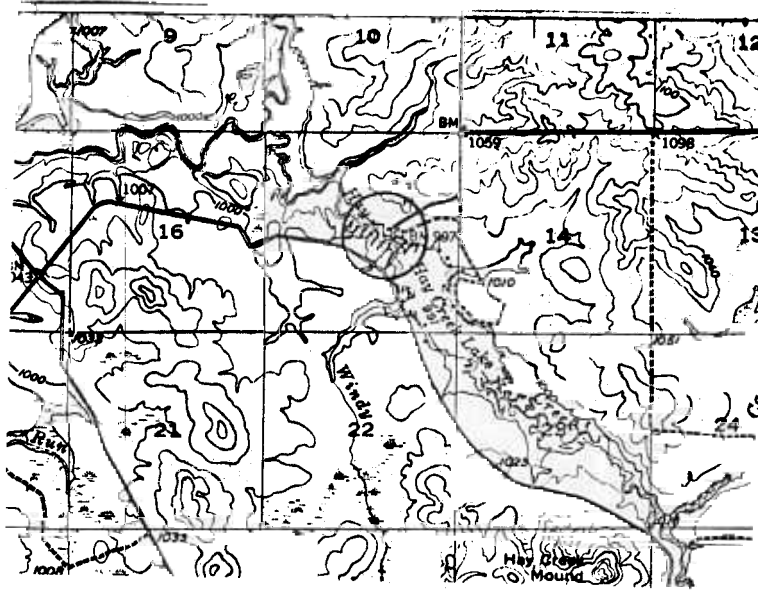


TITLE Felsic Mylonite Under Mt. Simon Sandstone

LOCATION: Hay Creek Dam: SE /4, NW /4 Sec. 15, T 26 N, R 4 W, Fairchild  
15' Quadrangle



AUTHOR: P. E. Myers, U.W. - Eau Claire

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SUMMARY OF FEATURES:

Felsic, micaceous mylonite (sheared granite?) with indistinct cataclastic foliation crops out beneath a ledge of conglomeratic Mt. Simon Sandstone on the north side of a plunge pool in Hay Creek about 0.5 kilometers below Hay Creek Dam (Figure 1). Thin compositional layering and foliation trend N87°E, 85°N. Complimentary joints trend N18°W, 73°E and N77°E, 8°S.

The plunge pool has developed by selective erosion of sandstones which filled a depression in the unconformity. This depression shows a local relief of over five meters. The unconformity is sharp and clean with a remarkably thin weathered veneer on the mylonite beneath. The felsic composition of the mylonite probably accounts for its topographic prominence. There is little compositional similarity between the mylonite, which is composed of feldspar, quartz and muscovite, and the overlying sandstone, which is predominantly quartz, a fact which tends to substantiate the effectiveness of 'winnowing' or the selective removal of fine-grained weathering products - clays.

A similar biotite-rich "granite" flaser gneiss exposed along a stream 2 km north of here may represent a less completely comminuted or mylonitized phase of the same parent rock.

Samples of the mylonite were taken in 1973 by W.R. Van Schmus for isotopic dating.



Figure 1 -- Flat-lying, cross-bedded Mt. Simon Sandstone overlying felsic mylonite with vertical foliation. View northeast. Photo by Gene LaBerge, UW - Oshkosh, 1977.