



Minerals Diversification

One in a Series of Division Fact Sheets

Division of Lands and Minerals • Minnesota Department of Natural Resources • 2002

What is this program and why is it important?

The Minnesota Minerals Diversification Program funds research supporting the long-term health of the state's mining economy. This is achieved through improvements to existing industry and by encouraging environmentally sound exploration and development of new mineral resources.

The Legislature established a Minerals Coordinating Committee (MCC) in 1987 to manage the Minerals Diversification Program. The MCC creates long-term plans for minerals research, allocates Minerals Diversification research funds, and submits biennial budget requests for minerals research to the Legislature. Members include representatives of the Department of Natural Resources, the Minnesota Geological Survey, the Minnesota Pollution Control Agency, the Natural Resources Research Institute, the University of Minnesota Institute of Technology, the United Steelworkers of America, the iron ore and taconite industry, the nonferrous metallic minerals industry, the industrial minerals industry, and the Iron Range Resources and Rehabilitation Board.

Past research has reevaluated the state's nonferrous metallic mineral resources, leading to renewed private sector interest in exploration in the state; investigated value-added options for iron ore and taconite; and completed a dimension stone inventory of northeastern Minnesota. The latter led to the opening of two new quarries that today produce stone for national markets, including the national D-Day monument in Bedford, Virginia.

What research is being done now?

Current research funded by the Minerals Coordinating Committee is organized into four areas:

- **GEOLOGIC MAPPING/DELINEATION OF POTENTIAL MINERAL RESOURCES** – \$300,000 per biennium. Minnesota has proven mineral resources distributed throughout the state; many of these resources could be mined in the future. Research in this area is providing information on the location and quality of Minnesota's promising platinum group element (or PGEs) resources in northern Minnesota.

- **SUPPORT FOR LAND USE AND ENVIRONMENTAL DECISION-MAKING** – \$225,000 per biennium. Informed land use decision-making in areas with potential mineral resources is needed at all levels of government, and consideration of environmental concerns has always been important in ensuring that mining is environmentally sound. Current research targets mercury, which has been identified as a regulatory concern by the Minnesota Pollution Control Agency and the U.S. Environmental Protection Agency. Currently funded projects are providing information on concentrations of mercury around taconite plants for future mitigation, and on technologies for removing mercury from taconite plant emissions.

- **SUPPORT FOR EXISTING MINERAL INDUSTRIES** – \$175,000 per biennium. County aggregate resource mapping work identifies the location and distribution of construction aggregate resources for counties and delivers the results in digital format on CDROM for use on county GIS systems. There are currently county maps in-progress for Itasca, LeSueur, Dodge, and Benton counties. Five more county boards have passed resolutions requesting that their sand and gravel resources be mapped.

- **EVALUATION OF KNOWN BUT UNDEVELOPED RESOURCES** – \$50,000 per biennium. Minnesota contains known mineral deposits that are not currently economically profitable to mine. For example, the Duluth Complex near Babbitt is known to host large, low-grade copper and nickel deposits; these rocks also contain significant quantities of ilmenite, a titanium ore, vanadium, and platinum group elements (PGE). Current work is collecting and processing data on these resources that may lead to mining in the future.

What future research is being proposed?

The four areas in which research is currently being conducted will continue to be important for the vitality and diversity of Minnesota's minerals-based economy.

The next round of project proposals will be requested by the MCC at the end of 2002, using funds provided in this legislative session.