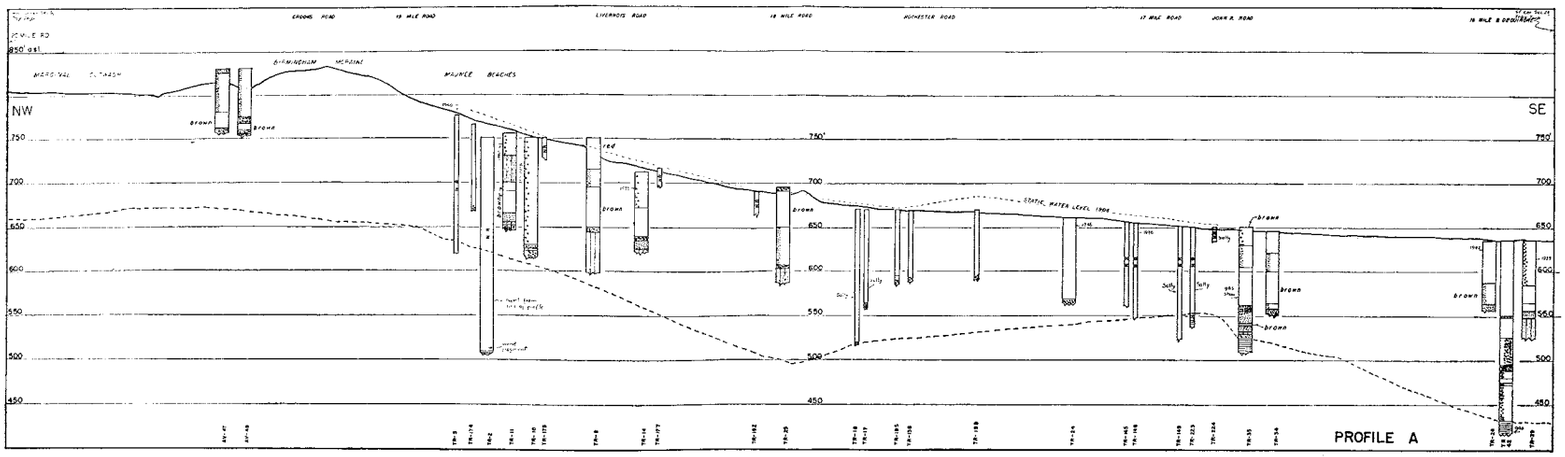
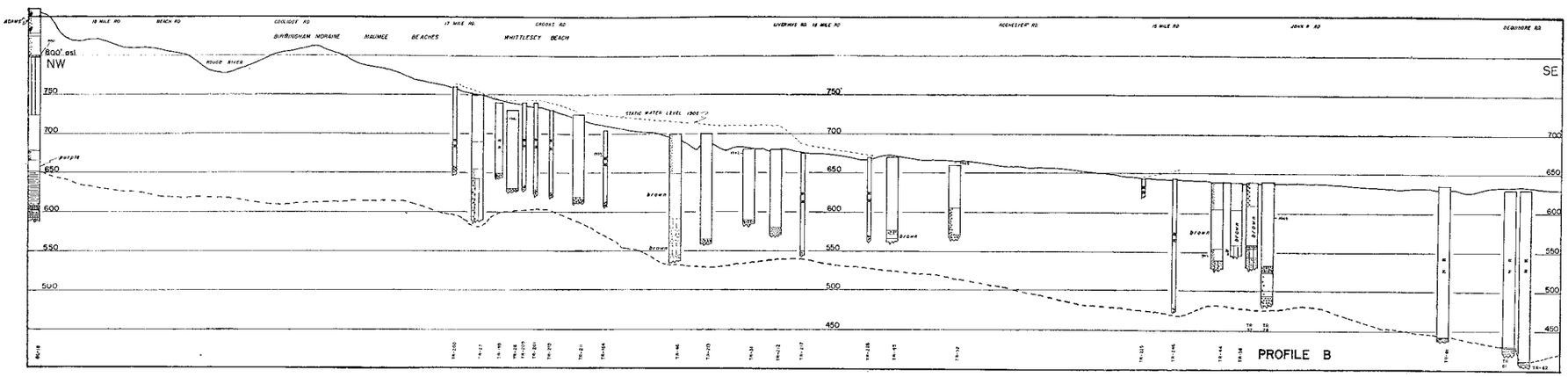
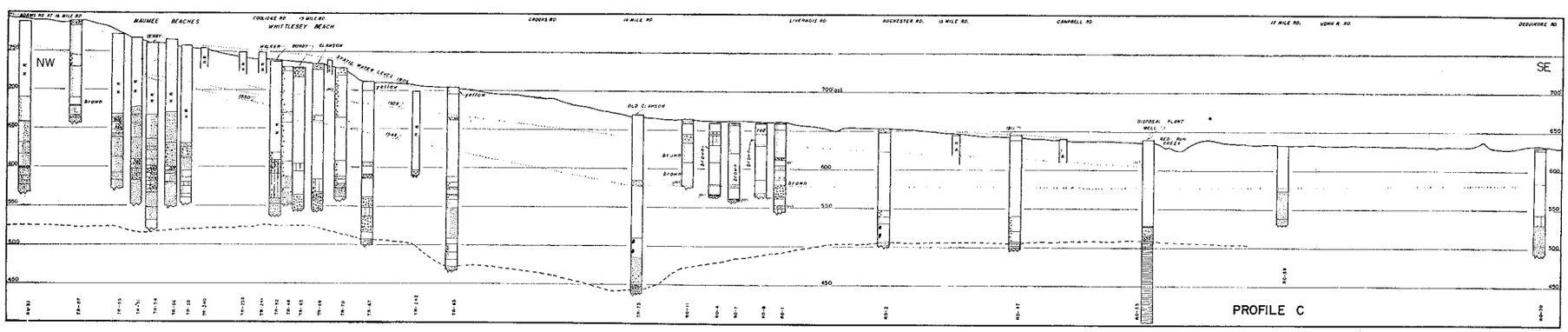






LEGEND

UNCONSOLIDATED SEDIMENTS

- CLAY
- SANDY CLAY
- GRAVELLY CLAY
- SANDY GRAVELLY CLAY
- BOULDERS
- HARDPAN
- SAND
- CLAYEY SAND
- GRAVEL
- CLAYEY GRAVEL
- SAND AND GRAVEL
- CLAYEY SAND AND GRAVEL

NOTE:- UNLESS OTHERWISE INDICATED, CLAYS ARE BLUE OR GRAY IN COLOR.

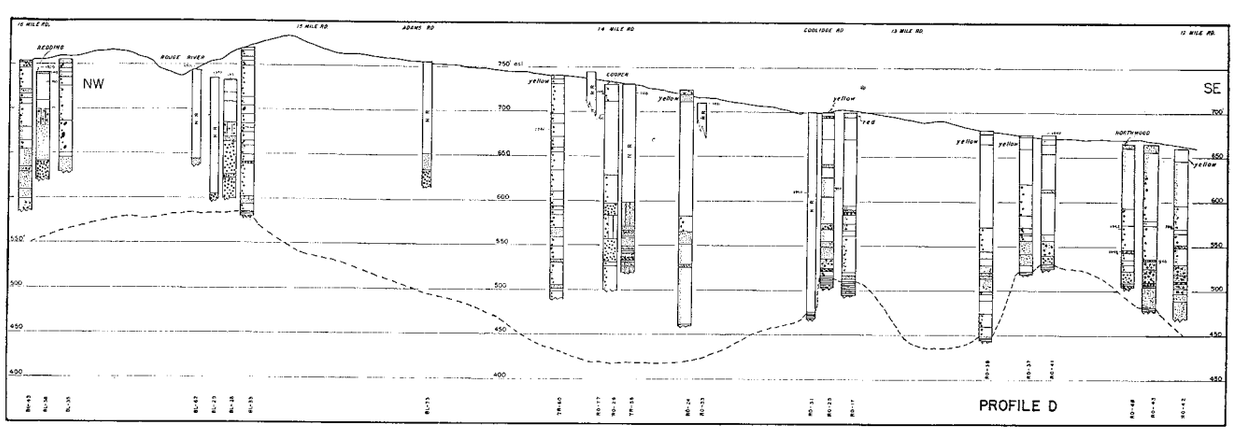
BEDROCK

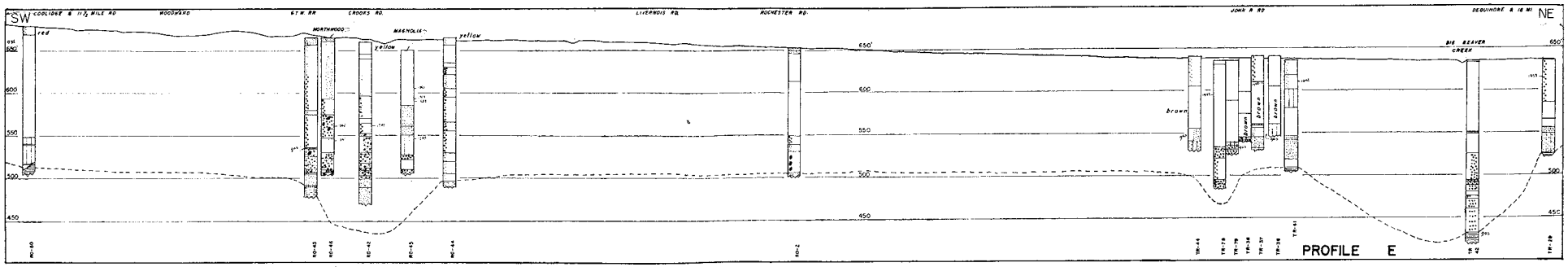
- SHALE
- SANDSTONE

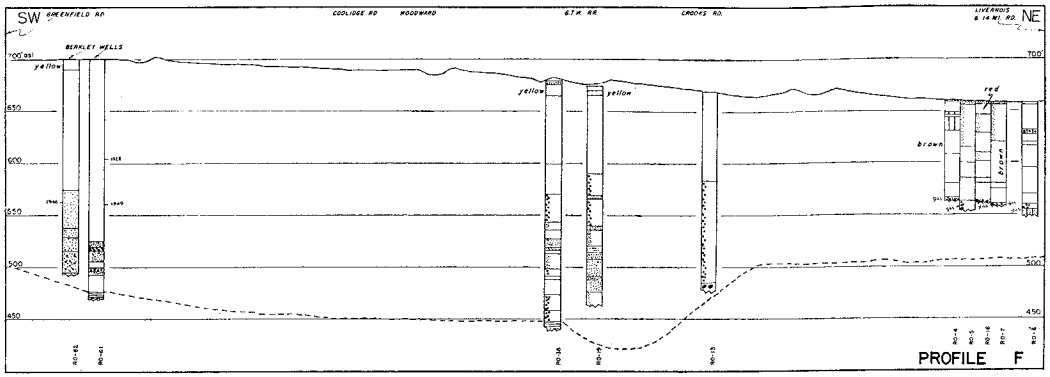
- TOPOGRAPHIC PROFILE.
- APPROX. BEDROCK PROFILE.
- 1950 REPORTED WATER LEVEL
- N R NO RECORD OF SEDIMENTS PENETRATED.
- WELLS NOT ALONG LINE OF PROFILE.

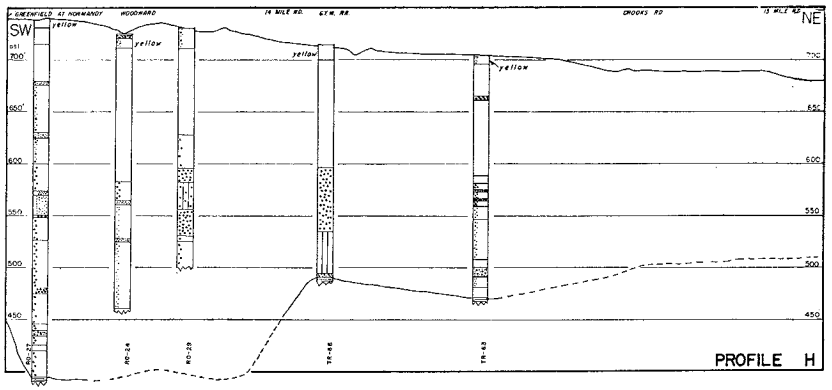
SCALE: HORIZONTAL 1" TO 1000 FT.
VERTICAL 1" TO 50 FT.

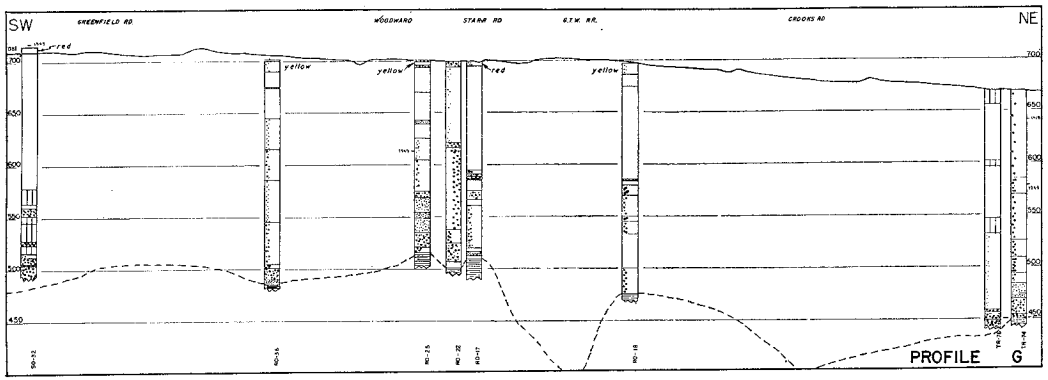
FIGURE 12
PROFILES A-D
GLACIAL LAKE PLAIN

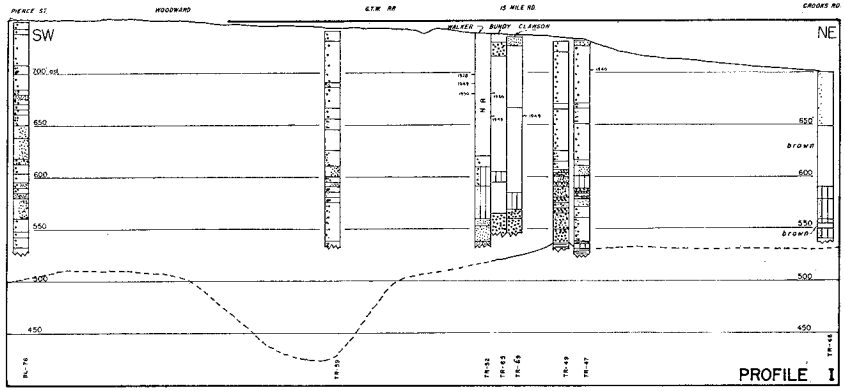


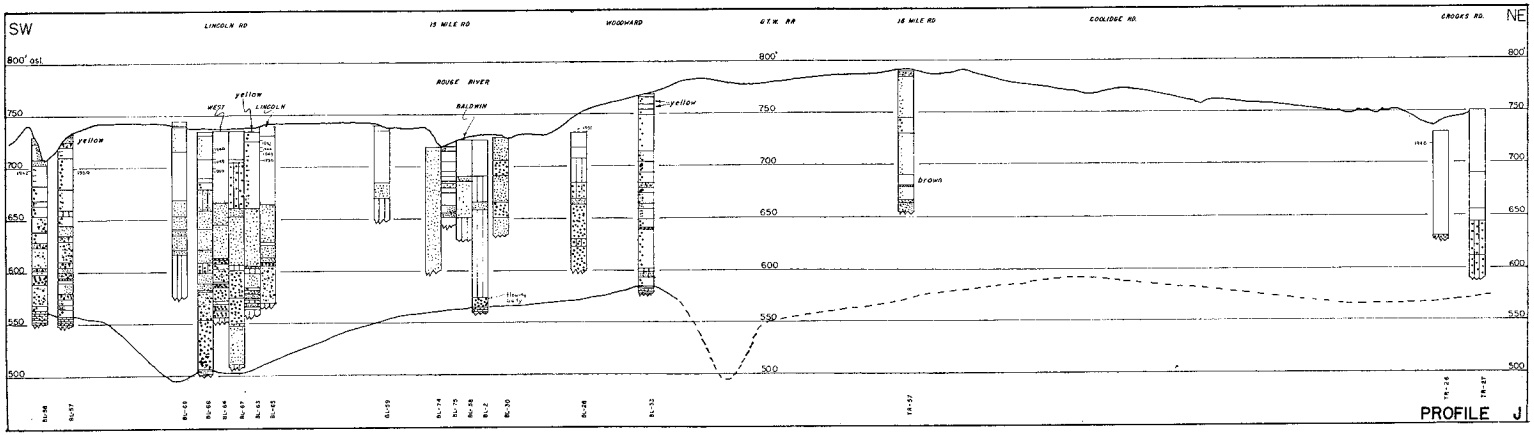












LEGEND

UNCONSOLIDATED SEDIMENTS

CLAY	SAND
SANDY CLAY	CLAYEY SAND
GRAVELLY CLAY	GRAVEL
SANDY GRAVELLY CLAY	CLAYEY GRAVEL
BOULDERS	SAND AND GRAVEL
HARDPAN	CLAYEY SAND AND GRAVEL

NOTE - UNLESS OTHERWISE INDICATED, CLAYS ARE BLUE OR GRAY IN COLOR.

BEDROCK

SHALE	SANDSTONE

TOPOGRAPHIC PROFILE

BEDROCK PROFILE (APPROX)

N R NO RECORD OF SEDIMENTS PENETRATED

1950 REPORTED WATER LEVEL

WELLS SLIGHTLY OFFSET FROM LINE OF PROFILE.

SCALE

HORIZONTAL 1" TO 1000 FT.

VERTICAL 1" TO 50 FT.

FIGURE 14

PROFILES E – J

GLACIAL LAKE PLAIN

J.J.M.

FIGURE 17

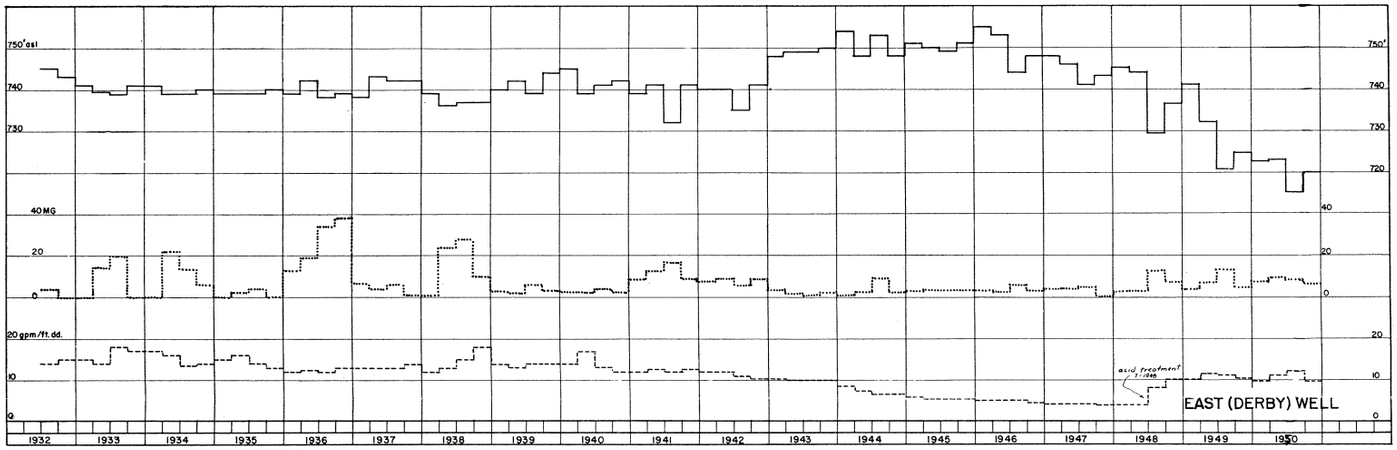
WELL HYDROGRAPHS

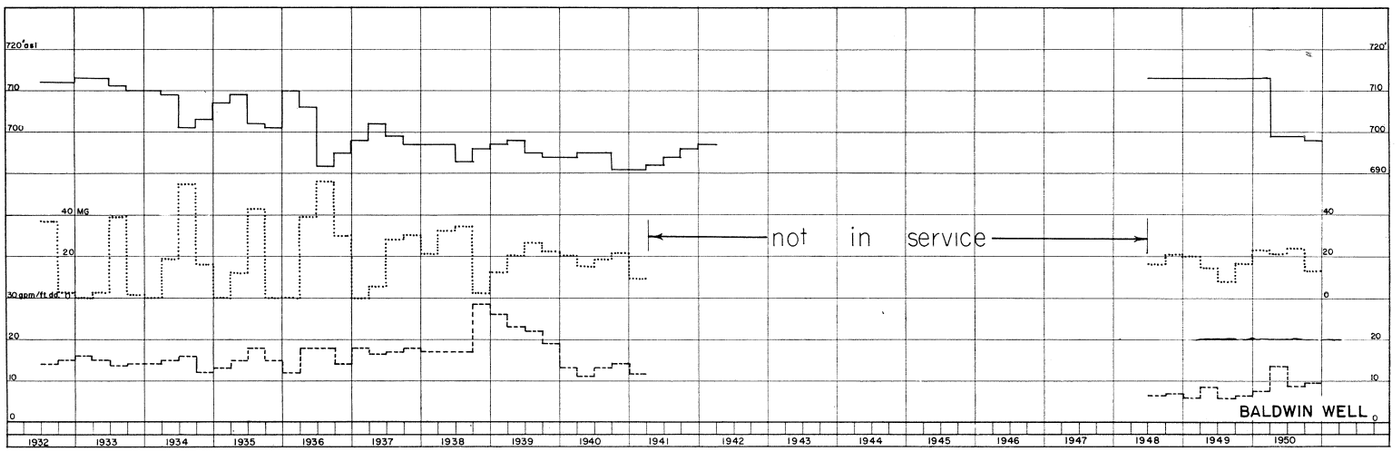
CITY OF BIRMINGHAM, MICH.

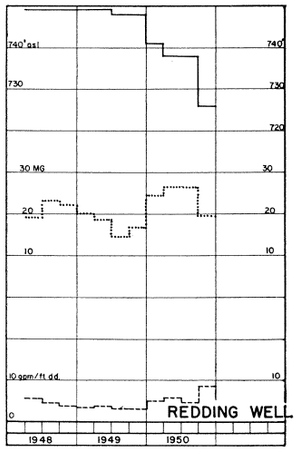
——— Static water level (sea level datum).

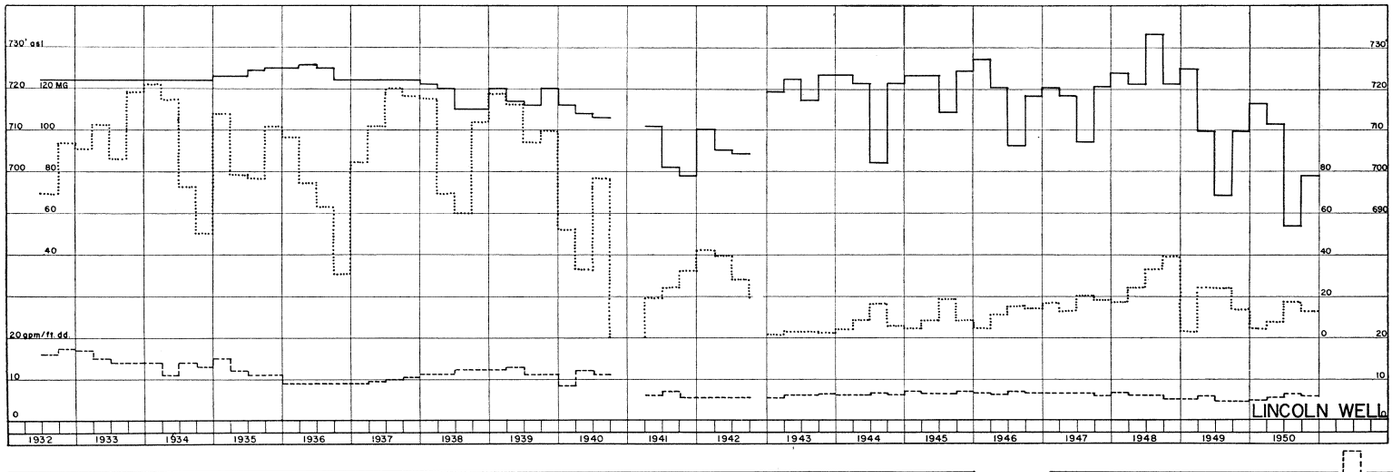
..... Total pumpage per quarter year. (MILLIONS OF GALLONS)

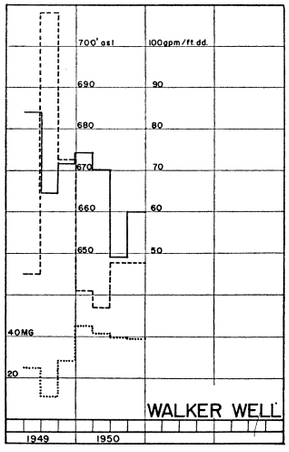
------ Specific capacity – gpm/ft. dd.

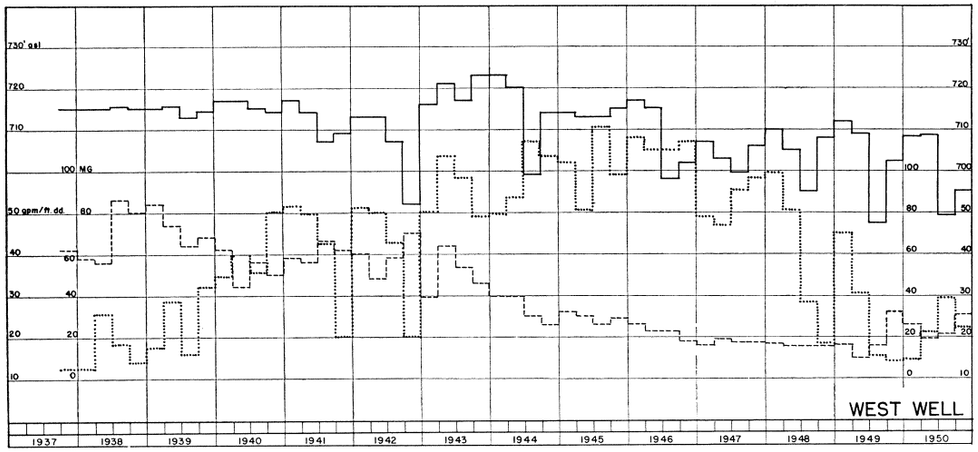


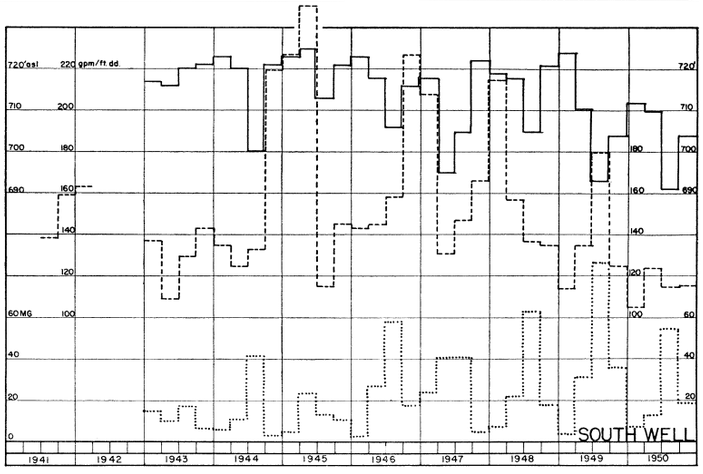


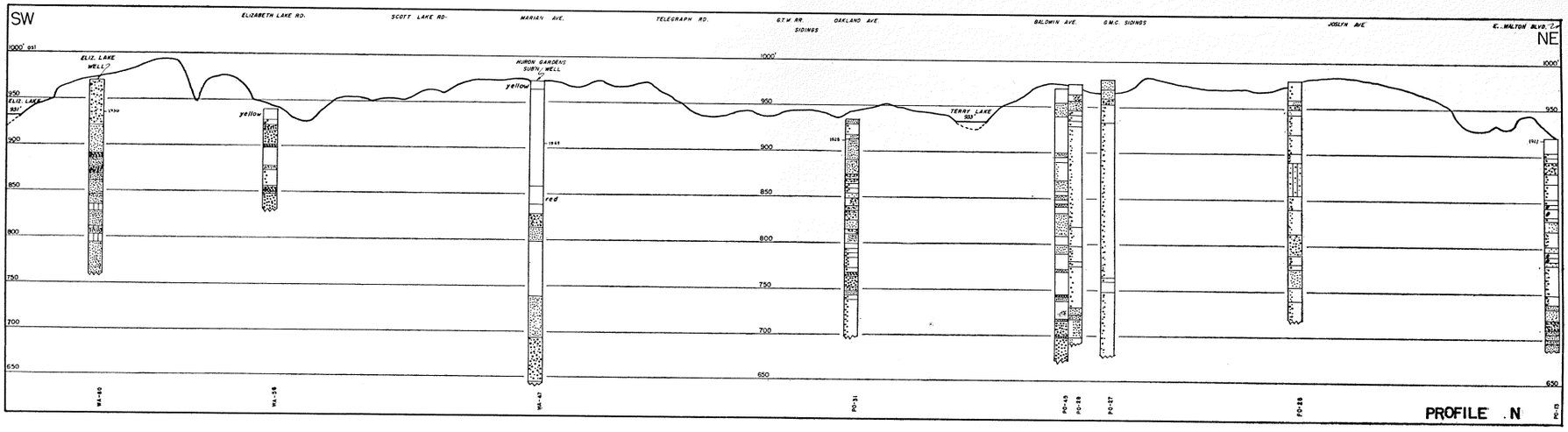


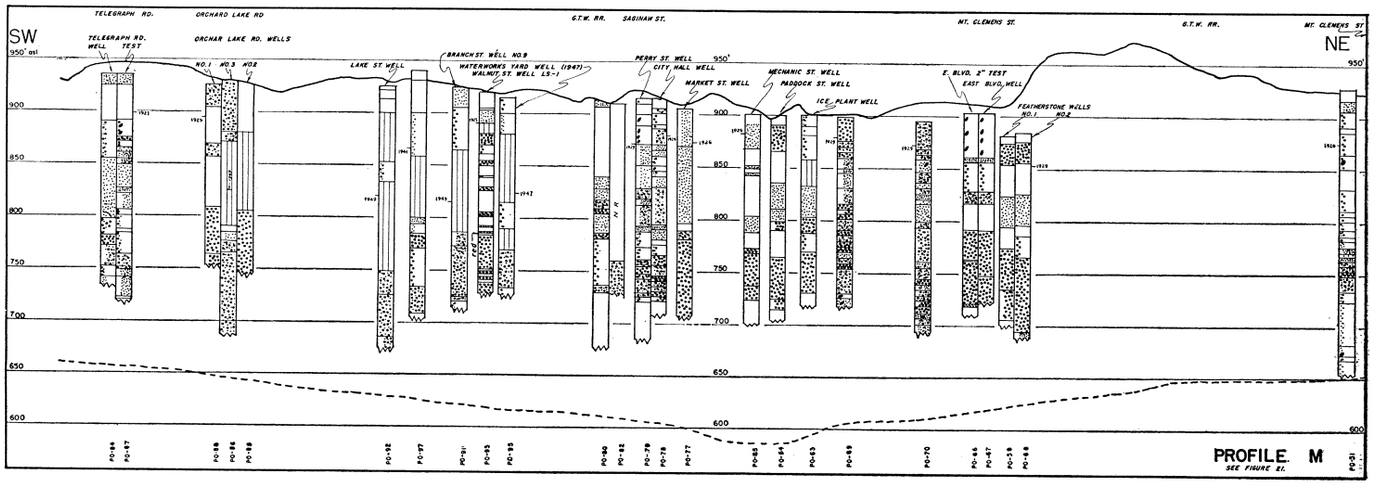


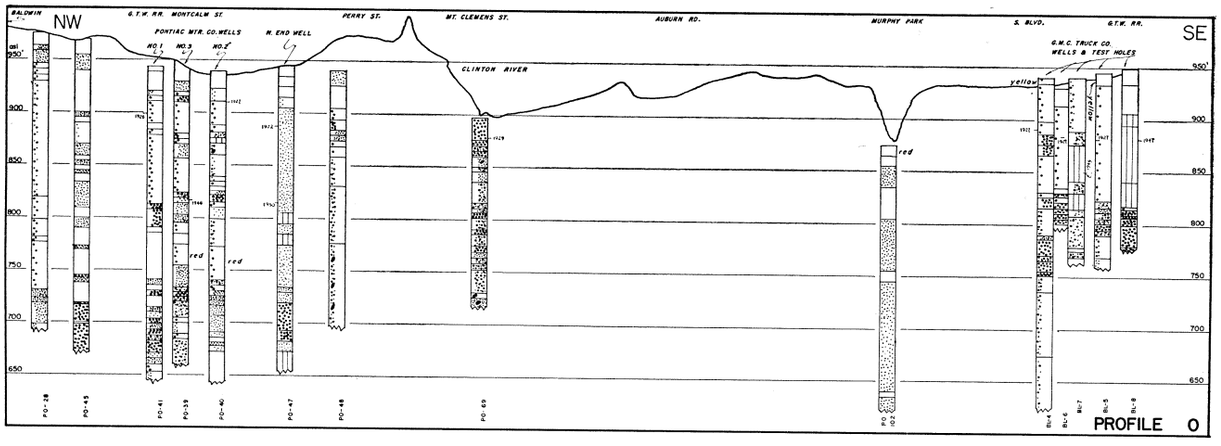


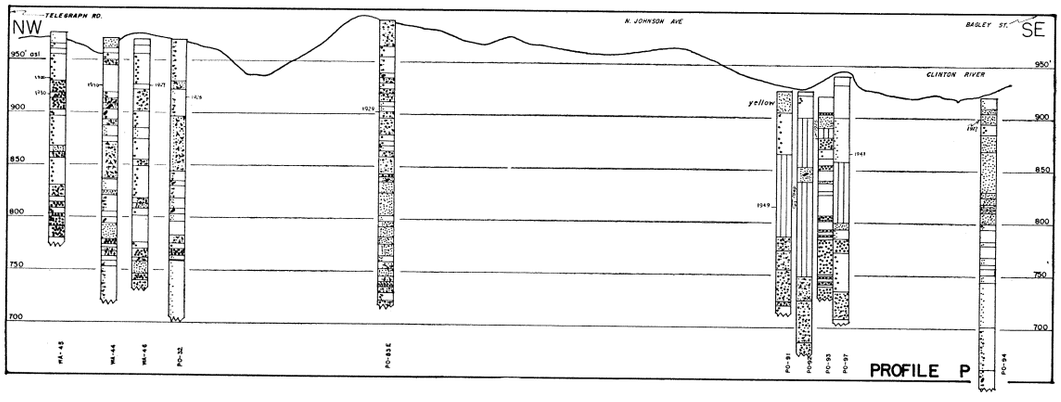












LEGEND

UNCONSOLIDATED SEDIMENTS

- CLAY
- SANDY CLAY
- GRAVELLY CLAY
- SANDY GRAVELLY CLAY
- BOULDERS
- HARDPAN
- SAND
- CLAYEY SAND
- GRAVEL
- CLAYEY GRAVEL
- SAND AND GRAVEL
- CLAYEY SAND AND GRAVEL

NOTE: UNLESS OTHERWISE INDICATED, CLAYS ARE BLUE OR GRAY IN COLOR.

TOPOGRAPHIC PROFILE.
APPROX. BEDROCK PROFILE.
N.R. NO RECORD OF SEDIMENTS PENETRATED.
-1850 REPORTED WATER LEVEL.
WELLS SLIGHTLY OFFSET FROM LINE OF PROFILE.

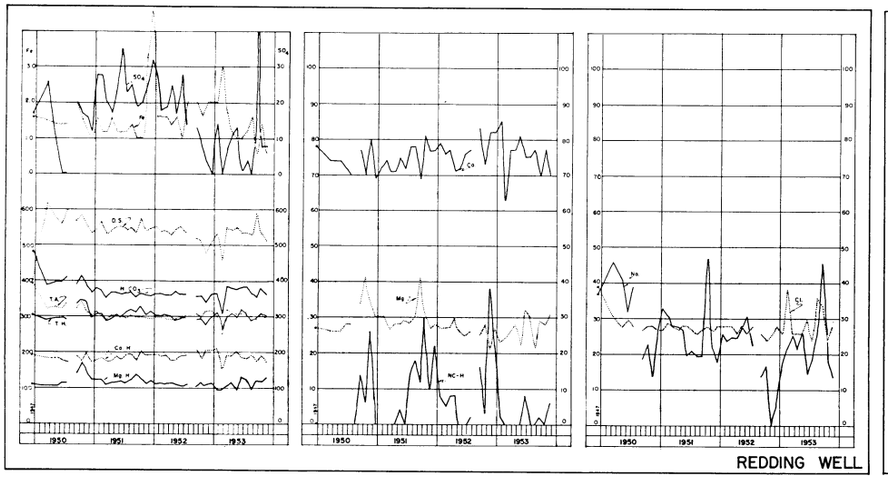
SCALE
HORIZONTAL 1" TO 1000 FT.
VERTICAL 1" TO 50 FT.

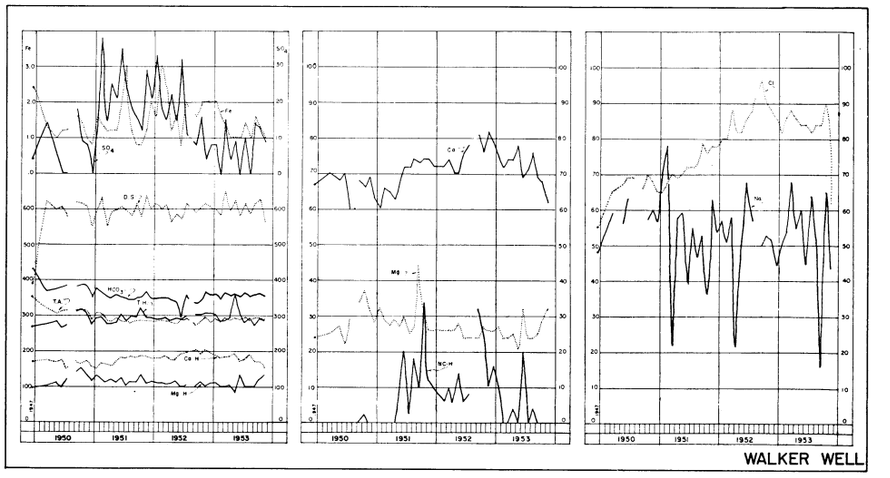
FIGURE 26

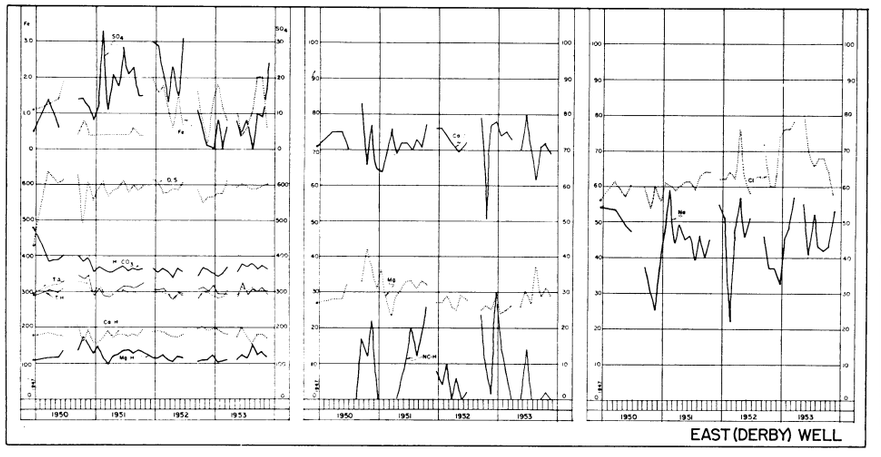
PROFILES M-P

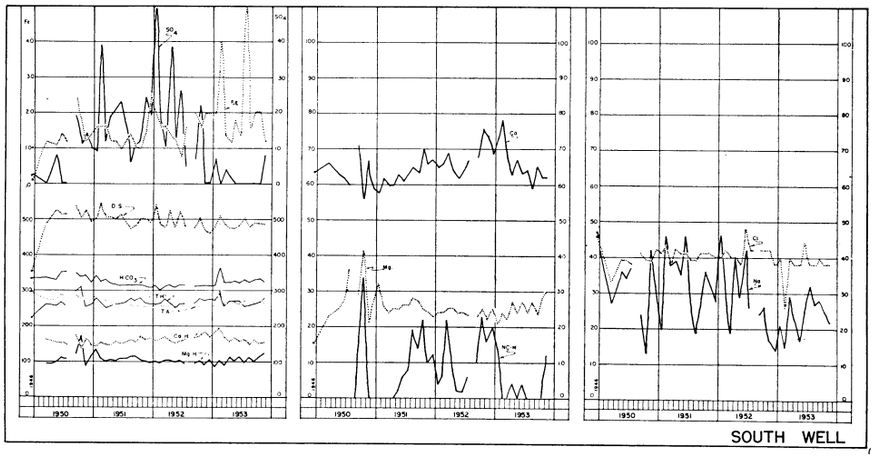
PONTIAC REGION

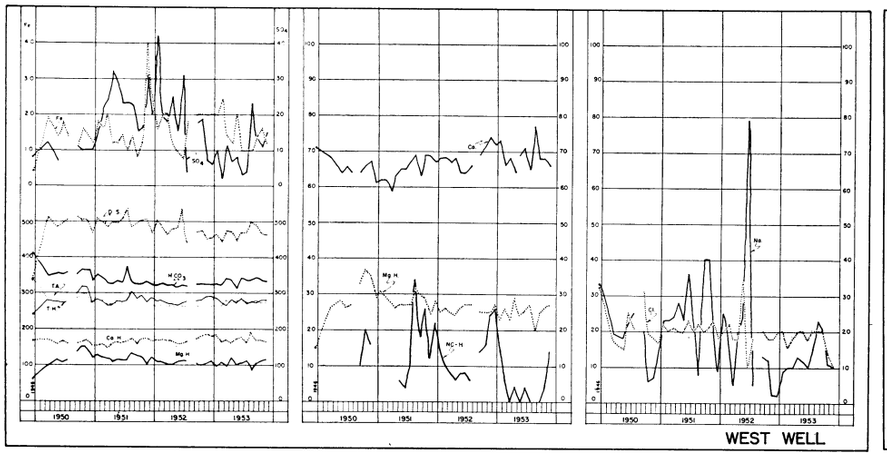
A.J.M.

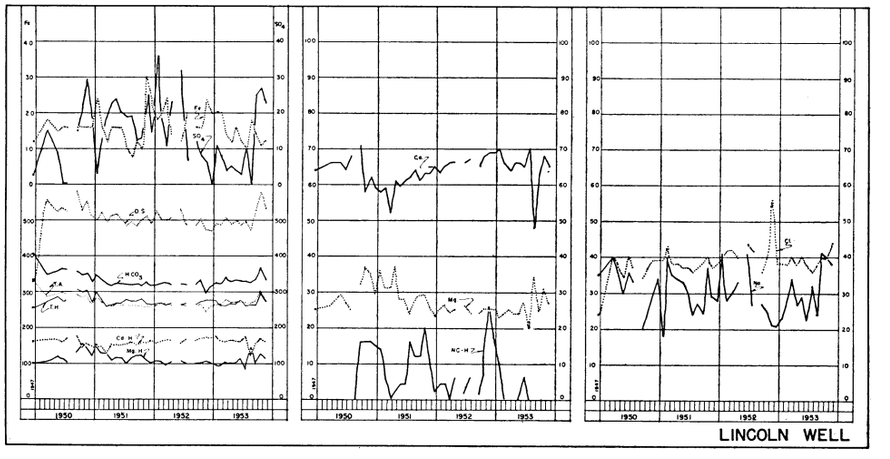












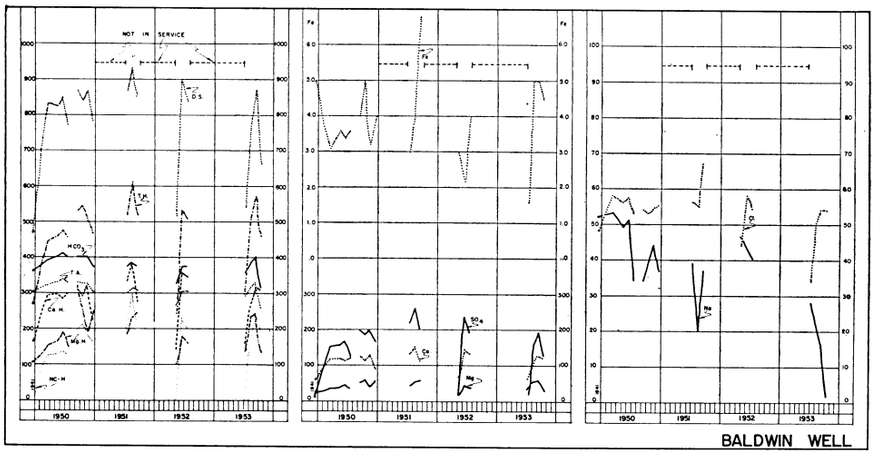


FIGURE 31

WATER ANALYSES CHART

CITY OF BIRMINGHAM
MICHIGAN

EXPLANATION

Fe	TOTAL IRON	D.S.	TOTAL DISSOLVED SOLIDS.
Ca	CALCIUM	T.A.	TOTAL ALKALINITY
Mg	MAGNESIUM	Ca.H.	CALCIUM HARDNESS
Na	SODIUM (by difference)	Mg.H.	MAGNESIUM HARDNESS
HCO_3	BICARBONATES	T.H.	TOTAL HARDNESS
SO_4	SULFATES	NCH	NON-CARBONATE HARDNESS
Cl	CHLORIDES		

NOTE: ALL VALUES SHOWN ON CHARTS ARE IN PARTS PER MILLION OF CONSTITUENT BY WEIGHT.