

LEGEND

COAL DEPOSITS

MORE THAN 14 in. OF COAL REPORTED :

● 201 NUMBER ADJACENT TO DRILL HOLE
= DEPTH TO TOP OF THICKEST COAL

● ONE BED
◆ SEVERAL BEDS

LESS THAN 14 in. OF COAL REPORTED or
UNCERTAIN INFORMATION :

● ONE BED
◆ SEVERAL BEDS

NO COAL REPORTED :

○ BARREN DRILL HOLE

COAL MINES

ABANDONED SHAFT MINE : ✖
ABANDONED STRIP MINE : ✖
OPERATING STRIP MINE : ✖ (One, 1975)



BOUNDARY OF MICHIGAN COAL BASIN



COUNTIES WITH COAL MAPS ON SCALE: 1" = 1 mile

for MIDLAND COUNTY see MAP 4A
BAY " " 5A
SAGINAW " " 6A
TUSCOLA " " 7A
SHIAWASSEE " " 8A
GENESEE " " 9A

Sources of Information

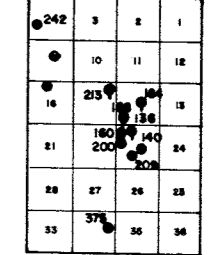
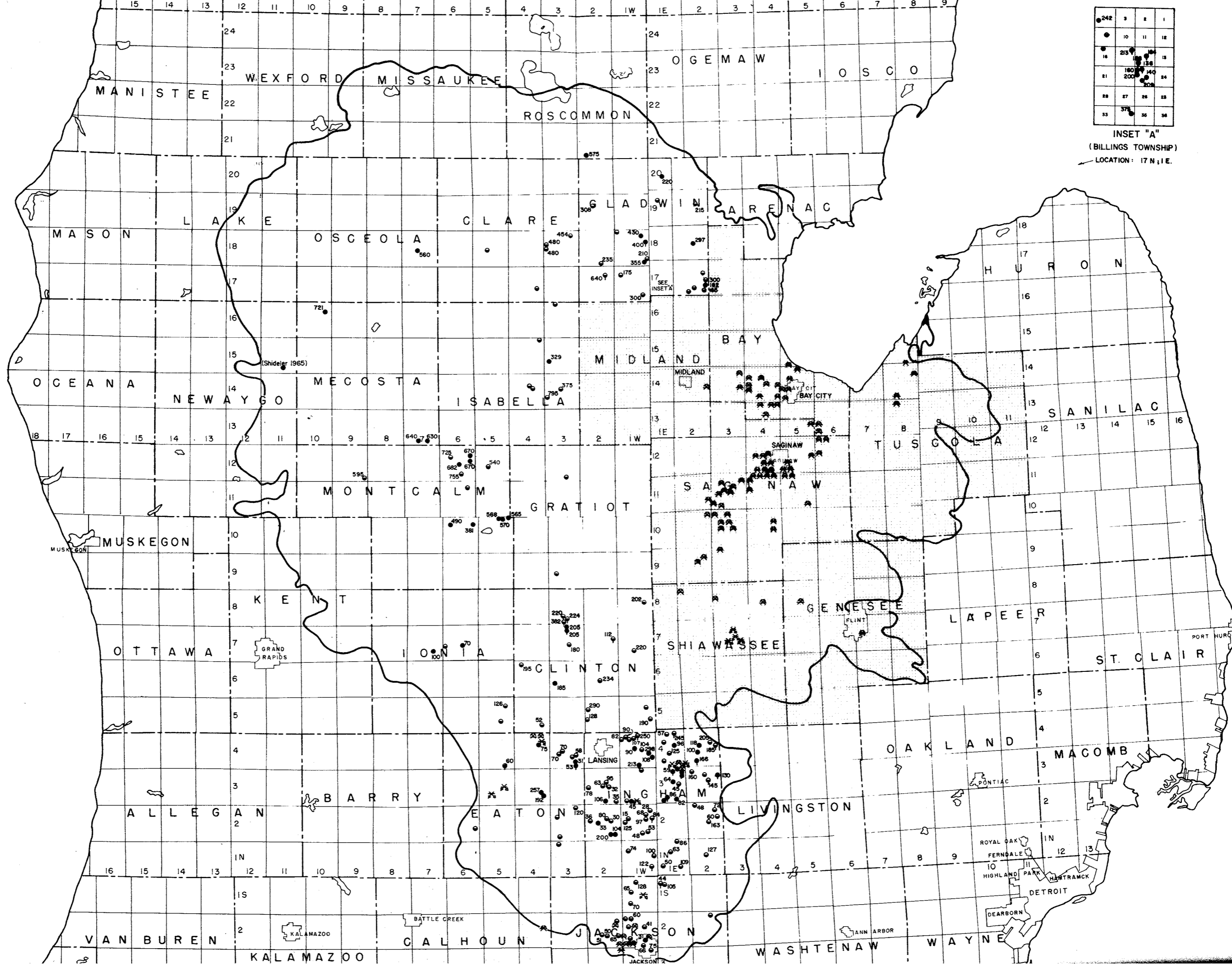
Most of the data, this work: Water well and oil well files, D.N.R., Lansing.
Coal basin boundary: Cohee(1950)
Base map: Michigan D.N.R. No. 3503.

MICHIGAN TECHNOLOGICAL UNIVERSITY
GEOLOGICAL MAP SERIES MAP IOA

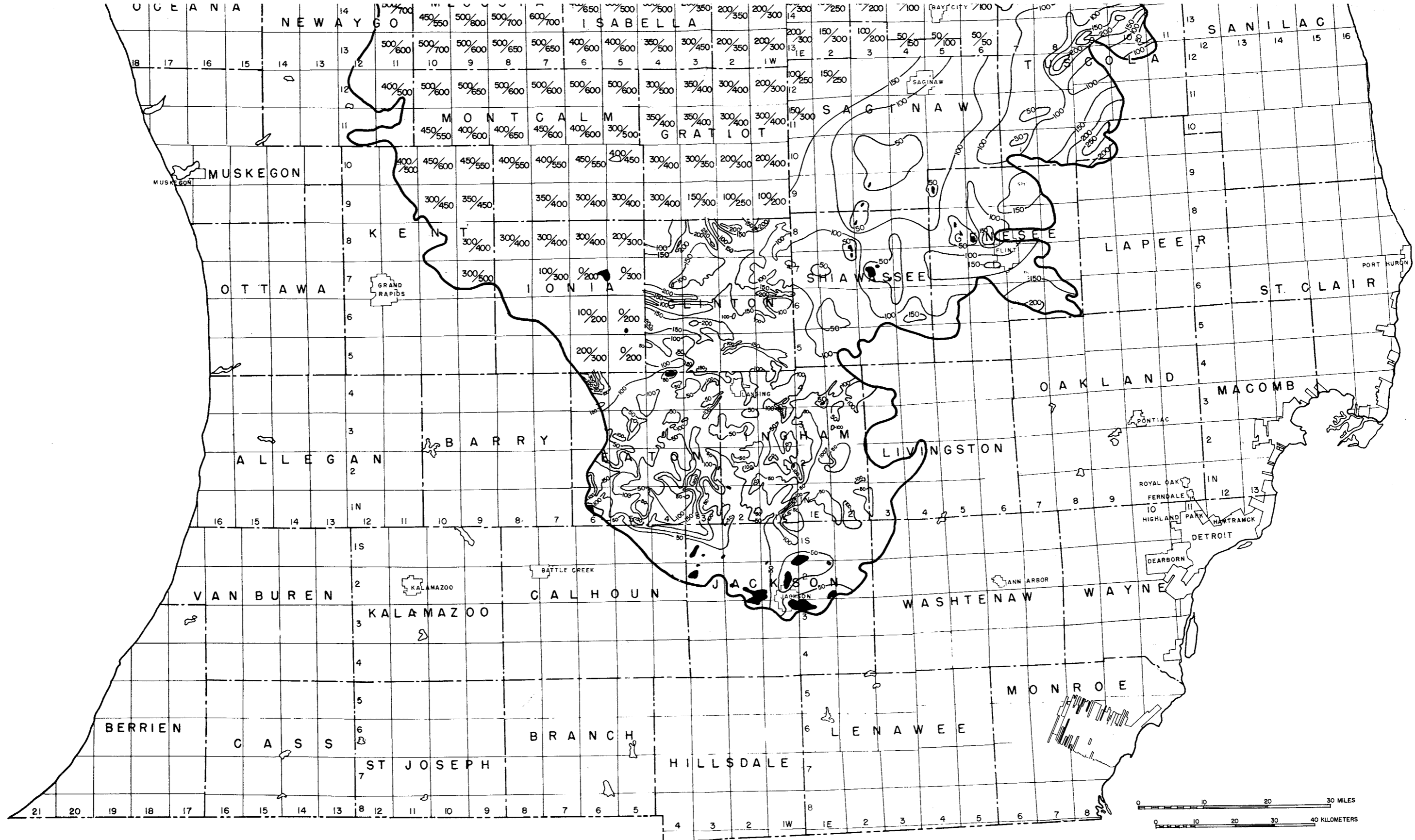
COAL DEPOSITS
LOWER PENINSULA OF MICHIGAN

1976

U.S. Bureau of Mines Proj. G0155165
Compiled by E. Welch under the direction of J. Kalliokoski.



INSET "A"
 (BILLINGS TOWNSHIP)
 LOCATION: 17 N, 1 E.



LEGEND

$\frac{200}{300}$ Approximate glacial overburden thickness, Minimum/Maximum by Township, in feet.

$\frac{300}{300}$ Approximate glacial overburden thickness, in feet.

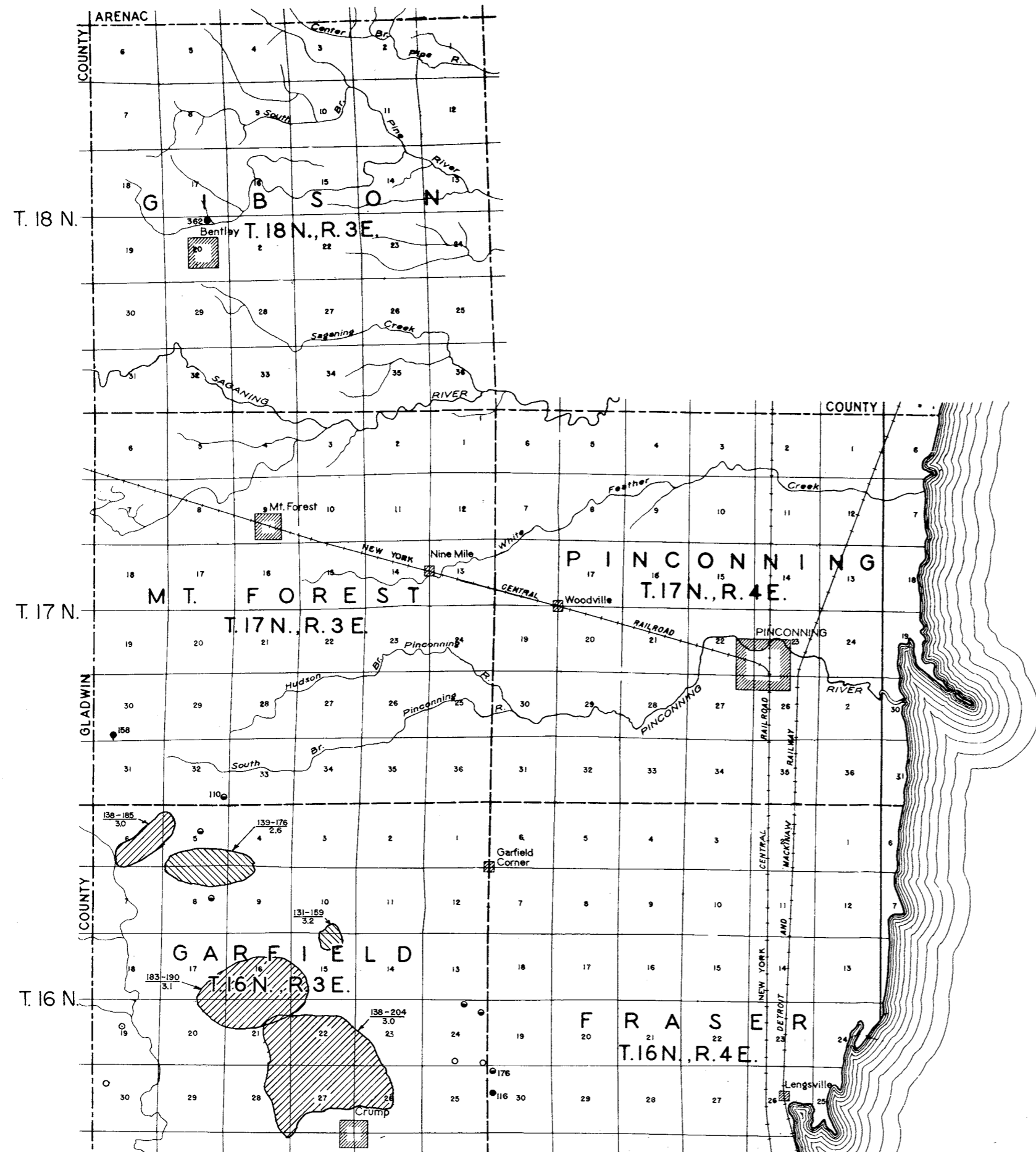
● Areas of outcrop

Sources of Information

Clinton, Eaton, Ingham Counties: Van Lier, et al (1973)
 Outcrop: Akers (1938)
 Coal basin boundary: Cohen, et al (1950)
 Remaining data: this work.
 Base map: Michigan D.N.R. No. 3503

MICHIGAN TECHNOLOGICAL UNIVERSITY
 GEOLOGICAL MAP SERIES MAP 10B
GLACIAL OVERBURDEN THICKNESS
 MICHIGAN COAL BASIN
 1976

U.S. Bureau of Mines Proj. G0155165
 Compiled by E. Welch under the direction of J. Kalliokoski.



BAY COUNTY

MICHIGAN



BASE MAP : GEOLOGICAL SURVEY DIVISION, MICHIGAN 1940

BAY

T. 15 N.

T. 15 N., R. 3 E.

T. 15 N., R. 4 E.

T. 14 N.

T. 14 N., R. 3 E.

BANGOR T. 14 N., R. 5 E.

T. 14 N., R. 6 E.

MIDLAND

SAGINAW R. 3 E.

R. 4 E.

R. 5 E.

FRANKENLUST






PORTSMOUTH

MERRITT T. 13 N., R. 6 E.

COUNTY

TUSCOLA

LEGEND

-  UPPERMOST BED (Cohee et al, 1950)
-  INTERMEDIATE BED (" ")
-  LOWERMOST BED (" ")
-  MINED OUT AREA (" ")
-  POSSIBLE EXTENT OF COAL BED (this work)

100 - 200 = DEPTH RANGE OF BED BELOW SURFACE, FEET.
2.5 = AVERAGE THICKNESS OF BED, FEET.

MORE THAN 14 in. OF COAL REPORTED

- ONE BED
- SEVERAL BEDS, DEPTH TO THICKEST
- LESS THAN 14 in. OF COAL REPORTED
- ONE BED
- SEVERAL BEDS, DEPTH TO THICKEST
- BARREN DRILL HOLE
- ²⁰¹ NUMBER ADJACENT TO DRILL HOLE = DEPTH IN FEET TO TOP OF COAL

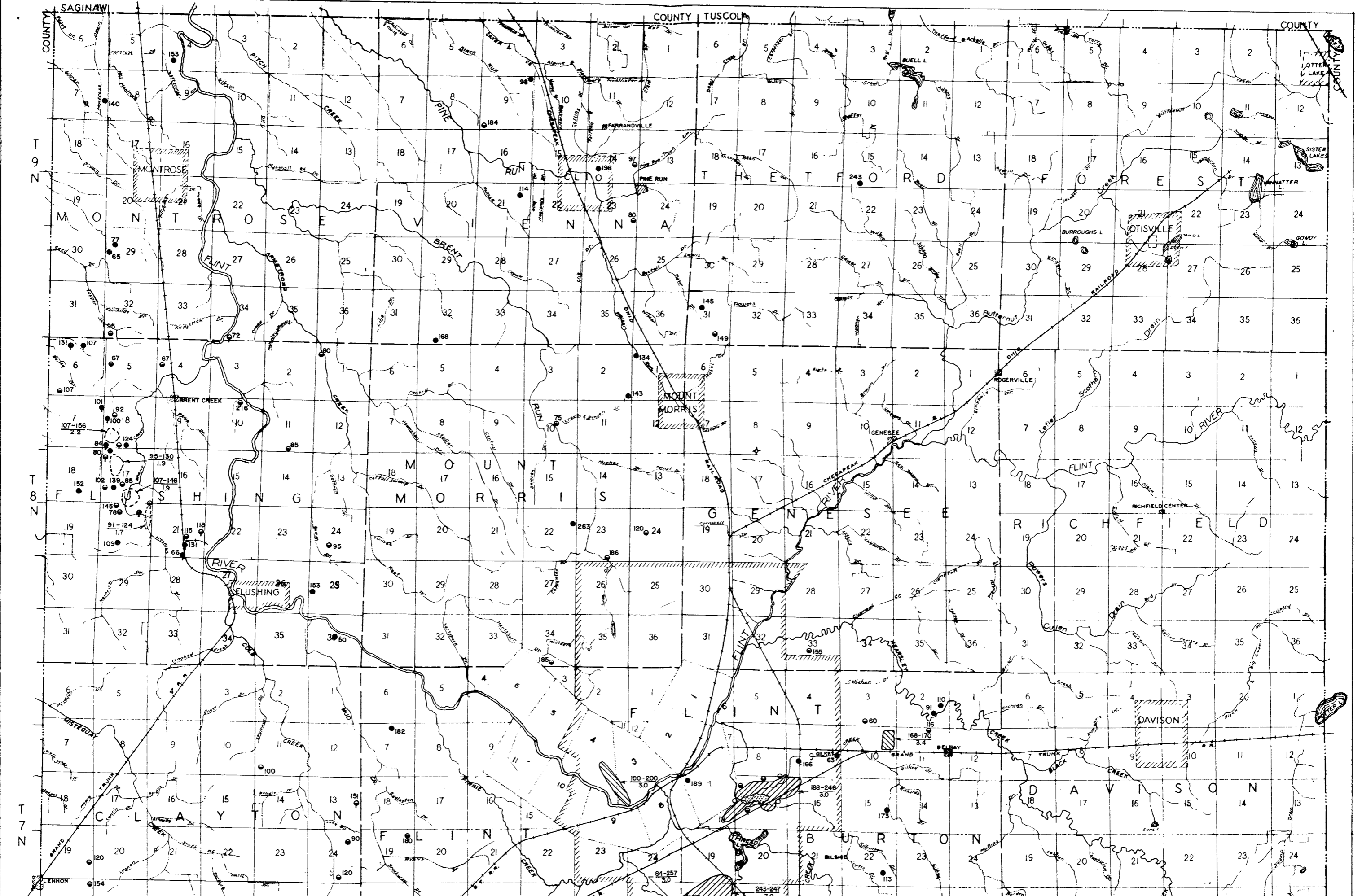
MICHIGAN TECHNOLOGICAL UNIVERSITY
GEOLOGICAL MAP SERIES MAP 5A

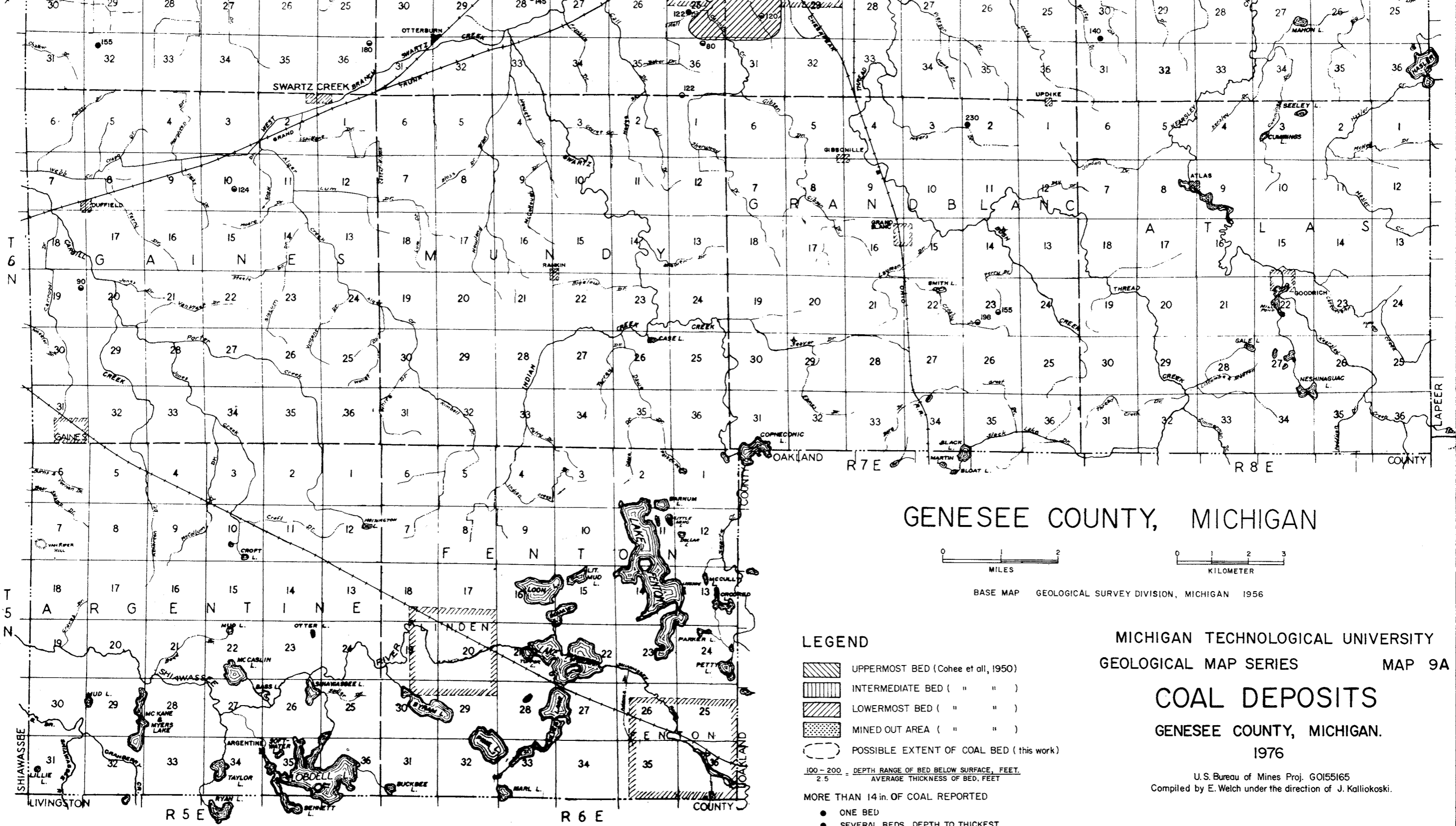
COAL DEPOSITS
BAY COUNTY, MICHIGAN. - 1976.

U.S. Bureau of Mines Proj. G0155165
Compiled by E. Welch under the direction of J. Kallioikoski.

125-154
2.1
147-178
1.8

R. 6 E. COUNTY





GENESEE COUNTY, MICHIGAN



BASE MAP GEOLOGICAL SURVEY DIVISION, MICHIGAN 1956

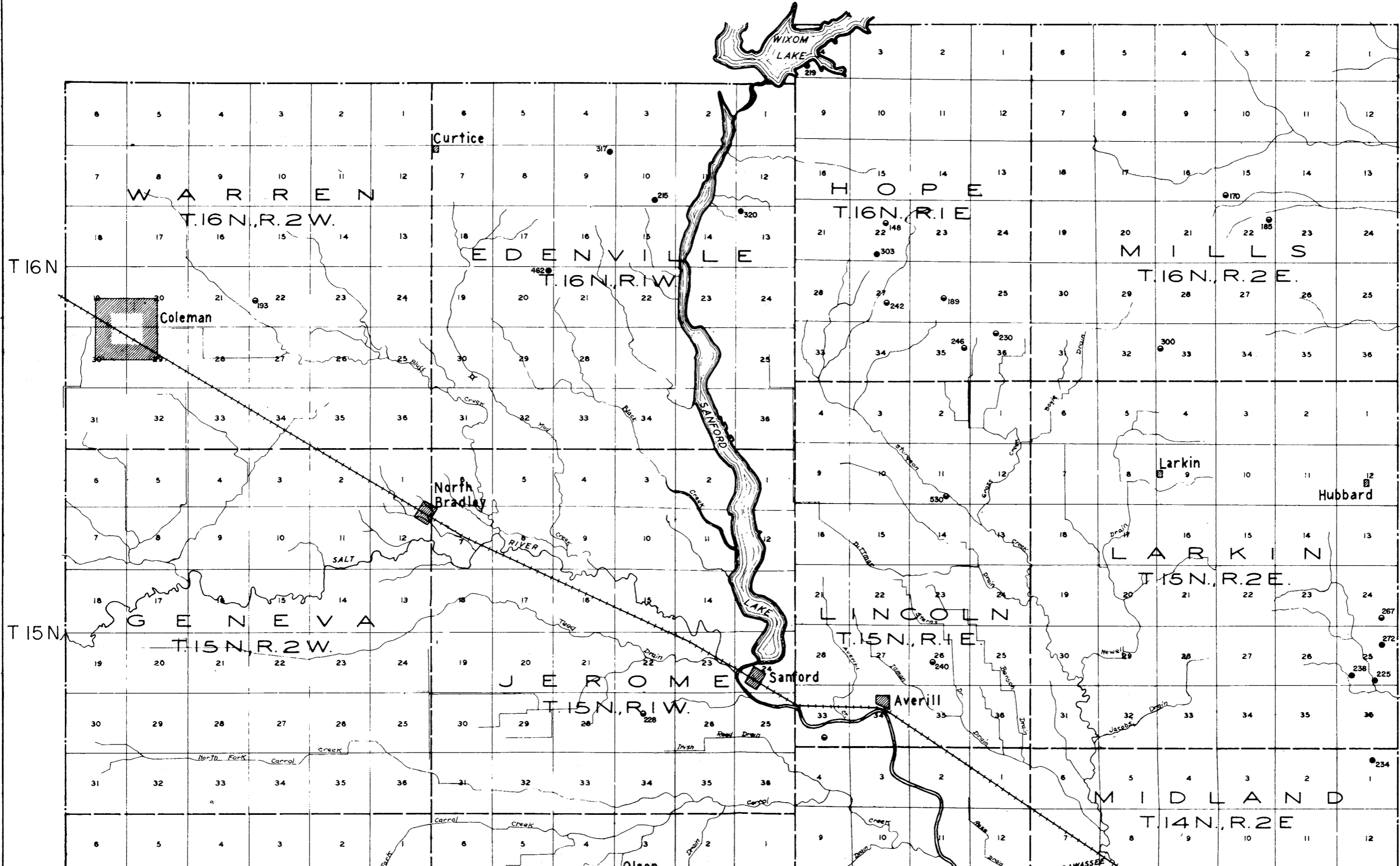
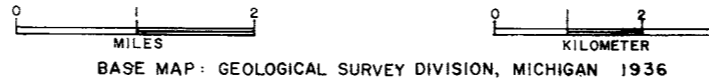
MICHIGAN TECHNOLOGICAL UNIVERSITY
 GEOLOGICAL MAP SERIES MAP 9A

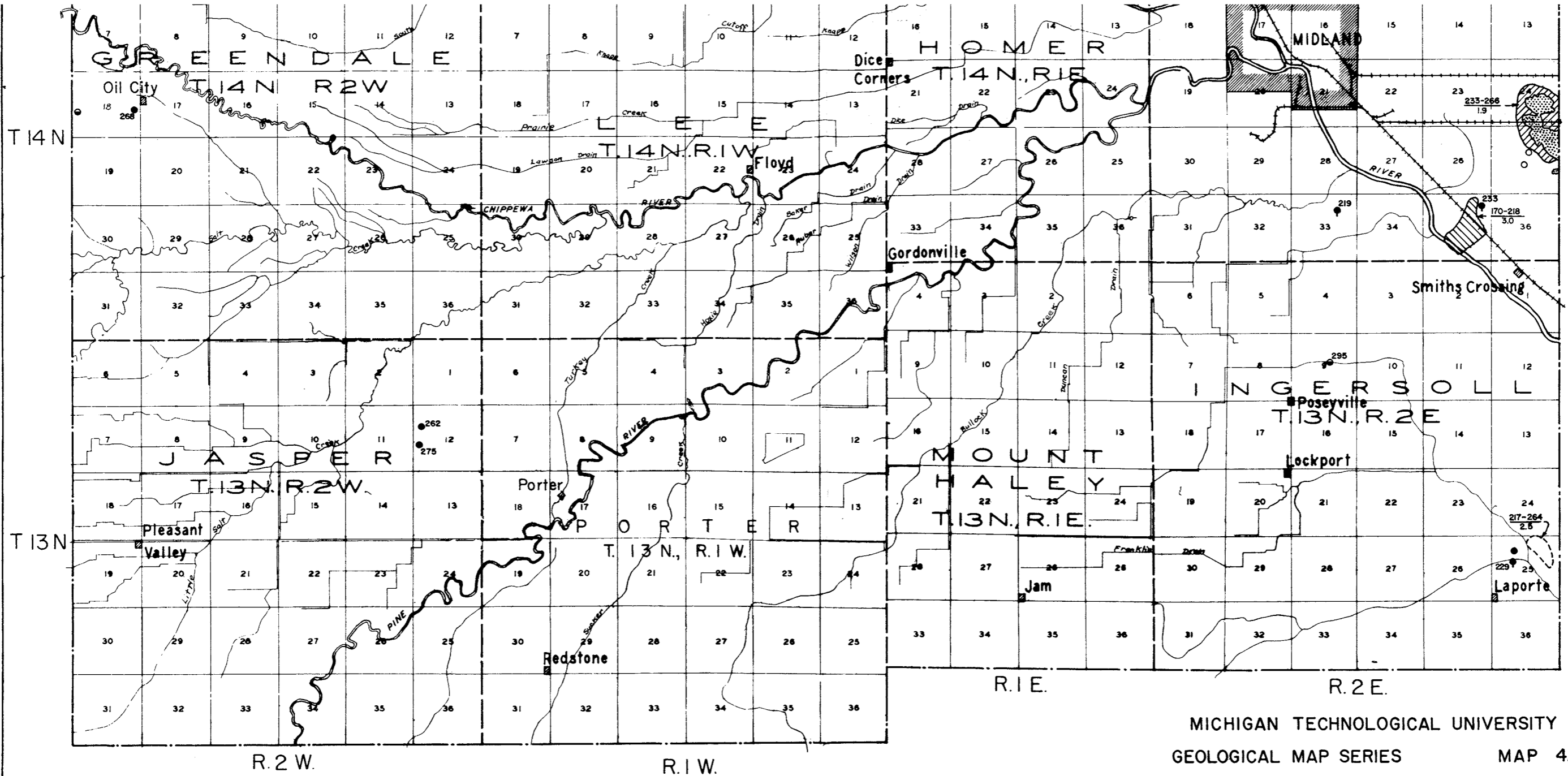
COAL DEPOSITS GENESEE COUNTY, MICHIGAN. 1976

U.S. Bureau of Mines Proj. G0155165
 Compiled by E. Welch under the direction of J. Kalliokoski.

- LEGEND**
- UPPERMOST BED (Cohee et al, 1950)
 - INTERMEDIATE BED (" ")
 - LOWERMOST BED (" ")
 - MINED OUT AREA (" ")
 - POSSIBLE EXTENT OF COAL BED (this work)
 - DEPTH RANGE OF BED BELOW SURFACE, FEET.
AVERAGE THICKNESS OF BED, FEET
 - MORE THAN 14 in. OF COAL REPORTED**
 - ONE BED
 - SEVERAL BEDS, DEPTH TO THICKEST
 - LESS THAN 14 in. OF COAL REPORTED**
 - ONE BED
 - SEVERAL BEDS, DEPTH TO THICKEST
 - BARREN DRILL HOLE
 - ²⁰¹ NUMBER ADJACENT TO DRILL HOLE = DEPTH IN FEET TO TOP OF COAL

MIDLAND COUNTY MICHIGAN










MICHIGAN TECHNOLOGICAL UNIVERSITY
 GEOLOGICAL MAP SERIES MAP 4A

COAL DEPOSITS
MIDLAND COUNTY, MICHIGAN
 1976

U.S. Bureau of Mines Proj. G0155165
 Compiled by E. Welch under the direction of J. Kalliokoski.

LEGEND

-  UPPERMOST BED (Cohee et al, 1950)
-  INTERMEDIATE BED (" ")
-  LOWERMOST BED (" ")
-  MINED OUT AREA (" ")
-  POSSIBLE EXTENT OF COAL BED (this work)

$\frac{100 - 200}{2.5}$ = DEPTH RANGE OF BED BELOW SURFACE, FEET.
 AVERAGE THICKNESS OF BED, FEET

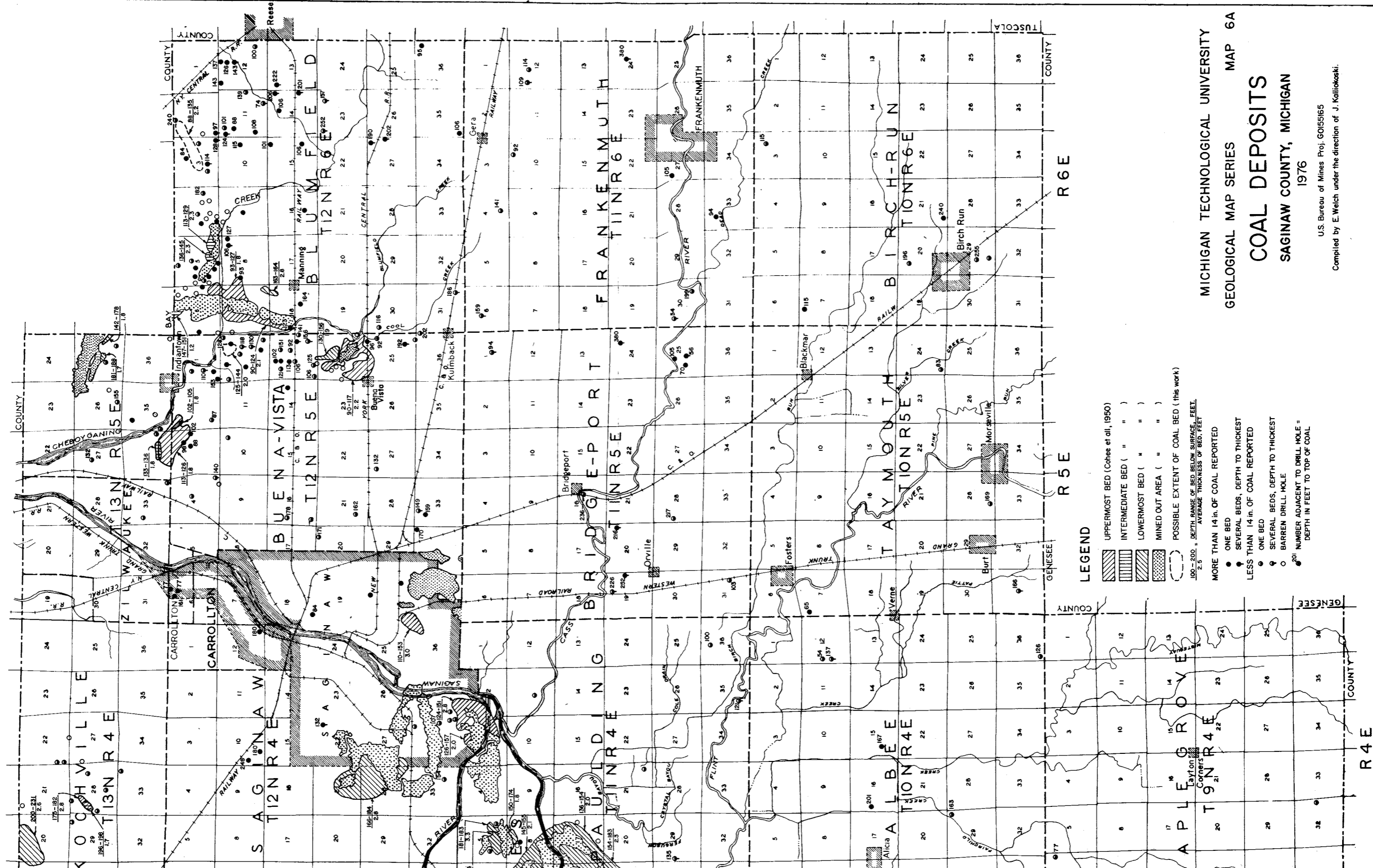
- MORE THAN 14 in. OF COAL REPORTED**
- ONE BED
 - ◆ SEVERAL BEDS, DEPTH TO THICKEST
- LESS THAN 14 in. OF COAL REPORTED**
- ONE BED
 - ◆ SEVERAL BEDS, DEPTH TO THICKEST
 - BARREN DRILL HOLE
 - ²⁰¹ NUMBER ADJACENT TO DRILL HOLE = DEPTH IN FEET TO TOP OF COAL

SAGINAW COUNTY
















MICHIGAN



BASE MAP GEOLOGICAL SURVEY DIVISION, MICHIGAN 1942



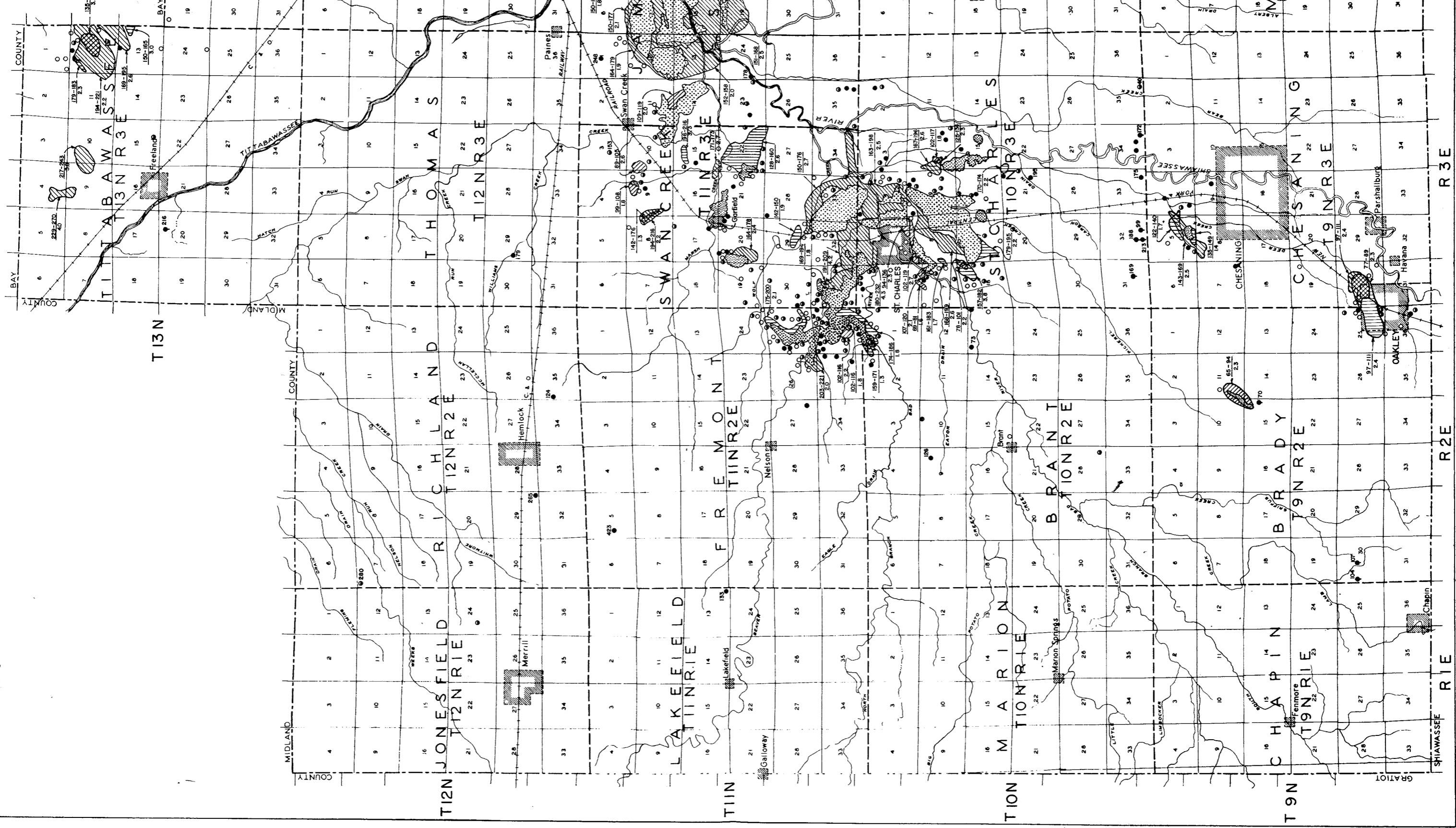
LEGEND

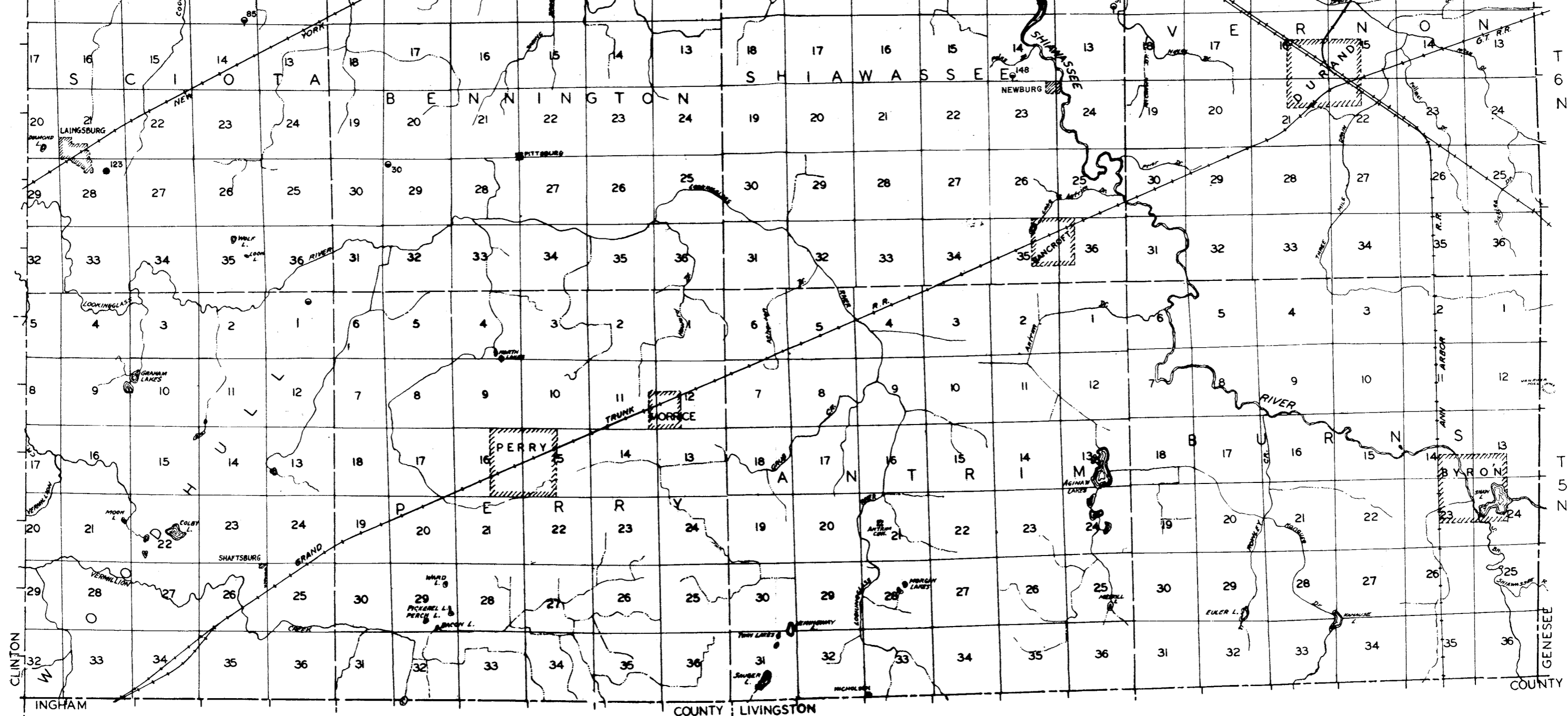
-  UPPERMOST BED (Cohite et al, 1950)
-  INTERMEDIATE BED (" ")
-  LOWERMOST BED (" ")
-  MINED OUT AREA (" ")
-  POSSIBLE EXTENT OF COAL BED (this work)
-  100-200 - DEPTH RANGE OF BED BELOW SURFACE, FEET.
-  2.5 - AVERAGE THICKNESS OF BED, FEET.
-  MORE THAN 14 in. OF COAL REPORTED
-  ● ONE BED
-  ● SEVERAL BEDS, DEPTH TO THICKEST
-  ○ LESS THAN 14 in. OF COAL REPORTED
-  ● ONE BED
-  ● SEVERAL BEDS, DEPTH TO THICKEST
-  ○ BARREN DRILL HOLE
-  ●²⁰¹ NUMBER ADJACENT TO DRILL HOLE = DEPTH IN FEET TO TOP OF COAL

MICHIGAN TECHNOLOGICAL UNIVERSITY
GEOLOGICAL MAP SERIES MAP 6A

COAL DEPOSITS SAGINAW COUNTY, MICHIGAN 1976

U.S. Bureau of Mines Proj. G0156165
Compiled by E. Welch under the direction of J. Kallikowski.










SHIAWASSEE COUNTY, MICHIGAN



BASE MAP : GEOLOGICAL SURVEY DIVISION, MICHIGAN 1958

LEGEND

-  UPPERMOST BED (Cohee et al, 1950)
-  INTERMEDIATE BED (" ")
-  LOWERMOST BED (" ")
-  MINED OUT AREA (" ")
-  POSSIBLE EXTENT OF COAL BED (this work)

$\frac{100 - 200}{2.5}$ = DEPTH RANGE OF BED BELOW SURFACE, FEET.
AVERAGE THICKNESS OF BED, FEET

MORE THAN 14 in. OF COAL REPORTED

- ONE BED
- SEVERAL BEDS, DEPTH TO THICKEST

LESS THAN 14 in. OF COAL REPORTED

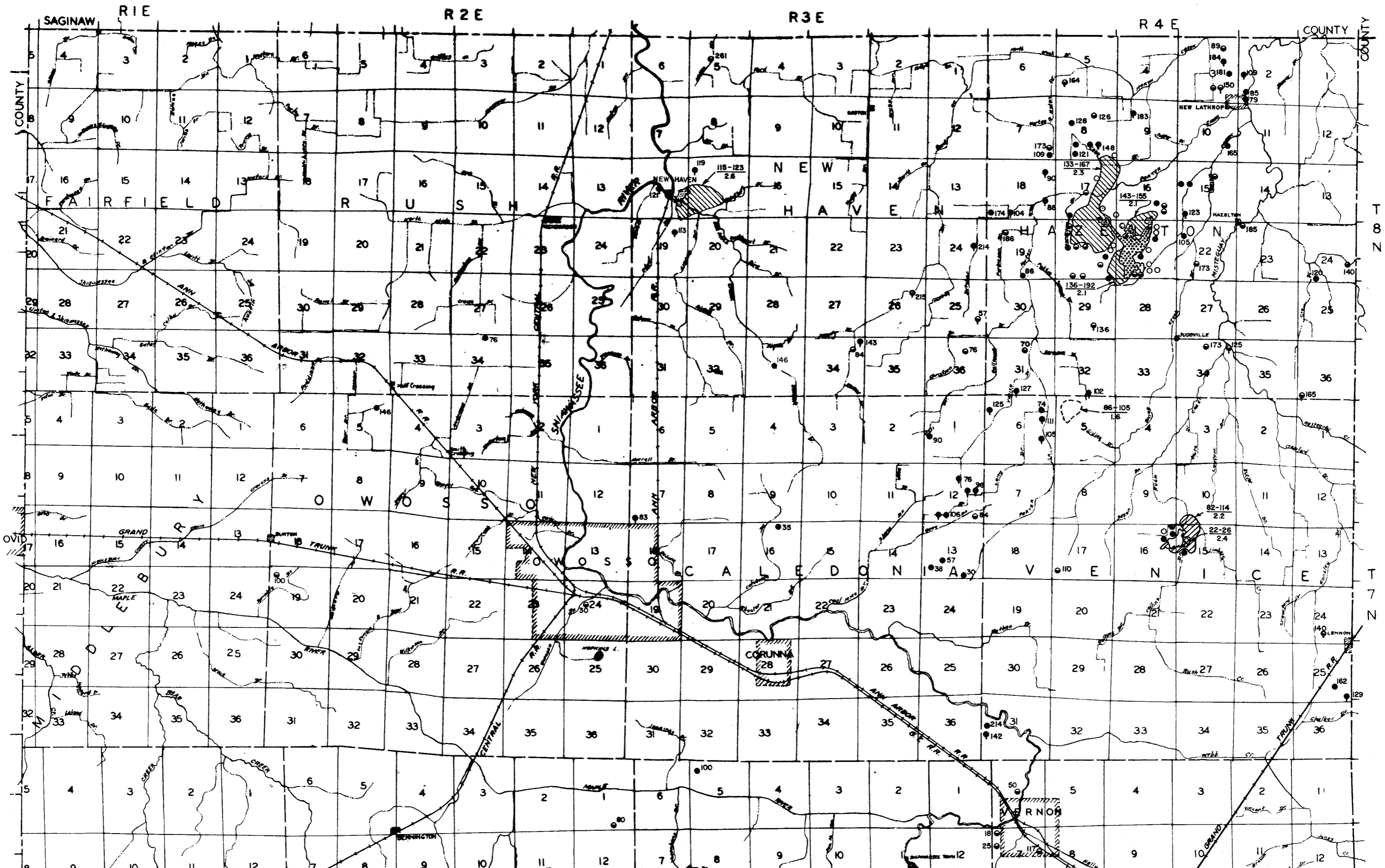
- ONE BED
- SEVERAL BEDS, DEPTH TO THICKEST
- BARREN DRILL HOLE

●²⁰¹ NUMBER ADJACENT TO DRILL HOLE = DEPTH IN FEET TO TOP OF COAL

MICHIGAN TECHNOLOGICAL UNIVERSITY
GEOLOGICAL MAP SERIES MAP 8A

COAL DEPOSITS SHIAWASSEE COUNTY, MICH. 1976

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Compiled by E. Welch under the direction of J. Kalliokoski.



TUSCOLA COUNTY MICHIGAN

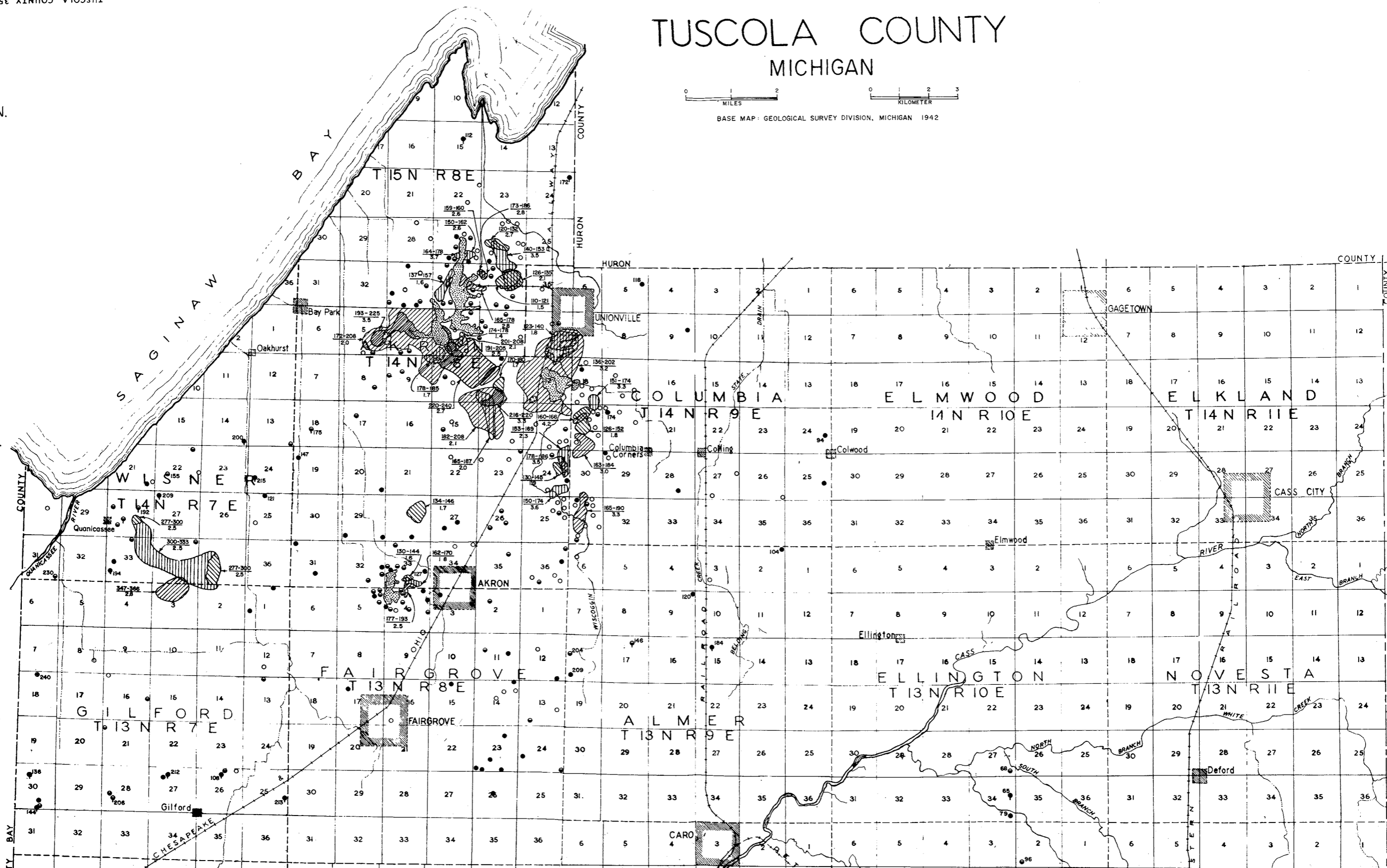


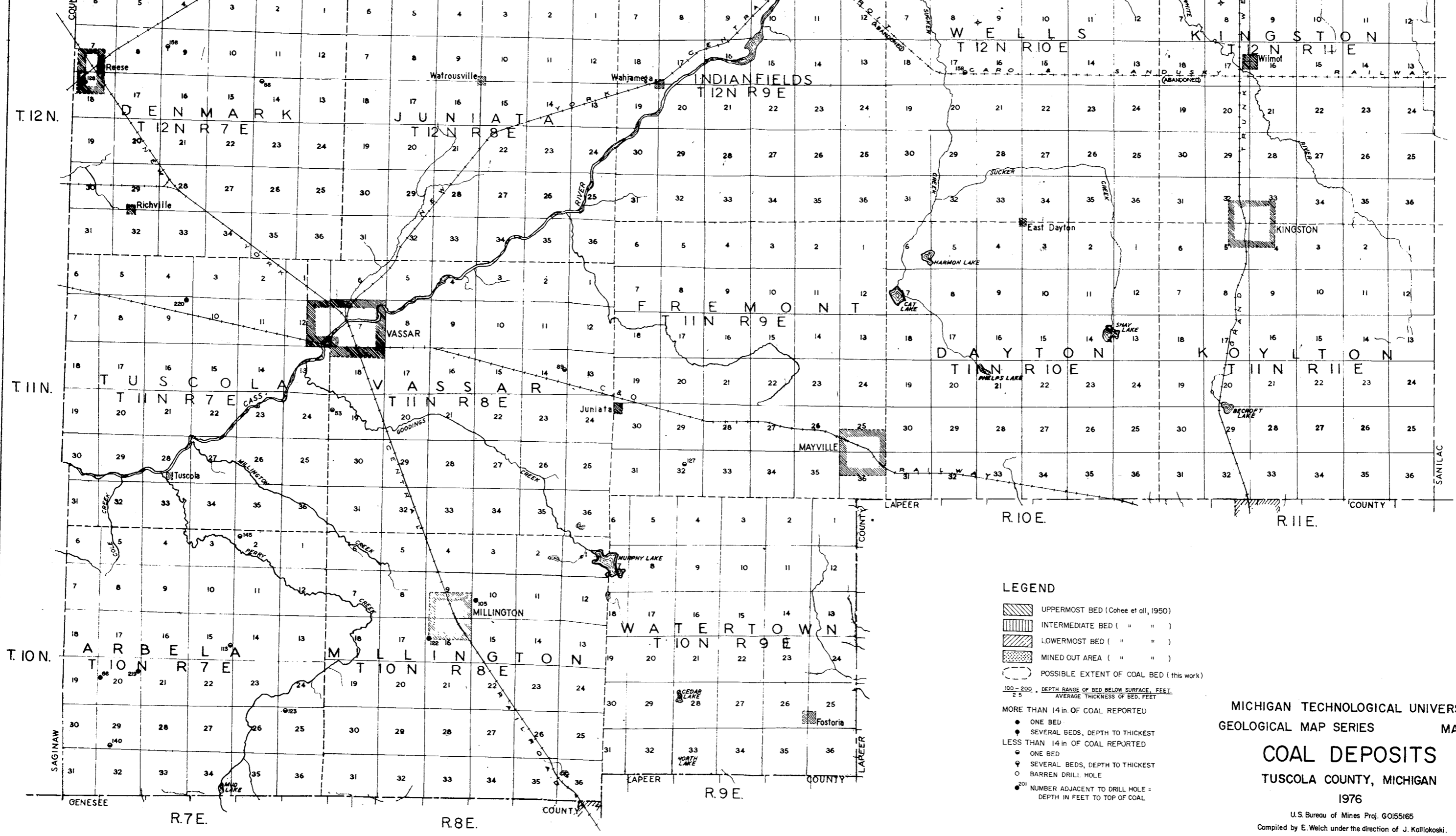
BASE MAP: GEOLOGICAL SURVEY DIVISION, MICHIGAN 1942

T.15 N.






T.14 N.

T.13 N.





LEGEND

-  UPPERMOST BED (Cohee et al., 1950)
-  INTERMEDIATE BED (" ")
-  LOWERMOST BED (" ")
-  MINED OUT AREA (" ")
-  POSSIBLE EXTENT OF COAL BED (this work)

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- ONE BED
- ◆ SEVERAL BEDS, DEPTH TO THICKEST

LESS THAN 14 in. OF COAL REPORTED

- ONE BED
- ◊ SEVERAL BEDS, DEPTH TO THICKEST
- BARREN DRILL HOLE
- NUMBER ADJACENT TO DRILL HOLE = DEPTH IN FEET TO TOP OF COAL

MICHIGAN TECHNOLOGICAL UNIVERSITY
 GEOLOGICAL MAP SERIES MAP 7A
COAL DEPOSITS
 TUSCOLA COUNTY, MICHIGAN
 1976
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