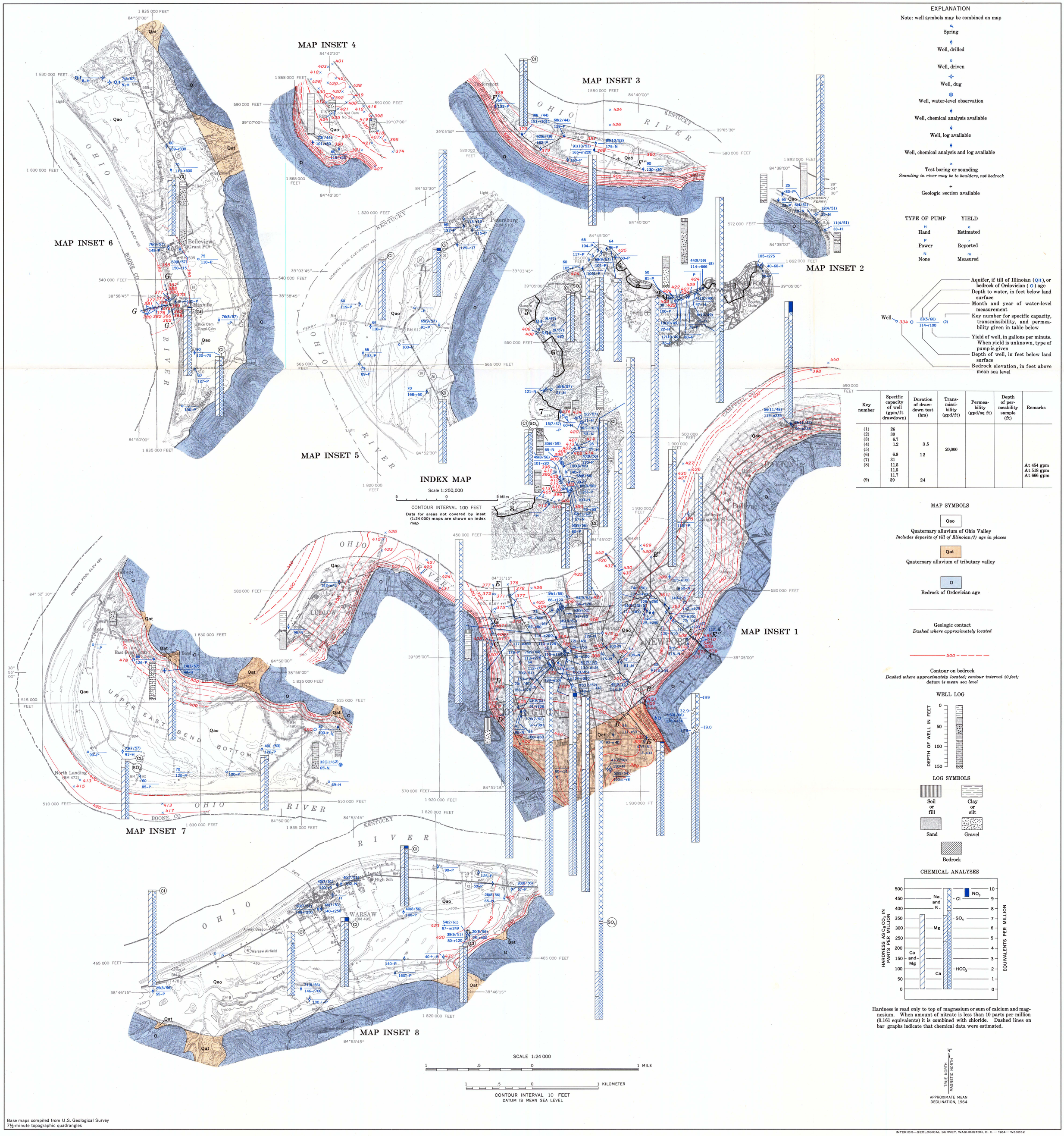
PREPARED IN COOPERATION WITH THE COMMONWEALTH OF KENTUCKY
THE UNIVERSITY OF KENTUCKY, KENTUCKY GEOLOGICAL SURVEY
AND THE KENTUCKY DEPARTMENT OF COMMERCE



EXPLANATION

Note: well symbols may be combined on map

- Spring
- Well, drilled
- Well, driven
- Well, dug
- Well, water-level observation
- Well, chemical analysis available
- Well, log available
- Well, chemical analysis and log available
- Test boring or sounding
  Sounding in river may be to boulders, not bedrock
- Geologic section available

TYPE OF PUMP	YIELD
H Hand	e Estimated
P Power	r Reported
N None	m Measured

Well 334 O 23(5/60) (2) 114-r100

- Aquifer, if till of Illinoian (Qit), or bedrock of Ordovician (O) age
- Depth to water, in feet below land surface
- Month and year of water-level measurement
- Key number for specific capacity, transmissibility, and permeability given in table below
- Yield of well, in gallons per minute. When yield is unknown, type of pump is given
- Depth of well, in feet below land surface
- Bedrock elevation, in feet above mean sea level

Key number	Specific capacity of well (gpm/ft drawdown)	Duration of draw-down test (hrs)	Trans-missi-bility (gpd/ft)	Permea-bility (gpd/sq ft)	Depth of per-meability sample (ft)	Remarks
(1)	26					
(2)	30					
(3)	6.7					
(4)	1.2	3.5				
(5)			20,000			
(6)	6.9	12				
(7)	31					
(8)	11.5					At 454 gpm
	11.5					At 518 gpm
	11.7					At 666 gpm
(9)	39	24				

MAP SYMBOLS

Qao — Quaternary alluvium of Ohio Valley
Includes deposits of till of Illinoian (?) age in places

Qat — Quaternary alluvium of tributary valley

O — Bedrock of Ordovician age

Geologic contact
Dashed where approximately located

500 — Contour on bedrock
Dashed where approximately located; contour interval 20 feet; datum is mean sea level

WELL LOG

DEPTH OF WELL IN FEET: 0, 50, 100, 150

LOG SYMBOLS

Soil or fill — Clay or silt — Sand — Gravel — Bedrock

CHEMICAL ANALYSES

HARDNESS AS $CaCO_3$ IN PARTS PER MILLION — EQUIVALENTS PER MILLION

Ca and Mg — Na and K — Mg — Ca — Cl — SO_4 — HCO_3 — NO_3

Hardness is read only to top of magnesium or sum of calcium and magnesium. When amount of nitrate is less than 10 parts per million (0.161 equivalents) it is combined with chloride. Dashed lines on bar graphs indicate that chemical data were estimated.

TRUE NORTH — MAGNETIC NORTH 4°5'

APPROXIMATE MEAN DECLINATION, 1964

Base maps compiled from U.S. Geological Survey 7½-minute topographic quadrangles

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—1964—W63262

GEOLOGY AND HYDROLOGY OF ALLUVIAL DEPOSITS ALONG THE OHIO RIVER BETWEEN NEWPORT AND WARSAW, KENTUCKY

By
William E. Price, Jr.

1964

For sale by U.S. Geological Survey, price $1.00 per set