

OPEN FILE MAP
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DESCRIPTION OF MAP UNITS

- Qm** Tidal marsh deposits - Interbedded sand, silt, and clay that is rich in organic matter. Thickness is generally less than 30 feet.
- Qal** Alluvium - Stream deposits, consisting of sand, silt and clay, gravel and organic matter. Locally contains boulders and other colluvial deposits. Thickness generally less than 40 feet.
- Qst** Talbot Formation - Yellowish brown, thin-bedded, fine-grained sand and silt. Commonly micaceous and glauconitic. Interpreted as deltaic and flood-plain deposits. Equivalent to fine-grained facies of Conant (1990). Thickness ranges between 25 to 50 feet.
- Tp** Pensauken Formation - Light yellow to orange-tan, in places oxidized to deep reddish brown, feldspathic, fine- to coarse-grained, cross-bedded sand, with thin- to thick beds of gravel. Base of formation characterized by gravely channel-lag deposits. Upper part of formation is generally a fine- to medium-grained sand and loam, but may include gravely beds and stringers. Detrital clasts include vein quartz, crystalline rocks, sandstone and siltstone. Thickness is between 0 and 55 feet.
- Te** Aquia Formation - Fine to medium glauconitic quartz sand, clayey in places, dark to light green and yellow where fresh, weathers to yellow brown and dusky dark orange. Thickness ranges from 0 up to possibly 50 feet in the southeastern part of quadrangle.
- Th** Hornerstown Formation - Fine, silty and clayey, olive black, glauconitic sand, very dense. Glauconite comprise 60 to 90 percent of sand; dark green polylobate grains, with few altering to limonite. Thickness is approximately 20 feet.
- Ks / Kml** Severn and Mount Laurel formations (undifferentiated).
- Severn Formation** - Olive-black to olive-brown, glauconitic-rich sand with common to abundant phosphate nodules. Fossils include *Belemnitella americana* and *Exogyra cancellata*. Thickness is between 15 and 20 feet.
- Mount Laurel Formation** - Medium light gray to light olive gray, fine- to medium-grained, glauconitic-rich, quartz sand. Sand is shelly and calcareous in places. Weathers yellow to yellow brown. Common fossils include *Belemnitella americana* and *Exogyra cancellata*. Thickness is approximately 50 to 60 feet.
- Kma** Marshalltown Formation - Greenish black, fine silty sand, heavily glauconitic, up to 90 percent glauconite. Glauconite grains, dark green and polylobate. Thickness about 15 feet.
- Kst** Englishtown Formation - Olive-gray and dark yellowish brown, fine- to medium-grained, silty sand that is micaceous, glauconitic-rich and lignite bearing. In places, partially lithified with limonite cement. Generally coarsens upward from underlying Merchantville Formation. Maximum thickness about 15 feet in the northwestern portion of the Cecilton Quadrangle, but units thin and becomes more silty or is absent in southeastern portion of quadrangle.
- Kmt** Merchantville Formation - Medium dark gray to dark gray, very fine, silty and clayey, micaceous and glauconitic-rich sand. Becomes very dense and more clayey with depth. Thickness is between 40 to 50 feet.
- Kmg** Magothly Formation - While to light gray and buff, fine to medium quartz sand, lignitic in places with flattened carbonized logs present. Also, black to dark gray clays and silty sands. Sands cross-stratified in places. Light gray to light pinkish gray silt plastic clay present just below contact with overlying Merchantville. Thickness ranges from 40 to 55 feet in the quadrangle.
- Kp** Potomac Group - Brown to yellow-brown, fine- to medium-grained, silty and gravely quartz sand. Variegated and mottles locally. Sands often contains planar cross-stratification. In places, dark gray clays may contain carbonized plant fossils, lignite, and carbonized logs. Thickness ranges from about 1,000 feet in the northwestern part of the Cecilton Quadrangle to 1,500 feet in the southeastern part.

References

Conant, L.C., 1990. The Coastal Plain of Cecil County. In Higgins, M.W., and Conant, L.C., The Geology of Cecil County Maryland: Maryland Geological Survey Bulletin 37, p. 117-183.

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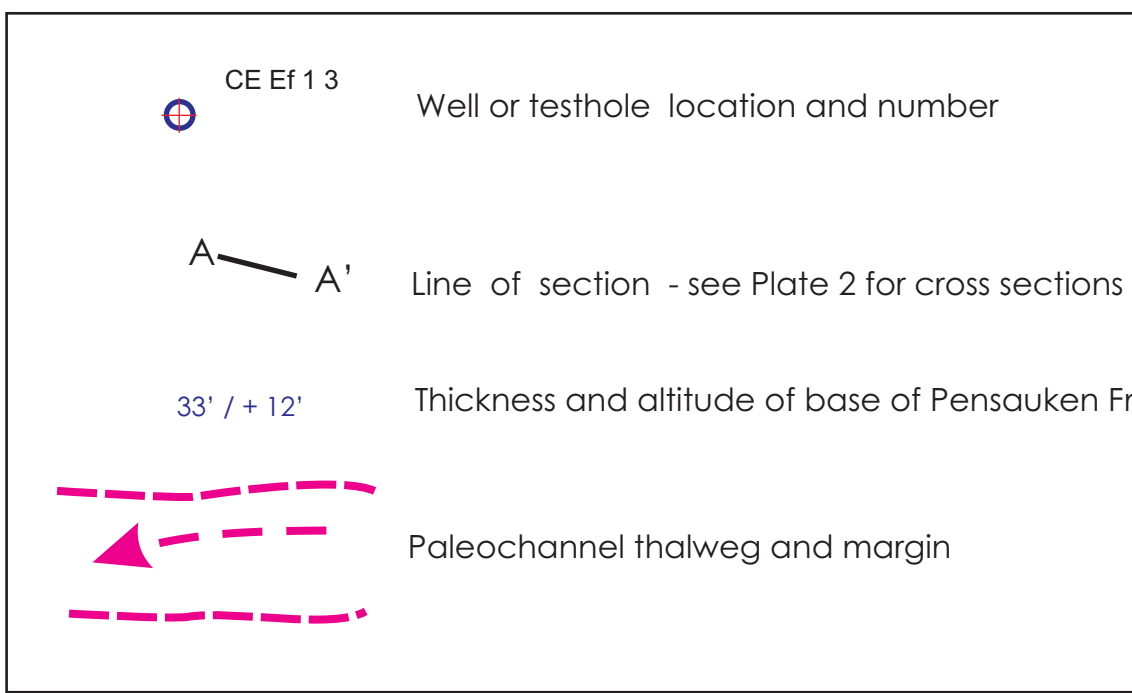
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Geologic field mapping conducted in 2004-2005. Map layout by D.K. Brezinski, 2020

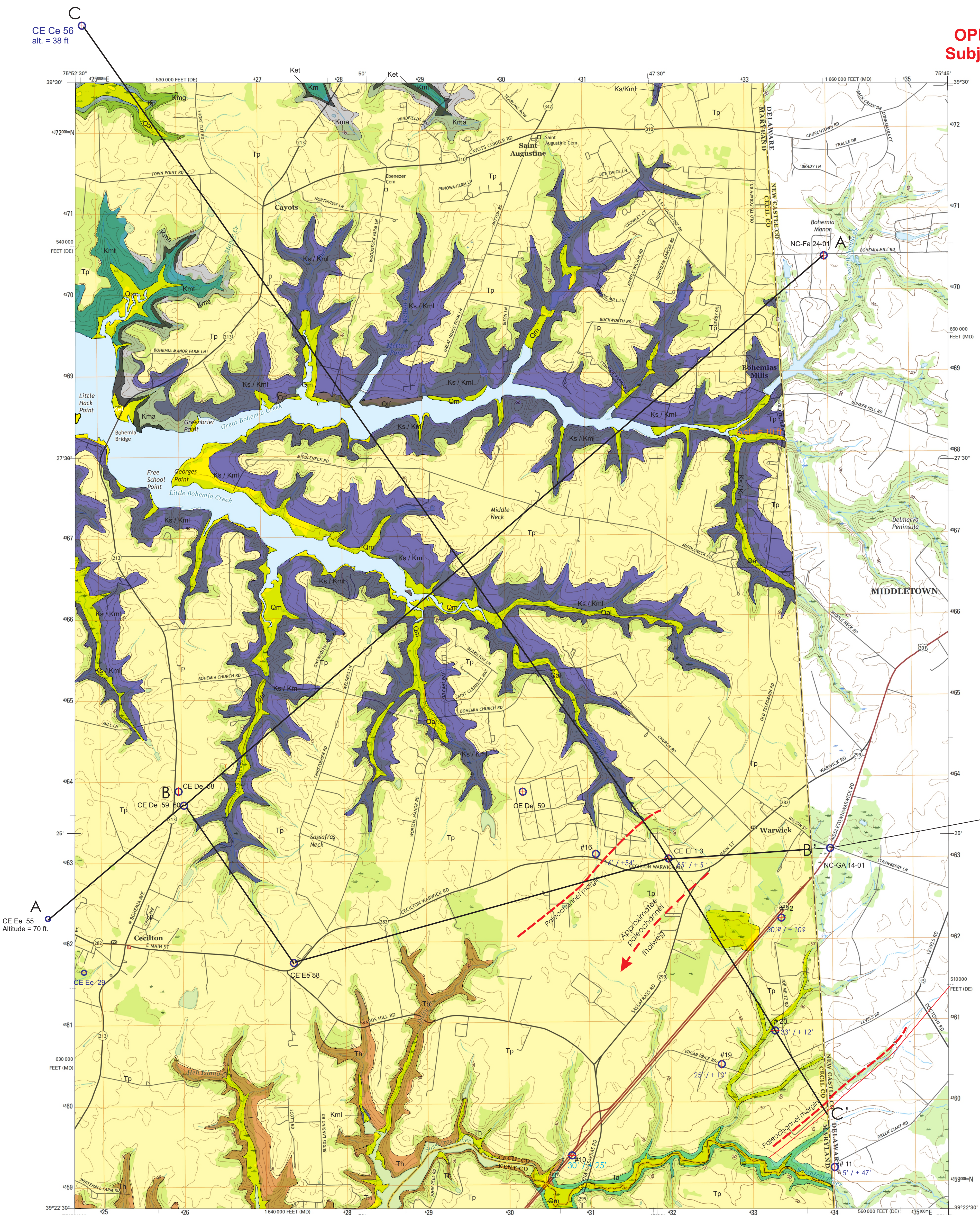
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MAP SYMBOLS



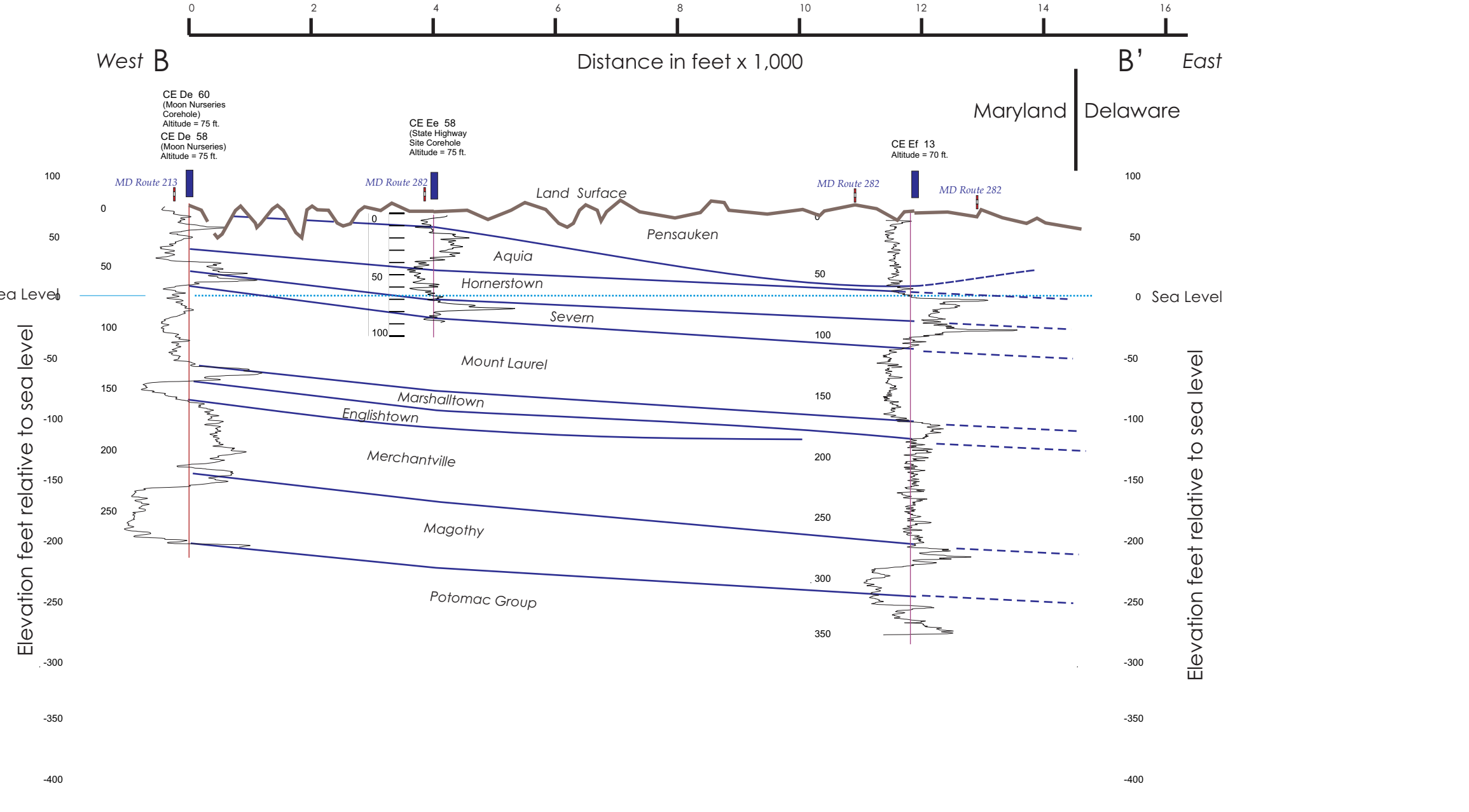
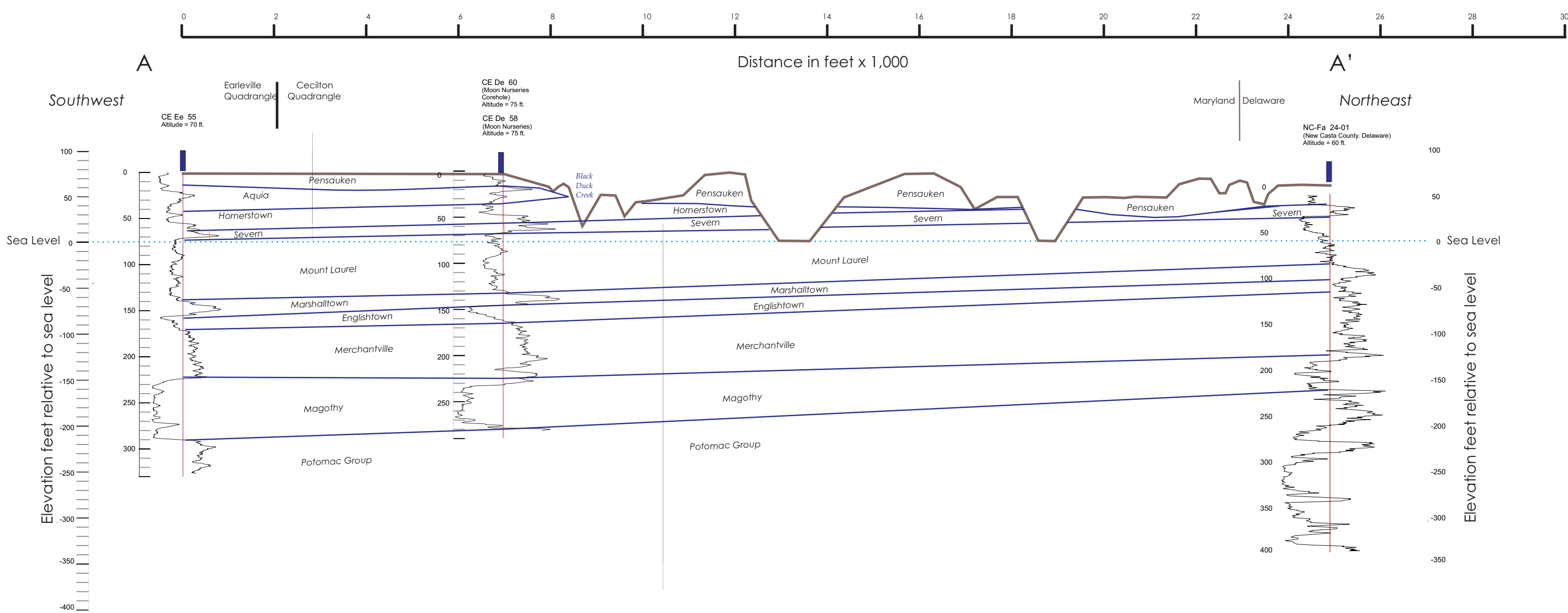
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SCALE 1:24,000
1 0.5 0 0.5 1
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
METERS
1 0.5 0 0.5 1
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET
CONTour INTERVAL: 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988



Adjoining 7.5-minute quadrangles
(Cecilton quadrangle shaded)

| | | | |
|---|---|---|---|
| 1 | 2 | 3 | 1 North East 2 Elkton 3 Saint Georges |
| 4 | | 5 | 4 Earleville 5 Middletown 6 Galena |
| 6 | 7 | 8 | 7 Millington 8 Clayton |

Quadrangle Location

Geologic Map of the Cecilton Quadrangle, Maryland

by
John M. Wilson
2006

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