

Comment on Limitations of Map Precision

The limits of precision of the stratigraphic picks and gridding method should be understood when utilizing these aquifer maps. The computed map data only provide estimates of the depths and thicknesses of the physical stratigraphic units on the basis of the available borehole data and methods selected.

The borehole type impacts data quality. Depths of stratigraphic picks based on geophysical logs may be accurate to within a few feet, depending on the log type. Picks made in cores are very accurate, within the limits of any incomplete core recovery. In contrast, depths picked from cuttings sample or drillers logs might in some cases only be considered confidently accurate to the nearest 10 ft, depending on the methodology and care used by the driller. More data were available from lower quality drillers log-based picks (85%) and less higher-quality data were available from holes with geophysical logs. As explained in the Methods section, we mostly used the higher-quality stratigraphic picks from geophysical logs to construct the maps of the more consistently occurring confined aquifers; mapping of the unconfined aquifer used the drillers logs as well to allow higher data density that better captures the greater thickness variations.

In addition, the distribution of the data and the gridding methodology impacts the accuracy of the depth and thickness maps. The gridding approach used here is sensitive to the spatial distribution of data and the variability of those data between boreholes. More data were available for the aquifers at shallower depths and less data from those that occur at greater depths. Data tends to be more densely concentrated in populated areas where water users live and is more sparsely distributed in rural areas. The rasters were computed at 100 m geographic precision so are only precise to that scale, at best.

As a result, the user of these maps should be cautioned not to assume greater precision of aquifer depth or thickness values than the underlying limitations of the data and methods will support. Near the data control points, the maps may have a precision close to the precision range of the borehole data type. Between data control points in areas of sparse data, precision could be significantly less.

Figure B1 (Text-figure 23).

Cheswold aquifer: Map of elevation of base of aquifer and stratigraphic equivalents.

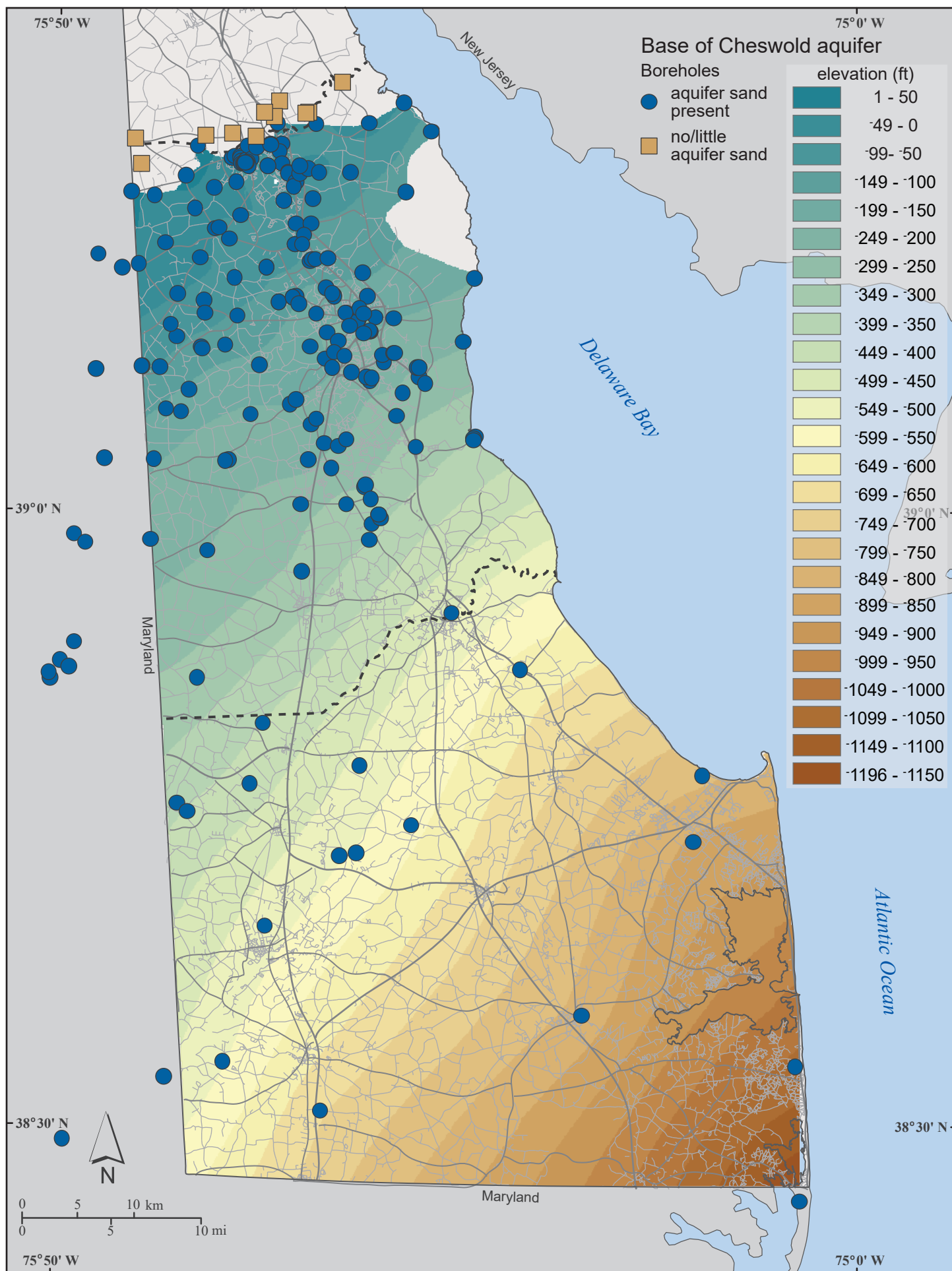


Figure B2 (Text-figure 24).

Cheswold aquifer: Map of thickness of aquifer and stratigraphic equivalents.

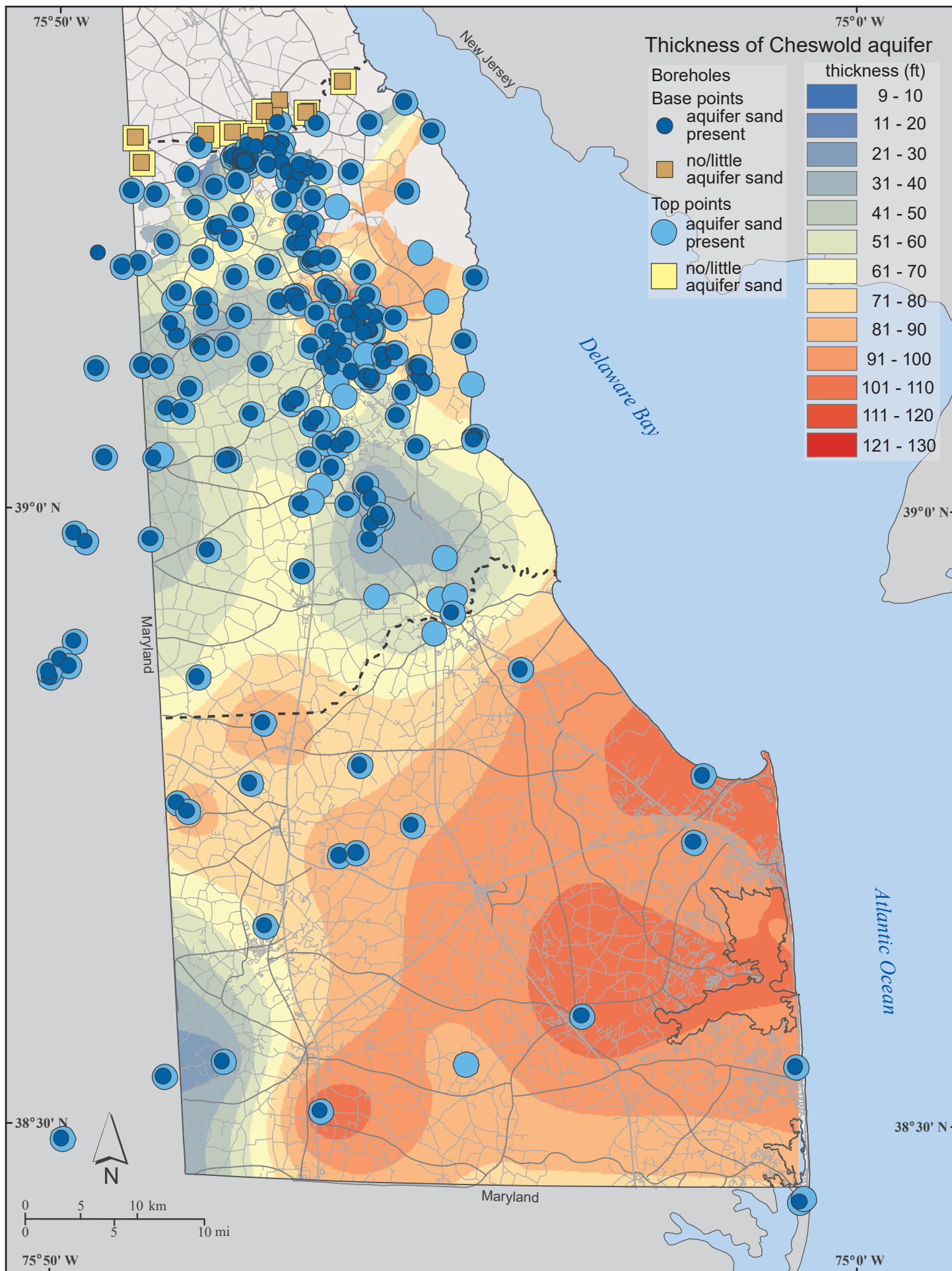


Figure B3 (Text-figure 22).

Cheswold aquifer: Map of elevation of top of aquifer and stratigraphic equivalents.

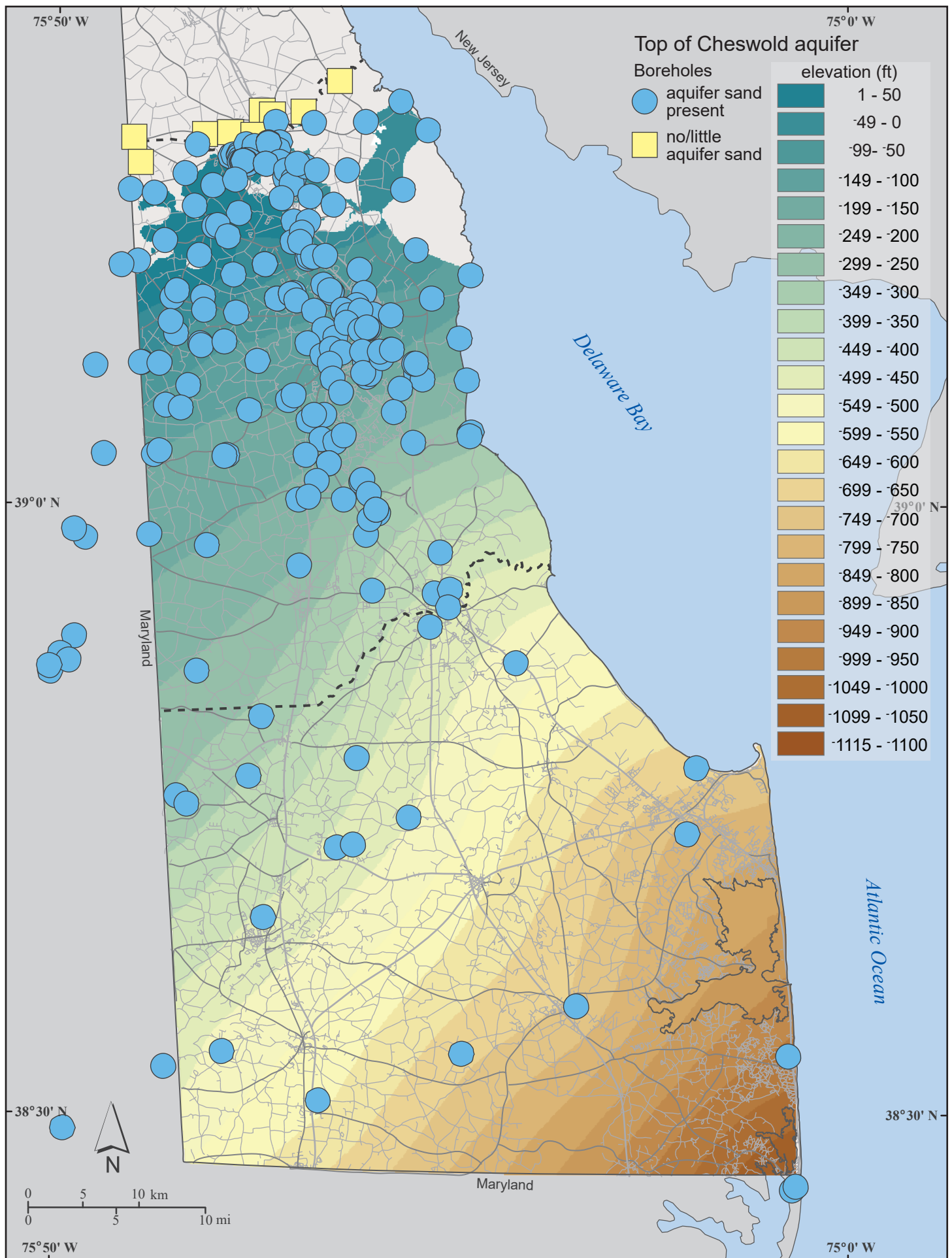


Figure B4 (Text-figure 26).

Federalsburg aquifer: Map of elevation of base of aquifer and stratigraphic equivalents.

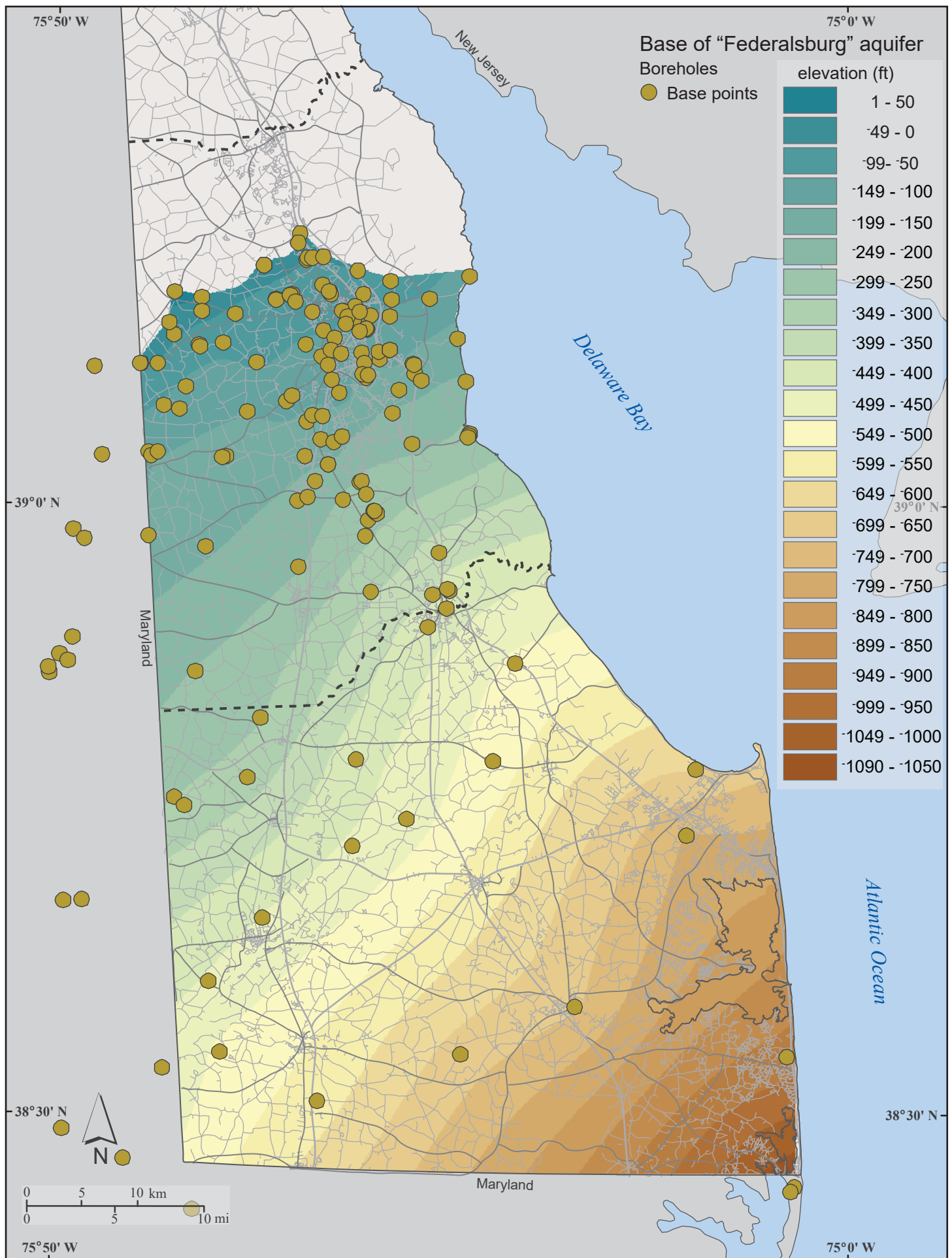


Figure B5 (Text-figure 27).

Federalsburg aquifer: Map of thickness of aquifer and stratigraphic equivalents.

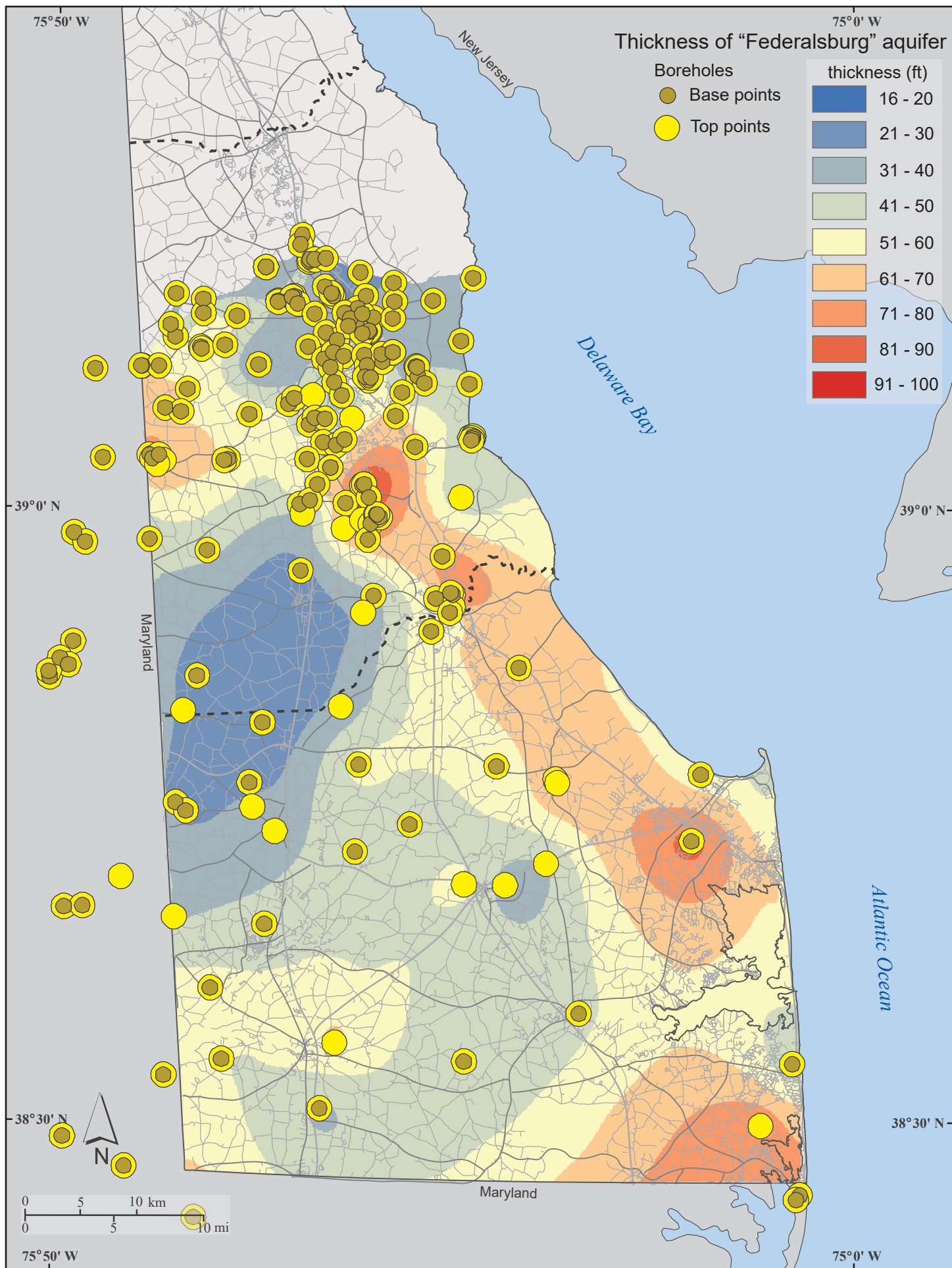


Figure B6 (Text-figure 25).

Federalsburg aquifer: Map of elevation of top of aquifer and stratigraphic equivalents.

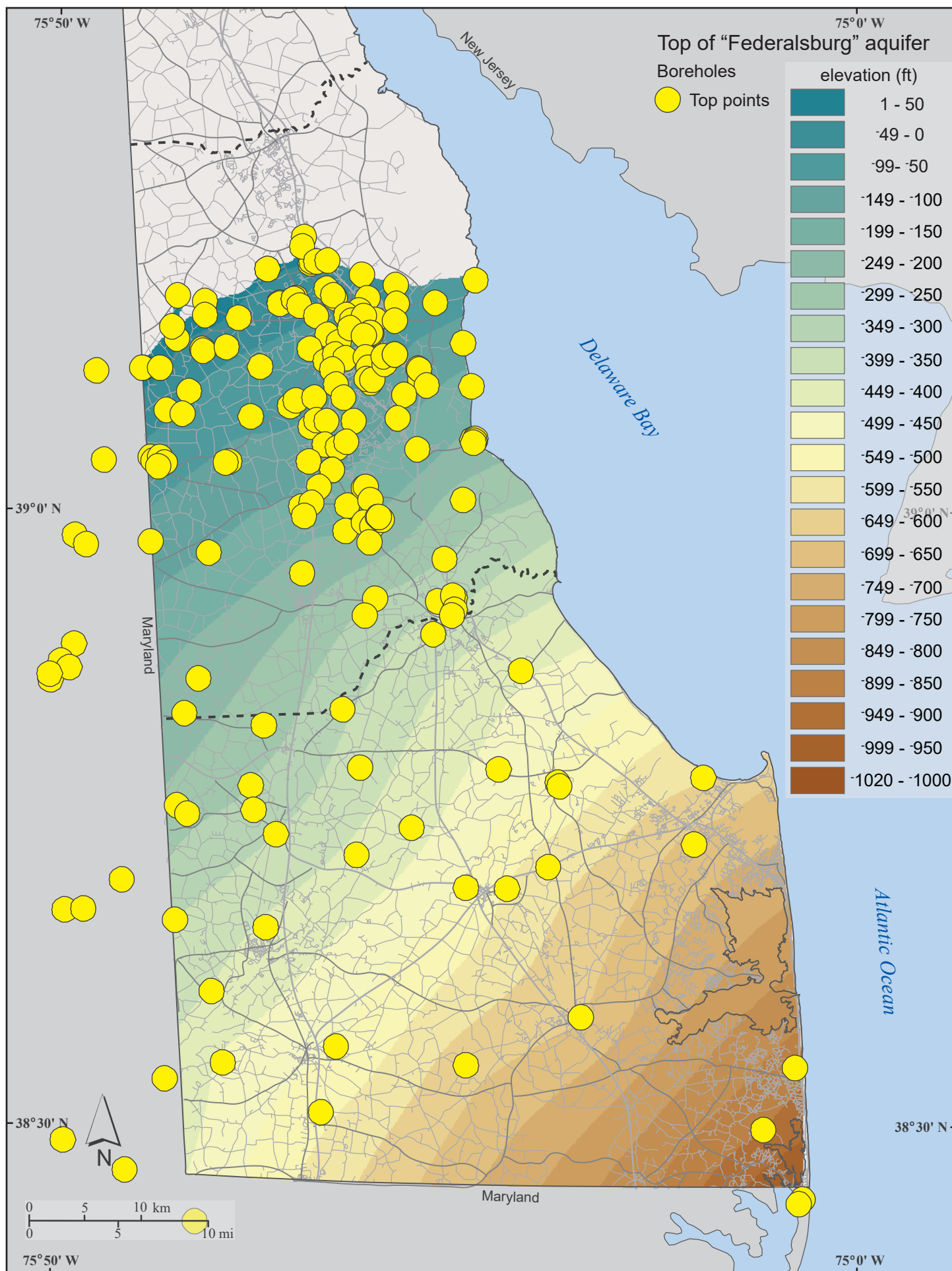


Figure B7 (Text-figure 29).

Frederica aquifer: Map of elevation of base of aquifer and stratigraphic equivalents.

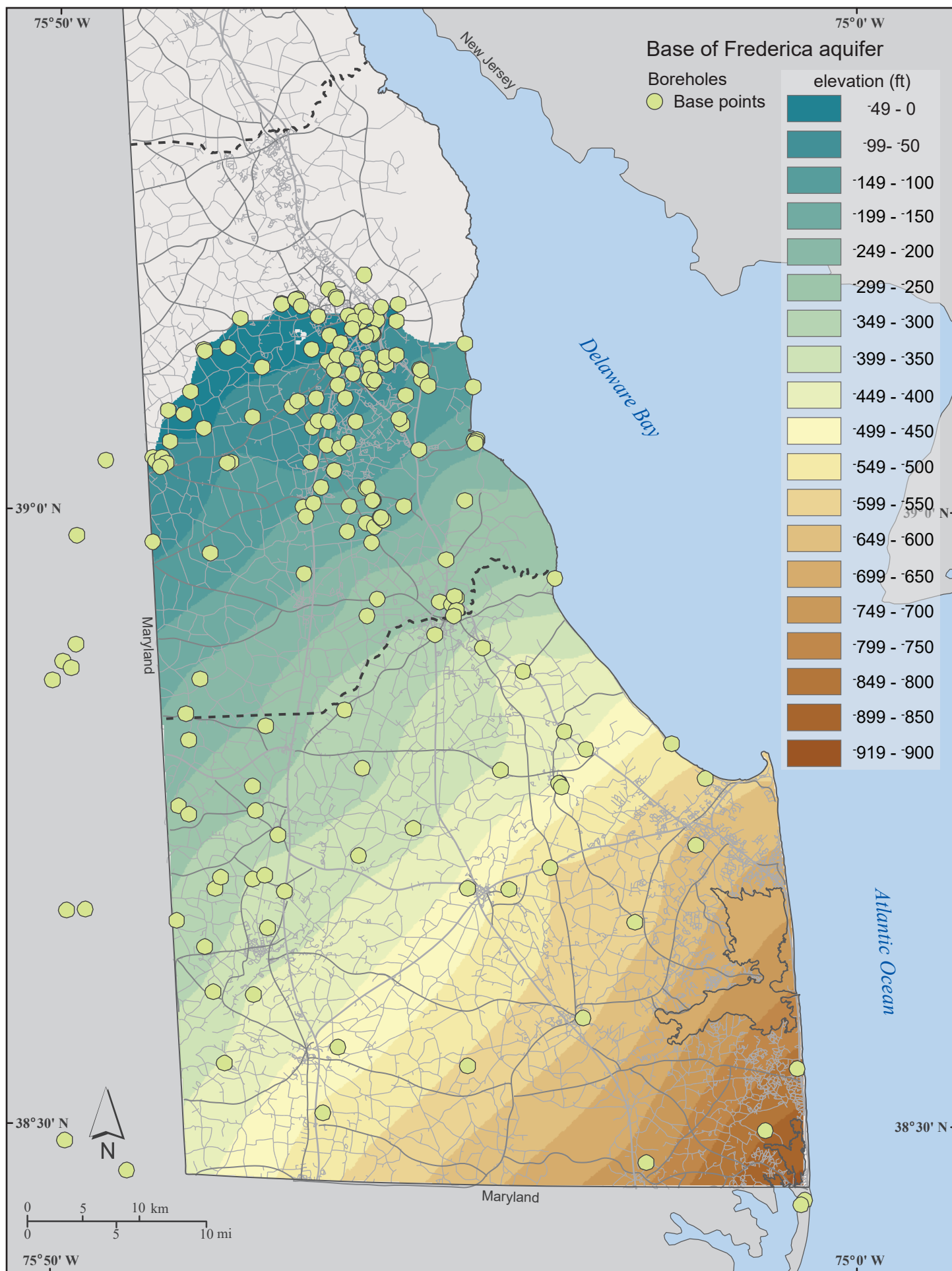


Figure B8 (Text-figure 30).

Frederica aquifer: Map of thickness of aquifer and stratigraphic equivalents.

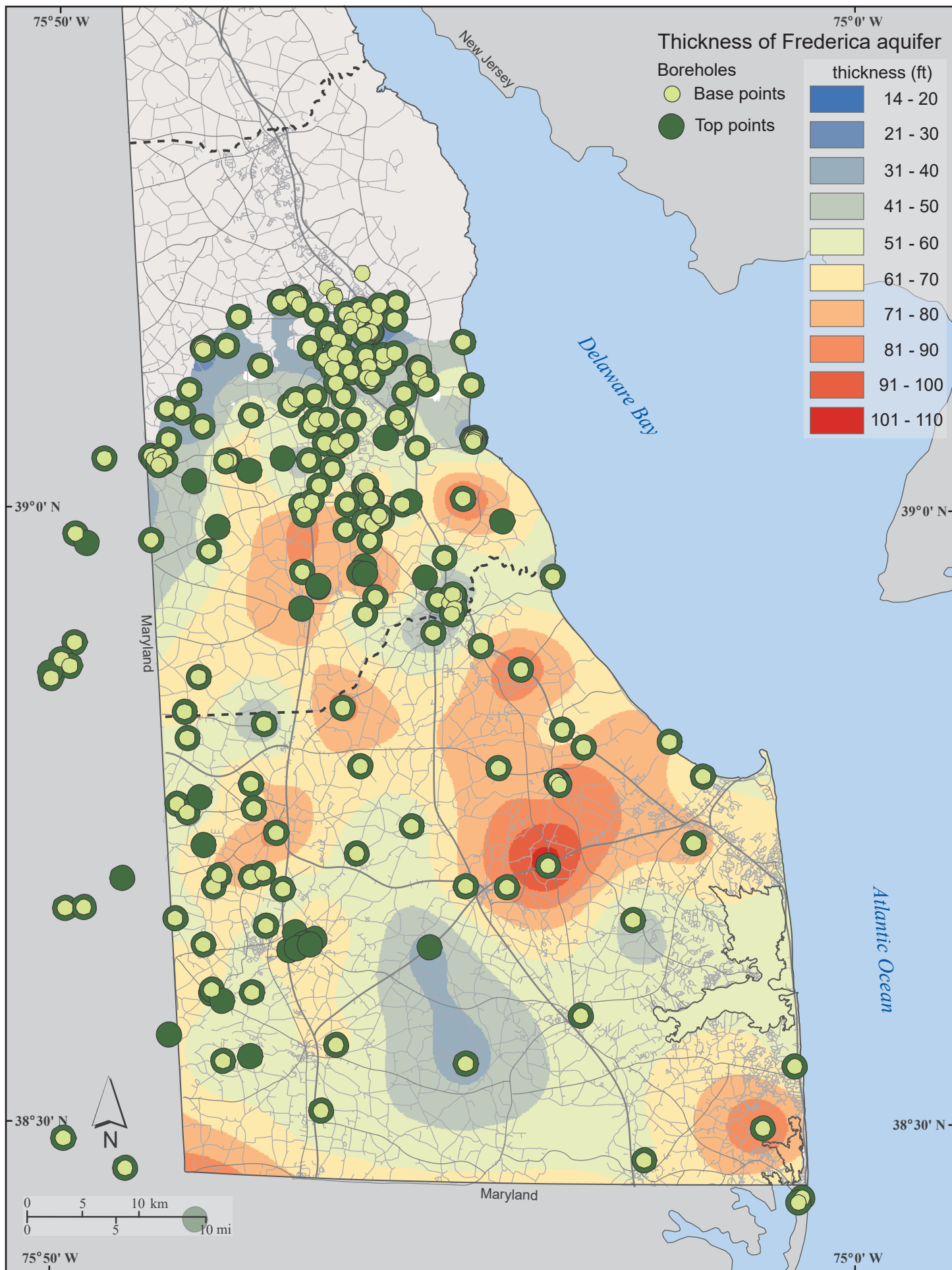


Figure B9 (Text-figure 28).

Frederica aquifer: Map of elevation of top of aquifer and stratigraphic equivalents.

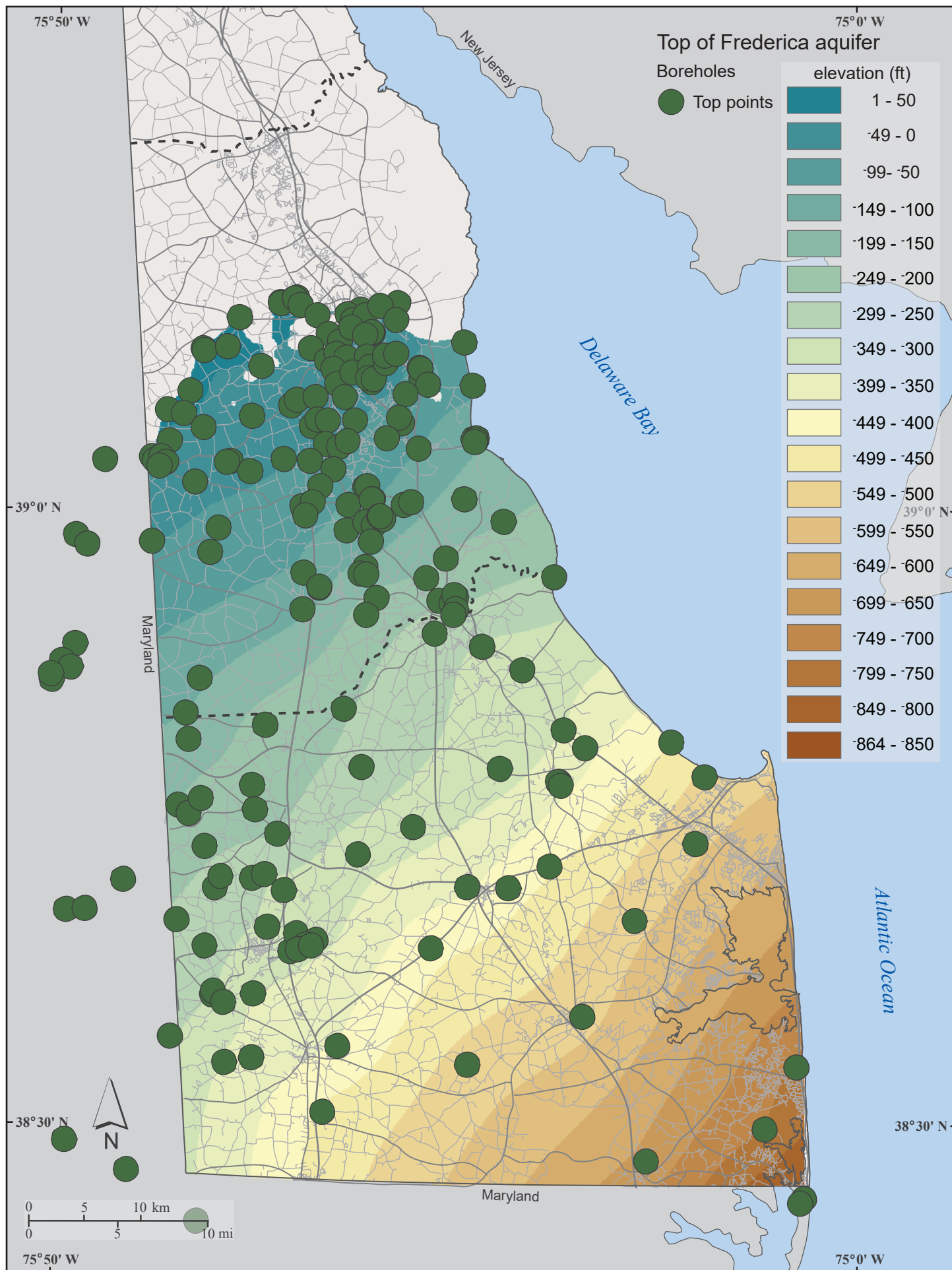


Figure B10 (Text-figure 19).

Lower Calvert aquifer: Map of elevation of base of aquifer and stratigraphic equivalents.

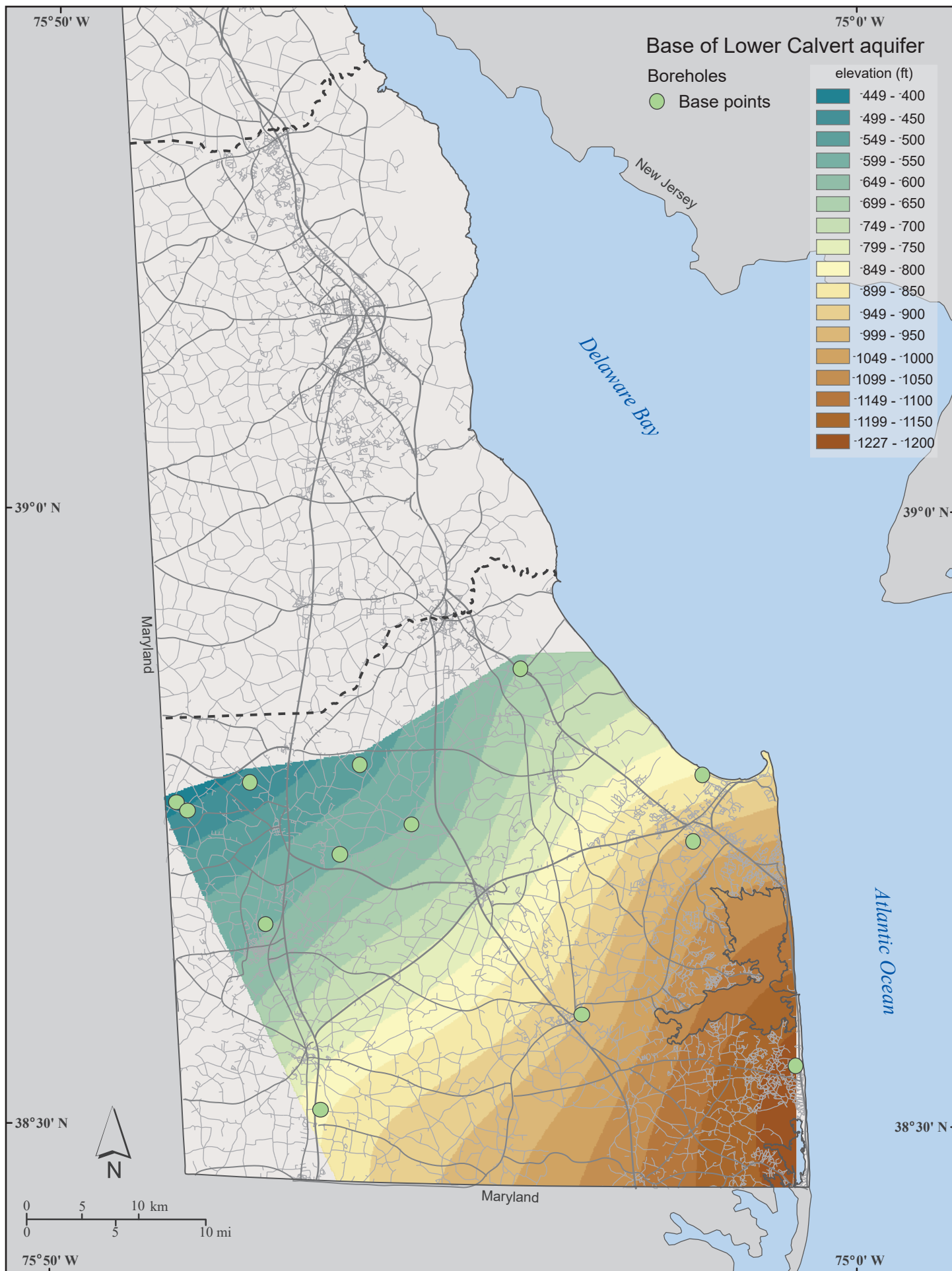


Figure B11 (Text-figure 20).

Lower Calvert aquifer: Map of thickness of aquifer and stratigraphic equivalents.

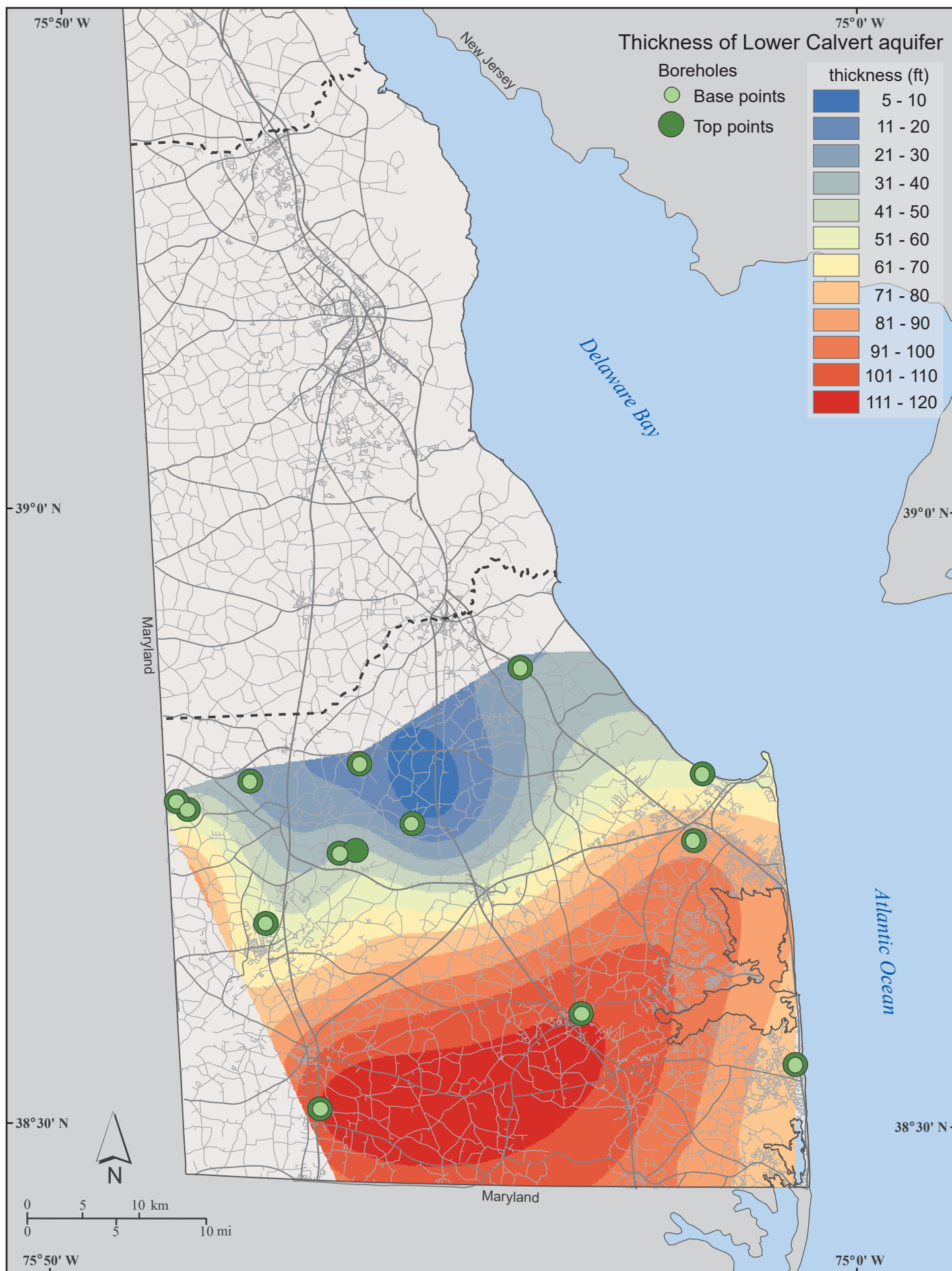


Figure B12 (Text-figure 18).

Lower Calvert aquifer: Map of elevation of top of aquifer and stratigraphic equivalents.

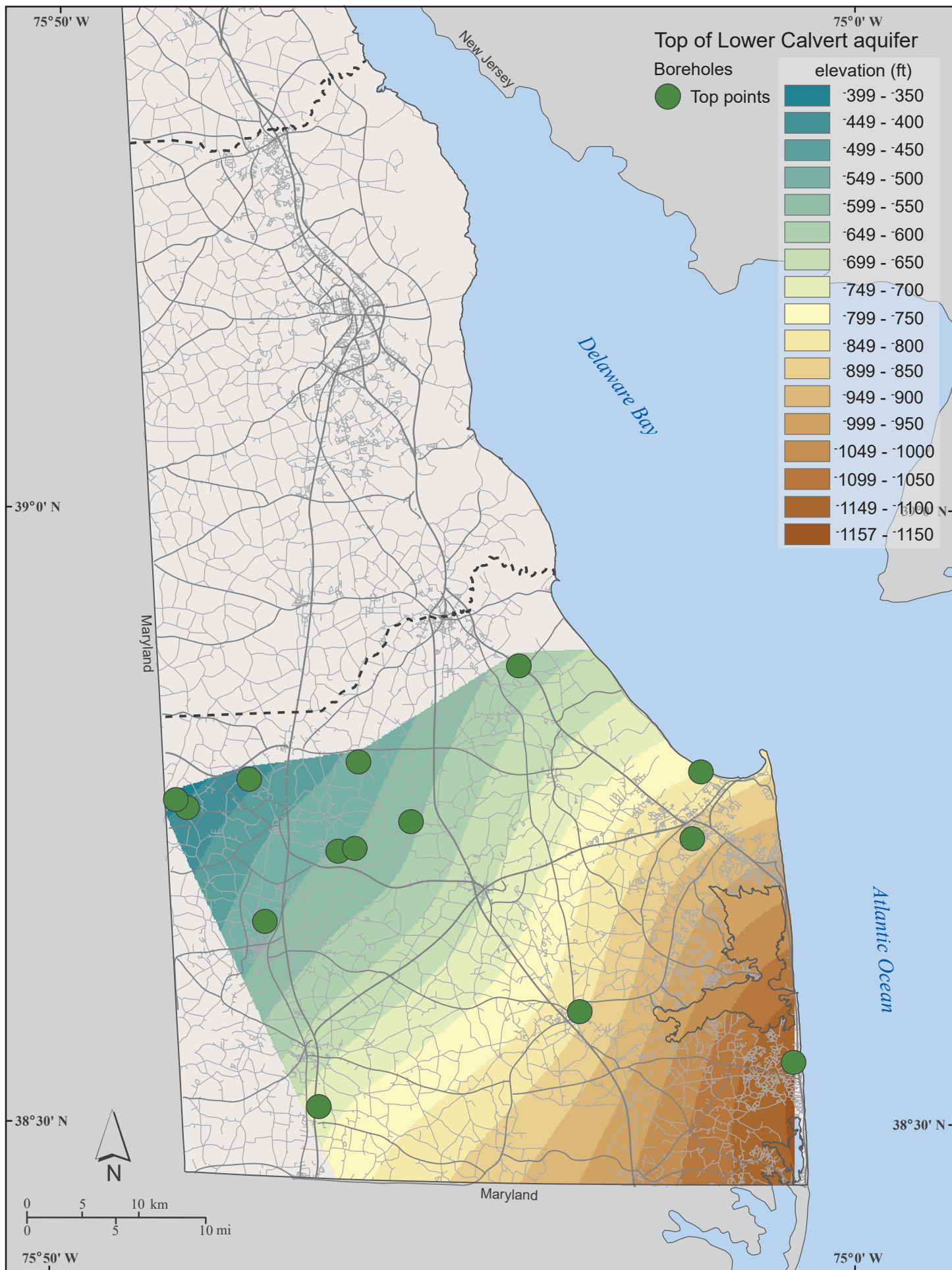


Figure B13 (Text-figure 41).

Manokin aquifer: Map of elevation of base of aquifer and stratigraphic equivalents.

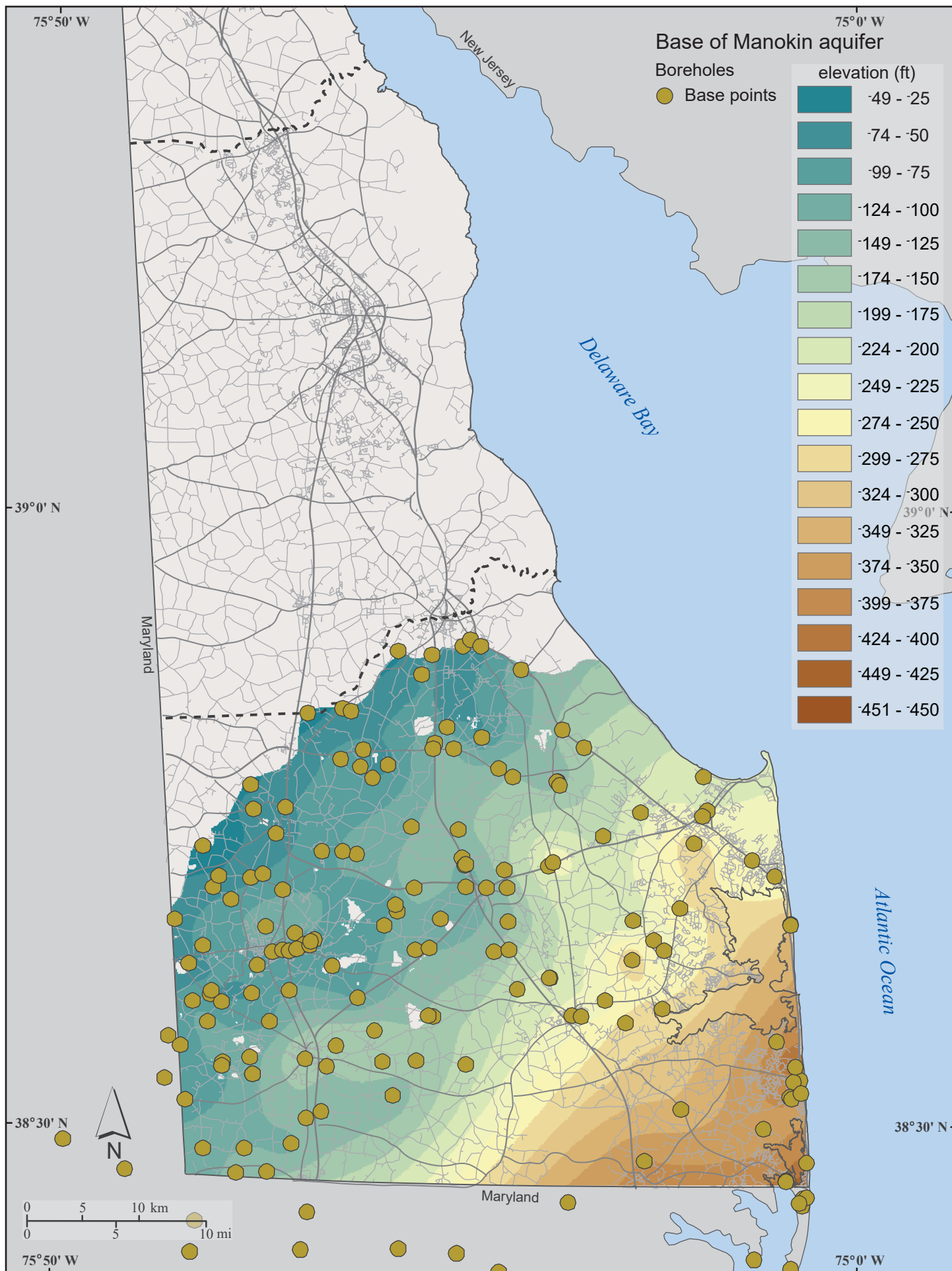


Figure B14 (Text-figure 42).
Manokin aquifer: Map of thickness of aquifer.

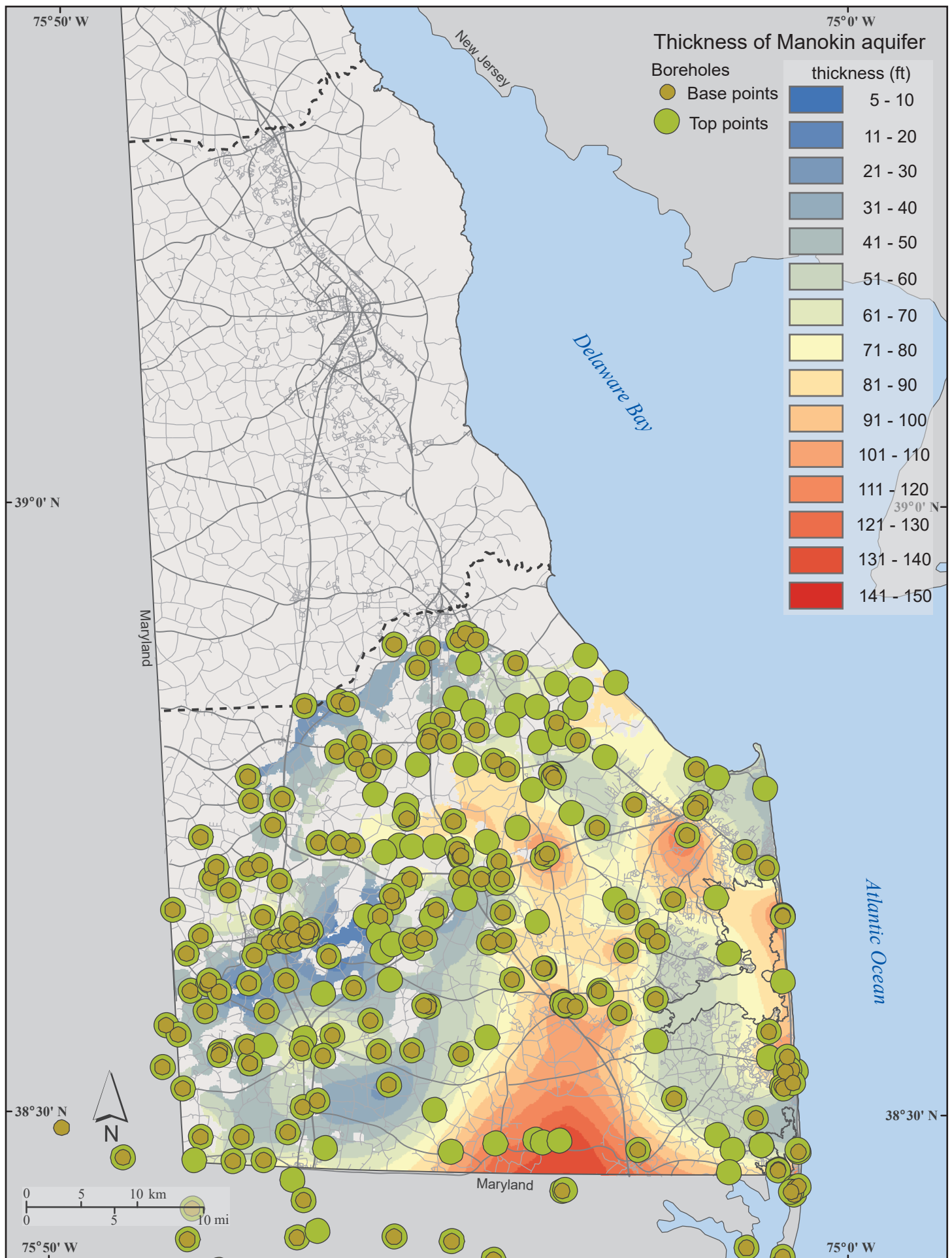


Figure B15 (Text-figure 40).

Manokin aquifer: Map of elevation of top of aquifer.

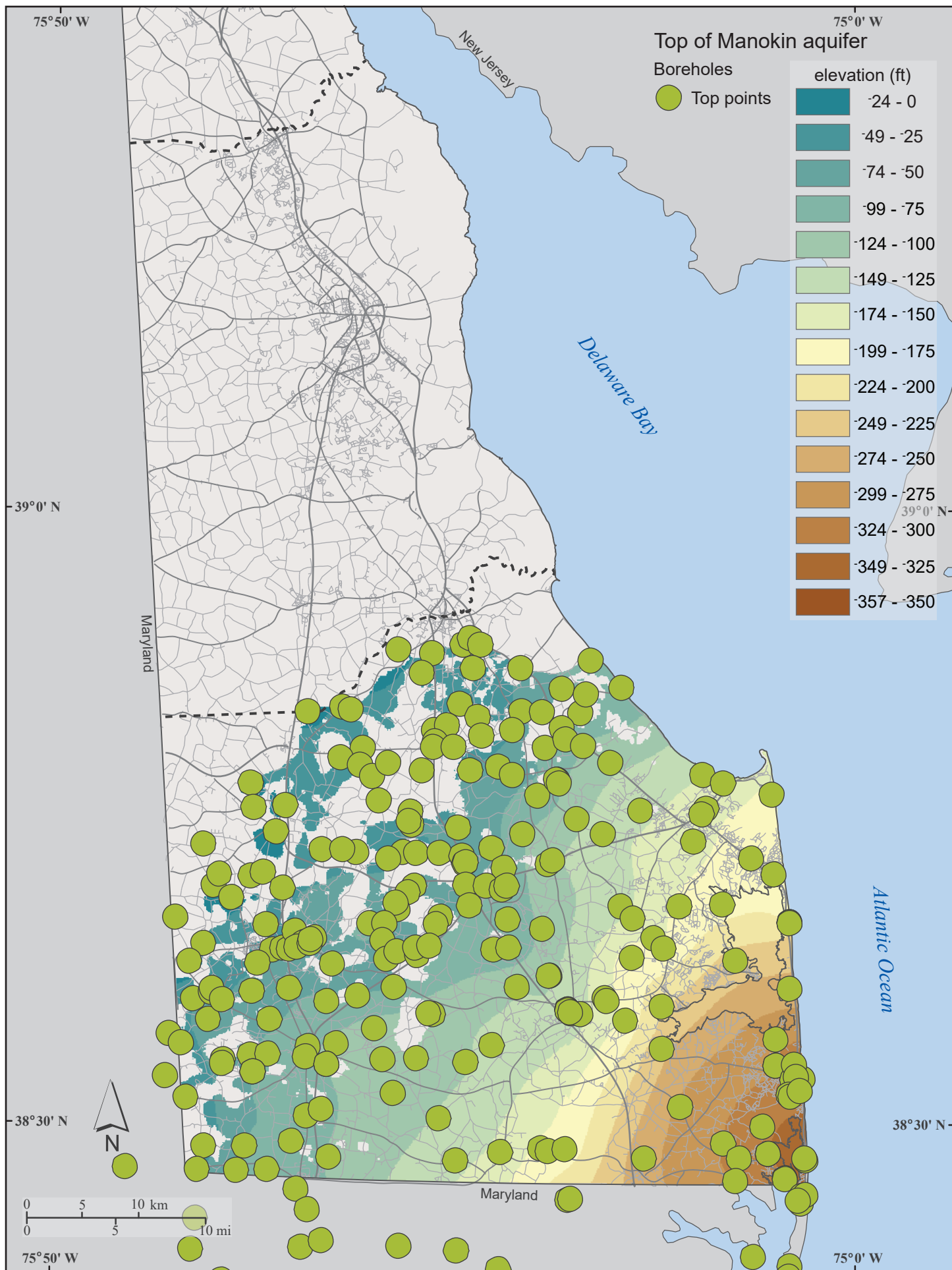


Figure B16 (Text-figure 43).

Manokin aquifer: Map of recharge windows into aquifer.

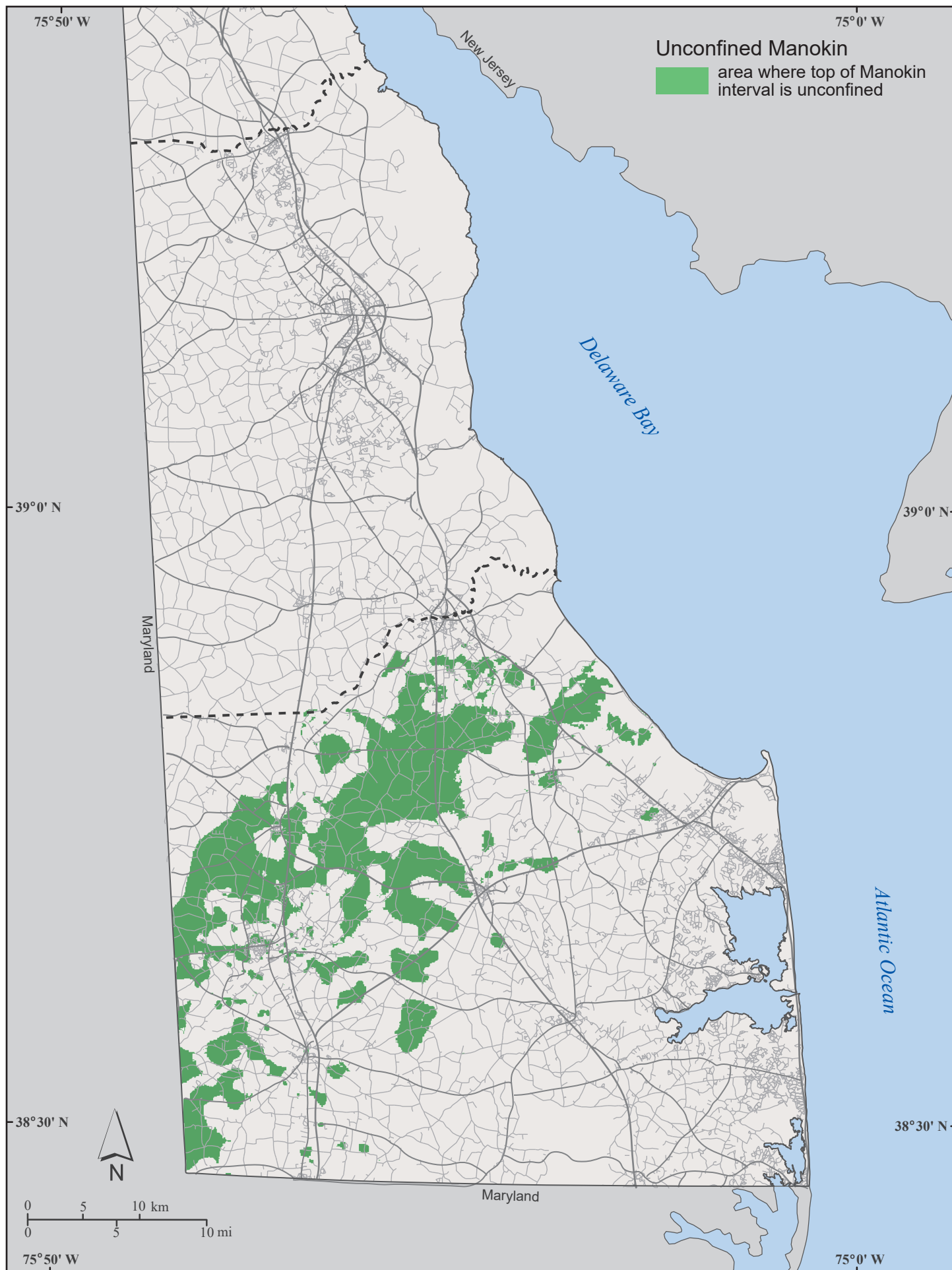


Figure B17 (Text-figure 35).

Middle Choptank aquifer: Map of elevation of base of aquifer and stratigraphic equivalents.

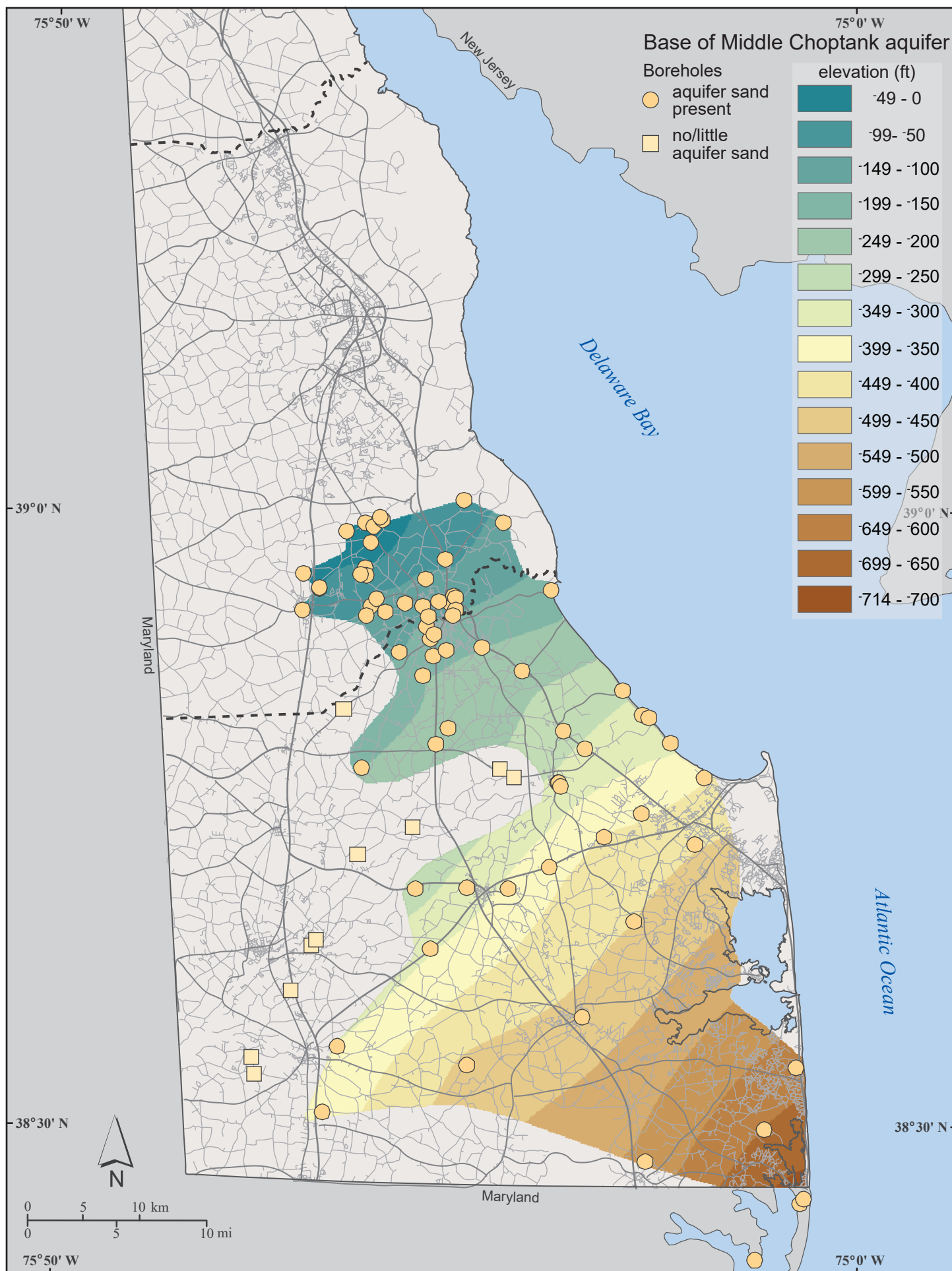


Figure B18 (Text-figure 36).

Middle Choptank aquifer: Map of thickness of aquifer and stratigraphic equivalents.

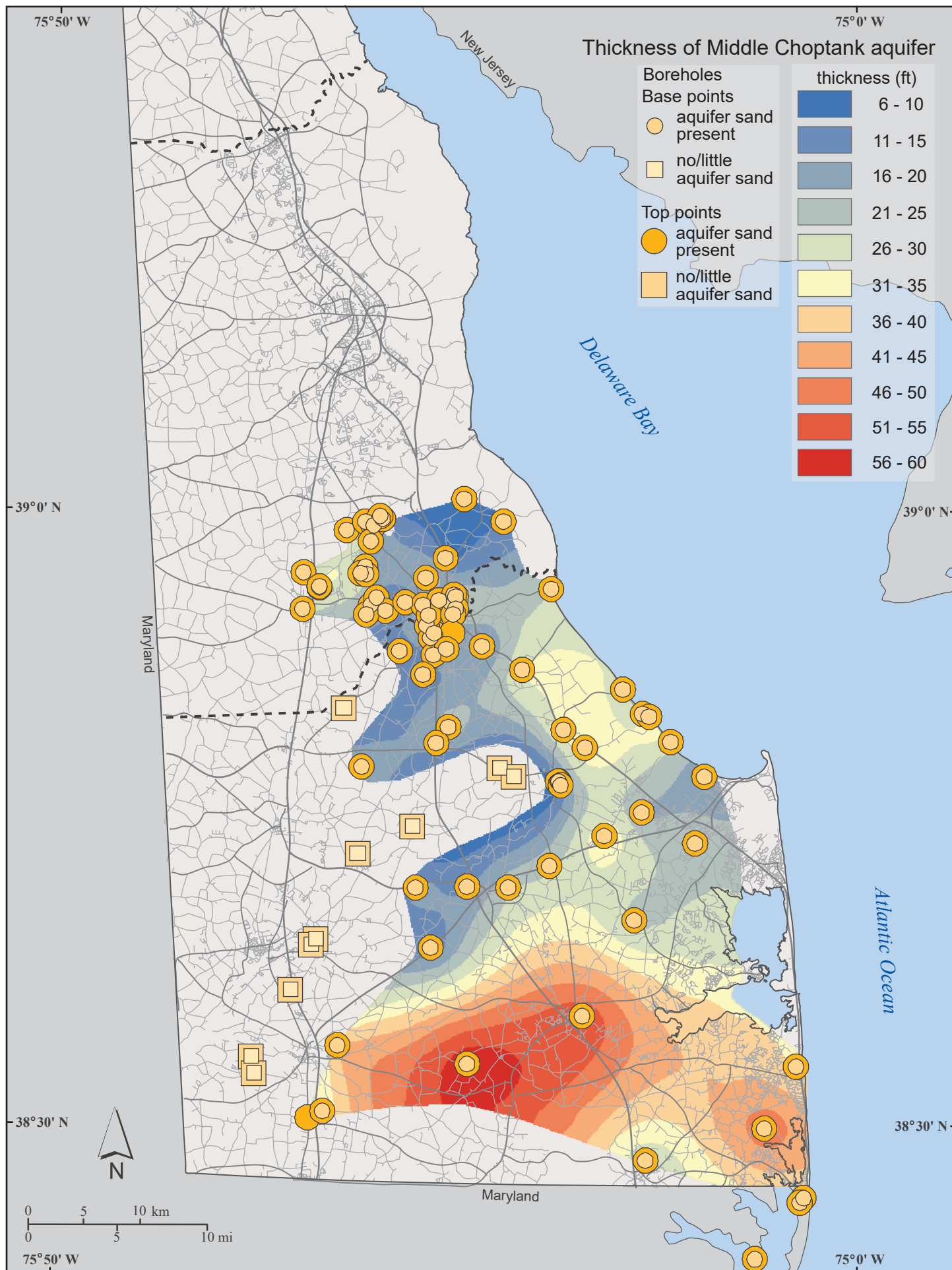


Figure B19 (Text-figure 34).

Middle Choptank aquifer: Map of elevation of top of aquifer and stratigraphic equivalents.

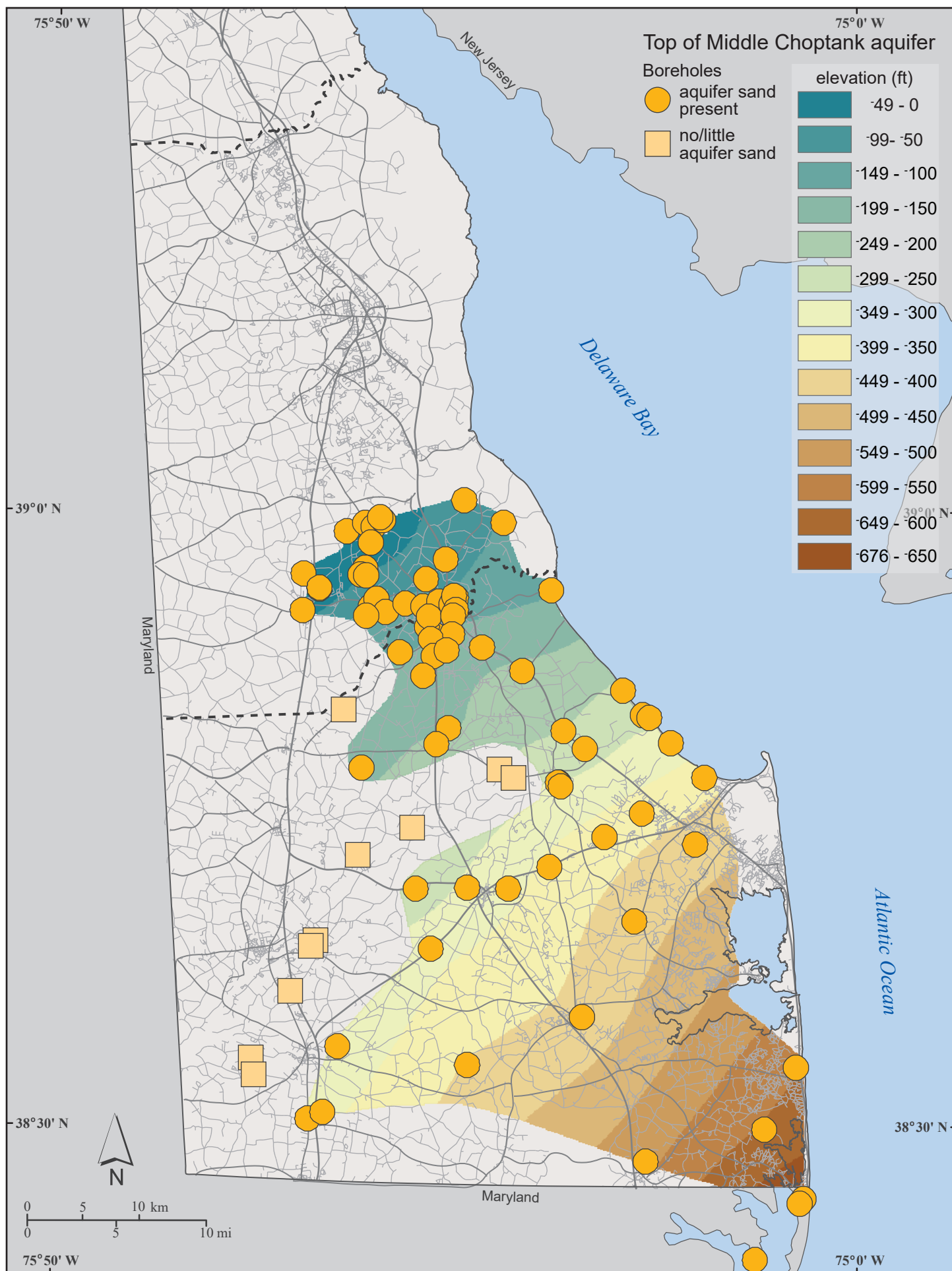


Figure B20 (Text-figure 32).

Milford aquifer: Map of elevation of base of aquifer and stratigraphic equivalents.

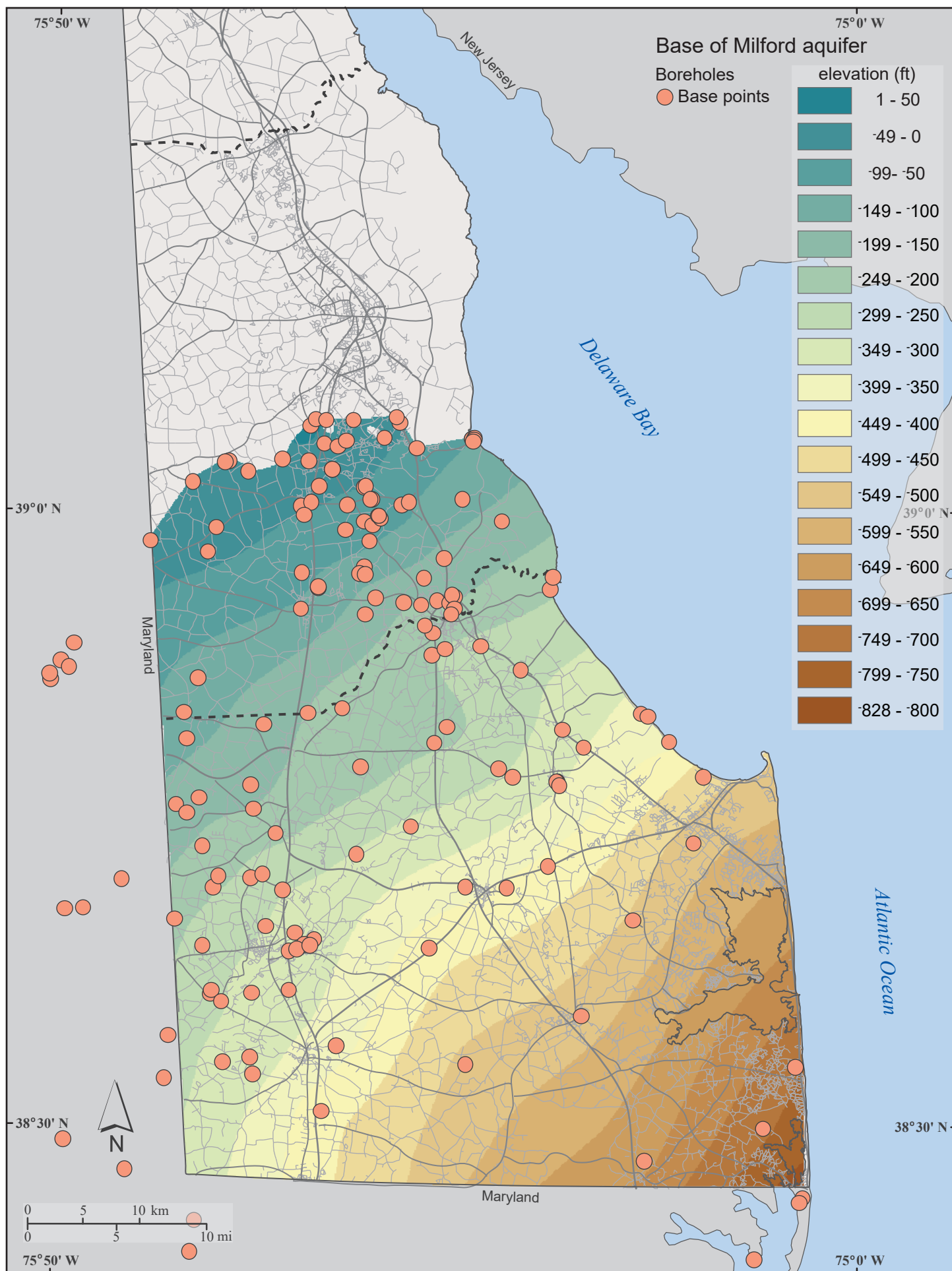


Figure B21 (Text-figure 33).

Milford aquifer: Map of thickness of aquifer and stratigraphic equivalents.

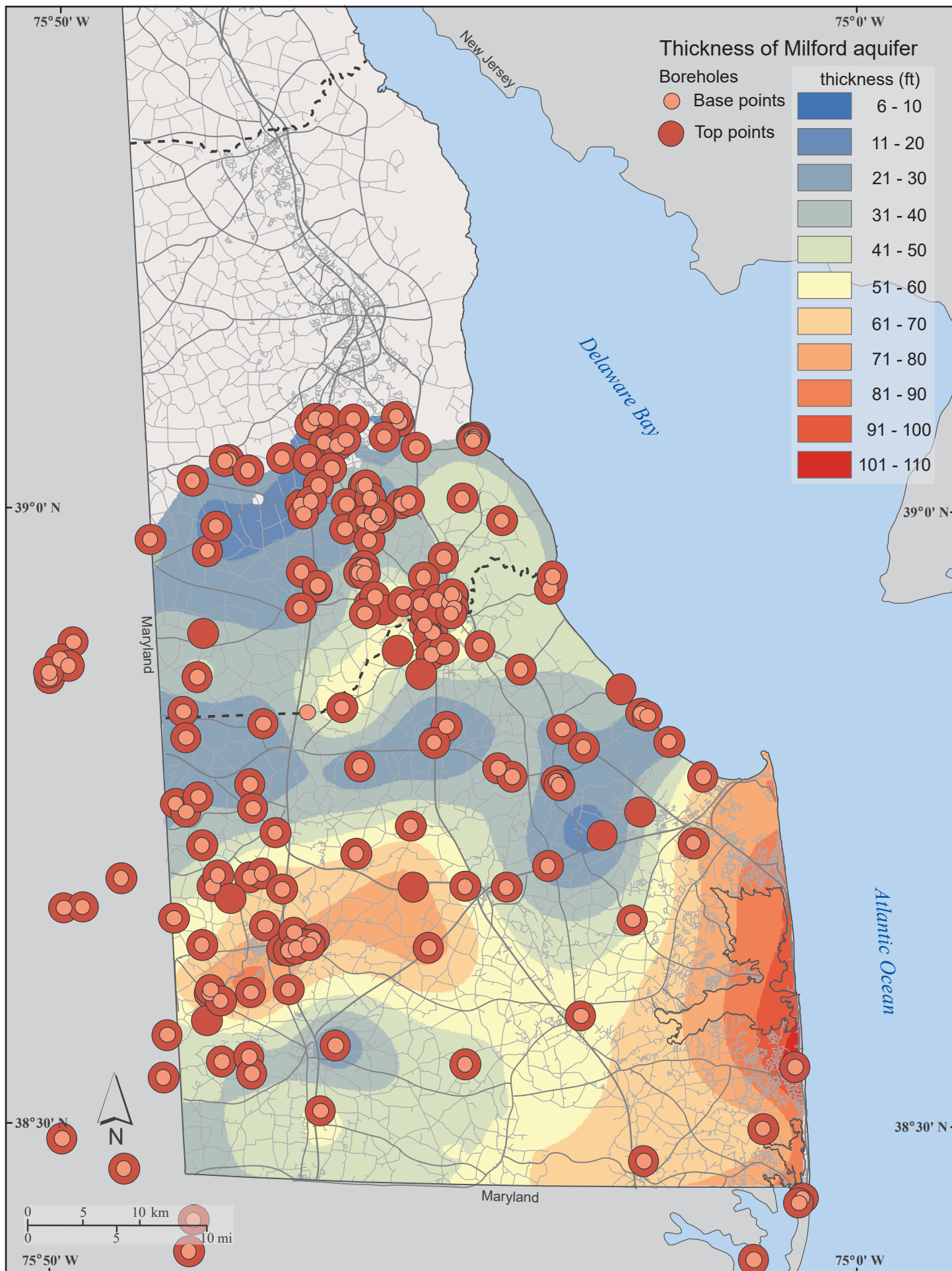


Figure B22 (Text-figure 31).

Milford aquifer: Map of elevation of top of aquifer and stratigraphic equivalents.

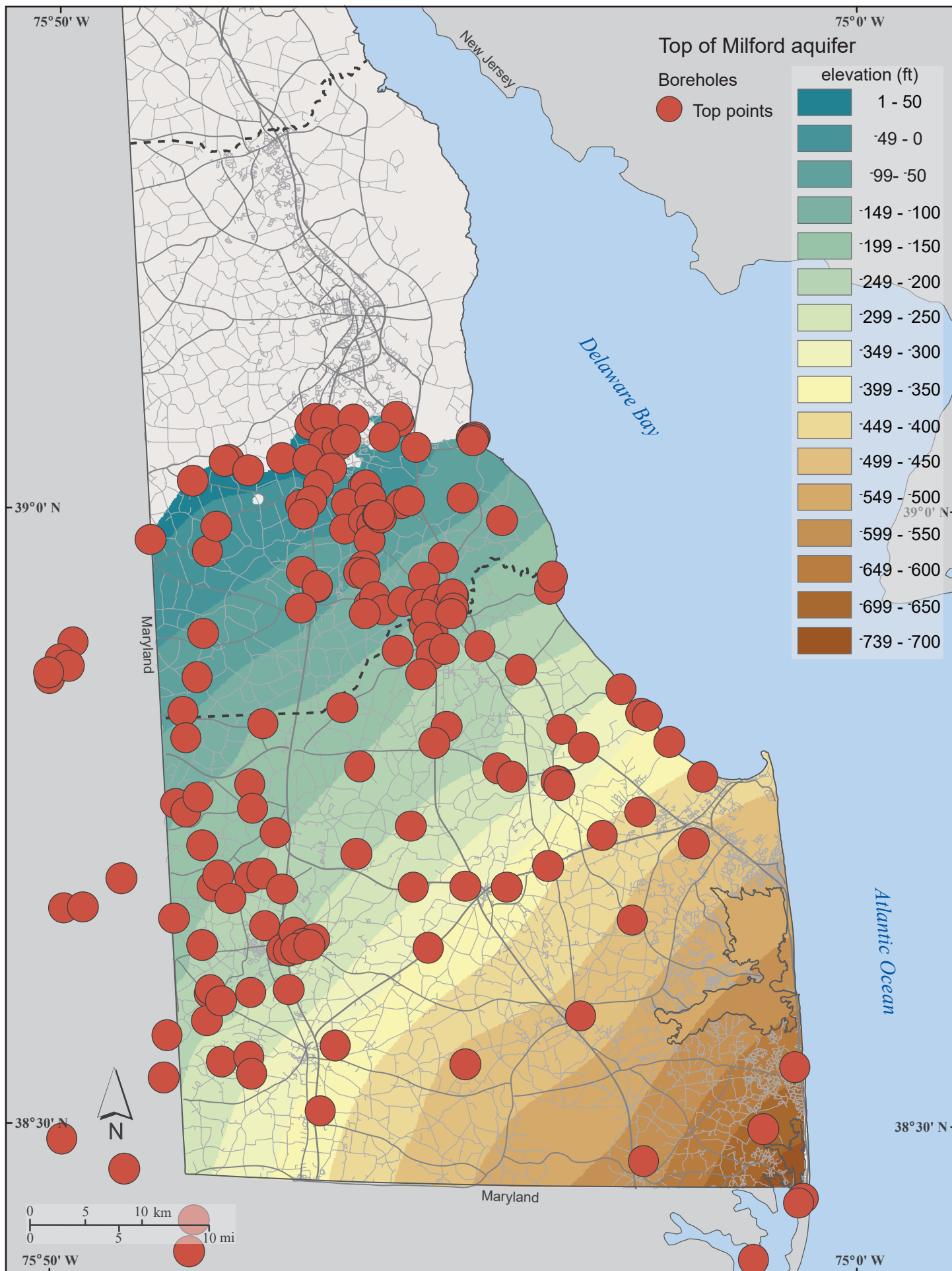


Figure B23 (Text-figure 10).

Mount Laurel aquifer: Map of elevation of base of aquifer and stratigraphic equivalents.

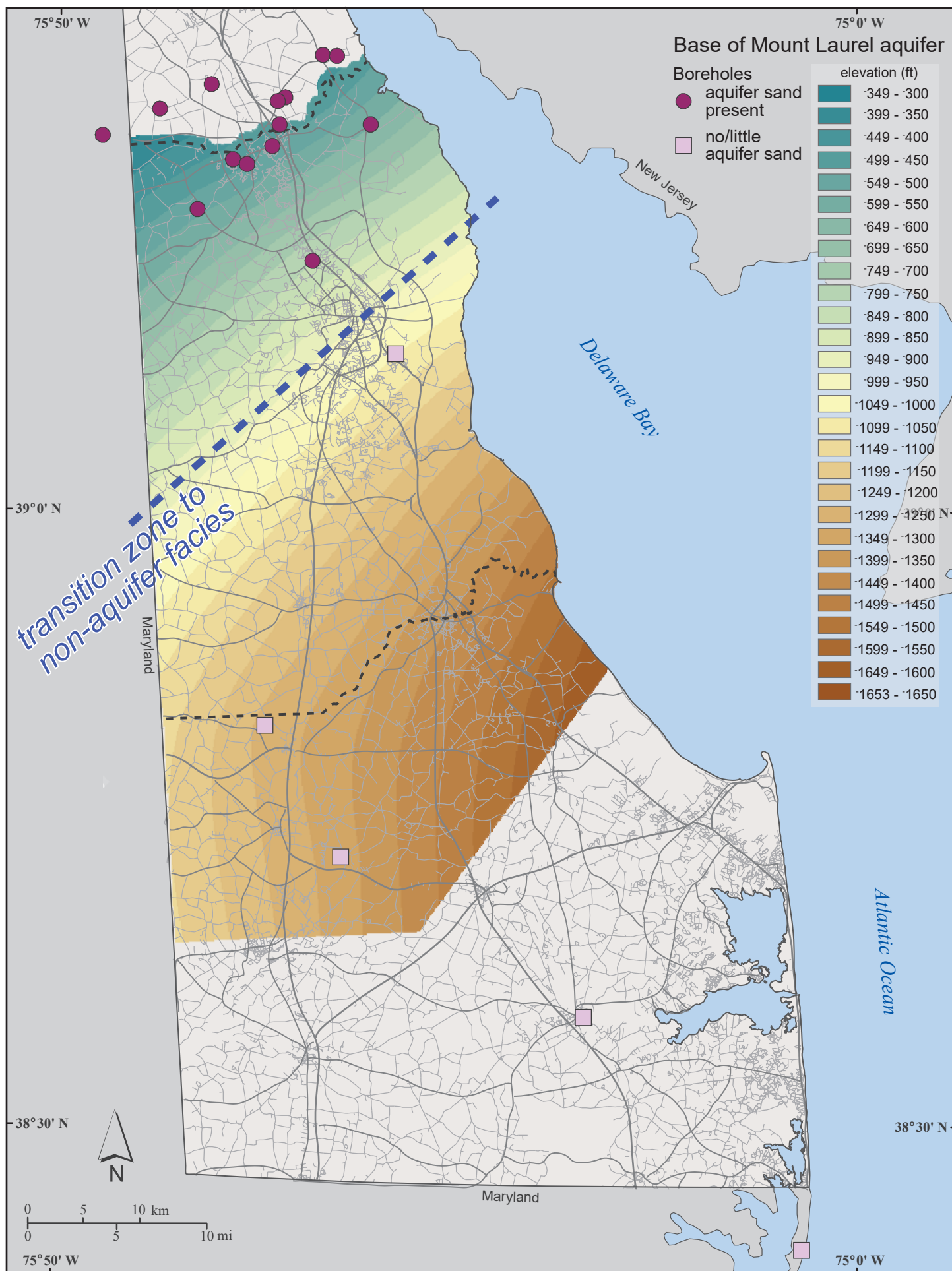


Figure B24 (Text-figure 11).

Mount Laurel aquifer: Map of thickness of aquifer and stratigraphic equivalents.

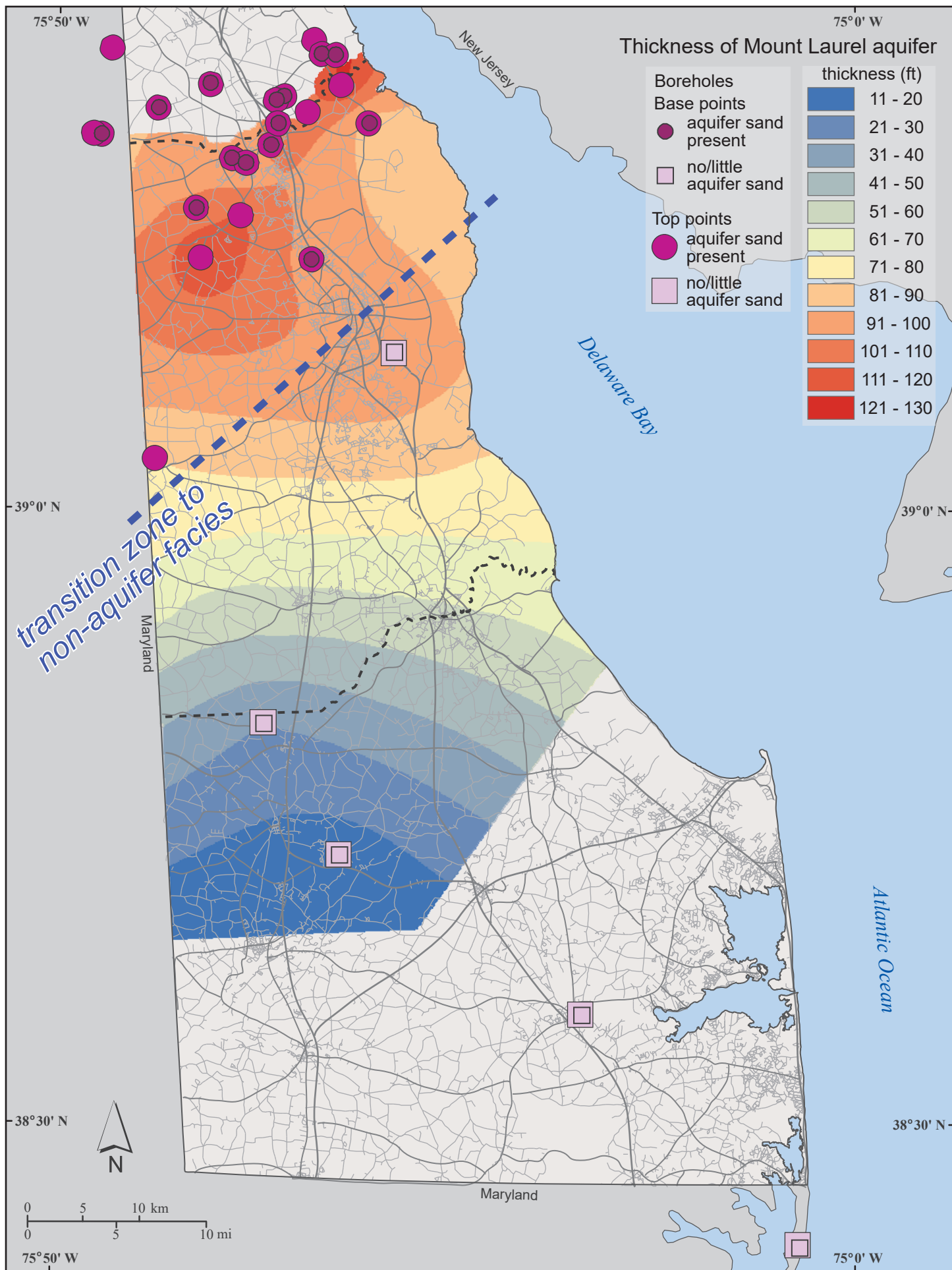


Figure B25 (Text-figure 9).

Mount Laurel aquifer: Map of elevation of top of aquifer and stratigraphic equivalents.

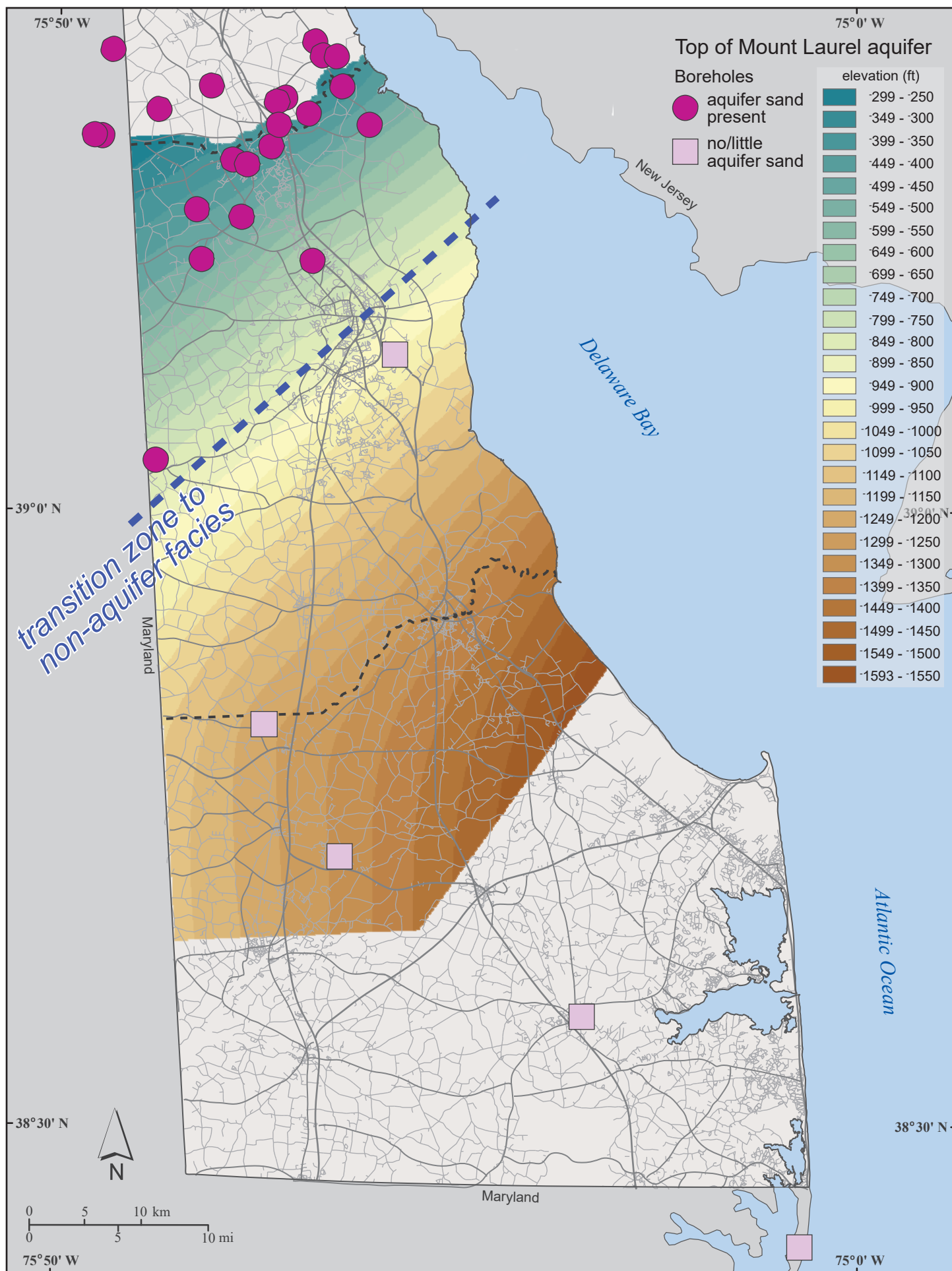


Figure B26 (Text-figure 16).

Piney Point aquifer: Map of elevation of base of aquifer and stratigraphic equivalents.

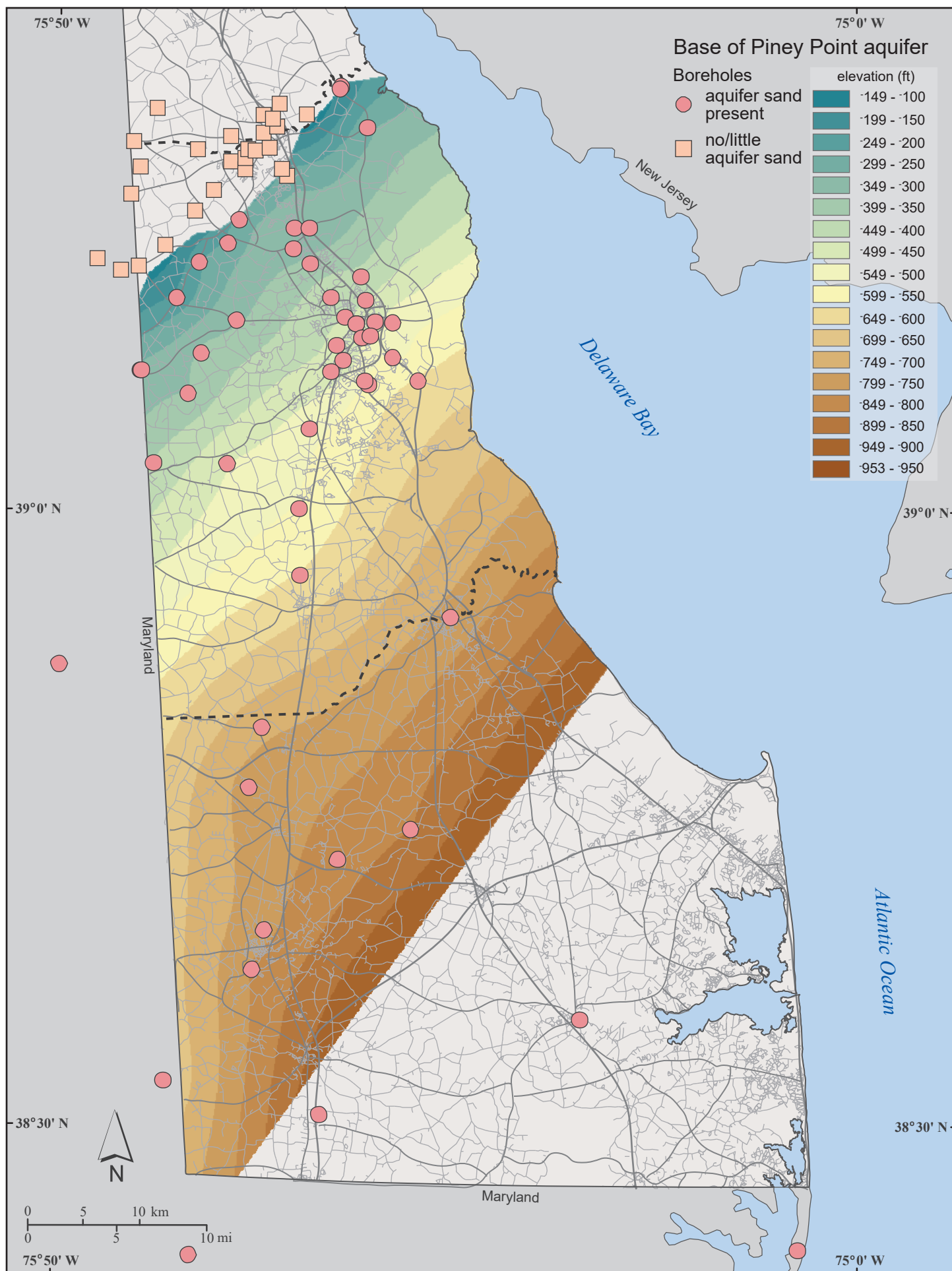


Figure B27 (Text-figure 17).

Piney Point aquifer: Map of thickness of aquifer and stratigraphic equivalents.

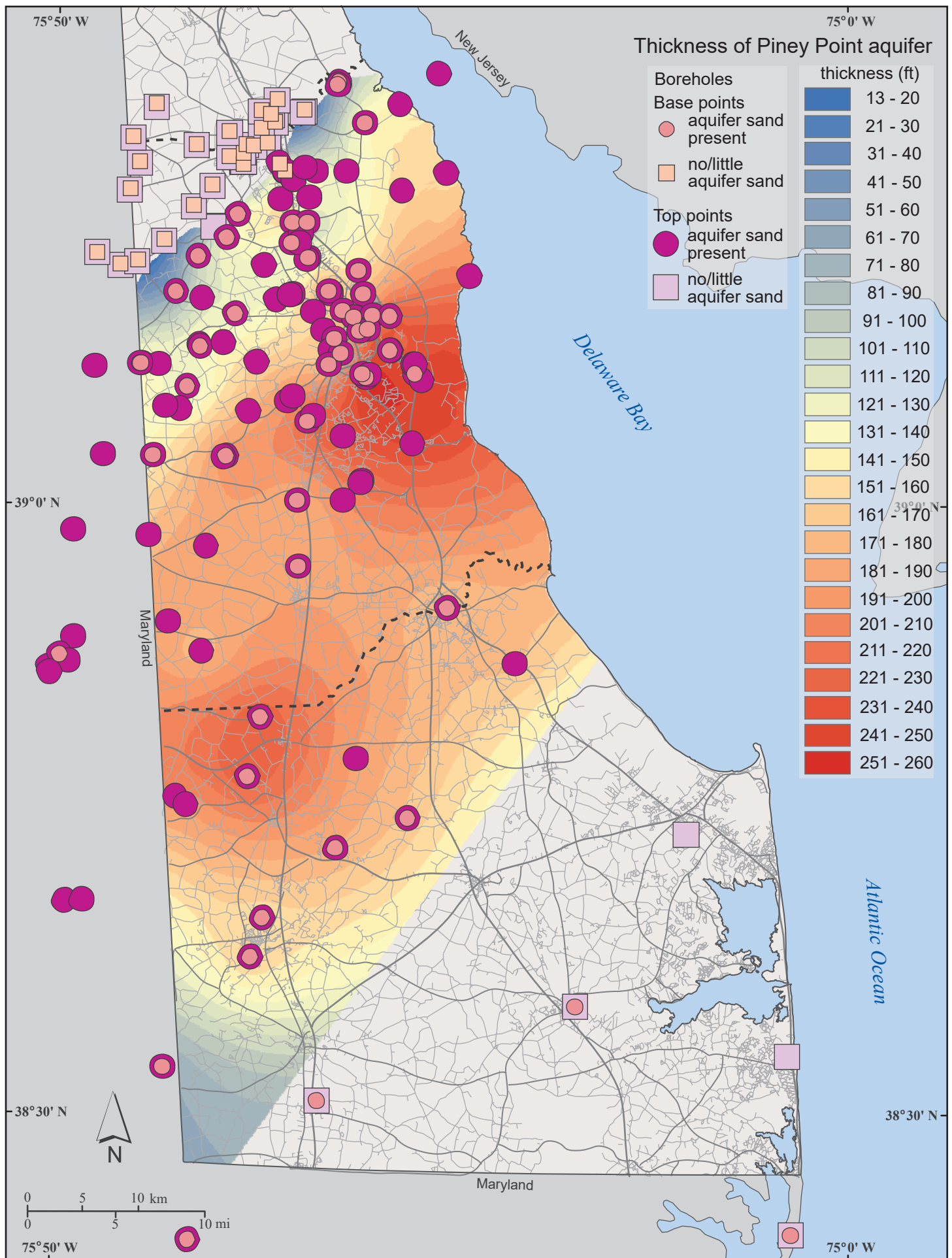


Figure B28 (Text-figure 15).

Piney Point aquifer: Map of elevation of top of aquifer and stratigraphic equivalents.

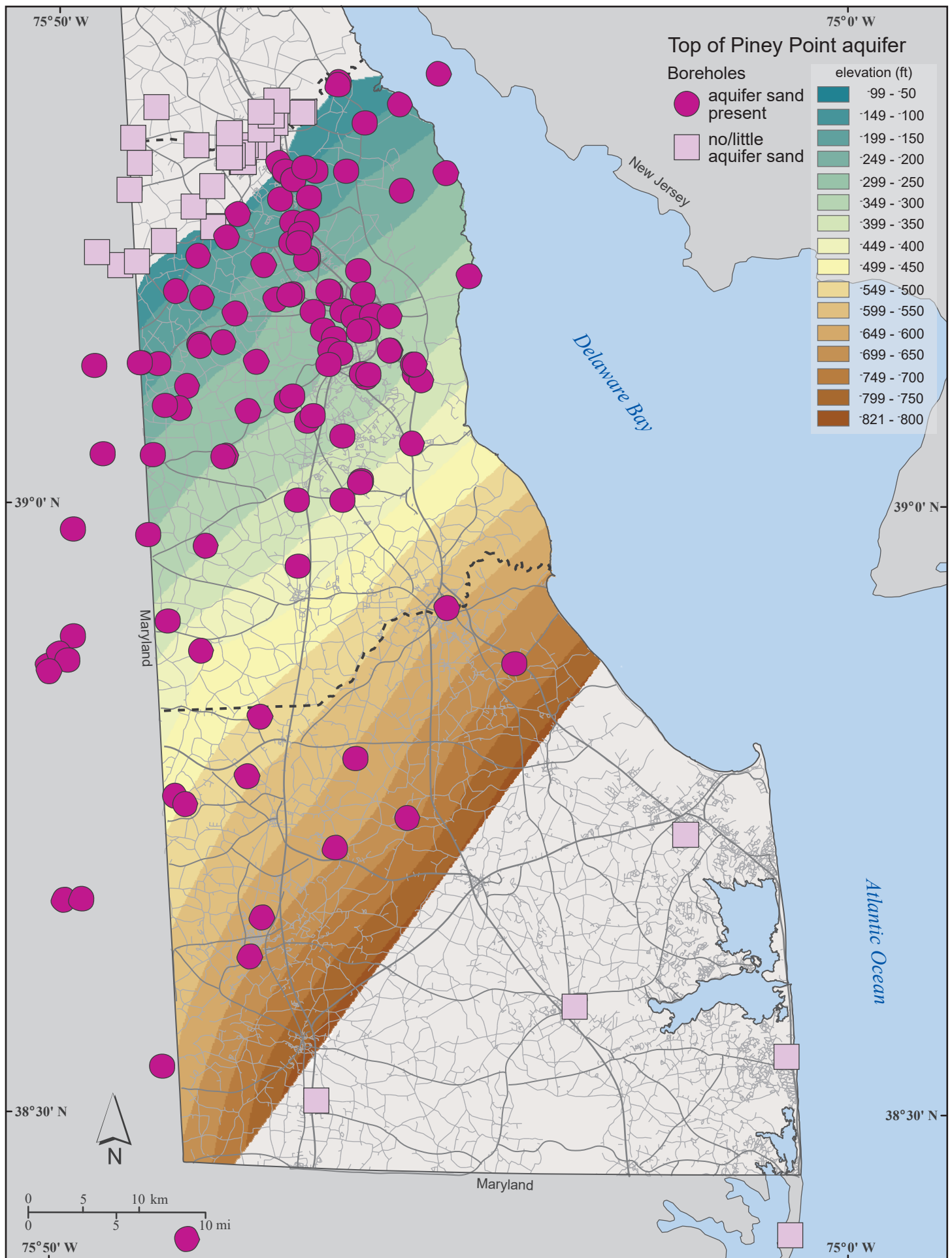


Figure B29 (Text-figure 45).

Pocomoke aquifer: Map of elevation of base of aquifer.

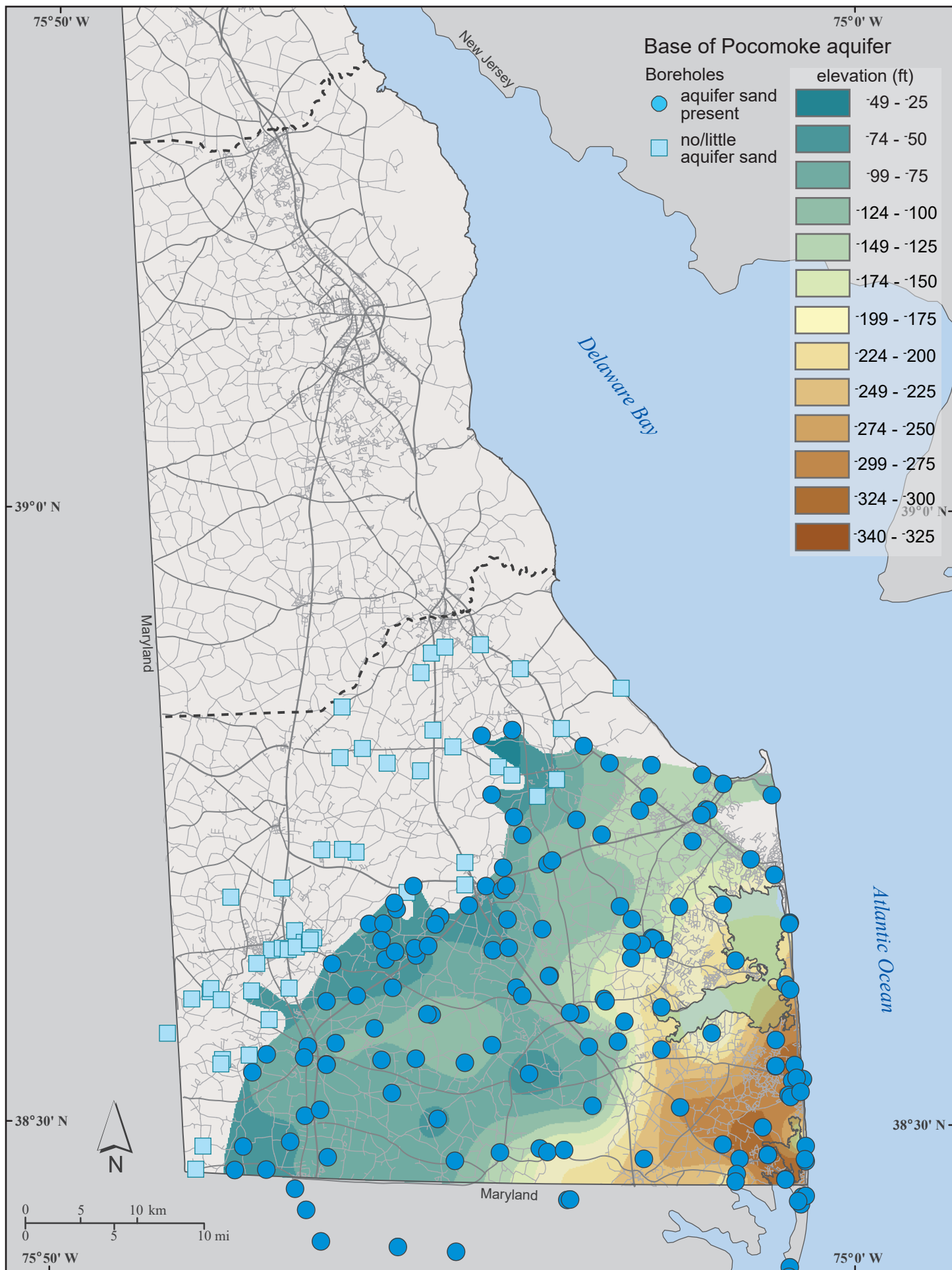


Figure B30 (Text-figure 46).

Pocomoke aquifer: Map of net sand thickness of aquifer.

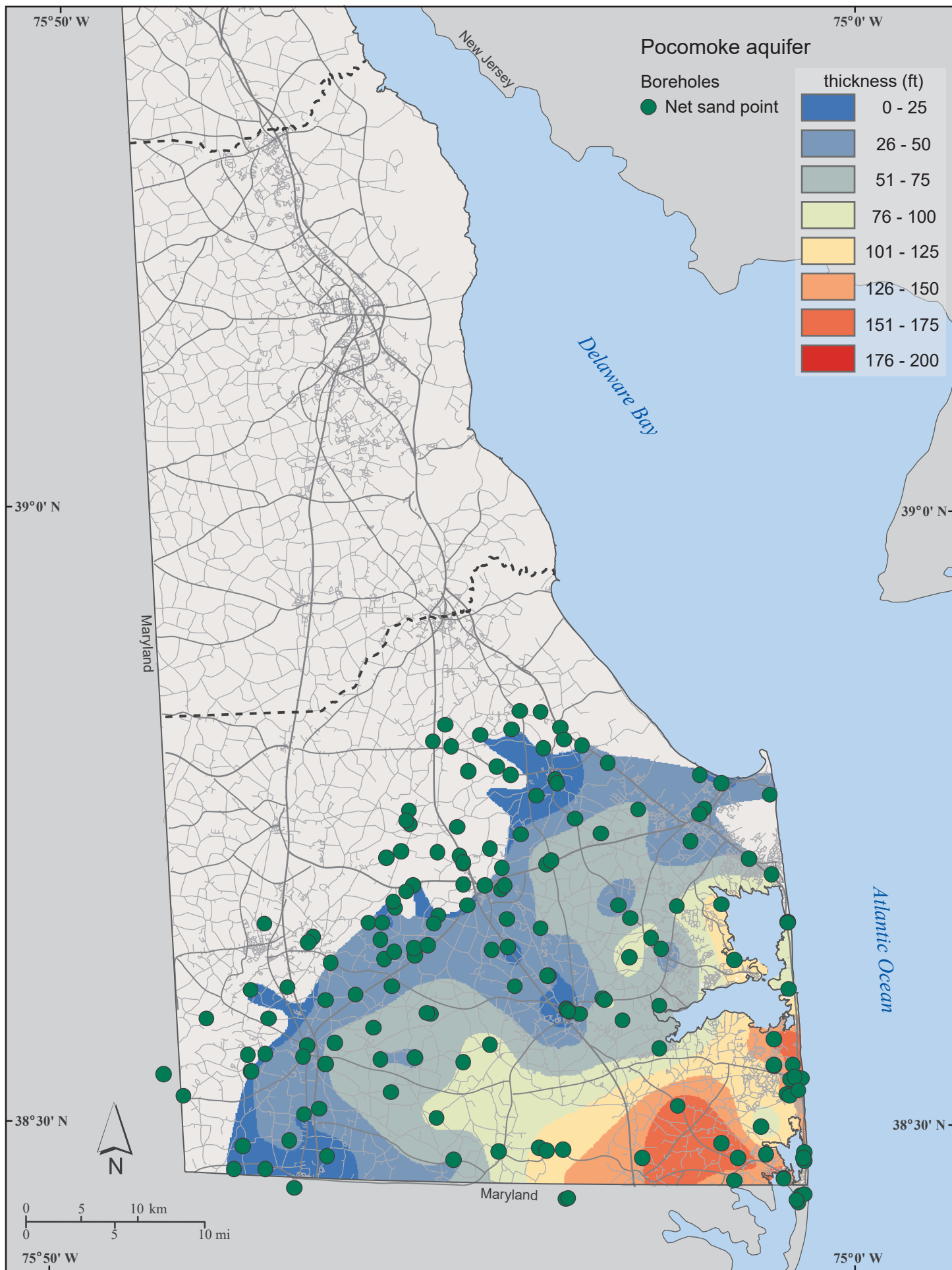


Figure B31 (Text-figure 44).

Pocomoke aquifer: Map of elevation of top of aquifer.

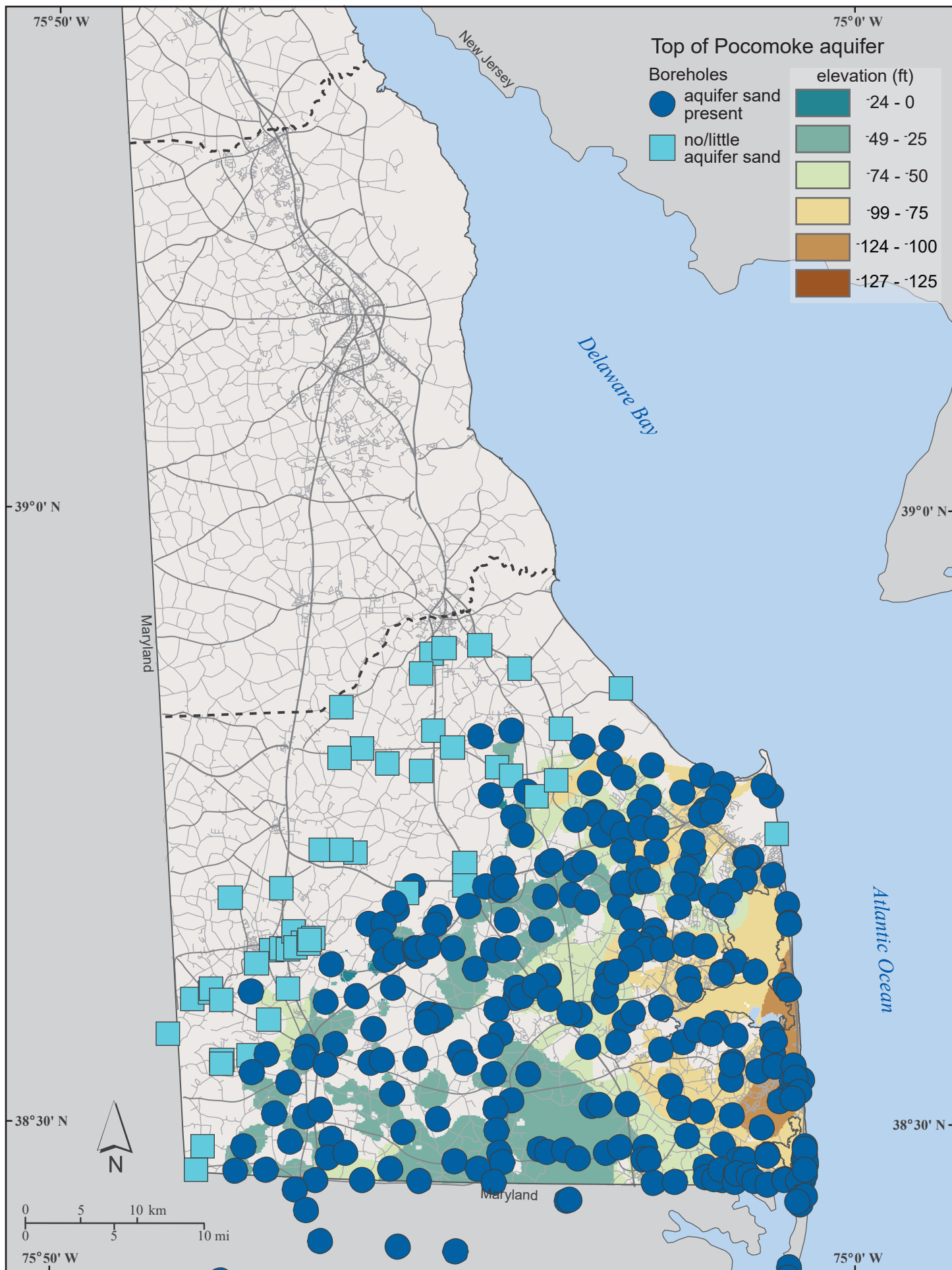


Figure B32 (Text-figure 47).

Pocomoke aquifer: Map of recharge windows into aquifer.

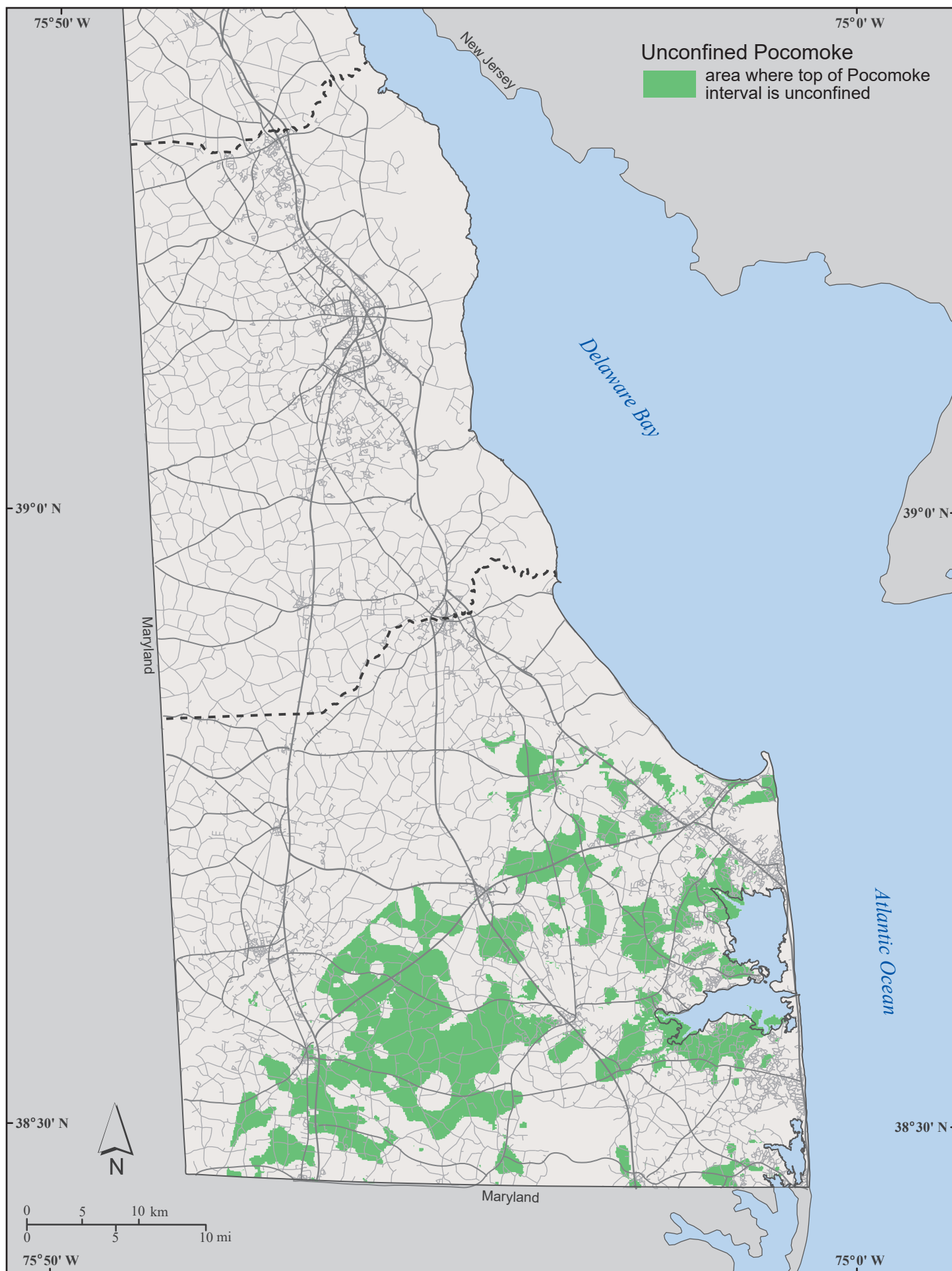


Figure B33 (Text-figure 13).

Rancocas aquifer: Map of elevation of base of aquifer and stratigraphic equivalents.

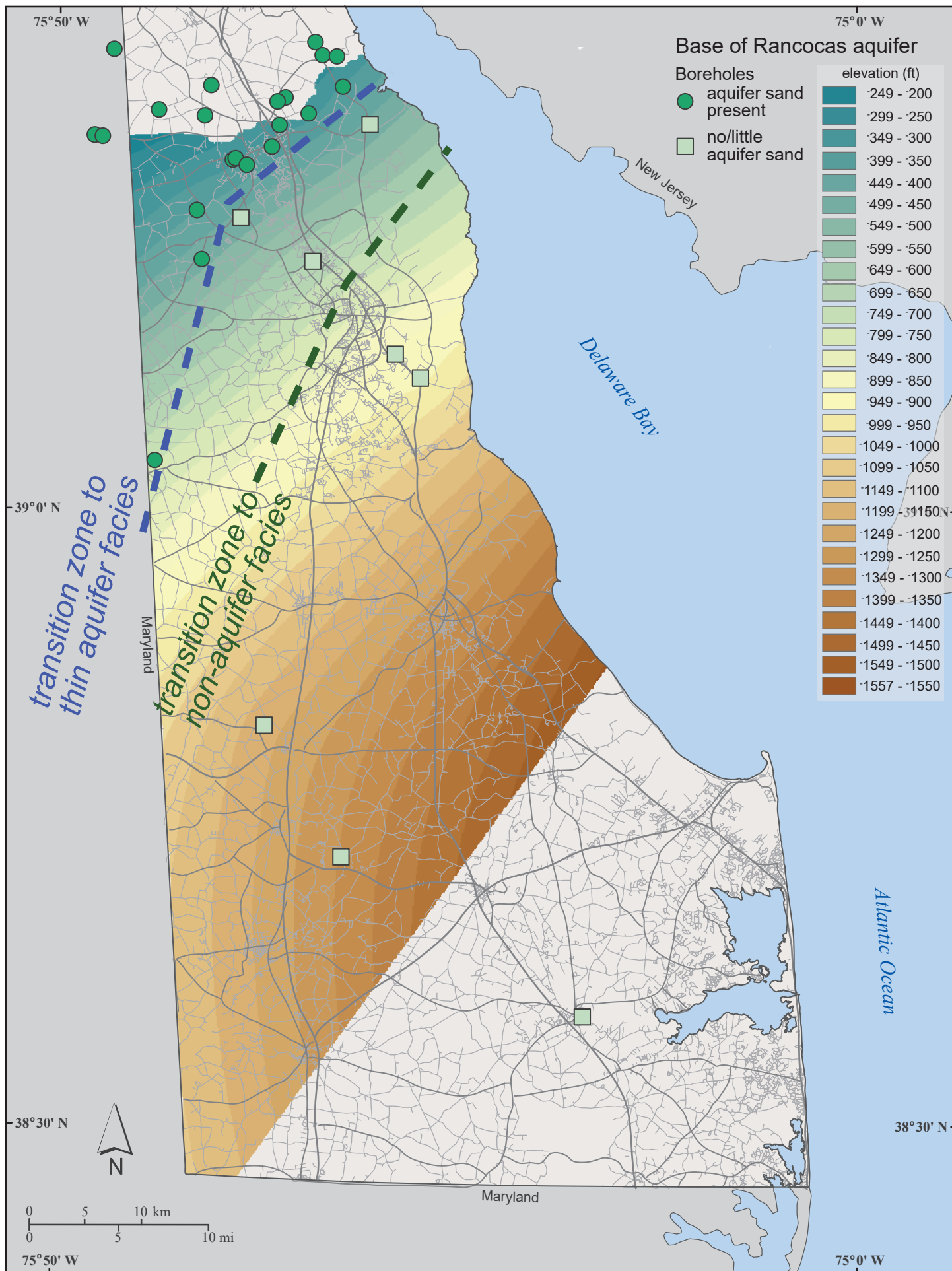


Figure B34 (Text-figure 14).

Rancocas aquifer: Map of thickness of aquifer and stratigraphic equivalents.

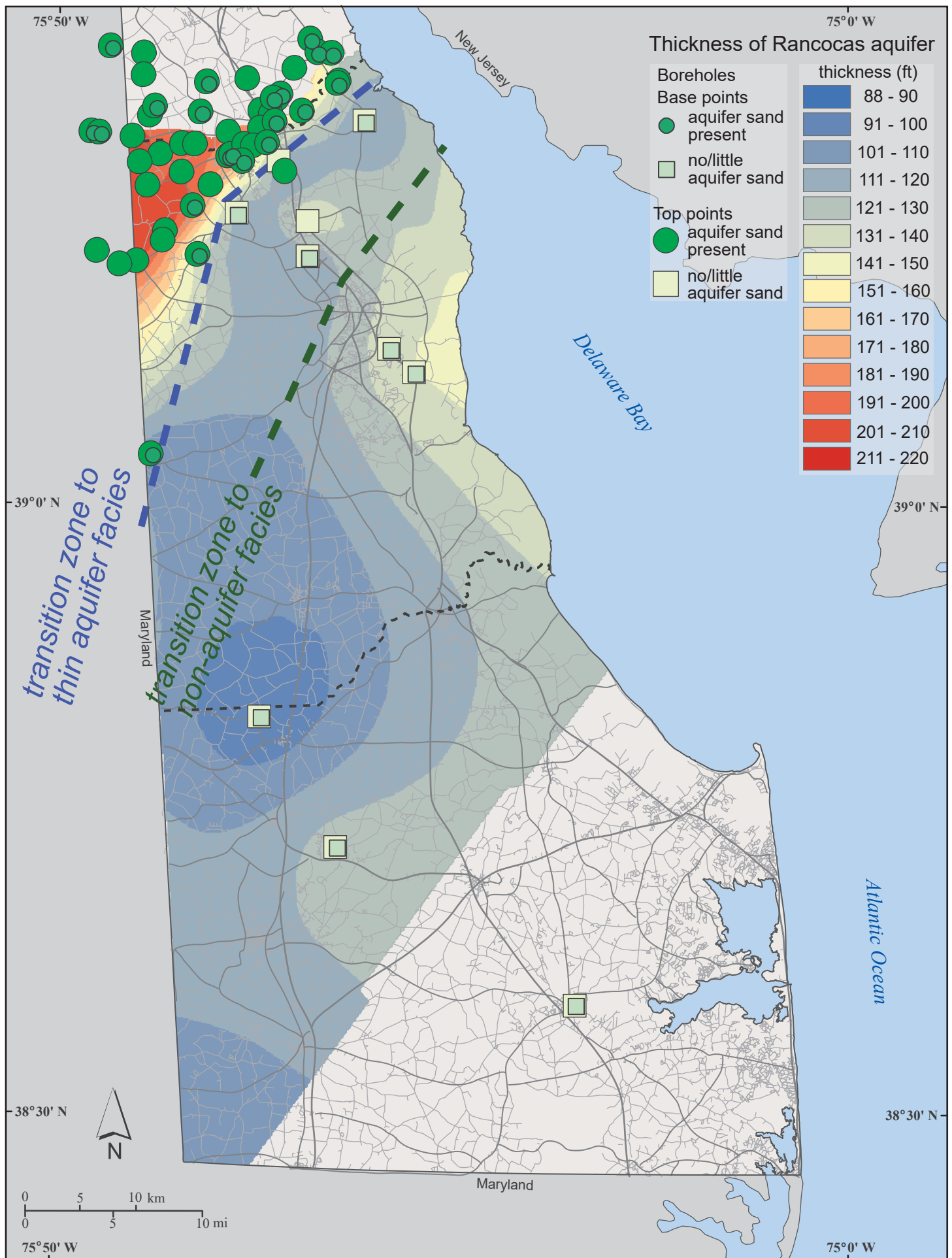


Figure B35 (Text-figure 12).

Rancocas aquifer: Map of elevation of top of aquifer and stratigraphic equivalents.

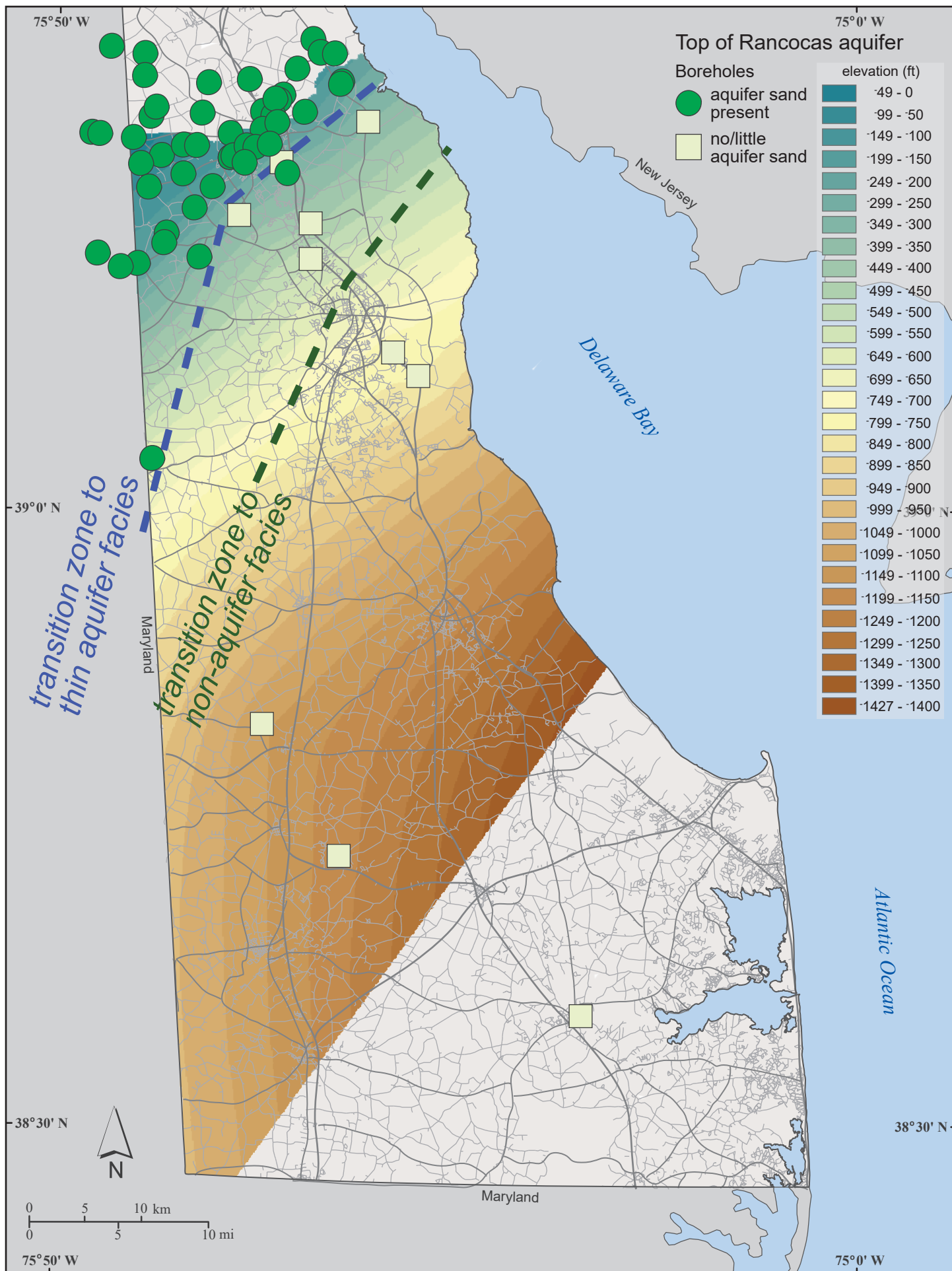


Figure B36 (Text-figure 38).

Upper Choptank aquifer: Map of elevation of base of aquifer and stratigraphic equivalents.

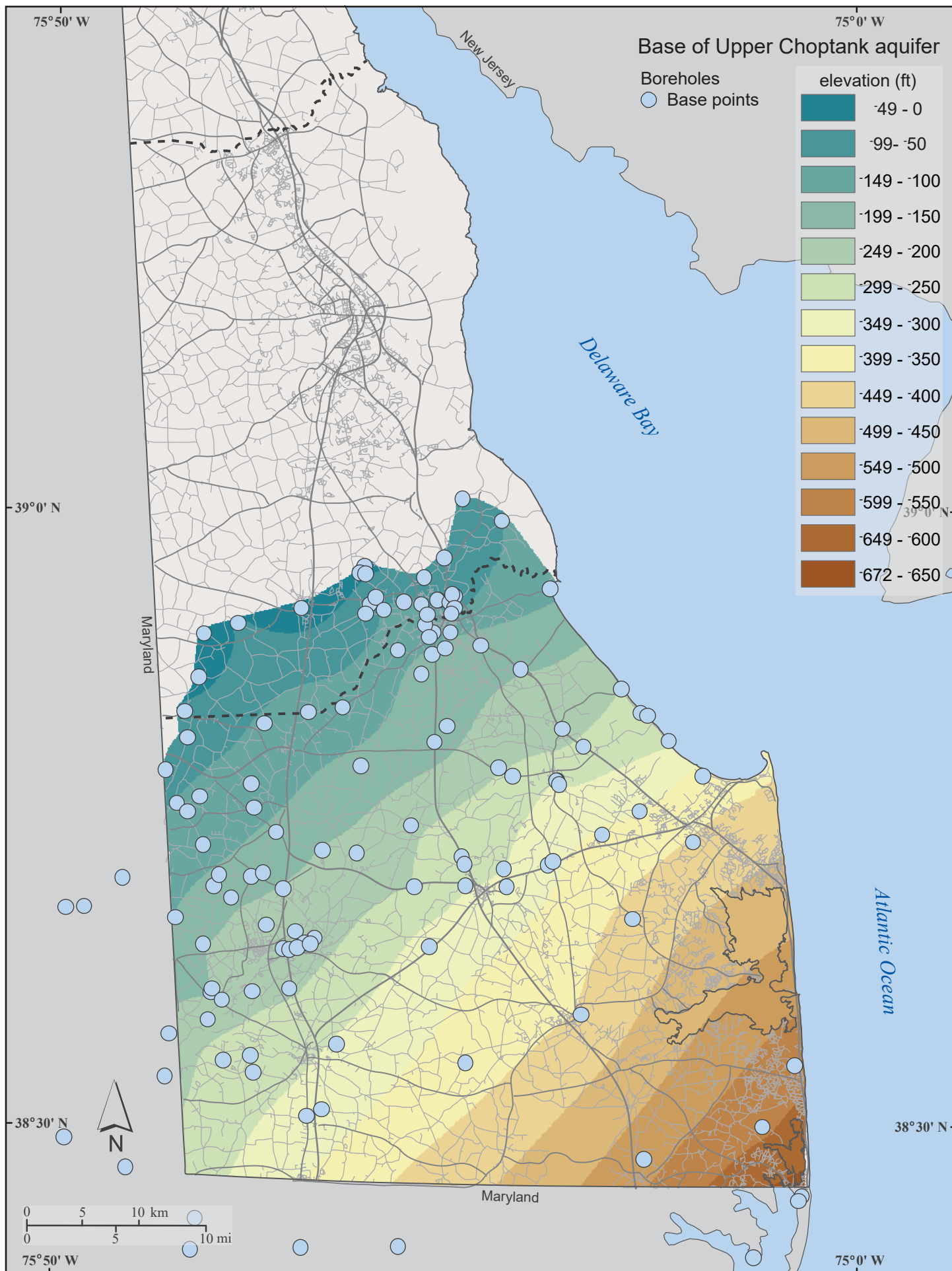


Figure B37 (Text-figure 39).

Upper Choptank aquifer: Map of thickness of aquifer and stratigraphic equivalents.

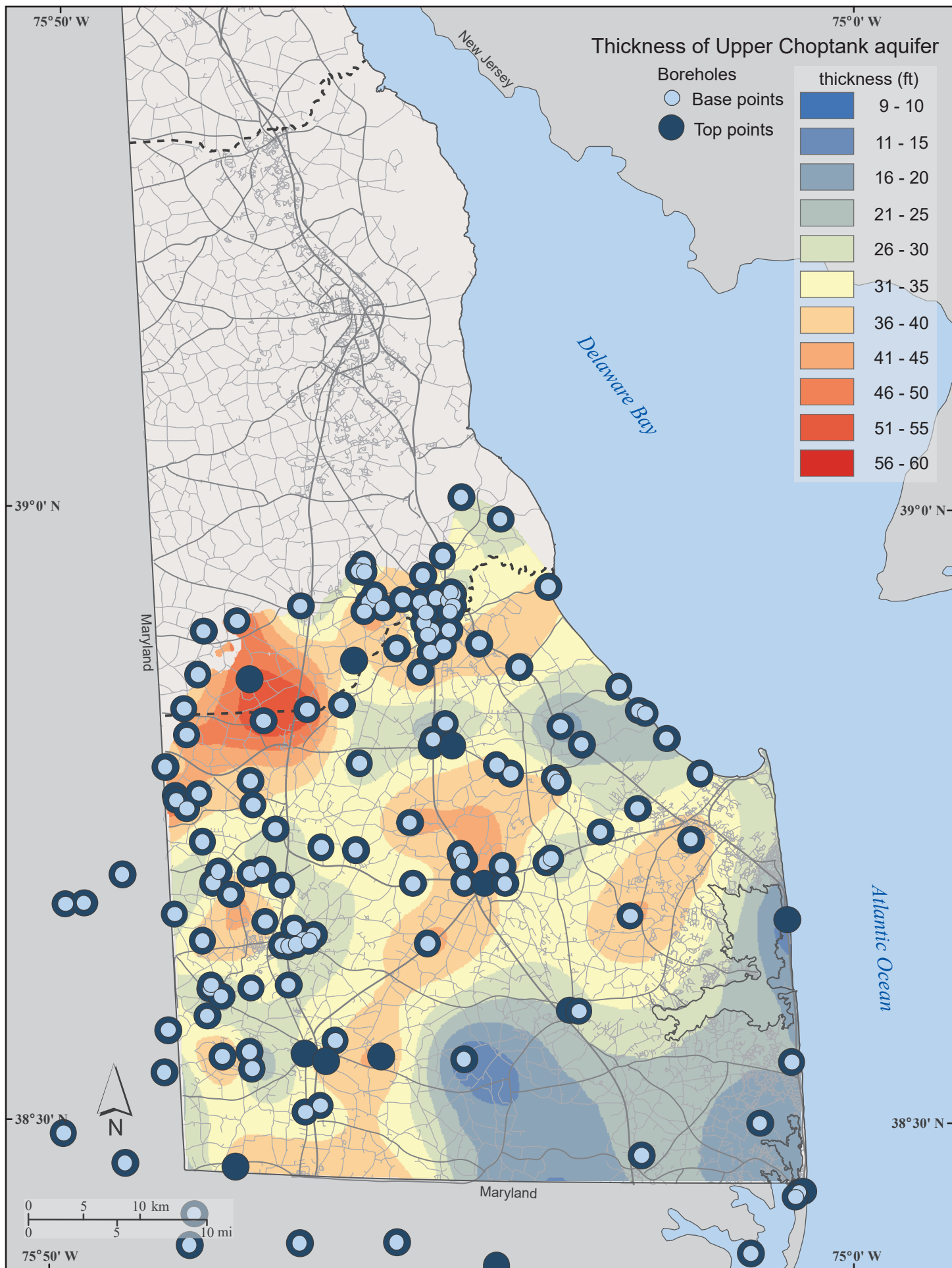


Figure B38 (Text-figure 37).

Upper Choptank aquifer: Map of elevation of top of aquifer and stratigraphic equivalents.

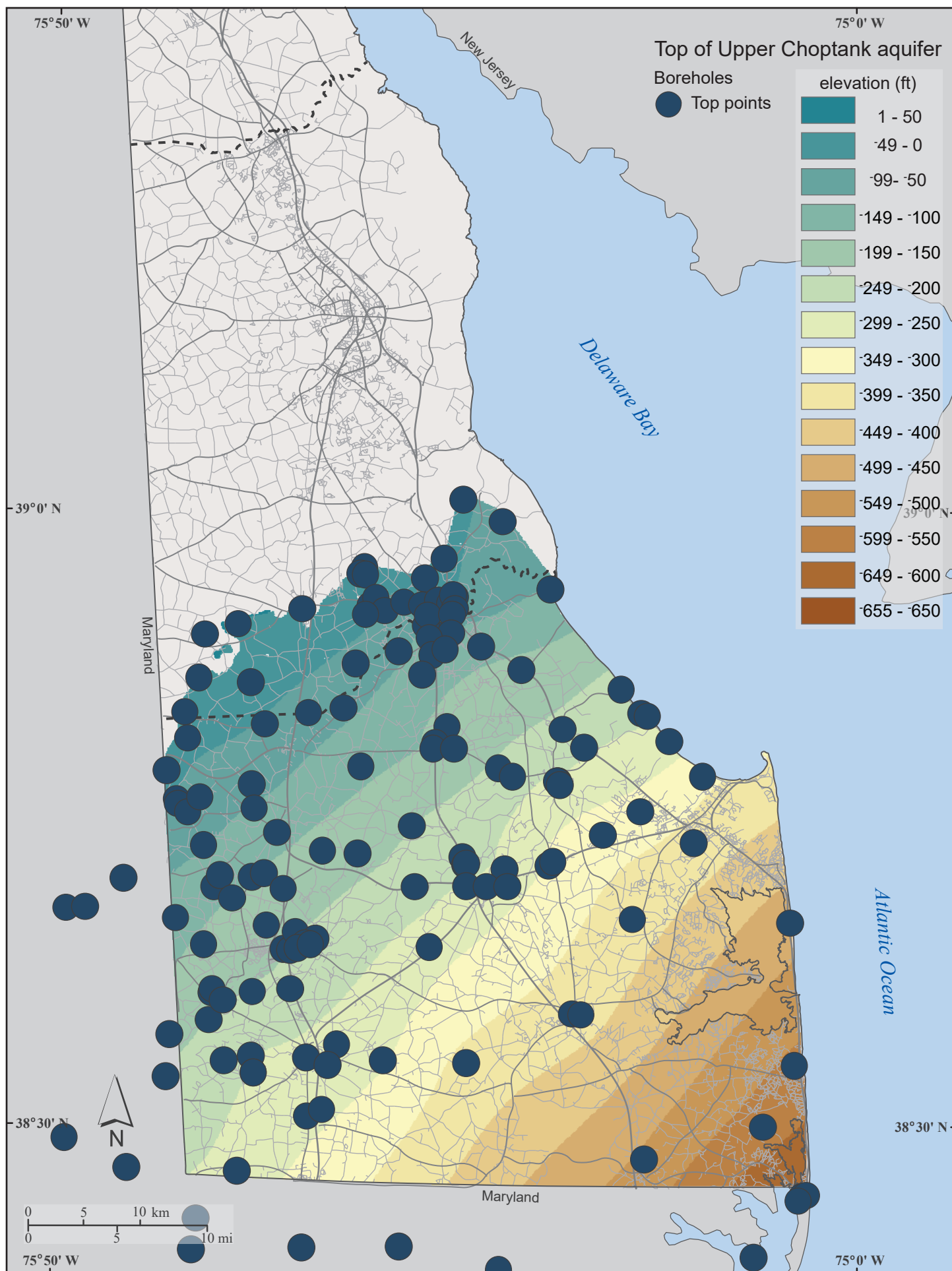


Figure B39 (Text-figure 48).

Unconfined aquifer: Map of elevation of base of aquifer.

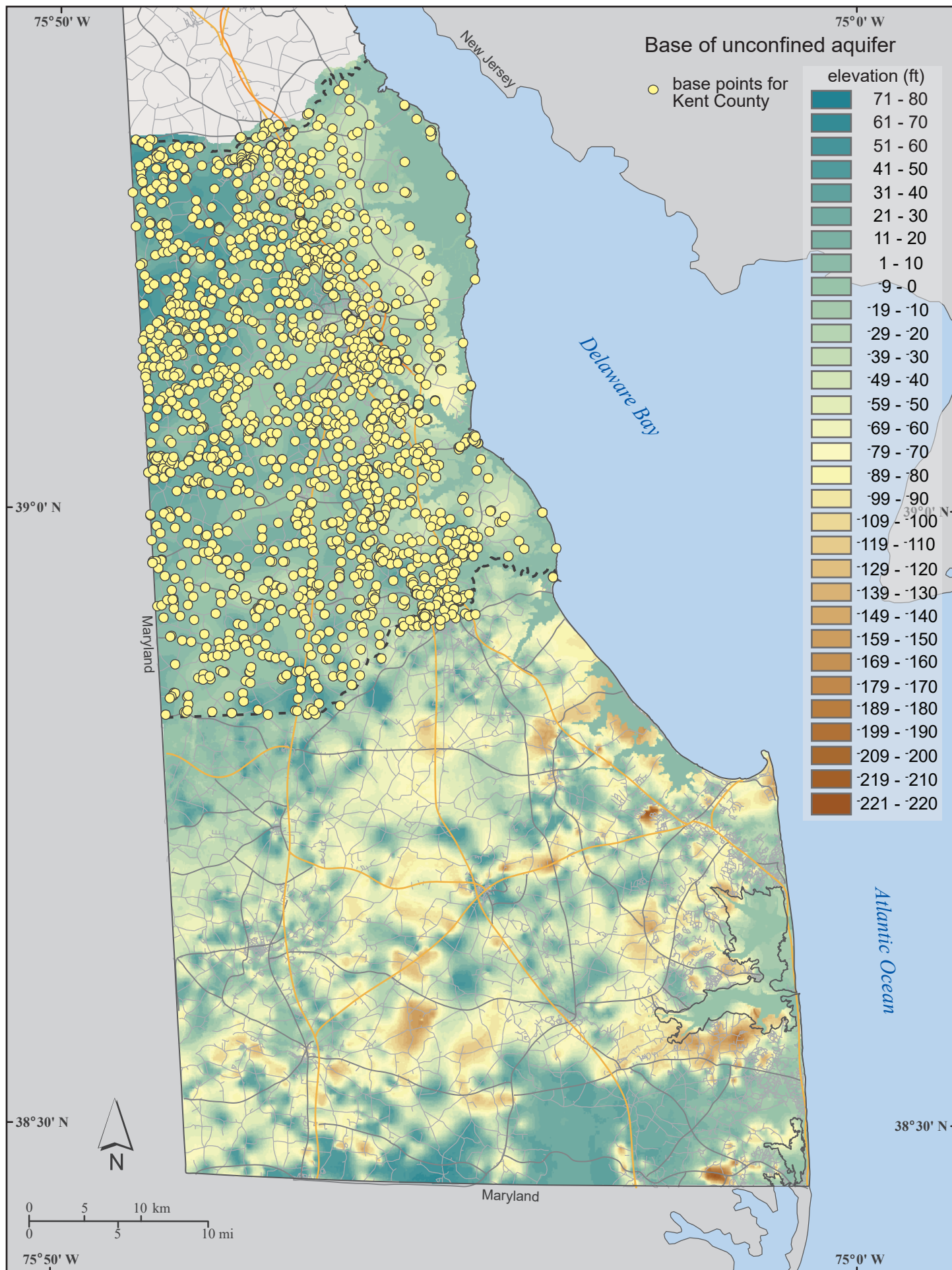


Figure B40 (Text-figure 49).

Unconfined aquifer: Map of thickness of aquifer.

