Testimony of
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before the
House Committee on Natural Resources
Subcommittee on Energy and Mineral Resources

Hearing on
The Importance of Domestically Sourced Raw Materials for Infrastructure Projects

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Good morning Chairman Gosar and members of the subcommittee.

My name is Nigel Steward and I am managing director of Rio Tinto's Copper and Diamonds operations which includes our largest U.S. projects, Kennecott Copper in Salt Lake City, Utah and Resolution Copper in Superior, Arizona.

I appreciate the opportunity to speak today on the importance of the United States ability to harness its own natural resources to provide a reliable source of essential minerals and metals to US manufacturers and infrastructure projects.

When it comes to infrastructure, experts have warned that the United States' infrastructure is in a dangerous state of disrepair. Just this month, the American Society of Civil Engineers (ASCE) issued its "report card" on the condition and performance of American infrastructure.[1] The grade for U.S infrastructure: a disappointing and disturbing D+.

Fortunately, both the Administration and Congress have acknowledged the severity of the problem and indicated that infrastructure investment will be at the core of this year's economic agenda. However, the infrastructure crisis cannot be solved without the raw materials required for the priority projects. A new report by the U.S. Geological Survey (USGS) should set off alarm bells about the ability to meet demand for both rebuilding infrastructure and upgrading US manufacturing capability.

Growing Mineral Import Reliance is a Troubling Trend

The most recent USGS *Mineral Commodity Summaries* published earlier this year indicates that the United States is now import-dependent for 50 different metals and minerals – and 100 percent import-dependent for 20.[2] That's half of the naturally-occurring elements on the Periodic Table. The trend line is troubling: U.S. mineral dependency is at a record-high, now double what it was 20 years ago. Another troubling trend line: the decrease in U.S. exploration activities that are a prerequisite to expanded or new operations necessary to increase domestic mineral supplies.

In the mining sector, exploration for new resources if often lead by small or medium sized "junior" mining companies. A downturn in US exploration

[1] ASCE, 2017 *Report Card for America's Infrastructure* available at http://www.infrastructurereportcard.org/making-the-grade
[2] USGS, *Mineral Commodity Summaries 2017*, available at https://minerals.usgs.gov/minerals/pubs/mcs/2017/mcs2017.pdf

activities reflects a diminishment of these small and medium sized companies' appetite and ability to prospect for new mineral resources in the United States. Last year marked the fourth consecutive year of globally declining exploration expenditure, with the U.S. showing the sharpest pullback in exploration last year, with its budgets falling more than 30%.[3]

Dependence on imported essential materials for infrastructure projects and key domestic industries leaves the United States unnecessarily vulnerable to disruptions to vital supply chains. One of my previous positions at Rio Tinto was Senior Vice President of the Technology and Supply Chain Business Unit so I have significant first-hand knowledge of the importance of secure supply chains. Minerals and the capability to convert them into metals are fundamental to infrastructure projects that are dependent on a reliable supply of essential materials and parts. If key minerals or metals are suddenly unavailable – due to political instability in a source country, shipping disruptions or restrictions on mining access – the whole supply chain could grind to a halt.

Access to raw materials is strategic concern as there will be sustained growth in global demand. As resource competition grows fiercer, stable and reliable mineral supply chains will become more critical to sustain economic growth and balance of trade in the developed and emerging economies. A new article in the scientific journal *Nature*, authored by a group of raw materials experts, points out there will be a massive requirement for new materials as the population grows to 8.5 billion by 2030.[4]

Of course, no country – not even the United States with its estimated $6.2 trillion mineral resources base – is blessed with top-tier deposits of every essential mineral. Enhancing the United States' ability to access its own resources does not mean we should raise barriers to imported materials. Nowhere are the mutual benefits of trade more apparent than the integrated supply chains in North America, where inputs from Canada make U.S. manufacturers more competitive and vice versa.

[3] S&P Global Market Intelligence, *Worldwide Mining Exploration Trends*, March 2017
[4] Ali, Saleem H et al, *Mineral supply for sustainable development requires resource governance*, Nature, Vol 543, pp. 367-372, Mar. 16, 2017

Permitting Delays Are the Most Significant Impediment to Providing Additional Domestic Supplies of Minerals for Infrastructure Projects

An outdated, inefficient permitting system presents a major barrier to the domestic mining sector's ability to perform to its full potential and supply more of our infrastructure needs. The U.S. has one of the longest permitting processes in the world for mining projects. In the U.S., necessary government authorizations now take approximately seven to 10 years to secure, placing the U.S. at a competitive disadvantage in attracting investment for mineral development. By comparison, permitting in Australia and Canada (which have similar environmental standards and practices as the U.S.) takes between two and three years.

Authorities ranging from the National Academy of Sciences to the Departments of Energy and Defense to international mining consulting firms have identified permitting delays as among the most significant risks and impediments to mining projects in the United States.[5] Most recently, the U.S Government Accountability Office linked the need to streamline the mine permitting process to mitigate supply risks.[6]

These delays have real consequences. The National Mining Association (NMA) commissioned a study from SNL Metals & Minerals to demonstrate empirically the destruction of value which results from unnecessary, extended delays to project development.[7] That study found that on average, a typical mining project loses over one-third of its economic value as a result of protracted delays in receiving the numerous permits needed to begin production. The longer the wait, the more the value of the investment is eroded, even to the extent that the project ultimately becomes an unviable investment. Even a large high-grade deposit will remain unmined if the balance between costs, revenue and timetable are not favorable.

The SNL study examined several real-world examples of mines where delays have eroded value including the Rosemont Copper and Kensington mine projects. It found that the Rosemont Copper project in Arizona continued in its attempts to secure permits, five years after the originally

[5] *See* National Resources Council*, Hardrock Mining on Federal Lands,* National Academy Press (1999); U.S. Department of Energy, *Critical Materials Strategy* (Dec. 2010); U.S. Geological Survey USGS, *the Principal Rare Earth Elements Deposits of the United States—A Summary of Domestic Deposits and a Global Perspective*, 2010; Behre Dolbear, *Where Not to Invest* (2015).
[6] GAO Report 16-699*, Advanced Technologies: Strengthened Federal Approach Needed to Help Identify and Mitigate Supply Risks for Critical Raw Materials,* Dec. 2016
[7] SNL Metals & Mining, *Permitting, Economic Value and Mining in the United States,* June 2015.

planned start date of 2010. And that over that period the value of the project has fallen from $18 billion to $15 billion despite much higher copper prices. The Kensington gold mine in Alaska was plagued by permitting issues during development. It commenced production in 2010, nearly 20 years after the originally planned start date of 1993. By the time the mine opened, the capital cost of building the mine had increased by 49 percent, and the company had reduced planned gold production by nearly one-third, to focus mining operations on the most profitable part of the deposit.

Rio Tinto's Resolution Copper Mine located in Superior, Arizona is one of the largest mining projects currently in the US permitting process. This world class copper deposit represents one of the largest undeveloped copper resources in the world is anticipated to have a 50-year mine life that will support thousands jobs annually and generate billions in economic activity in Arizona. The U.S. Forest Service is the lead regulator for the project and has been a constructive and responsive partner in the NEPA review process. The NEPA review process was started in November of 2013. While Rio Tinto has spent over $1.3 billion on the Resolution Project for permitting, studies and project shaping, the project is years away from a final permit. In other countries, this project would likely be coming to the end of the permitting process.

Solutions are Necessary

The efficiency and predictability of the permitting process matters in decisions about where companies chose to invest. Adverse public policies such as the U.S. Environmental Protection Agency's proposal to duplicate state and federal financial assurance programs can also be significant deterrents to investment and the development of a sustainable resource sector.

To address supply chain vulnerability and import dependence, President Trump and Congress should continue to examine ways to improve the permitting of new U.S. mines and smelters, eliminate duplicative regulations and support policies that encourage resource and materials innovation.

There is strong public support for policies that enable the use of domestic resources for infrastructure. In fact, a new poll conducted this week reveals that 71 percent of voters support using domestically-sourced materials for infrastructure and that 65 percent support enacting policies such as shorter permitting timeframes for mining projects to ensure timely

access to important minerals and metals that build steady and stable supply chains.[8]

Mr. Chairman, let me conclude by indicating that the mining industry is strongly supportive of efforts in the House to address the mine permitting process. Specifically, H.R. 520, the National Strategic and Critical Minerals Production Act, which many of the subcommittee members have sponsored, offers proactive solutions to fix the U.S. permitting process. This legislation has passed House five times in the last three Congresses and enjoys bi-partisan support. The legislation carefully addresses the deficiencies of the outdated U.S. permitting system without changing environmental and other protections afforded by current laws and regulations. The bill provides for efficient, timely and thorough permit reviews and incorporates best practices for coordination between state and federal agencies.

In order for the U.S. to vastly improve its infrastructure and revitalize its manufacturing sector, it must have a strong, sustainable and productive mineral resource development sector. This Committee should be commended for holding this hearing to highlight the resource challenges facing the United States, and for considering the kind of rational permitting reform outlined in H.R. 520.

Thank you for the opportunity to testify today.

[8] Polling Shows Strong Support for Policies that Encourage the Use of American Minerals in U.S. Infrastructure, Manufacturing http://nma.org/2017/03/20/polling-shows-strong-support-for-policies-that-encourage-the-use-of-american-minerals-in-u-s-infrastructure-manufacturing/