



EXPLANATION

- Contact**
Solid where exposed continuously or at short intervals;
dashed where exposed at irregular intervals or closely
limited by adjacent exposures; dotted where established
by drill holes and projection of mine data; queried where
position is not well defined
- Fault**
Dashed where approximately located
- Vertical shaft**
MANUEL
- Outline of pit or caved area**
Dashed where old pit has been filled with stripping
- Chlorite schist of unknown origin**
Locally oxidized to red or brown
- Chloritized intrusive rock**
Includes chloritized gabbroic or dioritic rock, and some
rock that is presumed to be intrusive; locally oxidized to
red or brown
- Rabbit Lake formation**
pCr, argillite and slate, gray and black, generally ferrugi-
nous, and interbedded tufts and flows near the base;
partly oxidized to red, brown, or buff; locally schistose or
phyllitic
pCr, upper iron-formation lenses, siliceous, thin-bedded,
and partly argillaceous
- Trommald formation**
pCtk, thick-bedded facies
pCtn, thin-bedded facies
Iron-formation consisting chiefly of quartz and iron- and
manganese-bearing minerals; either facies occurs by
itself in part of the district, and in about one-third of the
North range the thick-bedded overlies the thin-bedded
facies and grades downward into it; locally includes
lenses of clastic-bearing material and ferruginous
slate, schist, and chert conglomerate or breccia
- Mahomen formation**
Sericitic argillite, slate, and siltstone, and local phyllite or
schist; gray, light green, or light brown; local lenses of
quartzite near the upper contact
- Middle(?) Precambrian**
- Middle Precambrian**
- PRECAMBRIAN**
- TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN
DECLINATION, 1962

Base from maps provided by the M. A. Hanna Company.
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BEDROCK GEOLOGIC MAP OF THE NORTH RANGE, CUYUNA DISTRICT, MINNESOTA

SCALE 1:31 680
1 MILE

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—61154

Geology by R. G. Schmidt and C. E. Dutton, 1951-57