

INSTITUTE ON LAKE SUPERIOR GEOLOGY

***May 12-15,
2020***

***Mountain Iron,
Minnesota***

***“Taconite Capital
of the World”***



PLANNING COMMITTEE

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WHY “TACONITE CAPITOL OF THE WORLD?”

1865—Henry H. Eames (State Geologist-MN) canoed St Louis River and Embarrass Lake and reported “immense bodies of the ores of iron;” (*he was looking for gold*)

He then ascended the Prairie River, reporting similar finds.

In one year, he unknowingly defined the eastern and western ends of the Mesabi Iron Range.

1890—Merritt brothers discovered iron ore near *MOUNTAIN IRON*.

1892—First Mesabi Range iron ore shipped from *MOUNTAIN IRON*.



Courtesy of Iron Range Research Center



BEDROCK GEOLOGY

MESOPROTEROZOIC

Duluth Complex, North Shore Volcanic Group

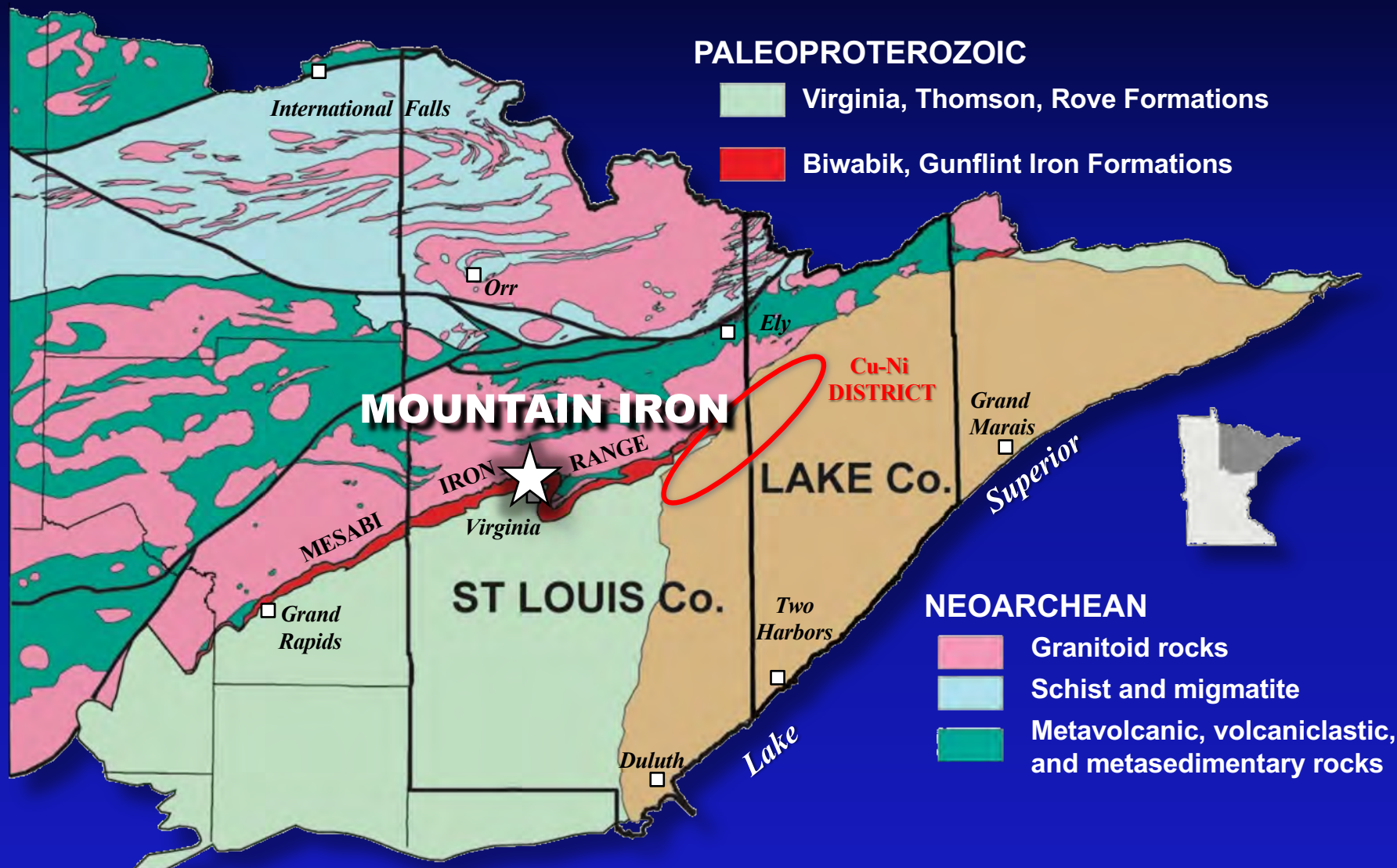
PALEOPROTEROZOIC

Virginia, Thomson, Rove Formations

Biwabik, Gunflint Iron Formations

NEOARCHEAN

Granitoid rocks
Schist and migmatite
Metavolcanic, volcanoclastic, and metasedimentary rocks





Greenstone-Wawa + Wabigoon subprovinces



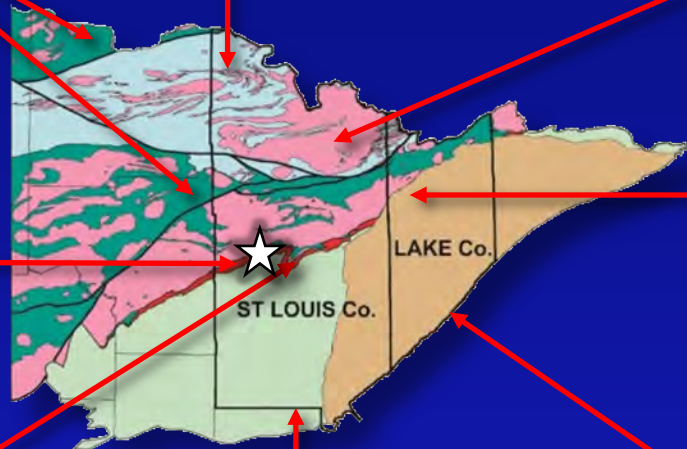
Schist + migmatite-Quetico subprovince



Granite-Quetico subprovince



Hematite mines + new high bridge



Augite troctolite-Duluth Complex



Taconite mines-Mesabi Iron Range



Graywacke-Jay Cooke State Park



Lavas-North Shore Volcanic Group

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POTENTIAL FIELD TRIPS:

- 1) *Quetico subprovince travers*
- 2) *Arrowhead—new road cuts, recent mapping results*
- 3) *Mesabi Range—mines, quarries, reclamation, NRRI Coleraine Lab*
- 4) *AngloGold Ashanti exploration—Wawa subprovince*
- 5) *Duluth Complex—Polymet, Twin Metals*
- 6) *Tamarack tour*
- 7) *Dean Peterson's "Profound Outcrops"*
- 8) *Arrowhead—Quaternary highlights and relevance to prospecting*





Digital Elevation Model Central Mesabi Iron Range, DNR, (ca. 1999)