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 support 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/minerals mining is one of the highest paying in the private sector with an average salary of more than $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* – In 2015, $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.

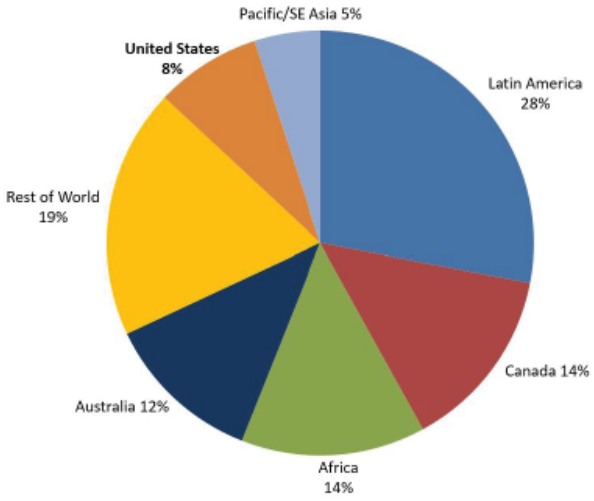
Despite the benefits provided by domestic minerals mining, the United States is not performing to its minerals potential. Though U.S. mines play an important role in meeting domestic demand, American manufacturers currently rely on foreign suppliers for more than half the minerals they use. Our ability 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 8 percent today.
- The U.S. is 100 percent dependent on imports for 19 different minerals and more than 50 percent import dependent for an additional 24 mineral commodities.

These trends are unsustainable in a highly competitive world economy in which the demand for minerals is increasing and supply stability is a growing concern. The United States needs 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 seven to 10 years to navigate puts the U.S. behind many top mining countries when ranked on mining permitting delays.

Declining U.S. Share of Worldwide Exploration Spending, 2015



Source: SME Mining Engineering Magazine, May 2016

Metal Used in a Fighter Jet Engine

Metal	Amount (tons)	Import Dependence
Titanium (Sponge)	2.7	68%
Nickel	2.7	37%
Chromium	0.9	66%
Cobalt	0.6	75%
Aluminum	0.5	100%
Niobium	0.1	100%
Tantalum	1.2 kg	100%

Sources: USGS Mineral Commodity Summaries 2015; British Geological Survey. Estimate based on 2015 data.

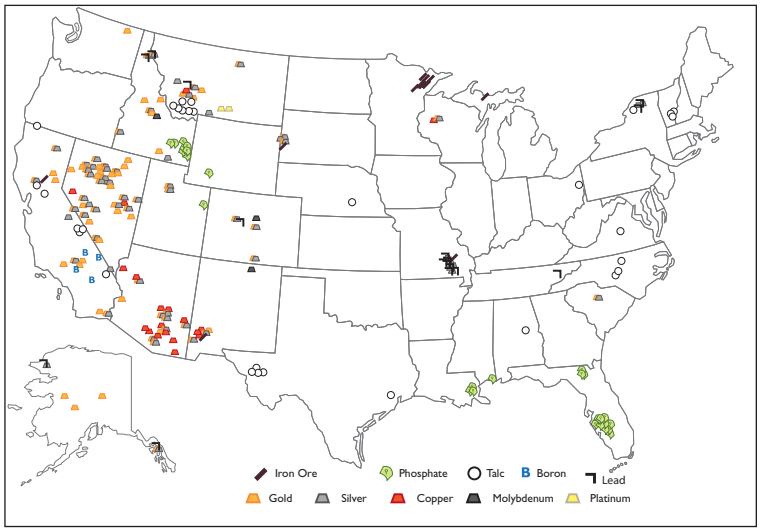
Permitting Solutions Under Consideration in Congress:

H.R. 1937, the National Strategic and Critical Minerals Production Act, was approved in October 2015 by a bi-partisan vote in the House and would establish a 21st Century permitting system for U.S. mining. H.R. 1937 carefully and credibly addresses the pitfalls of our current outdated and underperforming permitting-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.

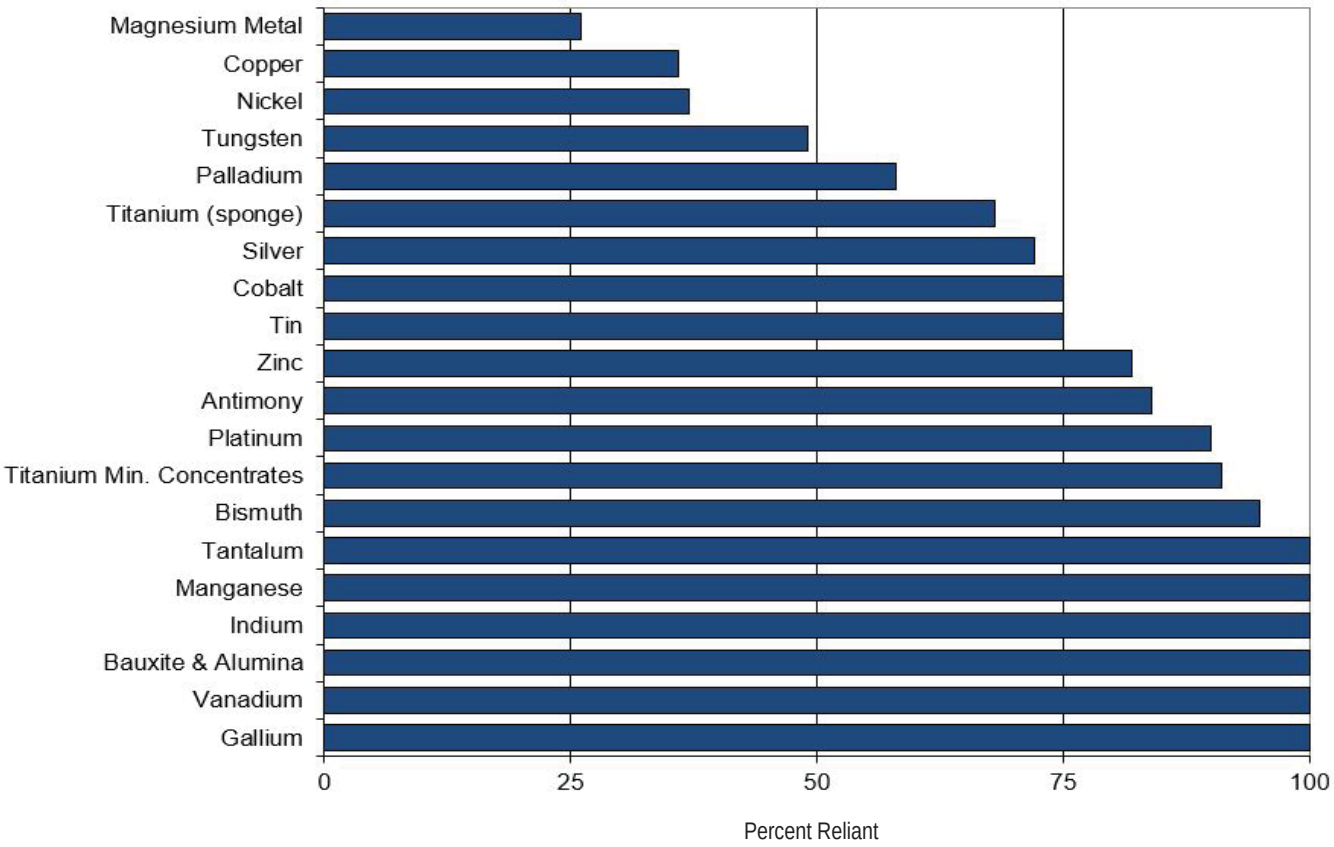
H.R. 1937 provides a more efficient permitting system without changing environmental and other protections provided by current laws and regulations, such as the Clean Air Act, Clean Water Act, National Environmental Policy Act, Safe Drinking Water Act, Solid Waste Disposal Act and numerous others. The Senate approach to this important issue is contained in S. 883, the American Mineral Security Act, which was ultimately included as a minerals subtitle in the Senate energy package (S. 2012) that passed in April 2016. Since H.R. 1937 was subsequently incorporated in the House energy package, there is a 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. The conference bill under consideration can do much to promote minerals' role in our nation's energy infrastructure, efficiency and security in the years to come.

Major U.S. Minerals Mines



Source: U.S. Geological Survey (USGS)

Selected Critical Minerals U.S. Net Import Reliance, 2015



Source: USGS Mineral Commodity Summaries 2016