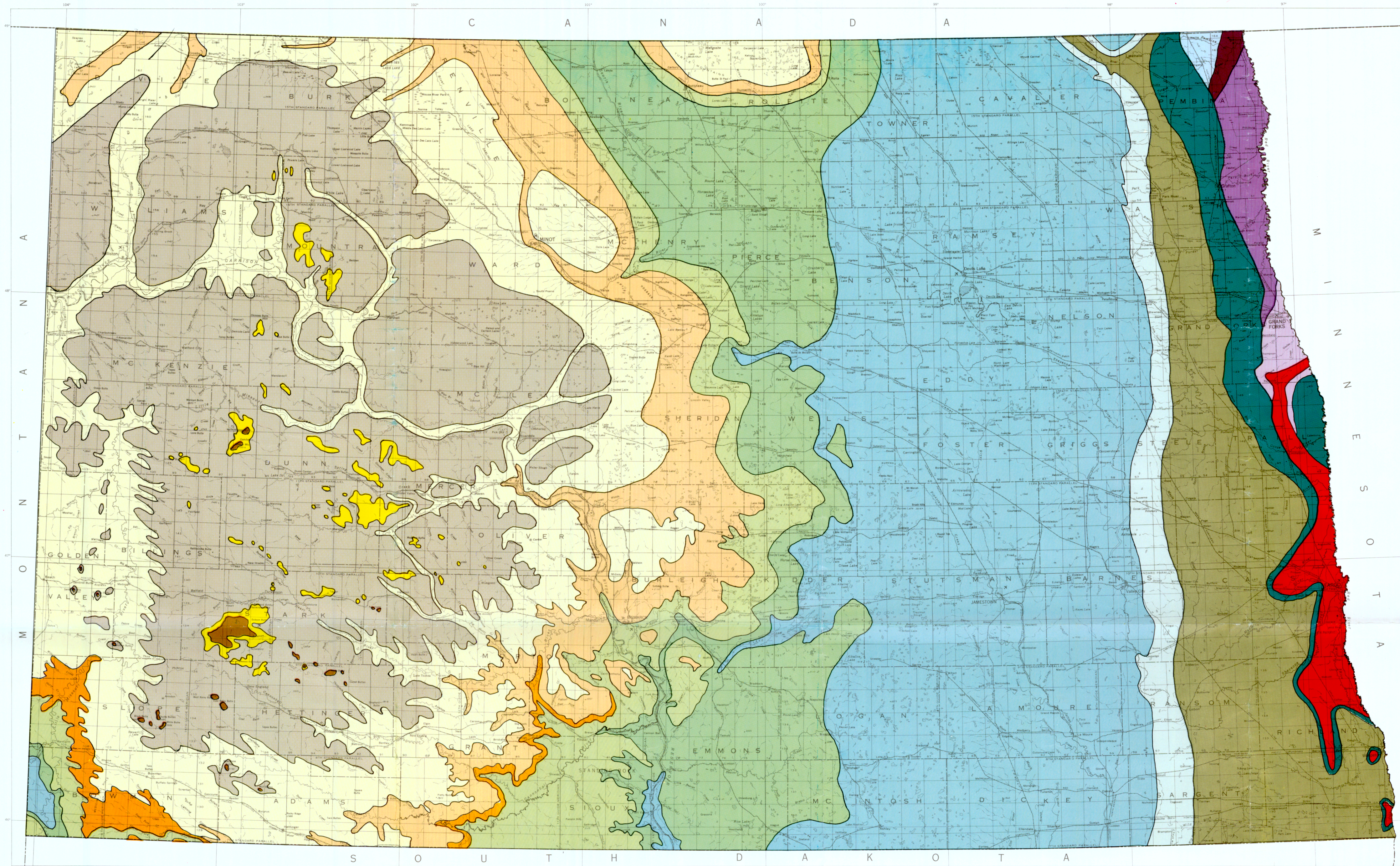


BEDROCK GEOLOGIC MAP OF NORTH DAKOTA

Compiled by Clarence G. Carlson
1969

E. A. NOBLE, STATE GEOLOGIST

NORTH DAKOTA GEOLOGICAL SURVEY MISC. MAP NO. 10



EXPLANATION

TERTIARY SYSTEM

- WHITE RIVER AND ARIKAREE FORMATIONS
- GOLDEN VALLEY FORMATION
- SENTINEL BUTTE FORMATION
- TONGUE RIVER FORMATION
- CANNONBALL FORMATION
- TULLOCK AND LUDLOW FORMATIONS

CRETACEOUS SYSTEM

- HELL CREEK FORMATION
- FOX HILLS FORMATION
- PIERRE FORMATION
- NIOBRARA FORMATION
- CARLILE, GREENHORN, BELLE FOURCHE, MOWRY, NEWCASTLE AND SKULL CREEK FORMATIONS
- FALL RIVER, FUSON AND LAKOTA FORMATIONS

JURASSIC SYSTEM

- "REDBEDS"

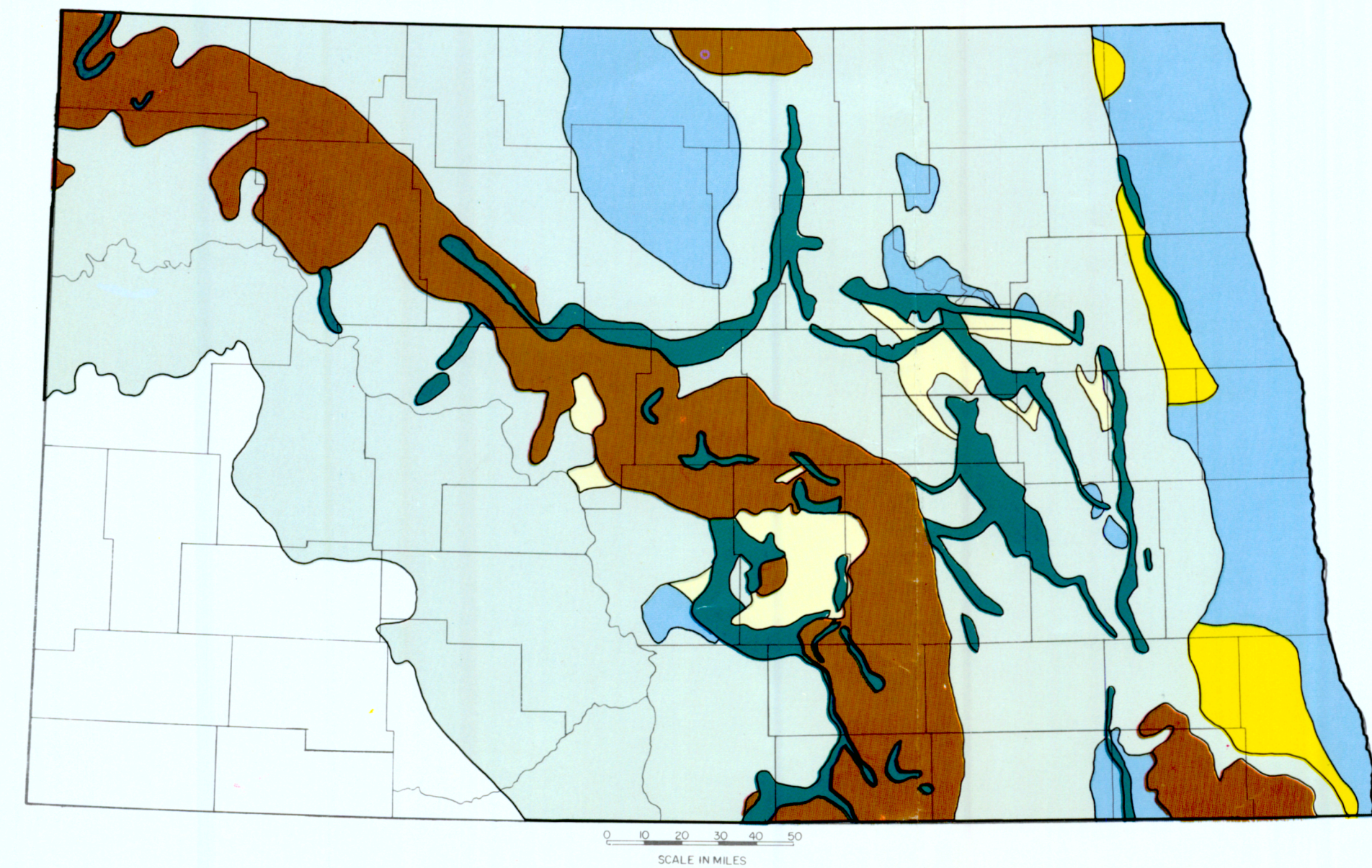
ORDOVICIAN SYSTEM

- STONEWALL AND STONY MOUNTAIN FORMATIONS
- RED RIVER FORMATION
- WINNIPEG GROUP

PRECAMBRIAN

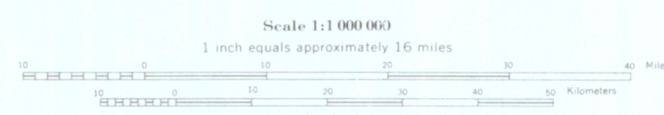
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GENERALIZED GLACIAL MAP OF NORTH DAKOTA



EXPLANATION

- END MORAINES
- DEAD ICE MORAINE
- GROUND MORAINE
- GLACIAL LAKE PLAIN
- DELTAS
- OUTWASH



Sources of Data

This geologic bedrock map is a revision of a geologic map prepared by Miller Hansen (1956). The generalized glacial map shows the extent of glacial deposits. The area from the limit of glaciation northward to the dead-ice moraine is an area of bedrock topography with a relatively thin, patchy, mantle of drift. North and eastward from the dead-ice moraine bedrock exposures are limited to a few scattered exposures, mostly along the major drainages of the area.

Much of the data is derived from the county ground water studies program, part of which has been published, but all available unpublished data was also used. Where reports included bedrock maps, these maps were used. Where only bedrock topography maps were available the bedrock geology was interpreted on the basis of the topographic maps.

The base map was supplied through the courtesy of the United States Geological Survey.

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