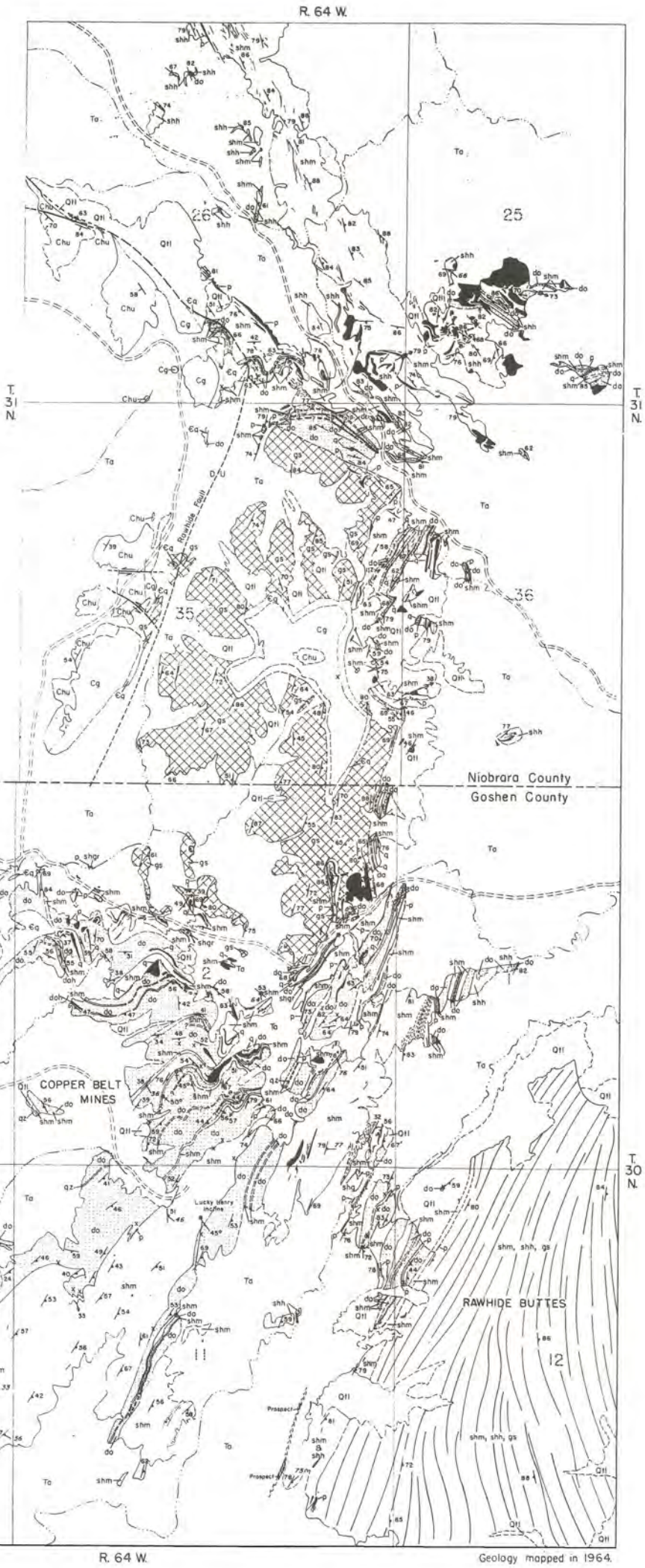


EXPLANATION OF MAP SYMBOLS

- Contact showing dip, dashed where approximately located, queried where indefinite.
- Fault, long dashed where approximately located, short dashed where concealed. Arrows show direction of relative horizontal movement. U, upthrown side, D, downthrown side.
- Brecciated zone, dashed where concealed.
- Zone of intensive quartz and pegmatite layering in mica schist. The strike is shown by the pattern trend.
- Strike and dip of bedding of rocks of Paleozoic age.
 - NORMAL
 - OVERTURNED
- Strike and dip of foliation of metamorphic rocks of Precambrian age, showing trend and pitch of lineation due to mineral parallelism. The pitch of lineation is measured in the foliate plane.
 - INCLINED
 - VERTICAL
- Strike and dip of foliation of igneous rocks of Precambrian age.
- Minor fold axis in rocks of Precambrian age, showing plunge.
- Generalized trend and plunge of fold axes in rocks of Precambrian age.
 - OPEN
 - CAVED
- Inclined shaft, showing direction of plunge measured at the surface.
 - OPEN
 - Adit
 - CAVED
- Prospect pit or cut.

EXPLANATION OF ROCK UNITS

- Unit 10 on Plate I
 - Qal Alluvium
 - Valley fill, chiefly gravel, sand, silt, and clay occurring along the larger drainageways.
- Unit 9 on Plate I
 - Qh Not shown on Plate I
 - Talus and landslide debris
 - Colluvium, composed of boulder to silt size particles.
 - UNCONFORMITY
- Unit 8 on Plate I
 - Ta Arkkore formation
 - Sedimentary rocks of Miocene age
 - Light grey, tuffaceous, sandstone, mudstone, and lenticular conglomerate.
 - UNCONFORMITY
- Unit 7 on Plate I
 - Chu Hartville formation undivided
 - Sedimentary rocks of Mississippian?, Pennsylvanian, and Permian age.
 - Interbedded red shale, grey limestone, white to pink dolomite, and pink sandstone, dark red to maroon, basal quartzitic sandstone 50 to 100 feet thick.
 - UNCONFORMITY
- Unit 6 on Plate I
 - Cg Guernsey formation
 - Sedimentary rocks of Devonian(?) and Mississippian age.
 - Pink and grey dolomite and limestone, pink sandstone, violet to purple, basal arkose 2 to 10 feet thick.
 - UNCONFORMITY
- Unit 5 on Plate I
 - Eg Cambrian(?) quartzite
 - Sedimentary rocks of Cambrian(?) age.
 - Brownish-red to light brown, coarse-grained, well cemented quartzite.
 - UNCONFORMITY
- Unit 4 on Plate I
 - Qa Quartz dike or sill
 - White, hard, dense, very fine- to fine-grained quartz, commonly with sparse limonite stain.
- Unit 3 on Plate I
 - Granite pegmatite dike or sill, showing dip
 - Mostly pink, microcline-rich pegmatites; a few white, plagioclase-rich pegmatites occur in the northern part of the map area, and some quartz-tourmaline pegmatites occur in sections 25 and 26, T. 31 N., R. 64 W. Pegmatites along contacts are identified by letter, elsewhere all dikes or sills are pegmatite unless otherwise noted.
- Unit 2 on Plate I
 - Structured granite
 - Pink to orange, medium- to coarse-grained, poorly foliated, microcline granite.
- Unit 1 on Plate I
 - Mica schist, hornblende schist, and structured granite
 - This unit includes the many granite sills and dikes occurring in poorly exposed metamorphic rocks and makes up the Rawhide Buttes and some low hills northeast of the Rawhide Buttes.
- Unit 1 on Plate I
 - sh Hornblende schist
 - Black to dark grey, very fine- to medium-grained, commonly limonite stained, hornblende schist. This unit is commonly hornfelsic in interior portions of larger outcrops and may be coarse-grained.
- Unit 2 on Plate I
 - do Dolomite sequence
 - do, dolomite, doh, hematitic dolomite; shm, mica schist, qz, quartzite
 - White to pale pink and grey, sandy and siliceous dolomite interlayered with biotite schist, muscovite schist, and some quartzite layers mostly less than 2 feet thick. Dolomite shows varying degrees of recrystallization ranging from coarsely-crystalline marble to very finely-crystalline dolomite.
- Unit 1 on Plate I
 - shm Mica schist
 - shm, mica schist; shg, graphitic schist
 - Mostly grey and dark grey, fine-grained, biotite schist, in places quartz or muscovite is the most abundant mineral. Discrete euhedral, garnet crystals and fibrous aggregates of amphibole (actinolite?) are common. Several layers of graphitic mica schist and graphitic schist occur near the top (?) of the unit.



Base map from U.S. Geol. Survey Oil and Gas Prelim. Map 102.

R. 64 W.

Geology mapped in 1964.

GEOLOGIC MAP OF THE COPPER BELT MINES AREA

by M.L. Millgate

SCALE



1966



Approximate mean declination, 1955