

AREAL GEOLOGY

OF THE
PLATTE QUADRANGLE

STATE OF SOUTH DAKOTA
G.T. MICKELSON, GOVERNOR

STATE GEOLOGICAL SURVEY
E.P. ROTHROCK, STATE GEOLOGIST

EXPLANATION

SEDIMENTARY ROCKS

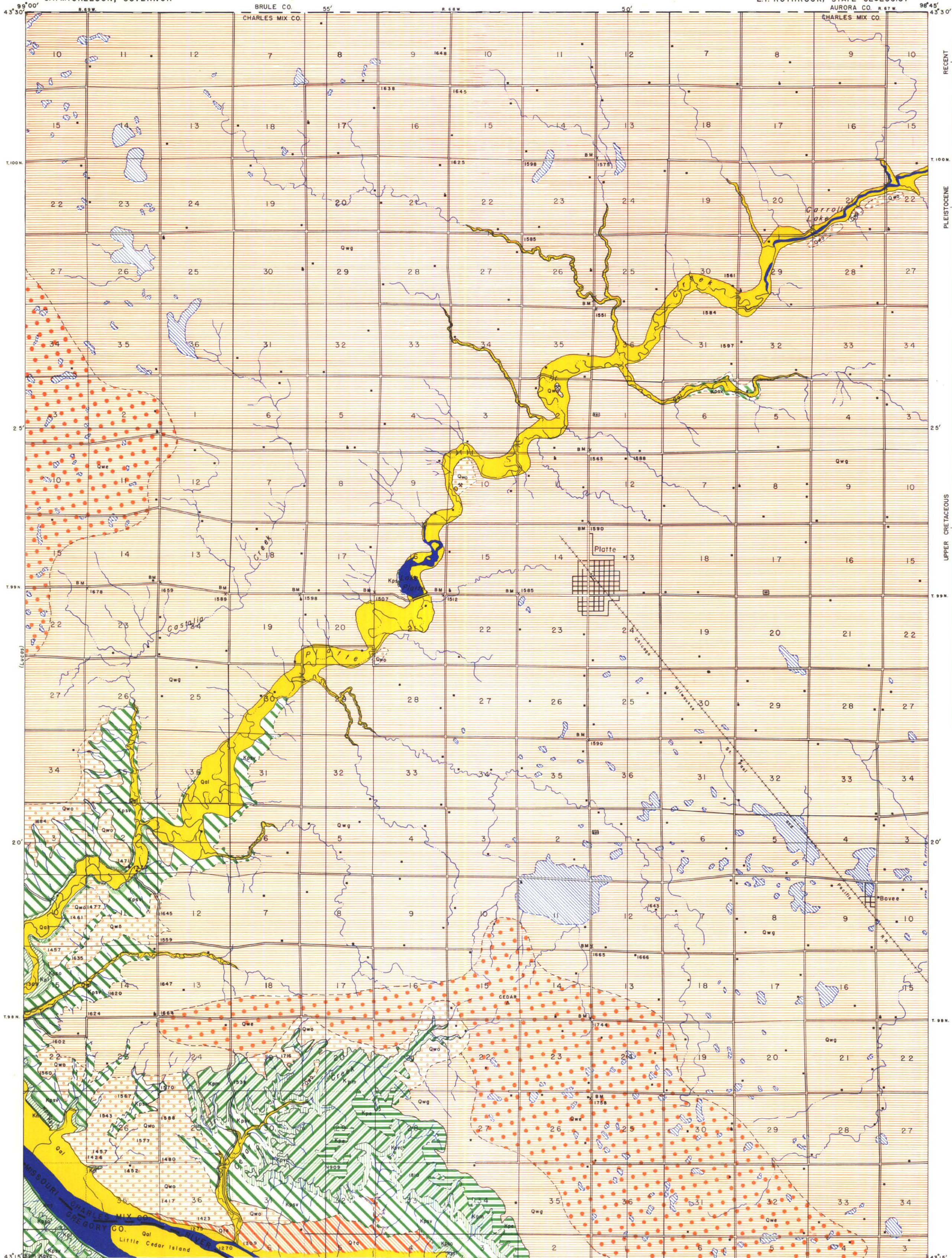
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|--------------------|------|--|
| RECENT | Qal | Aluvium
(Flood plain deposits of silt, sand and gravel in present streams.) |
| | Qta | Terrace Aluvium
(Terrace deposits of silt, sand and gravel along major streams.) |
| PLEISTOCENE | Qwo | Glacial Outwash
(Fluvial and glacio-fluvial terrace deposits of coarse sand and gravel.) |
| Wisconsin | Qwa | End Moraine
(Undifferentiated till deposits characterized by knob and kettle topography.) |
| | Qwg | Ground Moraine
(Undifferentiated till deposits characterized by slight relief and poor drainage.) |
| CRETACEOUS | Kpe | Elk Butte Member
(Brownish gray bentonitic clay with ferruginous and limy concretions.) |
| | Kpm | Mobridge Member
(Grey foraminiferal marl. Weathers buff.) |
| | Kpic | Virgin Creek Member
(Black to grey clay with numerous bentonites and concretions.) |
| UPPER CRETACEOUS | Kps | Sully Member
(Upper: Wendenry facies - Kpsr light grey bentonitic clay with numerous ferruginous concretions. Lower: Oscoma facies - Kpsl dark grey highly bentonitic clay with abundant manganese concretions.) |
| Pierre Formation | Kp | Lower Pierre undifferentiated
(Upper: Crow Creek facies, buff to brown marl; sandy at base. Gregory Member - grey to brown bentonitic clay with occasional bentonites. Lower: Sharon Springs Member - black to brown bituminous shale with numerous bentonites.) |
| Niobrara Formation | Kns | Smoky Hill Member
(Light grey dense foraminiferal limestone (chalk).) |

DRAINAGE

- Intermittent Streams
- Intermittent Lakes

CULTURE

- Buildings
(House, church and school)
- Roads and Trails
- Altitudes
(In feet above sea level)
- Bench Marks
(Monument marking point of known elevation)
- Triangulation Stations
(Monument marking point of exact geographic location)
- Gravel Pits and Quarries



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Surveyed in 1949.

Based on maps by Corps of Engineers,
U.S. Army, and Geodetic data from U.S.
Coast and Geodetic Survey.

