

MINNESOTA GEOLOGICAL SURVEY  
SAINT PAUL, MINNESOTA

ADAPTED FROM MOREY & COOPER (1976)

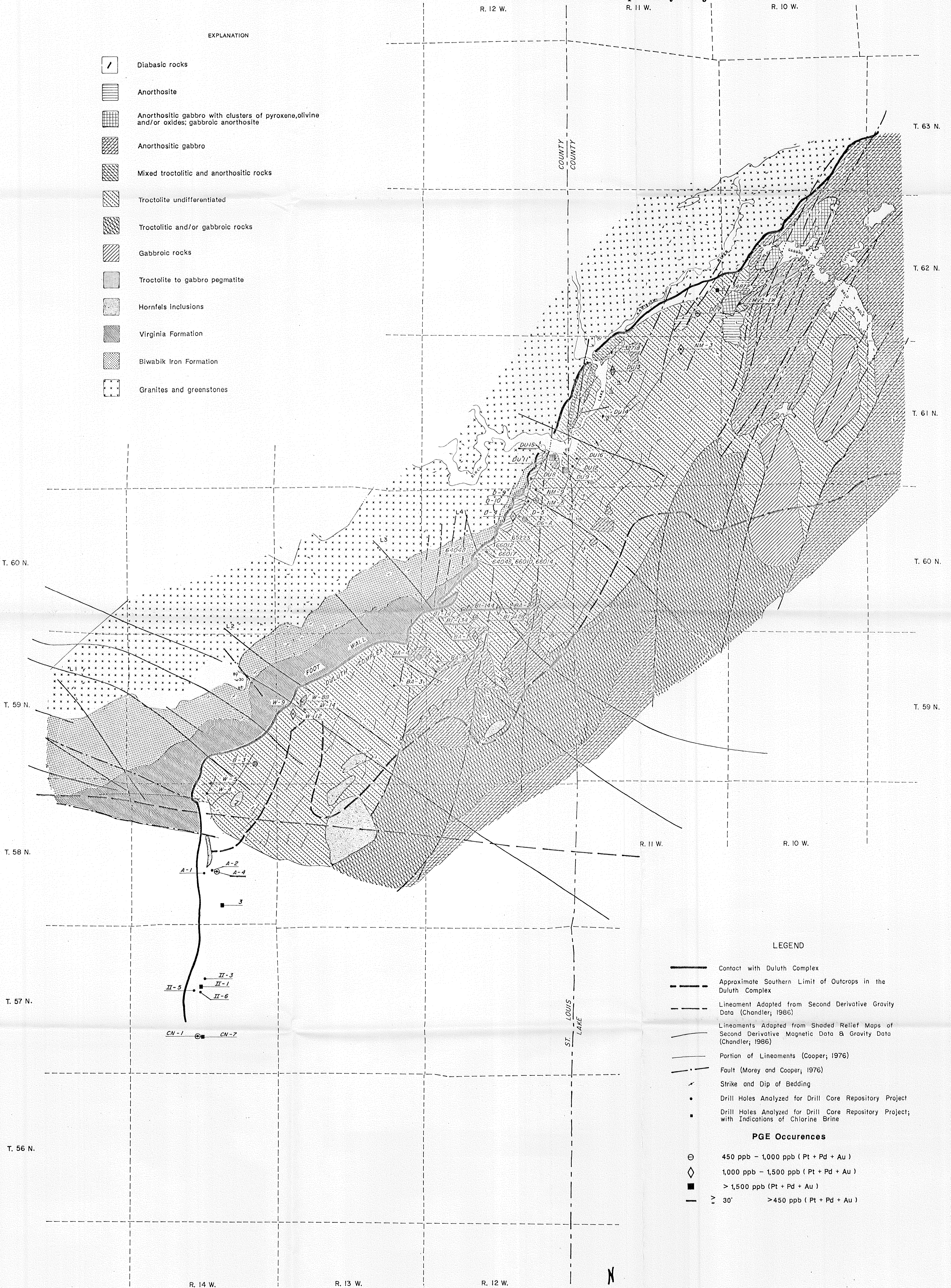
Relationships shown are approximate due to scale differences and distortions.

**HOYT LAKES - KAWISHIWI AREA, ST. LOUIS AND LAKE COUNTIES, NORTHEASTERN MINNESOTA**

Compilation of Bedrock Geology and Lineaments as adapted from Morey & Cooper (1976), Chandler (1986) with drill hole locations of Drill Core Repository Project

MINNESOTA DEPARTMENT OF NATURAL RESOURCES  
Division of Minerals

PROJECT 255-1  
DRILL CORE REPOSITORY PROJECT



EXPLANATION

- Diabasic rocks
- Anorthosite
- Anorthositic gabbro with clusters of pyroxene, olivine and/or oxides; gabbroic anorthosite
- Anorthositic gabbro
- Mixed troctolitic and anorthositic rocks
- Troctolite undifferentiated
- Troctolitic and/or gabbroic rocks
- Gabbroic rocks
- Troctolite to gabbro pegmatite
- Hornfels Inclusions
- Virginia Formation
- Biwabik Iron Formation
- Granites and greenstones

LEGEND

- Contact with Duluth Complex
  - Approximate Southern Limit of Outcrops in the Duluth Complex
  - Lineament Adapted from Second Derivative Gravity Data (Chandler, 1986)
  - Lineaments Adapted from Shaded Relief Maps of Second Derivative Magnetic Data & Gravity Data (Chandler, 1986)
  - Portion of Lineaments (Cooper, 1976)
  - Fault (Morey and Cooper, 1976)
  - Strike and Dip of Bedding
  - Drill Holes Analyzed for Drill Core Repository Project
  - Drill Holes Analyzed for Drill Core Repository Project, with Indications of Chlorine Brine
- PGE Occurrences**
- 450 ppb - 1,000 ppb ( Pt + Pd + Au )
  - 1,000 ppb - 1,500 ppb ( Pt + Pd + Au )
  - > 1,500 ppb ( Pt + Pd + Au )
  - > 30' > 450 ppb ( Pt + Pd + Au )

SCALE 1:125,000  
0 1 2 4 6 miles