

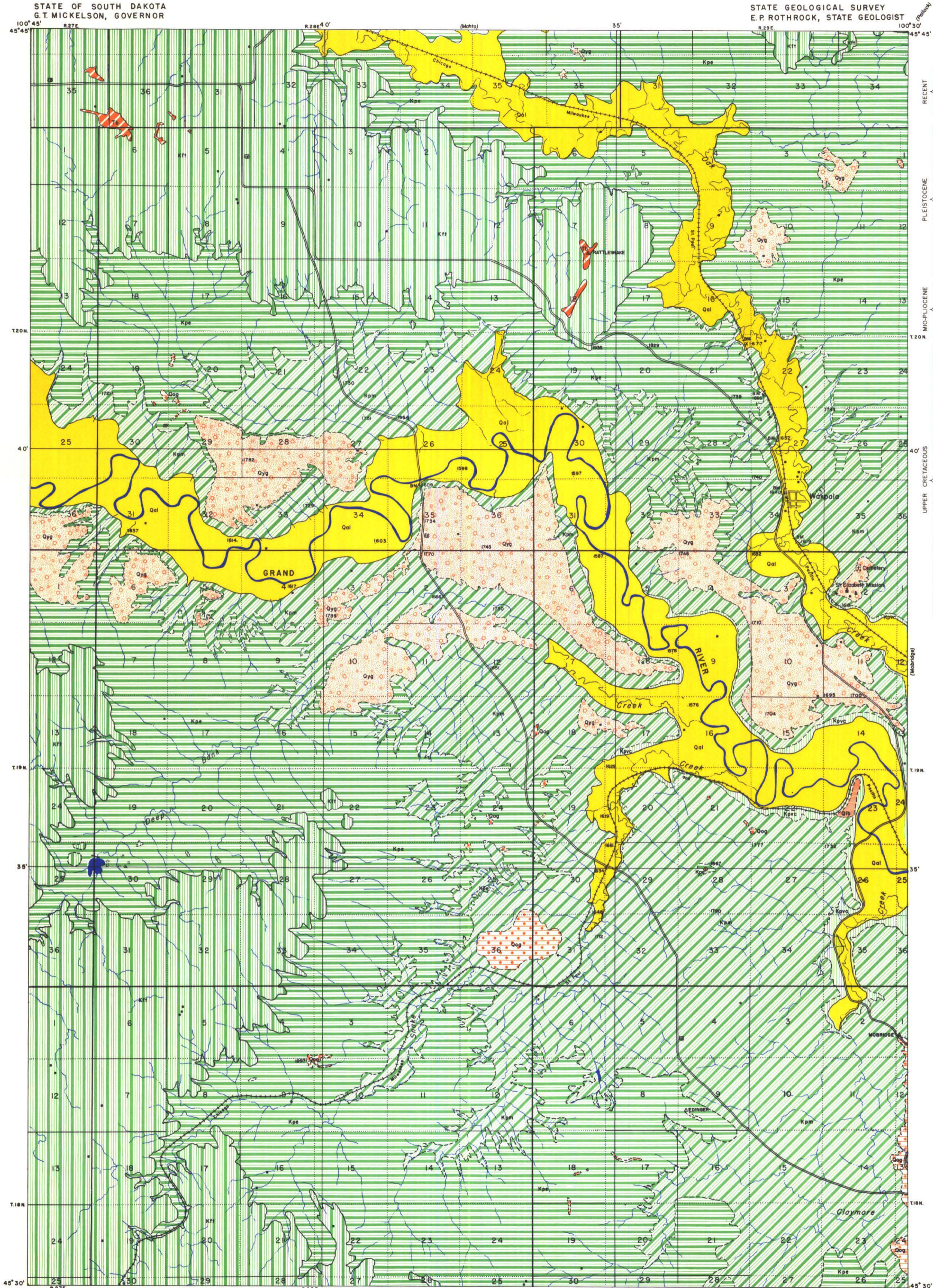
AREAL GEOLOGY

OF THE

WAKPALA QUADRANGLE

STATE OF SOUTH DAKOTA
G.T. MICKELSON, GOVERNOR

STATE GEOLOGICAL SURVEY
E.P. ROTHROCK, STATE GEOLOGIST



EXPLANATION

SEDIMENTARY ROCKS

- | | | |
|---|---|---|
| <p>RECENT</p> <p>PLEISTOCENE</p> <p>MIOCENE</p> <p>UPPER CRETACEOUS</p> | <p>QUATERNARY</p> <p>TERTIARY</p> <p>CRETACEOUS</p> | <p>Qal Alluvium (Flood plain deposits of silt, sand and gravel in present stream valleys.)</p> <p>Qlb Lake Beds (Thin-bedded silts and clays.)</p> <p>Oyg Younger Gravels (Gravels and sands forming terraces along Grand River.)</p> <p>Oog Older Gravels (Gravels with eastern-tilted boulders, possibly left-down earlier glacial drift.)</p> <p>Bj Bjou? Formation (Green-gray sandstone, siltstone, forming cap rock of buttes and mesas.)</p> <p>Kff Timber Lake and Trail City Members, Undifferentiated (Upper Timber Lake Member-yellow friable sandstone with fossiliferous concretions, cliff-forming. Lower Trail City Member-gray silty clay, silt and sandy silt, with fossiliferous concretions.)</p> <p>Kpe Elk Butte Member (Fluvio-weathering bluish-gray clay characterized by fine textured drainage and blowouts.)</p> <p>Kpm Mabrige Member (Calcareous to non-calcareous gray to buff clay, many in upper part, bentonitic clay horizon with crab-bearing concretions at base.)</p> <p>Kvc Virgin Creek Member (Upper facies. Dark gray clay, bentonitic, covered by slope wash.)</p> |
|---|---|---|

DRAINAGE

- Intermittent Streams
- Intermittent Lakes

CULTURE

- Buildings
(House, church and school)
- Roads and Trails
- Altitudes
(in feet above sea level)
- Bench Marks
(Minimum marking point of known altitude)
- Triangulation Stations
(Minimum marking point of geodetic location)
- Gravel Pits and Quarries

Geology by Brewster Baldwin and M.G. Glass
Assisted by A.F. Klein, Jr. and C.A. Carlson, Jr.
Surveyed in 1949



APPROXIMATE MEAN
DECLINATION 1947



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