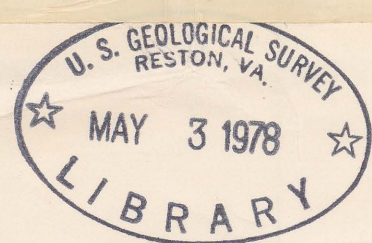


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ALTITUDE AND CONFIGURATION OF THE TOP OF THE FLORIDAN AQUIFER, DUVAL COUNTY, FLORIDA

By
G. W. Leve

Prepared by the
U.S. GEOLOGICAL SURVEY
in cooperation with the
CITY OF JACKSONVILLE
DEPARTMENT OF PUBLIC WORKS

The structural contour lines on the map reflect the eroded surface of the Ocala Limestone of Eocene age which is the top of the Floridan aquifer in Duval County. At the contour interval shown on the map, small irregularities on the surface of the aquifer are not apparent and the configuration of the contour lines reflects the approximate subsurface structure.

The contours show a number of structural features on the surface of the aquifer. For example, the series of depressions on the surface of the aquifer west of the St. Johns River may be buried sinkholes that developed during or after Eocene age when sea level was lower than it is today. Two generally north-south trending faults in central Duval County form a graben with a maximum vertical displacement of more than 150 feet in the southcentral part of the county. These faults are blanketed by about 250 to 600 feet of post-Eocene deposits and do not extend to land surfaces. They are inferred from geological and geophysical logs of water wells in the area.

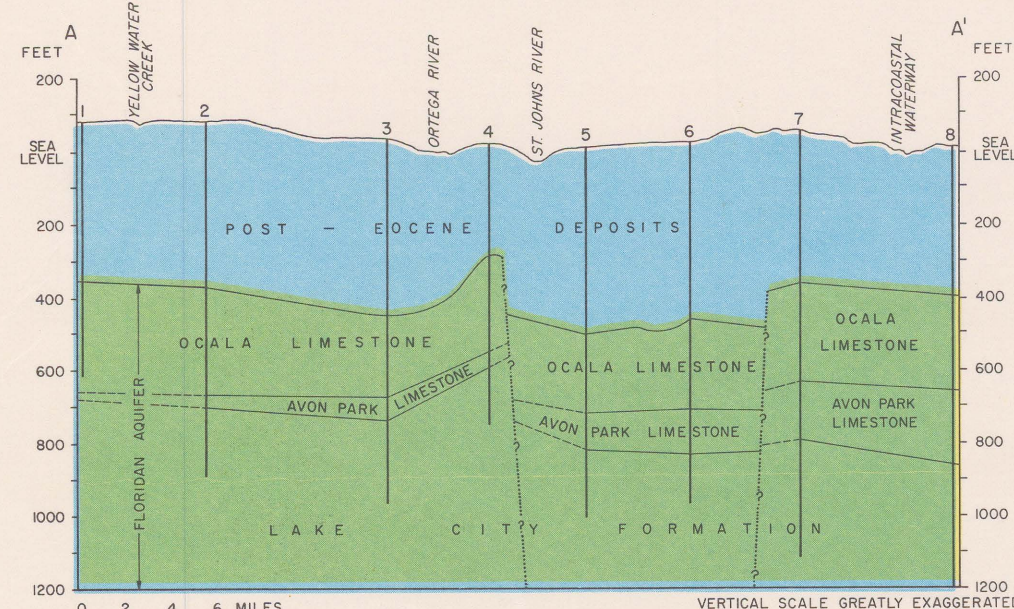
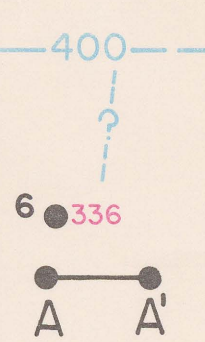
This map supercedes an earlier map compiled by the author showing the altitude of the top of the Ocala Limestone in Duval County (Leve, 1966, fig. 5). Much of the data used to compile the earlier map was used to compile this map; however, this map was modified from data obtained since the earlier map was completed.

SELECTED REFERENCES

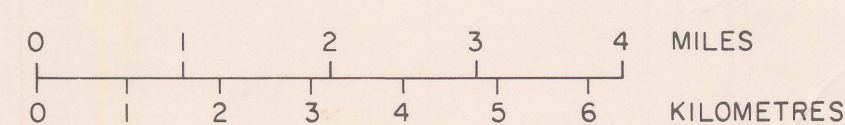
Leve, Gilbert W.
1966 Ground water in Duval and Nassau Counties,
Florida; Florida Geol. Survey, Rept. of Inv. 43,
91 p.

EXPLANATION

- STRUCTURE CONTOUR—Shows altitude, in feet below mean sea level, of top of the Floridan aquifer. Dashed where approximately located. Contour interval 50 feet.
- CONCEALED INFERRED FAULT—Interpreted from geologic evidence (well logs) U, upthrown side; D, downthrown side. Discussion of western fault in report, Ground Water in Duval and Nassau County, Florida, Fla. Geol. Survey, Rept. of Inv. No. 43, by G. W. Leve, 1966.
- CONTROL WELL—Small number indicates altitude, in feet below mean sea level, of the top of the Floridan aquifer. Larger number indicates well used in geologic section.
- Line of geologic section.

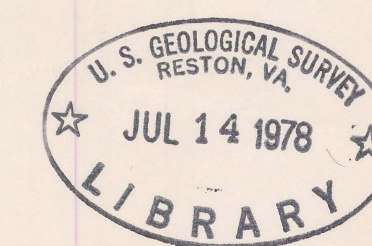


Geologic section along line A-A' (location shown on map).



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1978



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