UNIVERSITY OF MINNESOTA

MINNESOTA GEOLOGICAL SURVEY
D.L. Southwick, Director

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THE DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINERALS

OPEN-FILE REPORT 97-5
Plate 9—Mineral Potential

MINERAL POTENTIAL ASSESSMENT OF NORTHERN ST. LOUIS COUNTY, SOUTHEASTERN KOOCHICHING COUNTY AND NORTHEASTERN ITASCA COUNTY, MINNESOTA

MINERAL POTENTIAL ASSESSMENT MAP

by
G.B. Morey

EXPLANATION

Symbols

Geology and geologic symbols as modified from Plate 6 of this report

- Geologic Contact — Approximately located; inferred from geophysical data away from outcrops and drill holes.
- Low-angle Thrust Fault — Teeth on upper plate. Inferred from geophysical data..
- Fault — High Angle --Mainly strike slip.
- Crest of Airborne Magnetic Anomaly — Generalized from Plate 4 of this report.
- Crest of Electromagnetic Anomaly — Selected anomalies from the Exploration Files, Minnesota Department of Natural Resources, Division of Minerals, Hibbing.
- Bedrock Outcrop and areas of closely spaced small outcrops.
- Drill Hole — Locations from Plate 5 of this report.
- Drill Hole or Outcrop locality of Anomalous Mineral Values.

Potential areas of special interest.

See text for specific criteria used for each mineral deposit model and additional discussion.

VI-12 — Approximately located areas having mineral potential based on criteria identified In Geological Survey of Ontario Open-File Report 5916. Roman numeral refers to specific mineral deposit types as listed below. Arabic number refers to a specific area.

- I. Lode Gold
- II. Iron-Formation-Hosted Replacement Gold
- III. Volcanic-Associated Massive Sulfides
- IV. Mafic-Ultramafic Intrusion-Hosted Cu-Ni-PGE
- V. Komatiite-Associated Ni-Cu-PGE
- VI. Kimberlite-Hosted diamonds

DNR-I through DNR-IV — areas delineated in DNR Project 318 believed to have some mineral potential based on the analysis of sulfide-mineralized clasts collected from a number of gravel pits.

Digital base modified from 1990 Census TIGER/Line Files of U.S. Bureau of the Census (source scale,1:100,000)

Universal Transverse Mercator Projection, grid zone 15
1983 North American Datum

Every reasonable effort has been made to ensure the accuracy of the factual data on which this map interpretation is based; however, the Minnesota Geological Survey does not warrant or guarantee that there are no errors. Users may wish to verify critical information; sources include both the references listed here and information on file at the offices of the Minnesota Geological Survey in St. Paul. In addition, effort has been made to ensure that the interpretation conforms to sound geologic and cartographic principles. No claim is made that the interpretation shown is rigorously correct, however, and it should not be used to guide engineering-scale decisions without site-specific verification.

digital cartography by Joyce Meints and T.E. Wahl;
graphic design by R.S. Lively
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