

AREAL GEOLOGY

STATE OF MICHIGAN
BOARD OF GEOLOGICAL SURVEY
R.C. ALLEN, DIRECTOR

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY
GEORGE OTIS SMITH, DIRECTOR

MICHIGAN
DETROIT QUADRANGLE
R. 12 E.



THE SCHOOL OF MINES
STATE COLLEGE, MI.

LEGEND

SEDIMENTARY ROCKS

(Areas of subequal deposits are shown by patterns of dots and circles; subequal deposits by patterns of parallel lines)

Qsm

Swamp muck and peat

Qal

Alluvium
(loam, silt and muck; includes some marsh sand, only larger areas shown)

Glacial lake-shore lines
(dashed lines indicate position doubtful or poorly defined)

Obs

Beach sand pebbly in places
(includes some dune sand)

Qls

Lacustrine sand in bed of glacial lakes
(includes some beach and dune sands pebbly in places)

Ql

Lacustrine loamy soil in bed of glacial lakes
(admixture of sand and clay; pebbly in places)

Qlc

Chiefly lacustrine clay in bed of glacial lakes
(more or less reserved morainal clay; pebbly in places)

Qmc

Moraine largely covered by thin lake sediments
(Detroit interlobate moraine formed beneath the ice and West-Clemens and Eriem moraines deposited in glacial Lake St. Clair; their upper portions reworked into lacustrine sand and clay near ridges of exposed morainal clay of Eriem moraine, Qmc)

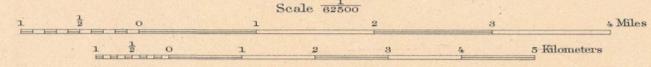
Recent
Wisconsin stage of Pleistocene series (includes some loess)
Deposits in glacial lakes (Moraine to St. Clair)
Deposits of Eriem Erie and St. Clair
(Grosse Pointe)

Note: Distribution of bedrock formations is shown in figure in text.

- ☒ Clay pits
- ⊙ Abandoned pit
- ⊙ SA17 Deep wells from which brine is pumped from rock-salt beds; only principal wells located
- ⊙ SA17 Shaft to rock-salt beds
- ⊙ G Gas wells

Economic note: Brine for salt, soda ash, and alkali manufacture is obtained from rock-salt beds by deep wells; rock salt for cattle preserving, fish and meat, and refrigeration purposes is obtained by deep shafts. Clay for brick, tile, and coarse pottery is obtained from Qlc; building and brick sand from Qs and Obs; gravel for roads and concrete from Obs; peat and moss from Qsm.

85° 15' R. 10 E.
H.M. Wilson, Geographer.
Chas. E. Cooke, in charge of section.
Topography by Chas. E. Cooke and R.W. Berry.
Assistant, J.N. Williamson.
Control by U.S. Lake Survey, Geo. T. Hawkins,
and J.R. Ellis.
Surveyed in 1904.



Scale 25000
Contour interval 20 feet.
Datum is mean sea level.
Edition of Jan. 1916.

Geology by W.H. Sherzer.
Surveyed in 1911.
SURVEYED IN COOPERATION WITH THE STATE OF MICHIGAN.