Ground-Water Resources of MERCER COUNTY

by
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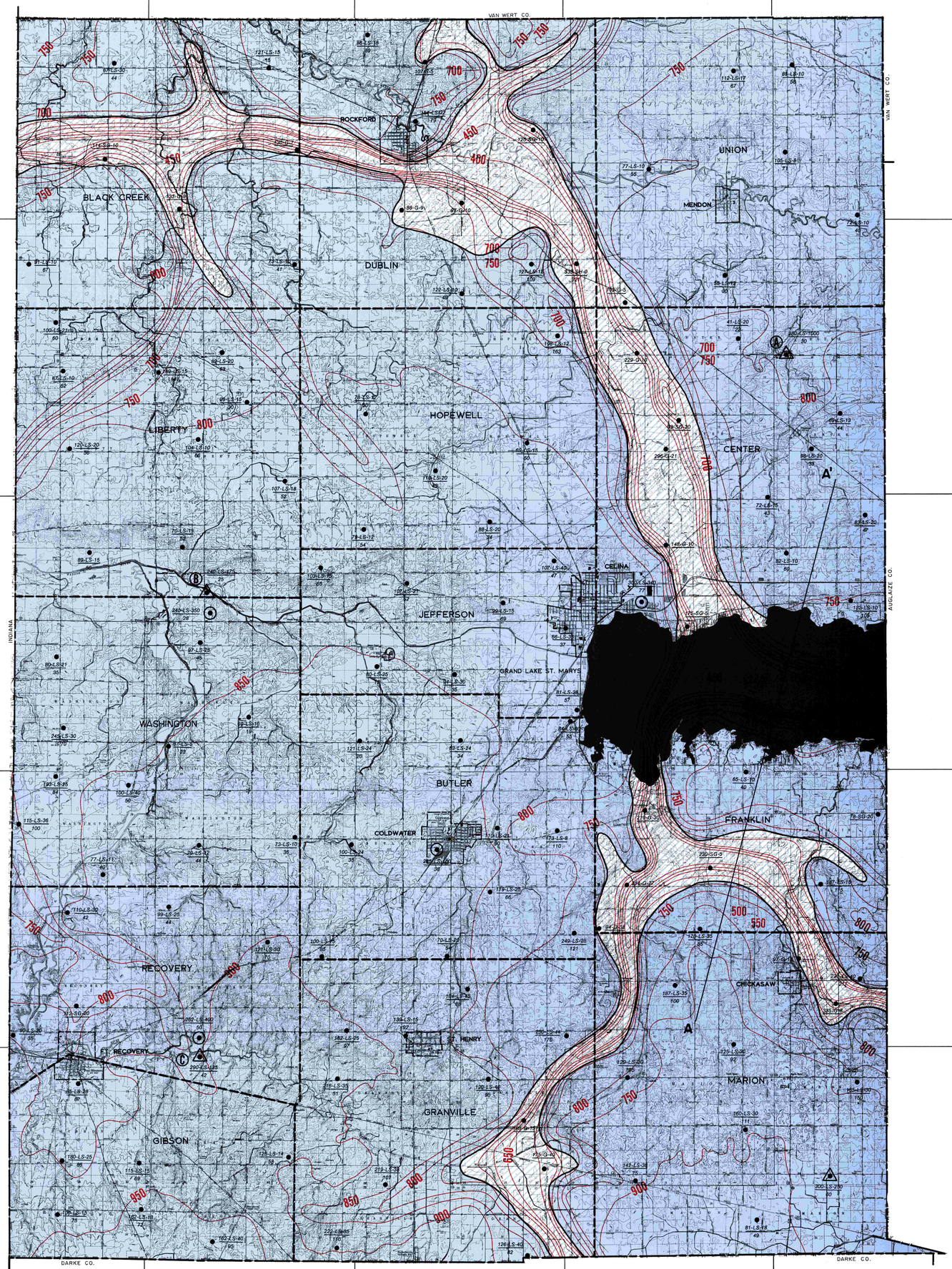
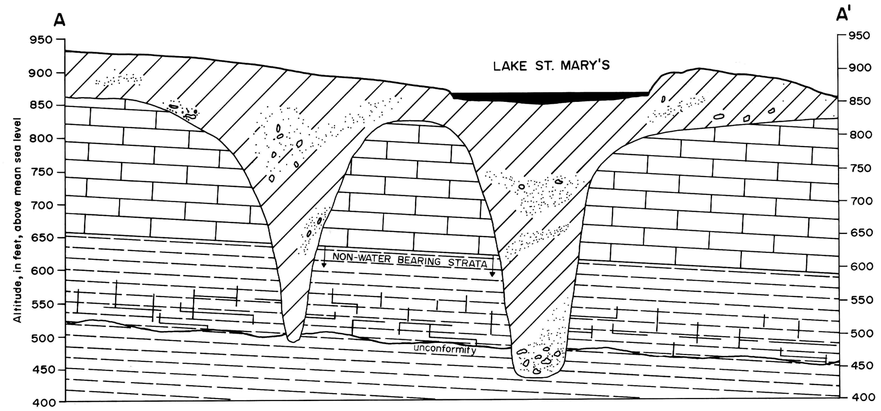
Index Map

Scale in miles
1:62,500

0 1 2 3 4

Contour Interval: 10 feet





CROSS SECTION FROM A TO A' SHOWING THICKNESS OF MATERIAL IN BURIED VALLEYS

Sand
Gravel
Clay
Shale
Limestone
Limy-Shale

Vertical Scale in Feet: 100, 50
Horizontal Scale in Miles

TEST WELLS

* WELL	A	B	C
Depth (Ft.)	280	240	280
Aquifer	LS	LS	LS
Calcium	189	140	200
Magnesium	100	63	100
Chloride	8.0	6.0	9.6
Fluoride	1.2	1.0	1.5
Nitrate	-0-	0.8	0.1
Dissolved Solids	1,230	711	1,280
Hardness ($CaCO_3$)	884	610	910
pH	7.2	7.2	7.2
Sulfides (H_2S)	1.5	3	-0-
Sulfates (SO_4)	566	230	700

* Chemical Constituents in mg/l

SYMBOLS

SH - Shale
LS - Limestone
G - Gravel
S - Sand
SG - Sand and Gravel

Domestic Well
Industrial-Municipal Well
Test Well
Chemical Analyses

Depth (ft.) - Water-bearing Formation - Yield (gpm)
Depth to Bedrock (ft.)

LEGEND

AREAS IN WHICH 100 TO 500 GALLONS PER MINUTE MAY BE DEVELOPED

PRINCIPAL AQUIFER is the limestone and dolomite of the Bass Island and Niagara groups. Yields in excess of 400 gallons per minute may be developed from wells encountering various solution cavities in the bedrock. Farm and domestic supplies of 20 to 40 gallons per minute may be developed at depths of less than 150 feet.

Bedrock is covered with 20 to 100 ft. of glacial till consisting of thick clay, sandy-clay and thin lenses of sand and gravel. Hydrogen sulfide (H_2S) is often encountered in the bedrock.

Deep sand and gravel lenses in ancestral Teays Valley underlain by impermeable Silurian shale. Sand and gravel lenses may yield over 25 gallons per minute to screened wells often providing artesian supplies. Coarsest material may be over 100 ft. deep. If permeable material is not encountered over the valley floor, wells should not be deepened into underlying shale.

700 — Contour on bedrock surface. Altitude in feet above mean sea level. Bedrock contour interval is 50 feet.

The ground-water characteristics have been mapped regionally, based upon interpretations of water well records and the area's geology and hydrology. Well log data on the map were selected as typical for the areas shown. Information regarding specific sites may be obtained from the Division of Water.

Ohio Department of Natural Resources
DIVISION OF WATER
Fountain Square
Columbus, Ohio 43224

Cartography: Douglas E. Keen

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