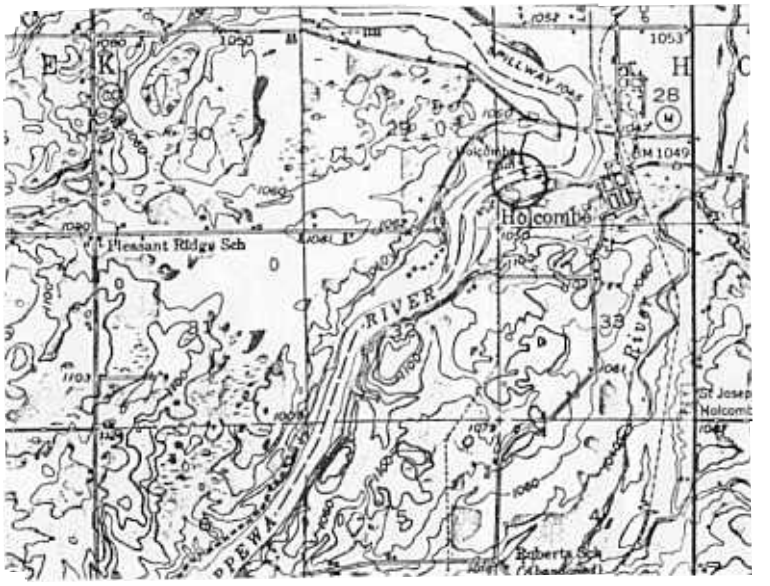
TITLE: Gneissic amphibolite, hornblende diorite, and felsic dikes of the Holcombe Dam area

LOCATION: Holcombe Dam, SW 1/4, Sec. 28, T.32N., R.6W., Chippewa County, Cornell 15' quadrangle



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DATE: September 1974, January 1978

SUMMARY OF FEATURES:

Gneissic amphibolite with basaltic inclusions was intruded by anatectic(?) hornblende diorite and later converted to schist along a shear zone exposed at the south end of the dam. After prolonged erosion, these rocks were intruded at shallow depth by granite dikes and later segmented by a system of ENE-trending faults.

DESCRIPTION:

Dark gray, medium-grained amphibolite and metalamprophyre(?) probably derived from mafic volcanics and/or intrusives, cintains lenticular inclusions and drag folds indicating flowage. The amphibolite is intruded with sharp contact by medium-grained hornblende diorite(?). The diorite contains inclusions of the amphibolite as well as relatively non-metamorphosed basalt. Migmititic-gneissic lamination in the amphibolite trends N80°W, 75°N. The diorite is locally flow-lineated. The diorite magma may have been formed by partial melting of the amphibolite at depth. South of Chippewa River below Holcombe Dam, mafic mylonitic biotite-chlorite schist probably formed by shearing of the amphibolite and diorite, has foliation which trends N60°E, 80°S. Crinkle folds plunge N60°W at 40°.

Several NNW-trending chloritized biotite granite dikes with chlorite

and biotite along chilled margins can be seen along the N65°E, 68°N fault on the outcrop just below the NW retaining wall. The dikes have fine-grained, flinty marings--a good indication of shallow, Late Precambrian intrusion. These dikes are segmented by numerous steep, N60°W trending right lateral faults (NE side SE). The felsic dikes are pyritic with hematite replacement.

Figure 1. Fault offsets of felsic dikes. The dike strikes about north-south and is about 0.5 m wide.