



**EXPLANATION**

Swampy deposits (Post and pre-glacial; includes some marshy tracts with little or no peat or muck, and in part now entirely drained)	Beach sand and gravel (Deposited along shores of glacial lakes, principally glacial Lake Agassiz, in the western and northern parts of the State)	Lacustrine clay (Deposited in glacial lakes, principally in glacial Lake Agassiz, in the western and northern parts of the State, but also in Lake Allen, Lake St. Louis, and Lake Nemadji, in the northeastern part)	Lacustrine sand (Deposited in glacial lakes, principally in glacial Lake Agassiz, in the western and northern parts of the State. That in Lake Allen and Lake St. Louis, in Allen, Brown, and St. Louis Counties, indicates the nearly deltaic and sub-deltaic of tributary streams)	Glacial till (Clayey and sandy till which was submerged and somewhat reworked by waters of glacial lakes, principally of Lake Agassiz, in the western and northern parts of the State)	Terminal moraine of the Keweenaw ice (Includes those of the Des Moines lobe and the Greenway lobe, composed of young gray drift, composed of young gray drift, and includes, in places, older moraines of red drift mantled with gray drift; moraines deposited in lakes, cross-lined)	Ground moraine of the Keweenaw ice (Includes the Des Moines lobe and the Greenway lobe, composed of young gray drift. Approximate outer limit of the gray drift deposited by the Keweenaw ice of the Wisconsin stage indicated by line of cross)
<b>RECENT</b>		<b>QUATERNARY</b>				
Terminal moraine of the Superior lobe of the Labrador ice (Composed of young reddish drift; moraine deposited in lake, cross-lined)		Outwash sand and gravel (Associated with formation of moraine of Keweenaw, Patrician, and Superior glacial)		Moraine of Patrician red drift, overlapped by this gray drift (The result of the Patrician moraine having been overlapped, and destroyed, by the Keweenaw ice of the Wisconsin stage)		Terminal moraine of the Patrician ice sheet (Composed of young red till containing iron concretions)
<b>QUATERNARY</b>		<b>QUATERNARY</b>		<b>QUATERNARY</b>		<b>QUATERNARY</b>
Pleistocene Wisconsin stage Late Wisconsin		Middle Wisconsin		Terminal moraine of the Patrician ice sheet (Composed of young red till containing iron concretions)		Block outcrop (Tracts where pre-Cambrian bedrock is bare or but thinly or partly covered)
Glacial striations (Includes those of the Des Moines lobe and the Greenway lobe, composed of young gray drift, and includes, in places, older moraines of red drift mantled with gray drift; moraines deposited in lakes, cross-lined)		Glacial striations (Includes those of the Des Moines lobe and the Greenway lobe, composed of young gray drift, and includes, in places, older moraines of red drift mantled with gray drift; moraines deposited in lakes, cross-lined)		Glacial striations (Includes those of the Des Moines lobe and the Greenway lobe, composed of young gray drift, and includes, in places, older moraines of red drift mantled with gray drift; moraines deposited in lakes, cross-lined)		Esker

**MAP OF THE NORTHERN PART OF MINNESOTA SHOWING SURFICIAL DEPOSITS**  
By Frank Leverett and Frederick W. Sardeson

Scale 500,000  
Contour interval 50 feet, except where 80-foot contours are shown; 50-foot contours below 1,000-foot elevation, and 100-foot where light contours are omitted (S. E. extremity).  
Datum is mean sea level.  
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