

EXPLANATION
Note: well symbols may be combined on map

- Well, drilled
- Well, driven
- Well, dug
- Well, water-level observation
- Well, chemical analysis available
- Well, log available
- Well, chemical analysis and log available
- Spring
- Test boring or sounding

TYPE OF PUMP **YIELD**

H	e
Hand	Estimated
P	r
Power	Reported
N	m
None	Measured

Aquifer, if bedrock of Pennsylvanian (P) or Mississippian (M) 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)	Transmissibility (gpd/ft)	Permeability (gpd/sq ft)	Depth of permeability sample (ft)	Remarks
(1)	38	2	12,000*	750*		
(2)	38	2	6,800*	427*		
(3)	16	42				
(4)	3.5					
(5)	5					
(6)	70					
(7)	10	6.5				
(8)	18					
(9)	18					In M rocks.
(10)	8.3					In M rocks & Qao.
	26					
(11)	48					
(12)	44					
(13)	36					
(14)	18	72	31,400*	1,380		
(15)	16	72	29,900*	1,380		
(16)				450	55	Disturbed sample.

*Figures from reports of Ranney, Inc.

MAP SYMBOLS

- Qao Quaternary alluvium of Ohio Valley
- Qat Quaternary alluvium of tributary valley
- P, M Pennsylvanian and Mississippian bedrock
- Geologic contact
- Dashed where approximately located
- Contours on bedrock
- Dashed where approximately located; contour interval 5 feet; datum is mean sea level

WELL LOG

DEPTH OF WELL IN FEET

LOG SYMBOLS

- Silt or fill
- Clay or silt
- Sand
- Gravel
- Bedrock

CHEMICAL ANALYSES

HARDNESS AS CaCO₃ IN PARTS PER MILLION

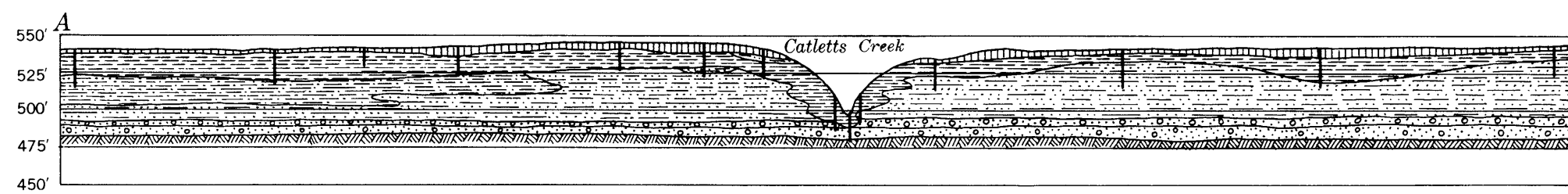
SO₄, HCO₃, Ca, Mg, Na and K, NO₃

EQUIVALENTS PER MILLION

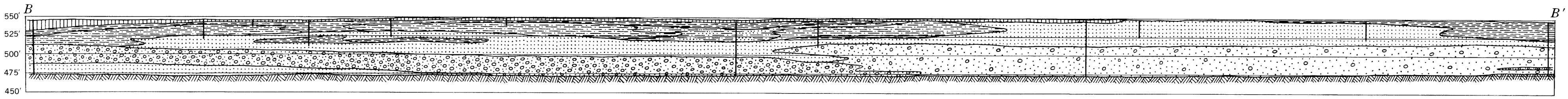
Hardness is read only to top of magnesium or sum of calcium and magnesium. When amount of nitrate is less than 10 parts per million (0.161 equivalent) it is combined with chloride. Sulfate and the sum of sodium and potassium are shown by dashed lines if estimated.

GEOLOGY AND HYDROLOGY OF ALLUVIAL DEPOSITS ALONG THE OHIO RIVER BETWEEN CATLETTSBURG AND SOUTH PORTSMOUTH, KENTUCKY

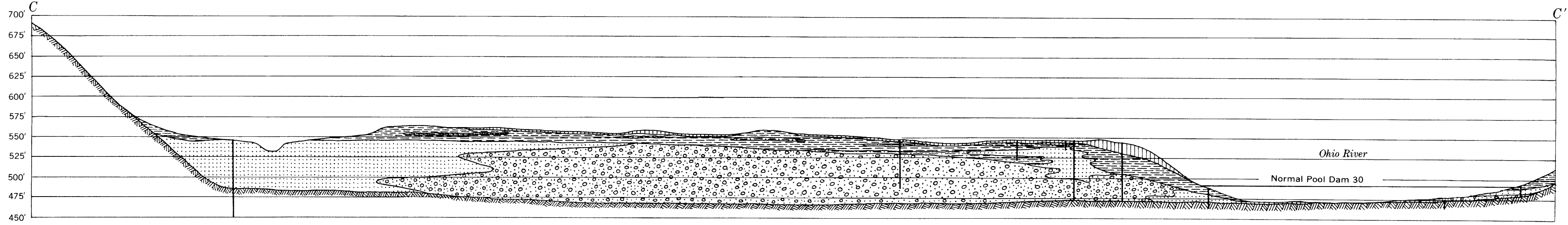
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1964



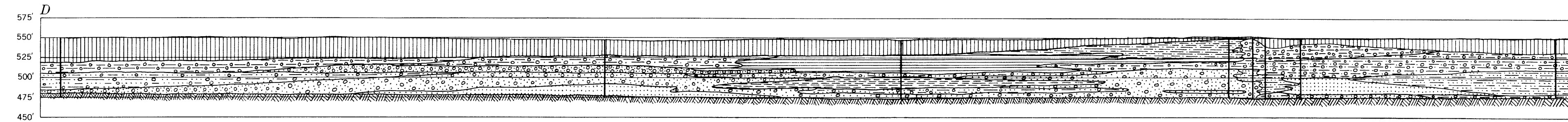
Section A-A'. Map inset 1



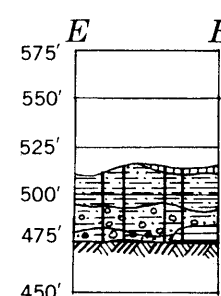
Section B-B'. Map inset 2



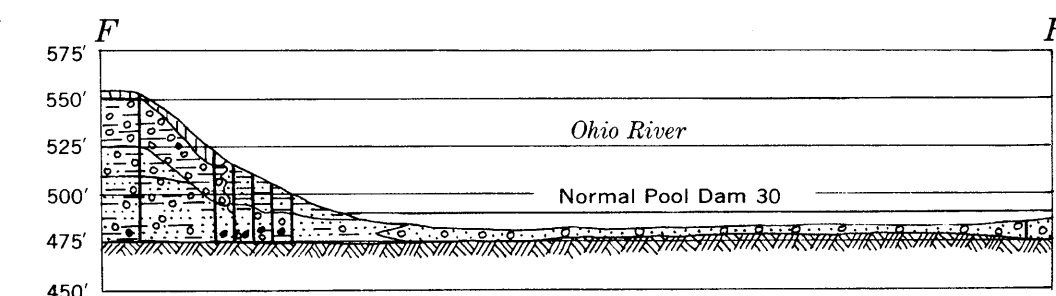
Section C-C'. Map inset 2



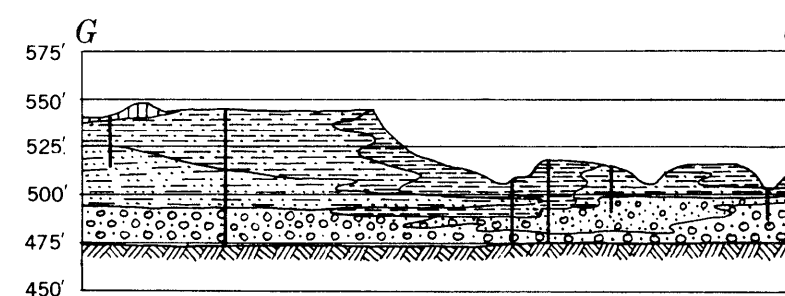
Section D-D'. Map inset 3



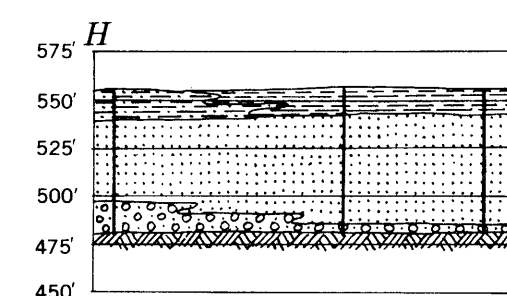
Section E-E'. Map inset 3



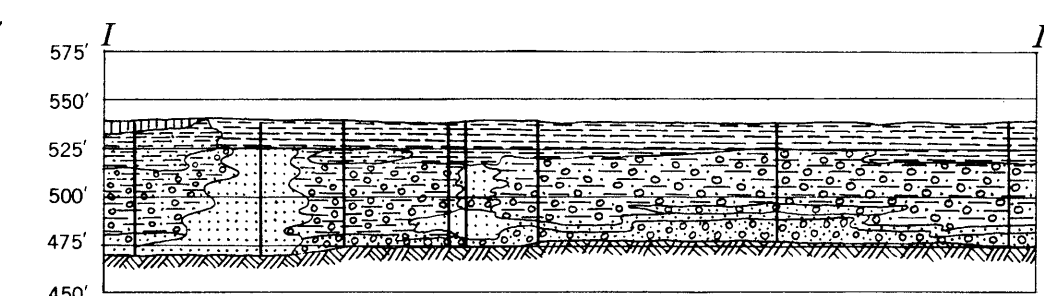
Section F-F'. Map inset 3



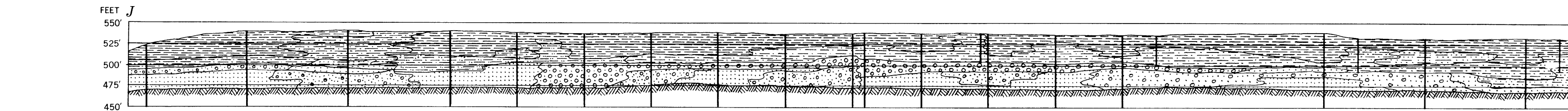
Section G-G'. Map inset 3



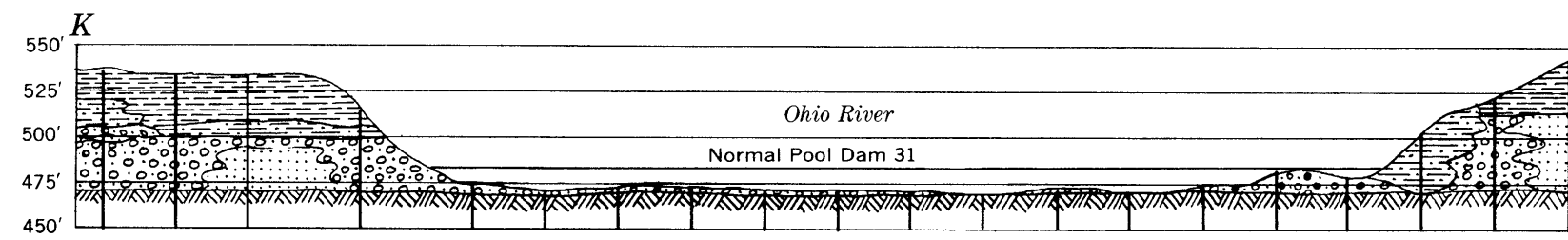
Section H-H'. Map inset 3



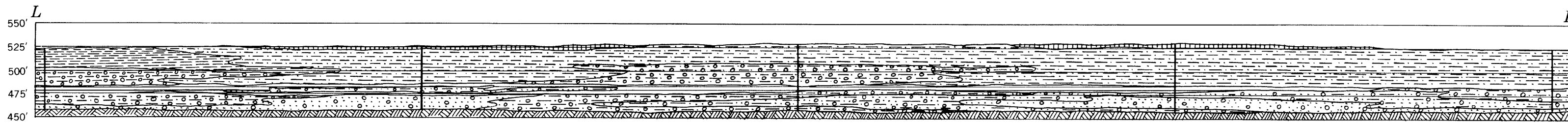
Section I-I'. Map inset 4



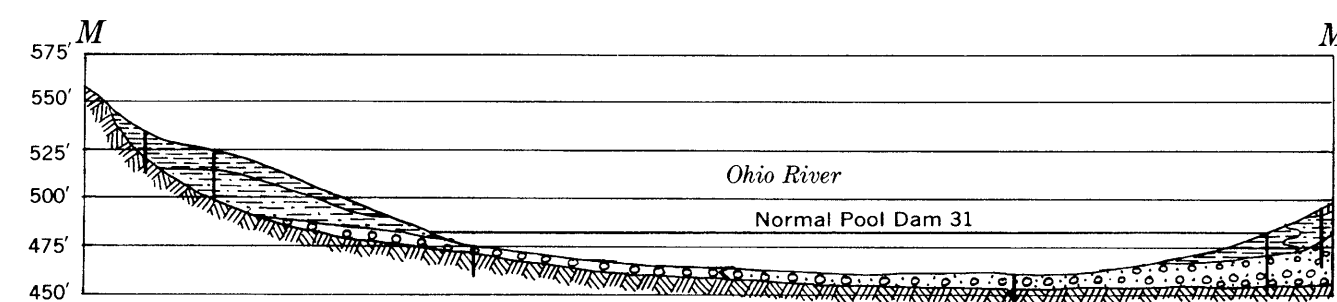
Section J-J'. Map inset 5



Section K-K'. Map inset 5



Section L-L'. Map inset 6



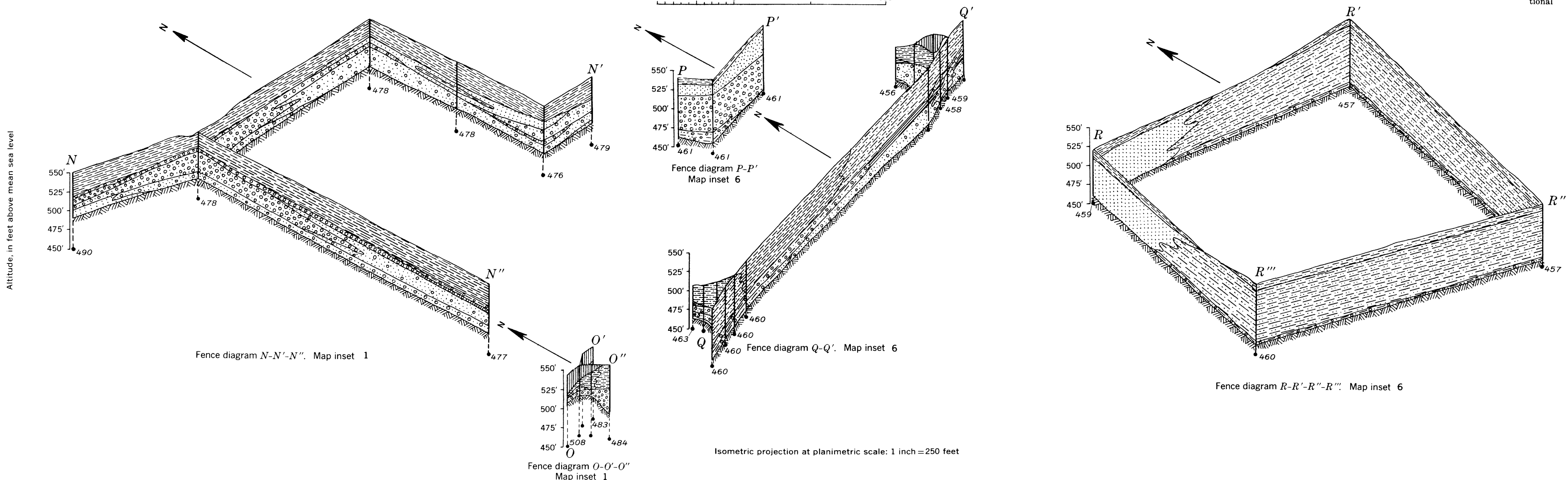
Section M-M'. Map inset 7

EXPLANATION

- Soil or fill
- Clay or silt
- Hardpan
- Sand
- Gravel
- Boulders
- Bedrock
- Well or test boring

•452
Dot represents the projected position of well or test boring on an imaginary datum plane. Number shows altitude of bedrock surface, in feet above mean sea level.

Approximate boundary between lithologic units, generally gradational



Fence diagram N-N'-N''. Map inset 1

Fence diagram P-P'. Map inset 6

Fence diagram Q-Q'. Map inset 6

Fence diagram R-R'-R''. Map inset 6

Isometric projection at planimetric scale: 1 inch = 250 feet

SECTIONS AND FENCE DIAGRAMS OF ALLUVIAL DEPOSITS ALONG THE OHIO RIVER
BETWEEN CATLETTSBURG AND SOUTH PORTSMOUTH, KENTUCKY

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1964