



## ABOUT TWIN METALS MINNESOTA

TWIN METALS MINNESOTA LLC (TMM) is a Minnesota mining company focused on designing, constructing and operating an underground copper, nickel, platinum, palladium, gold and silver mining project and is committed to doing so in an environmentally responsible way. TMM is a wholly owned subsidiary of Antofagasta plc, one of the top 10 global copper producers. The company currently operates in offices in Ely and St. Paul, Minnesota.

The Twin Metals Project will target the valuable minerals within the Maturi deposit approximately nine miles southeast of Ely, and 11 miles northeast of Babbitt, part of the Duluth Complex geologic formation. TMM plans to propose locating the processing site on about 100 acres of TMM-owned land approximately one mile south of the underground mine site. The processing site would include access to the underground mine and activities related to recovering the target minerals from ore.

TMM is making significant progress advancing the design of the underground mine project, pursuing compact and efficient designs. The company expects to submit a formal mine plan proposal in the next 18 months, initiating a rigorous and thorough environmental review by multiple state and federal agencies as required by law.

## INSIDE THE PROJECT

- Once operational, TMM expects to directly employ 650 people long-term in northeastern Minnesota and to create an estimated 1,300 spinoff jobs in other industries.
- TMM plans to employ geologists, engineers, carpenters, safety inspectors, process equipment operators, surveyors, mechanics, electricians, miners, truck drivers, accountants, instrumentation technicians and more.
- TMM anticipates processing 20,000 tons of ore per day from underground mining.
- State and federal environmental requirements must be met or exceeded, or the TMM Project will not be authorized to move forward.
- The TMM Project will generate significant tax and royalty revenue supporting state and local governments, and the education of nearly 900,000 K-12 students statewide.
- The minerals mined will support the domestic economy, boosting job creation, spurring growth and producing metals necessary for the emerging green economy.

# SPURRING ECONOMIC DEVELOPMENT

The TMM Project represents an extraordinary opportunity for economic growth and job creation regionally and statewide.

**Investment:** To date, more than \$400 million has been invested in the TMM Project, and approximately \$1.2 billion will be invested in further design, permitting and construction for the TMM underground mine project.

**Local Job Creation:** Once operational, TMM expects to directly employ 650 people long-term in northeastern Minnesota, and to create another 1,300 non-mining jobs in industries such as equipment suppliers, manufacturing, retail, healthcare, automotive and more. TMM plans to propose opening another office in Babbitt and busing mine employees to the mine site from both Ely and Babbitt locations, minimizing traffic and maximizing employment opportunities across the region.

Several million labor hours will be generated during construction, on par with the number of construction and related professional jobs created by projects such as U.S. Bank Stadium and Target Field in the Twin Cities. Even in its design stage, the TMM Project has supported as many as 200 direct and consultant/contractor positions and additional spinoff jobs.

**Mining Wages:** Mining offers living wages that can support families, send children to college, provide for retirement and build local communities. According to the U.S. Bureau of Labor Statistics, the average annual wage for a Minnesota mining job in 2016 was \$77,232, more than 41 percent greater than the average wage for all other industries. A 2017 study conducted by Praxis Strategy Group found that the average tourism industry wage in northeastern Minnesota was \$18,200, further solidifying the strong economic impact of the mining industry in Minnesota.

# ENVIRONMENTAL STEWARDSHIP

Twin Metals Minnesota recognizes environmental conservation as a core value and remains committed to protecting Minnesota's wilderness, natural environment and recreational resources. Today's environmental regulations tightly control how mines are designed and operated, and require bankruptcy-proof financial assurance for reclamation and closure performance. The Minnesota Department of Natural Resources, Minnesota Pollution

Control Agency, U.S. Environmental Protection Agency, U.S. Army Corps of Engineers and other state and federal agencies will enforce regulations protecting water, soil, animals and air.

The TMM Project will minimize the surface footprint of mining activity by using underground mining operations coupled with storing half of tailings material as permanent cemented backfill in the underground mine. This method would allow Twin Metals to mine without generating waste rock stockpiles. The remaining tailings would be stored on a modern, lined surface tailings storage facility near the Peter Mitchell Mine southwest of the city of Babbitt, Minnesota, and outside the Rainy River Watershed. Testing shows the tailings would be non-acid generating. Extensive additional testing will be conducted under the supervision of the Minnesota Department of Natural Resources and federal agencies.

# MINERALS FOR A SUSTAINABLE FUTURE

Copper, nickel and platinum group metals are critical aspects of a sustainable future including construction, communications, power distribution, national defense, medicine and renewable green energy. The TMM Project will contribute to establishing Minnesota as a world leader in the production of green energy minerals used in wind turbines, hybrid and electric vehicles, batteries and solar energy panels.

