TWIN METALS MINNESOTA

ABOUT TWIN METALS MINNESOTA

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

The Twin Metals Project will target the valuable minerals within the Maturi deposit of the Duluth Complex geologic formation approximately nine miles southeast of Ely, and 11 miles northeast of Babbitt. The Duluth Complex is one of the world's largest polymetallic deposits and contains TMM's strategic target minerals including copper, nickel, cobalt and platinum group metals. TMM plans to locate its processing site 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 has submitted to state and federal regulators its formal proposal to build a world-class, 21st century underground mining project for scoping and environmental review. The submittal takes the form of a Scoping Environmental Assessment Worksheet (SEAW) data submittal issued to the Minnesota Department of Natural Resources, and a Mine Plan of Operations (MPO) issued to the Bureau of Land Management.

INSIDE THE PROJECT

- Once operational, TMM expects to directly employ at least 700 people long-term in NE Minnesota, and to create an estimated 1,400 spinoff jobs in other industries.
- TMM plans to use the environmentally friendly dry stack method for its tailings storage, which eliminates the storage pond and dam associated with conventional tailings facilities.
- TMM anticipates processing 20,000 tons of ore per day from underground mining.
- Due to the unique geology of the Maturi Deposit and TMM's mining method, tailings will be non-acid-generating.
- The TMM Project will generate significant tax and royalty revenue supporting state and local governments, and the education of K-12 students statewide.
- The minerals mined will support the domestic economy, boosting job creation, spurring growth and producing metals necessary for a worldwide green economy.
- State and federal environmental requirements must be met or exceeded, or the TMM Project will not be authorized to move forward.

SPURRING ECONOMIC DEVELOPMENT

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

Investment: To date, more than $450 million has been invested in the TMM Project, and TMM expects to invest a total of approximately $1.7 billion in design, study, environmental review, permitting and construction related to its underground mine project.

Local Job Creation: Once operational, TMM expects to directly employ at least 700 people long-term in northeastern Minnesota, and to create another 1,400 spinoff jobs in industries such as equipment suppliers, manufacturing, retail, healthcare and automotive. TMM plans to propose opening another office in Babbitt and busing mine employees to the mine site from both the Ely and Babbitt locations, minimizing traffic and maximizing employment opportunities across the region.

Several million union labor hours will be generated during the two to three-year construction phase, 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.

Mining Wages: Mining offers living wages that can support families, send children to college, provide for retirement and build local communities. According to the Minnesota Department of Employment and Economic Development (MDEED), the average annual wage for a northeastern Minnesota mining job in 2017 was nearly $90,000, which is 120 percent more than the average for other industries in the region. MDEED also reported the average tourism industry wage in northeastern Minnesota was about $21,000 in 2017, further solidifying the strong economic impact of the mining industry in Minnesota.

ENVIRONMENTAL STEWARDSHIP

Twin Metals 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, Bureau of Land Management, U.S. Forest Service, 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.

DRY STACK TAILINGS

TMM will minimize the surface footprint of mining activity by using underground mining operations coupled with storing up to half of tailings material as permanent cemented backfill in the underground mine. TMM will use the environmentally friendly dry stack method to manage the remaining tailings, which are non-acid generating. Dry stack also eliminates the need for a storage pond and tailings dam associated with conventional tailings facilities. Dry stack is one of the ways TMM is making a 21st century mine that will be the most technologically advanced mine in Minnesota's history and a model of how mining can be done safely and sustainably.

MINERALS FOR A SUSTAINABLE FUTURE

Copper, nickel, cobalt and platinum group metals are critical aspects of a sustainable future, including renewable green energy, construction, communications, power distribution, national defense and medicine. These industries cannot recycle enough copper to meet the growing demand. It is expected that over the next 25 years, to meet the demand, the global economy will need as much copper as what has been already mined to date. The TMM Project will contribute to establishing Minnesota as a world leader in the production of responsibly sourced green energy minerals used in wind turbines, hybrid and electric vehicles, batteries and solar energy panels.