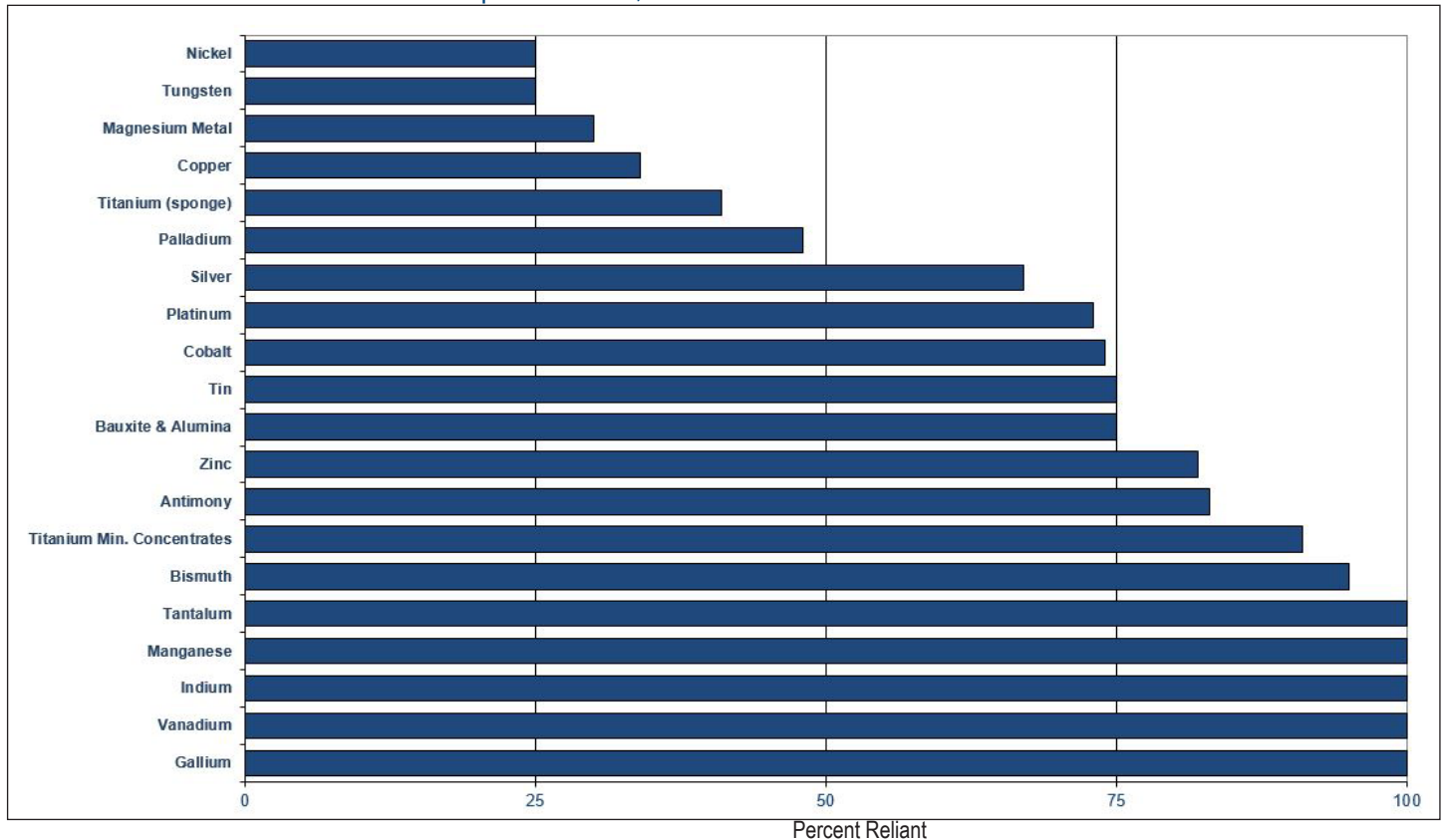
- providing efficient, timely and thorough permit reviews;
- incorporating best practices for coordination among state and federal agencies;
- clarifying responsibilities and avoiding duplication; and
- setting binding timeframes.

The legislation provides a more efficient permitting system without changing environmental and other protections provided by current laws and regulations, such as the Clean Air Act, Clean Water Act, National Environmental Policy Act, Safe Drinking Water Act, Solid Waste Disposal Act and numerous others. The Administration's infrastructure package may provide real opportunity to move these legislative efforts forward to bring our permitting process in line with our competitors for minerals exploration investments—countries such as Australia and Canada, that have already modernized their permitting regime.



Source: U.S. Geological Survey (USGS)

## Selected Critical Minerals U.S. Net Import Reliance, 2016



Source: USGS Mineral Commodity Summaries 2017