



China Is Seizing Our Supply of Cesium

A Monday Morning Musing from Mickey the Mercenary Geologist

[Contact@MercenaryGeologist.com](mailto:contact@mercenarygeologist.com)

April 22, 2019

Last week, I wrote about America's dependence on China for 20 of the 35 critical mineral commodities on the Department of Interior's list published in May 2018 ([Mercenary Musing, April 15, 2019](#)).

I now document a recent development that means yet another critical mineral will be turned over to the Chinese unless steps are taken by the US government to block a proposed sale.

The metal is cesium (Cs) and not surprisingly, the United States is 100% import dependent for the raw material. Fortunately, the world's only significant cesium mine is located in Canada, our closest friend and ally. Furthermore, the mine and its proprietary manufacturing technology are owned by an American corporation.

Cesium is an obscure, low-use commodity with limited market data. According to the USGS, world production has not been available since 1977 and there has been no US import and consumption data since the late 1980s. World resources are incomplete and largely undocumented.

For what it's worth, the USGS includes this statement in its annual mineral commodity summary for cesium: "*Only a few thousand kilograms (tonnes) of cesium are consumed in the United States every year.*"

In my ongoing commodities podcast, now in its ninth year at Kitco.com, cesium did not even warrant its own show when we covered the periodic table of the elements. We lumped it along with rubidium in a podcast on the minor alkali metals ([Mercenary Musings Radio, July 11, 2012](#)).

There is no trading of cesium and therefore, no world market price is available. That said, it is extremely expensive at high purity levels. The 2018 price for 99.98% pure cesium metal was \$79 per gram, or nearly twice the price of a gram of gold. 98% pure cesium formate, which comprises the majority of its use, was priced at \$39 for 25 grams.

Cesium production comes from pollucite, a rare zeolite mineral that occurs in lithium-rich granite pegmatites. Historically, about 85% of the world's supply has come from Cabot Corporation's Tanco mine in Bernic Lake, Manitoba, where it is produced as a co-product of tantalum operations. Zimbabwe and Namibia also produce small amounts of cesium from lithium mining.

The room and pillar Tanco mine had major collapses during development operations in 2010 and 2013. Mining was shut down in 2015 when the development project was completed and Cabot has since met demand from stockpiled ore.

The USGS position is that Tanco is no longer commercially viable so it does not include the deposit in its list of world cesium reserves.

Although a very minor metal, cesium has an important use in oil and gas exploration. Cesium formate brines are high density, low viscosity additives to drilling fluids and critical for prevention of catastrophic blowouts in deep, over-pressurized, high temperature wells. Because these brines are quite expensive, they are usually rented to drillers, recovered at about 85% when operations cease, and returned to the company for reformulation and recycling.

The opaque supply-demand fundamentals of cesium are only part of a developing story. Let's start with a review of the company that currently controls the world's cesium supply:

Cabot Corporation is headquartered in Boston, Massachusetts and is a NYSE-listed specialty chemicals company. It is a multi-national organization with 44 manufacturing plants in 21 countries. Many of the company's operations are in China and it obviously has strong relationships there.

In its 2018 annual report, Cabot reported revenues of \$3.2 billion with \$253 million of free cash flow, returned \$80 million in dividends to shareholders, and repurchased \$142 million of its shares. The company has a current share price of about \$47 and market capitalization of \$2.7 billion.

One of its four divisions is "Specialty Fluids". These operations produce cesium formate brines and fine cesium chemicals used as catalysts, doping agents, and brazing fluxes. The division produced only 1% of company revenues over the past two years and is not considered a core asset.

The company completed "an additional infrastructure and mining project" at Tanco in 2018. It also entered into a 100% off take contract with Pioneer Resources Ltd, an ASX-listed junior miner, for pollucite from the Sinclair Zone deposit in Western Australia.

In the annual report, Cabot stated it has "*sufficient raw material to... supply cesium products for the foreseeable future, based on our anticipated consumption.*"

And now the plot thickens:

On January 30, 2019, Cabot Corporation entered into an agreement to sell its Specialty Fluids Division to Sinomine Resource Group Co Ltd., a Chinese exploration, mining, and chemical company listed on the Shenzhen Exchange. The purchase price is \$130 million upon closing and up to \$5 million in cash royalties for lithium products over a 10-year period.

According to Cabot's news release, this transaction is subject to regulatory approval with closing expected in Q3. As part of my due diligence, I did a brief perusal of Sinomine's website and found it woefully obsolete with company news last posted in July of 2015.

My first reaction upon reading the news release was to note the similarity of this transaction with another sad saga that began in 1995 and culminated in 2004. That deal involved an American-based specialty metals technology and manufacturing monopoly, and it proved to be a disaster for our strategic interests.

Let's review:

In the early 1980s, General Motors developed permanent rare earth magnets for use in vehicle air bags and mechanical sensors. With research support from the Pentagon, it also produced magnets for motors in laser-guided "smart" missiles and bombs. In 1986, it formed a subsidiary called Magnequench and began manufacturing Nd-Fe-B magnets at plants in Indiana.

In 1995, GM sold Magnequench to Sextant Group. It was an American-led front for two Chinese companies closely tied to the government of then Premier Deng Xiaoping who famously said in 1992: *"The Middle East has oil. China has rare earths."*

Also, one of the Chinese buyers had been fined \$1.5 million for patent infringement and business espionage by the US government a few months prior to the sale.

Over the course of the next nine years, the head of Sextant, Archie Cox, marshaled the shutdown, disassembly, and transfer of Magnequench's three rare earth facilities including research, operations, and manufacturing plants to China.

Both the Clinton and Bush Administrations were complicit in this subterfuge: the first declined to block the original sale, the transfer of unique technologies, and the first two moves to China in 1999 and 2000; the latter, despite vehement protests from an Indiana Congressman and a Senator (both Democrats) failed to block the final move of Magnequench facilities to China and corporate headquarters to Singapore in 2004.

At the time, these plants with their patented technologies for sintered magnetic rare earth oxide powders supplied 85% of the rare earth magnets used by US computer, electronics, and aviation industries and the military's precision guided munitions.

China controls world mining of rare earth elements, sintered metal powder technologies, and manufacturing of rare earth magnets. It holds a virtual monopoly on the entire mine-to-market supply chain for this unique and valuable group of 17 metals.

Now it appears that China is on the verge of capturing another mineral and manufacturing monopoly from the United States.

Although cesium is not of strategic importance as are the rare earths, it is required for segments of the oil and gas business, especially in the North Sea and deep Gulf of Mexico.

I presume the proposed sale is under review by the Committee for Foreign Investment in the United States (CFIUS). This is an inter-agency organization that assesses the national security implications of foreign investments in American companies or operations, and it can reject any deal. However, CFIUS does not acknowledge which deals are under review, does not require the involvement of any of the parties, and does not publicly announce its findings.

In 2018, cesium was declared a critical mineral for economic and national security interests by the US government. A Chinese sovereign company is attempting to obtain a world monopoly of this metal from an American-domiciled, multi-national corporation.

China is our sworn enemy and has been since the late 1940s. I opine it poses the greatest threat to our future American way of life.

This is the first real test of President Trump's agenda to reduce our country's overwhelming mineral dependence. Ultimately, Trump has the sole authority to approve or reject this deal.

Does President Trump just talk the talk or will he actually walk the walk in this case? Will he live up to his brand to "Make America Great Again"?

We must wait and see what the White House does in the coming months.

So far, the proposed sale has flown under the radar. With this missive, I am raising an alarm about the pending sale and transfer of a designated "critical mineral". The deal includes the transfer of a Canadian mine and a proprietary manufacturing technology from United States ownership to the Chinese.

As I documented last week, the United States of America is already under the "People's Republic" of China's thumb for 20 of our 35 USGS-designated critical mineral commodities. Will we allow them to make it 21?

As a good ol' boy American libertarian hillbilly redneck and an unabashed patriot, rest assured that I am watching this development closely.

May I kindly suggest that you do, too?

Ciao for now,

Mickey Fulp
Mercenary Geologist



Acknowledgement: I thank my friend and fellow analyst Christopher Ecclestone of [Hallgarten Research](#), London, for his recent inquiry into cesium and for alerting me to this development in the marketplace.

The [Mercenary Geologist Michael S. "Mickey" Fulp](#) is a Certified Professional Geologist with a B.Sc. in Earth Sciences with honor from the University of Tulsa, and M.Sc. in Geology from the University of New Mexico. Mickey has 35 years of experience as an exploration geologist and analyst searching for economic deposits of base and precious metals, industrial minerals, uranium, coal, oil and gas, and water in North and South America, Europe, and Asia.

Mickey worked for junior explorers, major mining companies, private companies, and investors as a consulting economic geologist for over 20 years, specializing in geological mapping, property evaluation, and business development. In addition to Mickey's professional credentials and experience, he is high-altitude proficient, and is bilingual in English and Spanish. From 2003 to 2006, he made four outcrop ore discoveries in Peru, Nevada, Chile, and British Columbia.

Mickey is well-known and highly respected throughout the mining and exploration community due to his ongoing work as an analyst, writer, and speaker.

Contact: Contact@MercenaryGeologist.com

Disclaimer and Notice: I am not a certified financial analyst, broker, or professional qualified to offer investment advice. Nothing in any report, commentary, this website, interview, and other content constitutes or can be construed as investment advice or an offer or solicitation or advice to buy or sell stock or any asset or investment. All of my presentations should be considered an opinion and my opinions may be based upon information obtained from research of public documents and content available on the company's website, regulatory filings, various stock exchange websites, and stock information services, through discussions with company representatives, agents, other professionals and investors, and field visits. My opinions are based upon information believed to be accurate and reliable, but my opinions are not guaranteed or implied to be so. The opinions presented may not be complete or correct; all information is provided without any legal responsibility or obligation to provide future updates. I accept no responsibility and no liability, whatsoever, for any direct, indirect, special, punitive, or consequential damages or loss arising from the use of my opinions or information. The information contained in a report, commentary, this website, interview, and other content is subject to change without notice, may become outdated, and may not be updated. A report, commentary, this website, interview, and other content reflect my personal opinions and views and nothing more. All content of this website is subject to international copyright protection and no part or portion of this website, report, commentary, interview, and other content may be altered, reproduced, copied, emailed, faxed, or distributed in any form without the express written consent of Michael S. (Mickey) Fulp, MercenaryGeologist.com LLC.

[Copyright © 2019 Mercenary Geologist.com, LLC. All Rights Reserved.](#)