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The Proposed Rosemont Copper Mine

A preliminary mine plan of operation (MPO) was submitted to the Forest Service (FS) in 2007 for the proposed Rosemont Copper Mine (RCM), located partially within the Coronado National Forest near Tucson, Arizona (**Figure 1**). In May 2022, the U.S. Court of Appeals for the Ninth Circuit affirmed a district court ruling in 2019 that vacated the FS's 2013 Final Environmental Impact Statement (FEIS), 2017 Record of Decision (ROD), and 2019 approval of the amended MPO. The vacated MPO would have disposed of mine tailings and waste rock on FS lands.

Given the role copper plays in the U.S. economy and congressional interest in application of the federal mining laws, Members of Congress may be interested in the history of and challenges to proposed mining activities at the RCM.

Copper Background

Copper, recognized for its thermal and electrical conductivity, is commonly used in heating and cooling appliances, plumbing, and in electrical applications (e.g., wires and cables, windings for transformers, generators, and motors).

An estimated 26 million metric tons of copper were produced globally in 2021. The United States in 2021 produced approximately 1.2 million metric tons of copper in the form of mined ore, and approximately 1.2 million metric tons from refining operations. Arizona produces about 70% of domestic copper. In 2021, the United States was estimated to be the fifth largest producer of copper ore and the fifth largest producer of refined copper.

The United States consumed approximately 2 million metric tons of copper in 2021, including over 900,000 metric tons of copper imports.

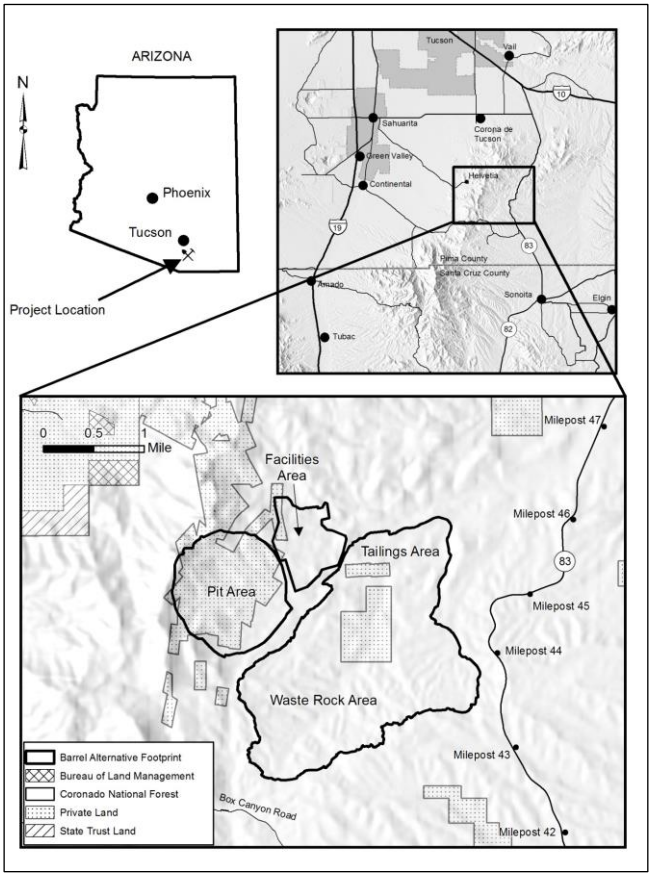
The Rosemont Copper Mine

The RCM was a proposed open-pit copper mine, consisting of approximately 995 acres of private land, 75 acres of state-owned land, and 3,670 acres of mining claims on FS lands. The mine was originally expected to produce 550 million tons of ore and 1,288 million tons of waste rock during its 19-year operation. The initial RCM would have processed ore into copper (from oxide ore via solvent extraction and electrowinning) and copper concentrate (from sulfide ore) at facilities located at the mine. Additional byproducts would have included silver and molybdenum. Later modifications to the RCM increased the expected ore production and eliminated the planned processing of oxide ores.

The RCM was expected to produce approximately 2.7 million metric tons of copper and 88,000 metric tons of molybdenum, and other mineral by-products. The proposed mine would have operated for approximately 25 years.

The MPO proposed disposing of the waste rock and tailings on FS and private lands. The proposed mine would have directly disturbed over 5,600 acres; the waste rock and tailings areas would be reclaimed and revegetated, while the 955-acre pit would not be revegetated. **Figure 1** indicates the location and layout of the proposed mine as considered by the FS (i.e., the Barrel Alternative).

Figure 1. Location of the Proposed RCM



Source: U.S. Forest Service (FS), Final Environmental Impact Statement for the Rosemont Copper Project: A Proposed Mining Operation Coronado National Forest Pima County, Arizona, Volume 1, MB-R3-05-6, 2013, p. viii, at https://cdxapps.epa.gov/cdx-enepa-II/public/action/eis/details?eisId=88299.

Notes: The shown "Barrel Alternative" is the option that was selected for further review by the FS.

Timeline of Recent RCM Events

Copper mining has been occurring in this region of Arizona for over 100 years. The list of dates and actions below

highlight some of the notable events surrounding the proposed RCM.

July 2007: Rosemont Copper Company (a subsidiary of the Canadian Augusta Resource Corporation) submits a preliminary MPO for approval to the FS.

March 2008: FS publishes in the *Federal Register* a notice of intent to prepare an environmental impact statement for the proposed mine.

August 2010: Hudbay Minerals begins acquiring stock ownership of Augusta (initially 11% of issued and outstanding common shares).

October 2011: FS publishes in the *Federal Register* a notice of the availability of the draft environmental impact statement for the mine.

December 2013: FS publishes the final environmental impact statement (FEIS) and a draft ROD for the RCM.

February 2014: Hudbay Minerals acquires ownership of Augusta Resource Corporation, including the Rosemont Copper Company.

July 2015: New Coronado Forest Supervisor appointed.

June 2017: FS issues a final ROD (to satisfy National Environmental Policy Act requirements) approving the "Barrel Alternative" for the RCM, after incorporating two supplemental information reports (SIR), consultations under the Endangered Species Act (ESA), and an amended final reinitiated Biological and Conference Opinion from the U.S. Fish and Wildlife Service (FWS).

March 2019: FS approves amended MPO for the RCM.

July 2019: U.S. District Court for Arizona vacates and remands the FS's June 2017 ROD and December 2013 FEIS, halting development of the RCM.

October 2019: In response to Hudbay's petition, U.S. District Court for Arizona finds no basis to reconsider the July 2019 ruling.

June 2020: Hudbay files an appeal with the U.S. Court of Appeals (Ninth Circuit) to reverse the U.S. District Court of Arizona decision (in July 2019).

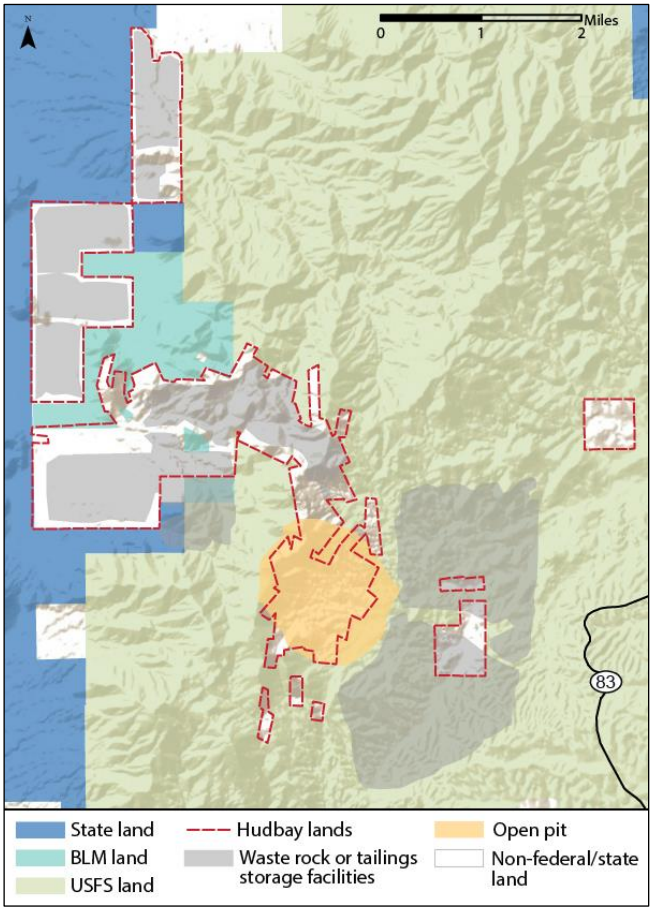
May 2022: U.S. Court of Appeals (Ninth Circuit) affirms U.S. District Court for Arizona July 2019 ruling.

Copper World Complex

In July 2022, Hudbay released a Preliminary Economic Analysis (PEA) for its Copper World Complex, which includes a modified proposal for the RCM. The PEA details a two-phase approach: Phase 1 would primarily mine resources on private land near the proposed RCM, and Phase 2 would develop the RCM in a similar fashion to what was previously proposed; Phase 2 would require FS approval. Phase 1 is estimated to produce approximately 1.5 million tons of copper during the project's first 16 years, and Phase 2 is estimated to produce approximately 3.4 million tons of copper during the following 28 years. Silver and molybdenum would also be produced during both phases; additional copper could be produced from purchased concentrate. **Figure 2** indicates the approximate layout of the Copper World Complex described in the PEA.

Figure 2. Proposed Copper World Complex

As projected at end of Phase II mine operations



Source: Created by CRS using data from ESRI, the Protected Area Database of the U.S. (PADUS), and Hudbay Minerals, Inc. (see Hudbay Minerals, Inc., *Preliminary Economic Analysis, Copper World Complex, Pima County, Arizona, USA*, 2022, p. 16-124).

Notes: "Hudbay lands" are generalized areas of lands owned or controlled by Hudbay; some small areas inside these lands may be state or federal lands. "BLM" is the Bureau of Land Management. "USFS" is the U.S. Forest Service.

Mining on Federal Lands

The General Mining Law of 1872, as amended, (30 U.S.C. §§22 et seq.), establishes a mining claim system, where a qualified person has a statutory right to locate a mining claim on public domain lands for non-leasable or saleable minerals. Locating a mining claim requires payment of certain annual fees; a claim is not valid until a valuable mineral is discovered within the claim. An approved MPO (or a notice for smaller operations) is required before mining operations can begin. Congressional interest in the topic includes legislative proposals (e.g., H.R. 1 in the 118th Congress) that would allow uses of mining claims other than for mining.

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