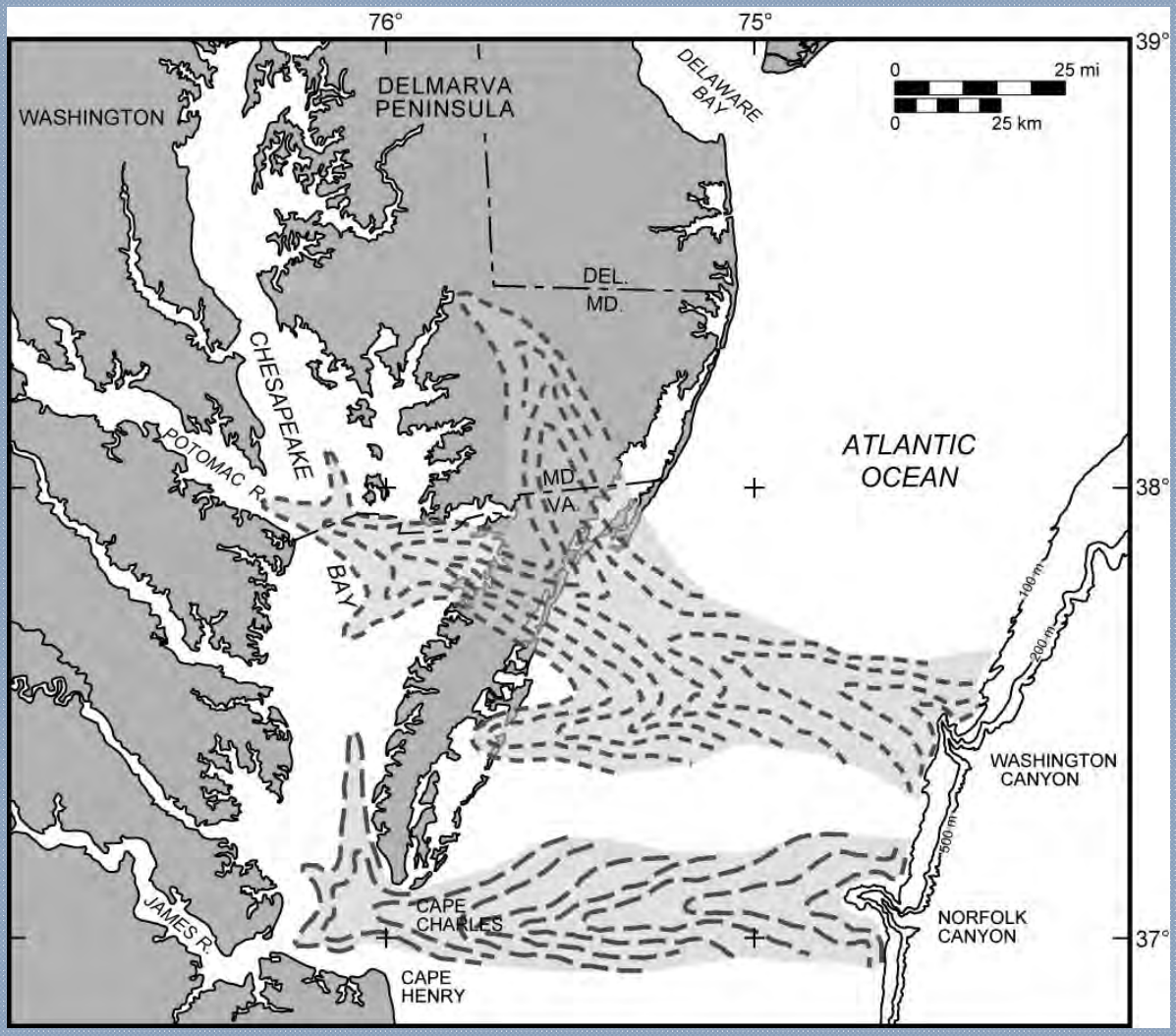
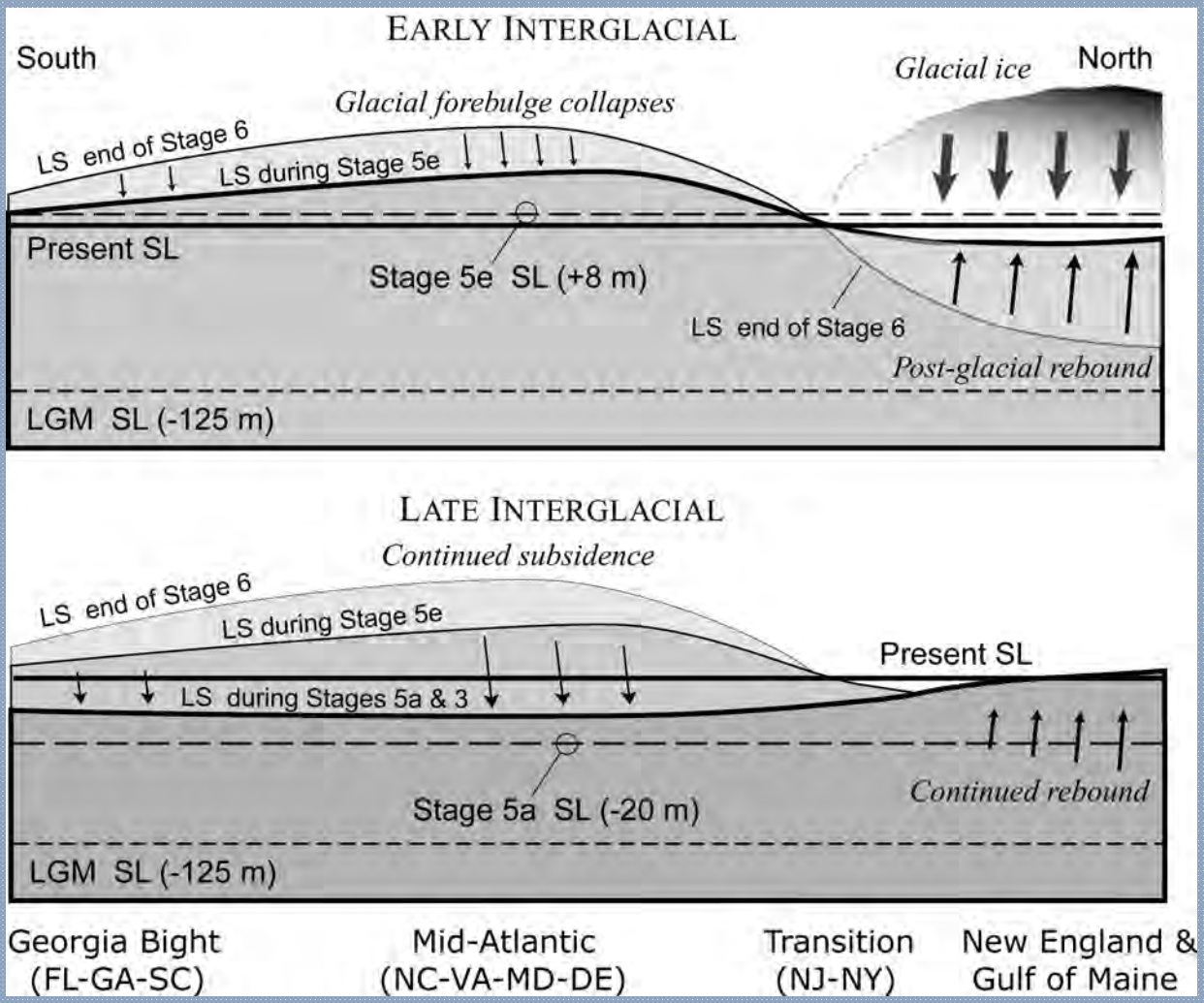
Glaciation Creates the Eastern Shore



Inference by Harrison (1972) of a paleovalley of the Potomac River crossing the northern section of the modern Virginia Eastern Shore, and heading to Washington Canyon His interpretation included the recently discovered Salisbury (Maryland) paleochannel as a tributary to the Pot mac River, and also connected the ancestral James River with Norfolk Canyon

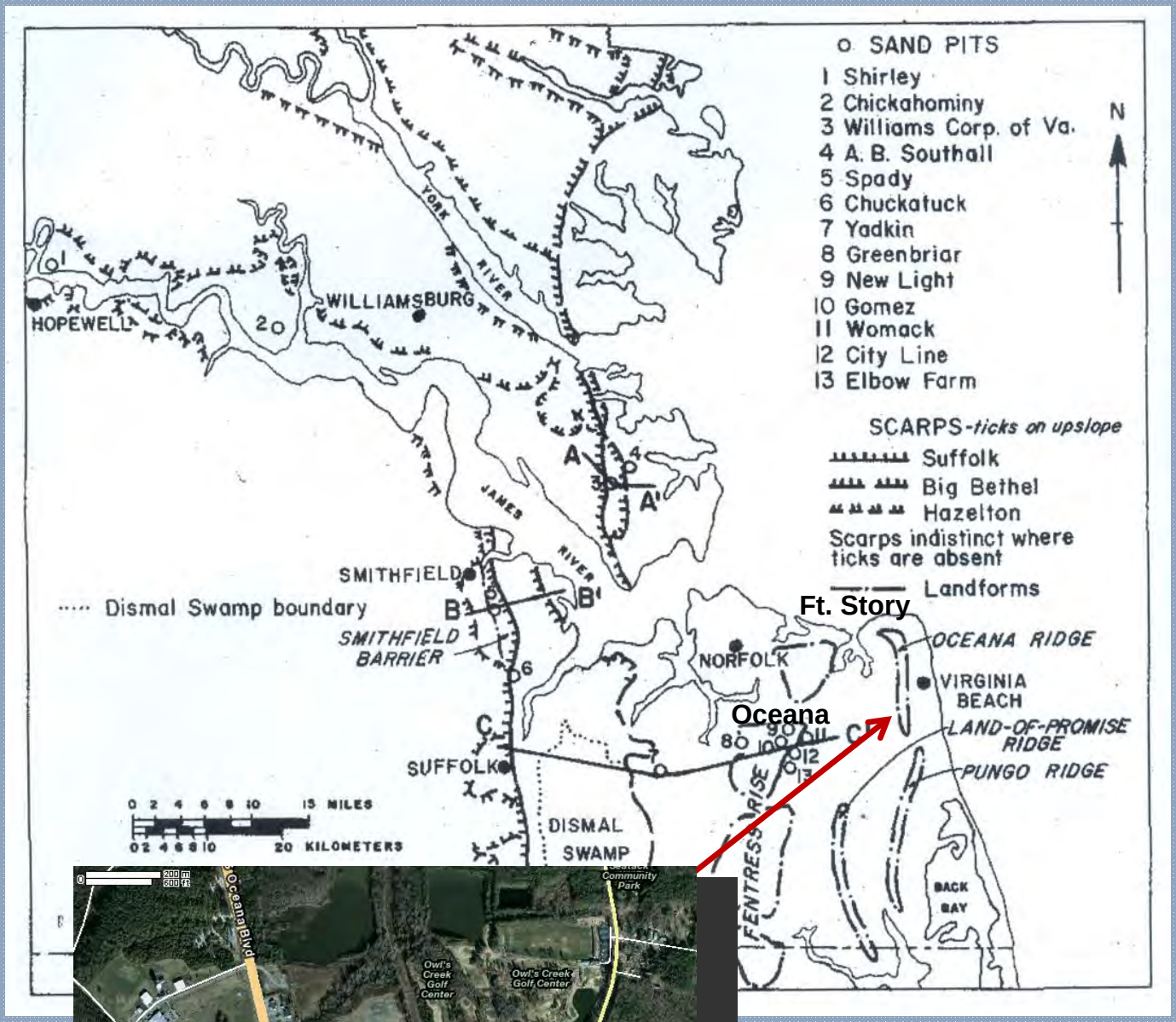
Glaciation Creates the modern landscape:

Northern Glaciers Heave the Mid-Atlantic



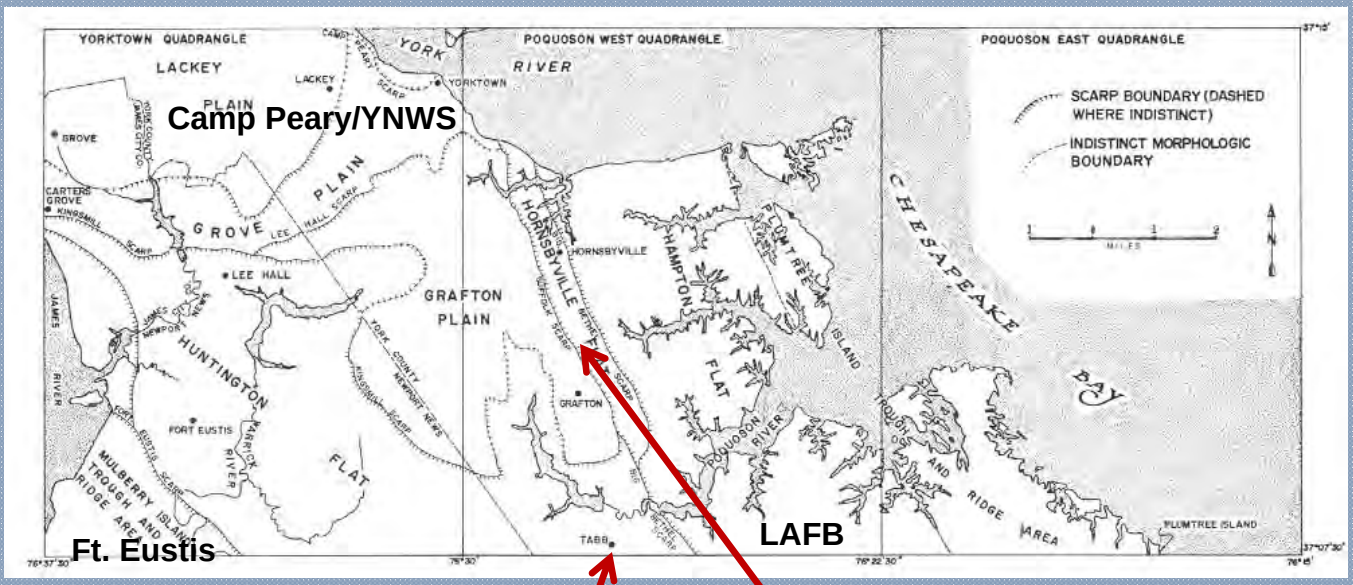
Regional isostatic response of the Atlantic coast after the Illinoisan glaciation. This model follows from recent findings by Wehmiller *et al* (2004) and Mallinson *et al*. (2008) of late stage 5 and stage 3 highstand shorelines preserved on the outer coastal plain of Virginia and North Carolina approximately 22 to 26 m higher than expected from records of global ice volume

Glaciation Creates the modern landscape: Economic Benefit

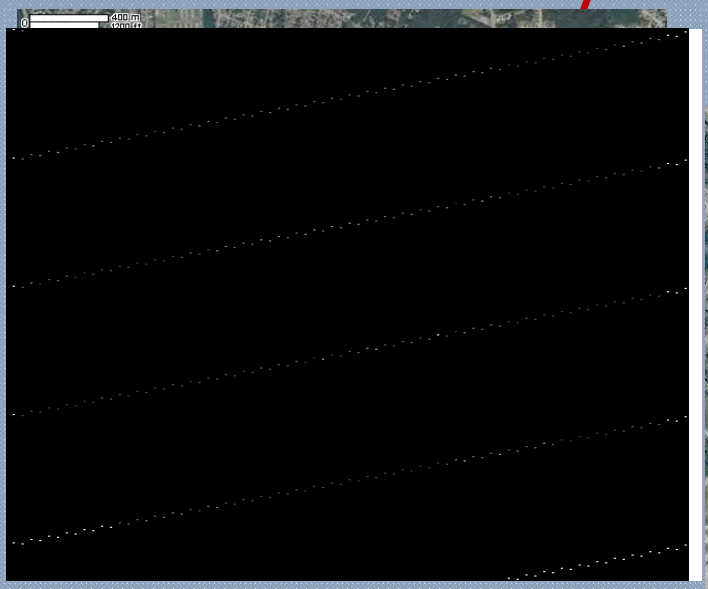


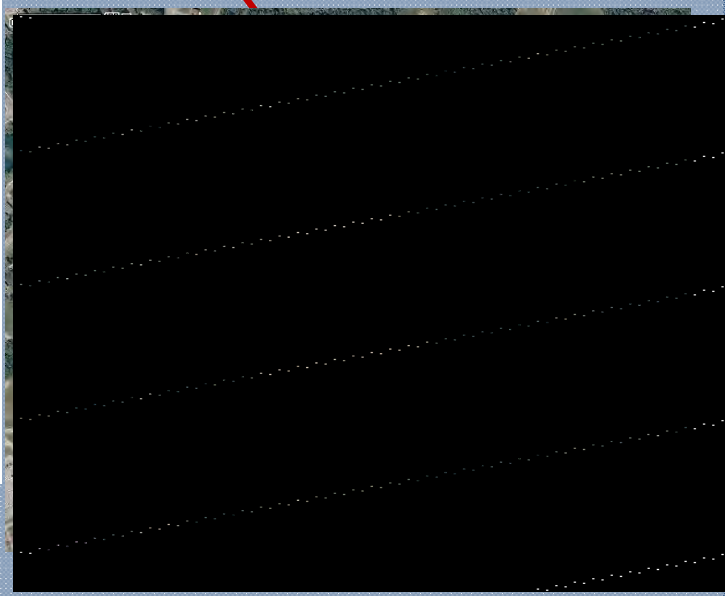
Oakes and Coch

Glaciation Creates the modern landscape: Economic Benefit

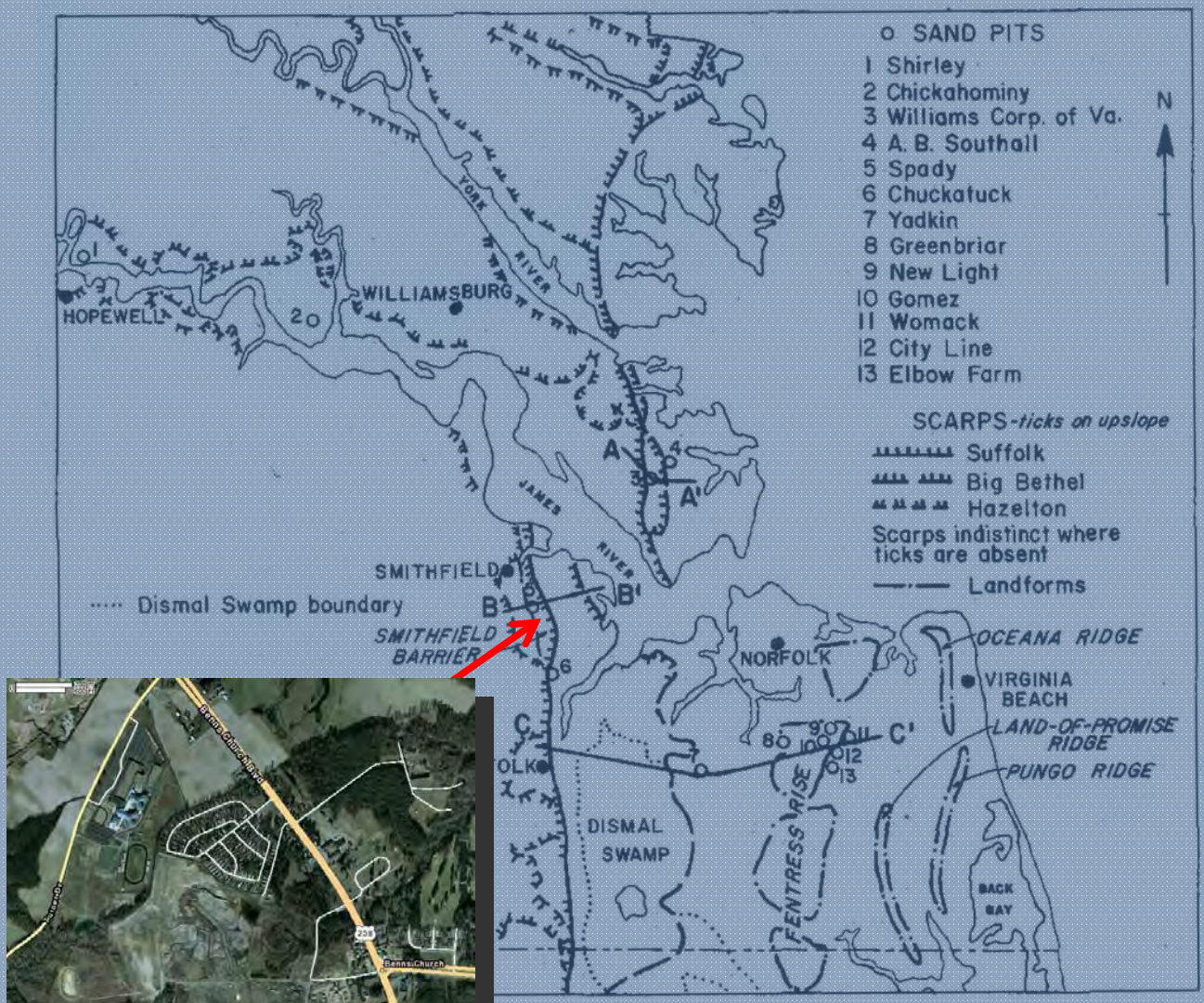


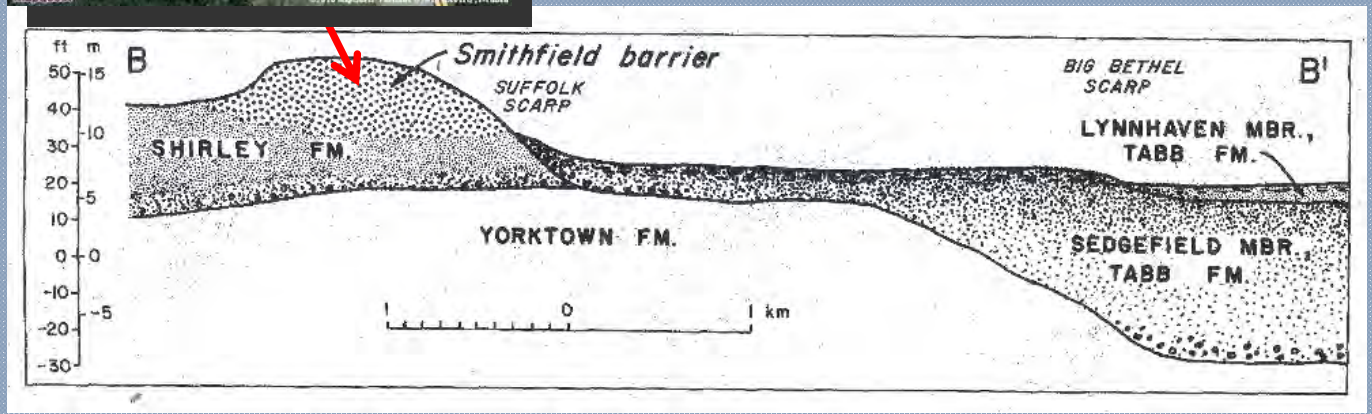
Oakes and Coch





Glaciation Creates the modern landscape: Economic Benefit



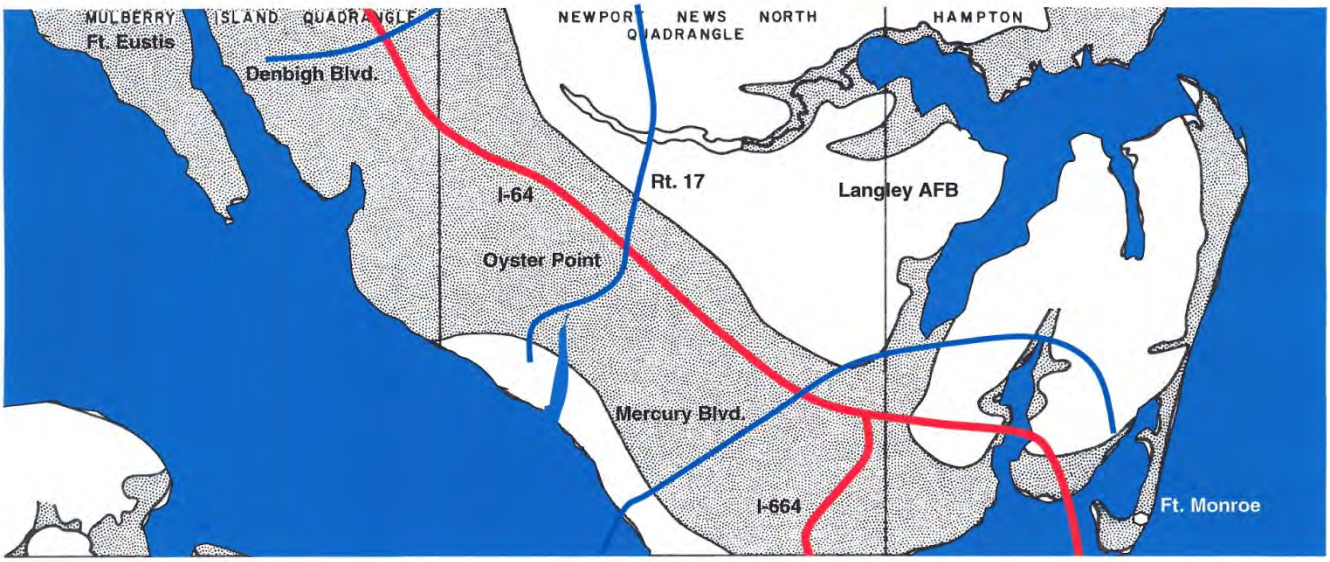


Glaciation Creates the modern landscape - Scarps

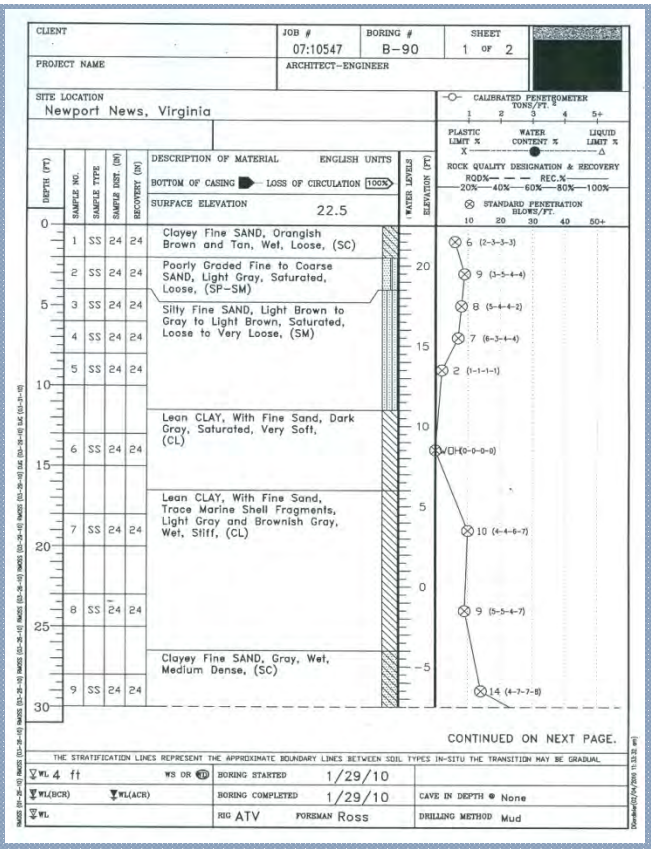
Scarps in the making in Surry County

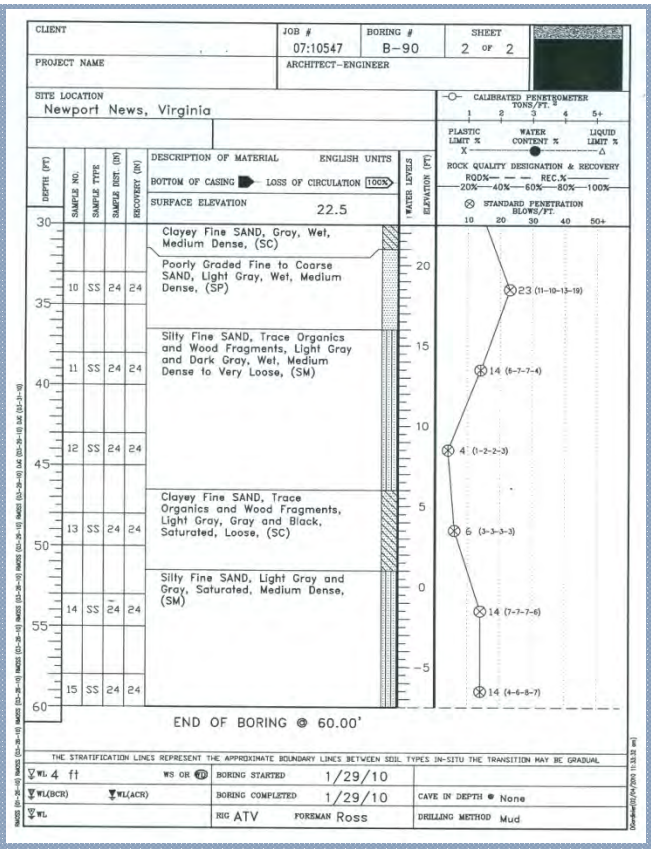
W&M Geology

Glaciation Creates the modern landscape – Sporadic Peat



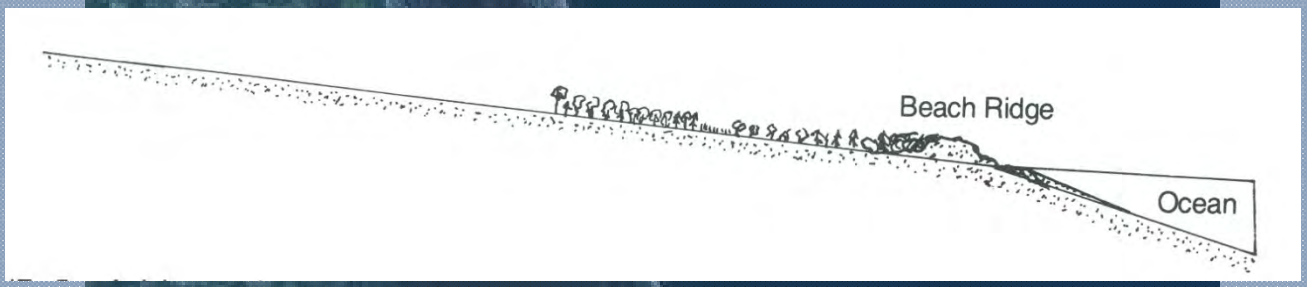
Shaded areas are underlain by late Pleistocene and Holocene sporadic Peat (Pt), Organic SILT (OH), and normally consolidated plastic CLAY (CL and CH) deposited before the Wisconsinan Stage glaciation. This latest in a series of glacial advances and retreats began possibly 70,000 years ago and ended only 10,000 years ago. In fact, we can't even be certain that we are not still in the Ice Age and merely enjoying a warm period between two glacial advances.

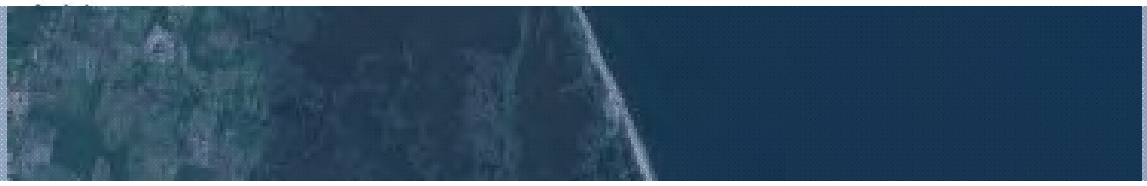


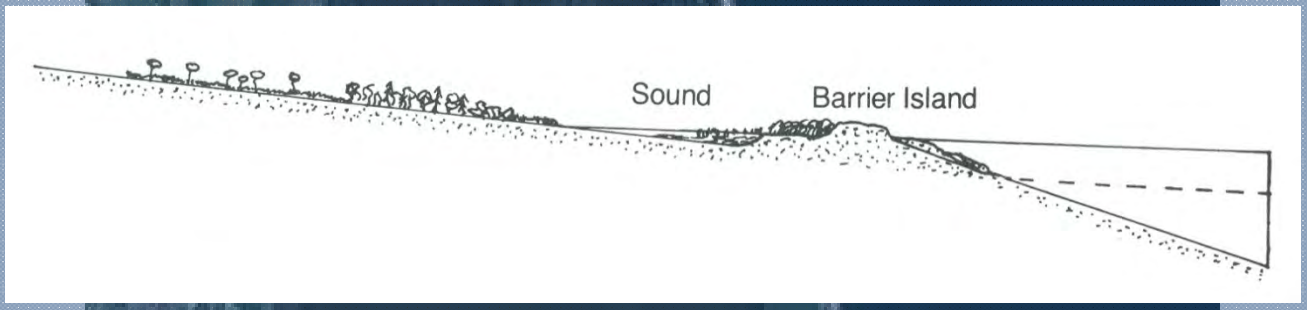


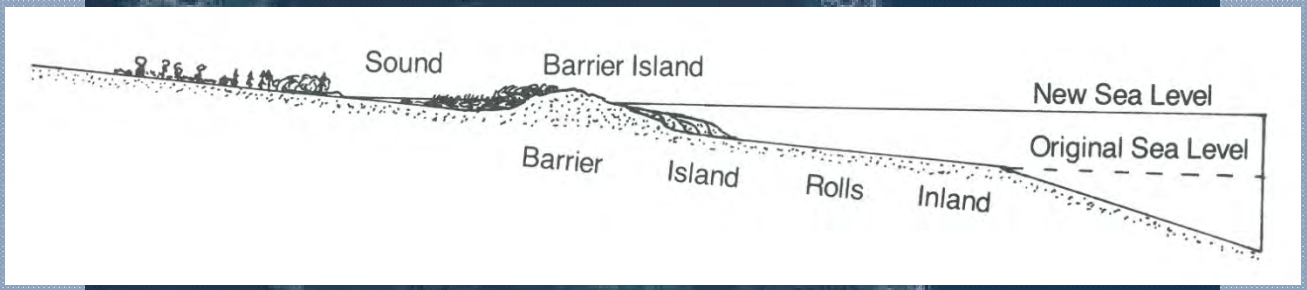
Barrier Islands

Began forming about 18,000 ya as coastal sand ridges, probably near the continental shelf, and have been rolling landward ever since



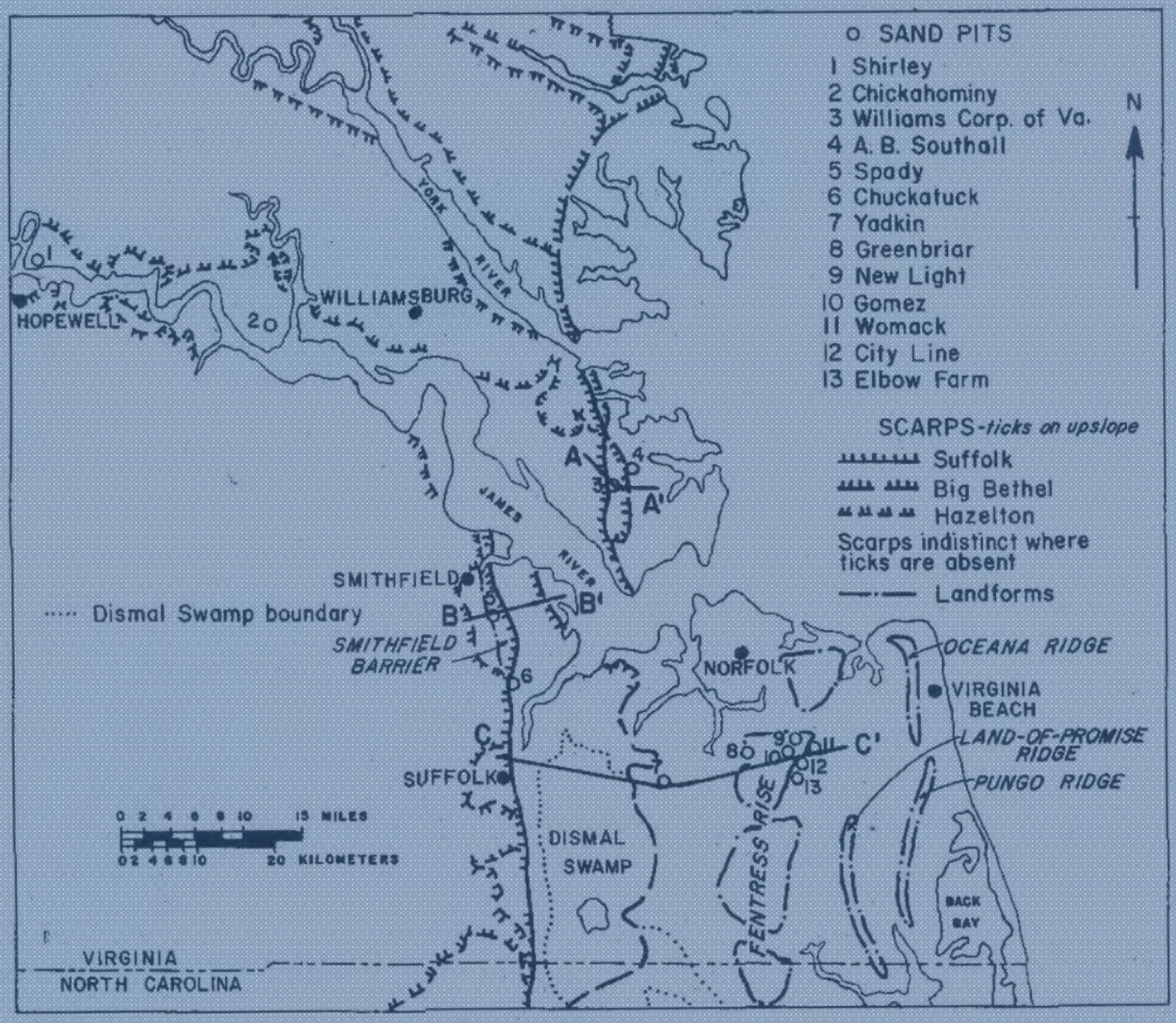


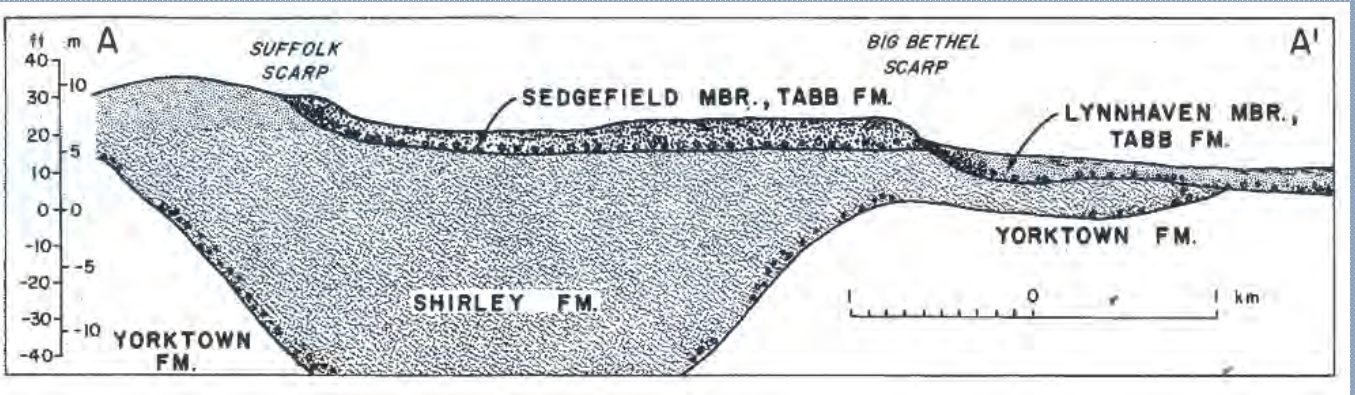




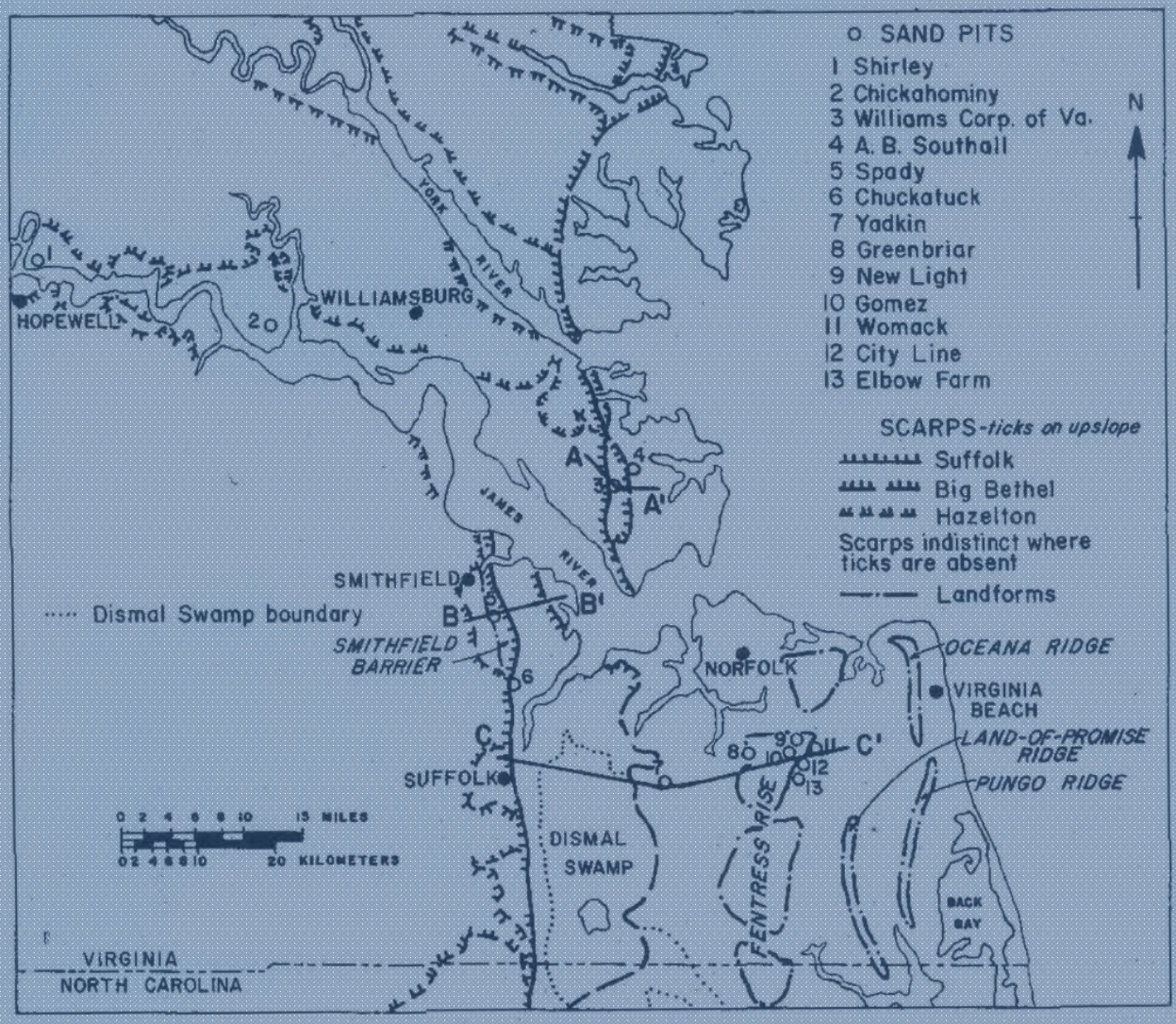
From *North Carolina: The Years Before Man* by Fred Beyer

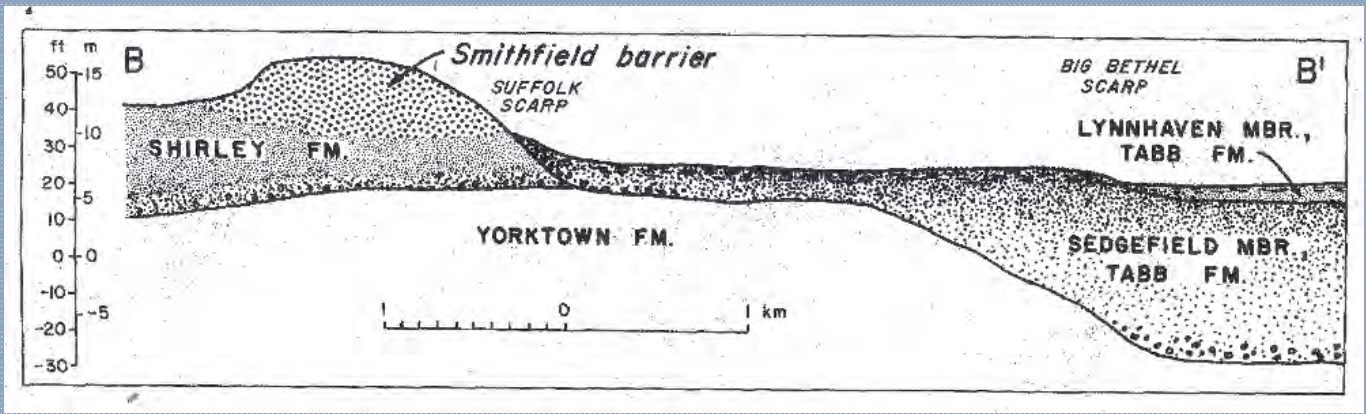
The Tidewater Cross Section
Hampton-Newport News



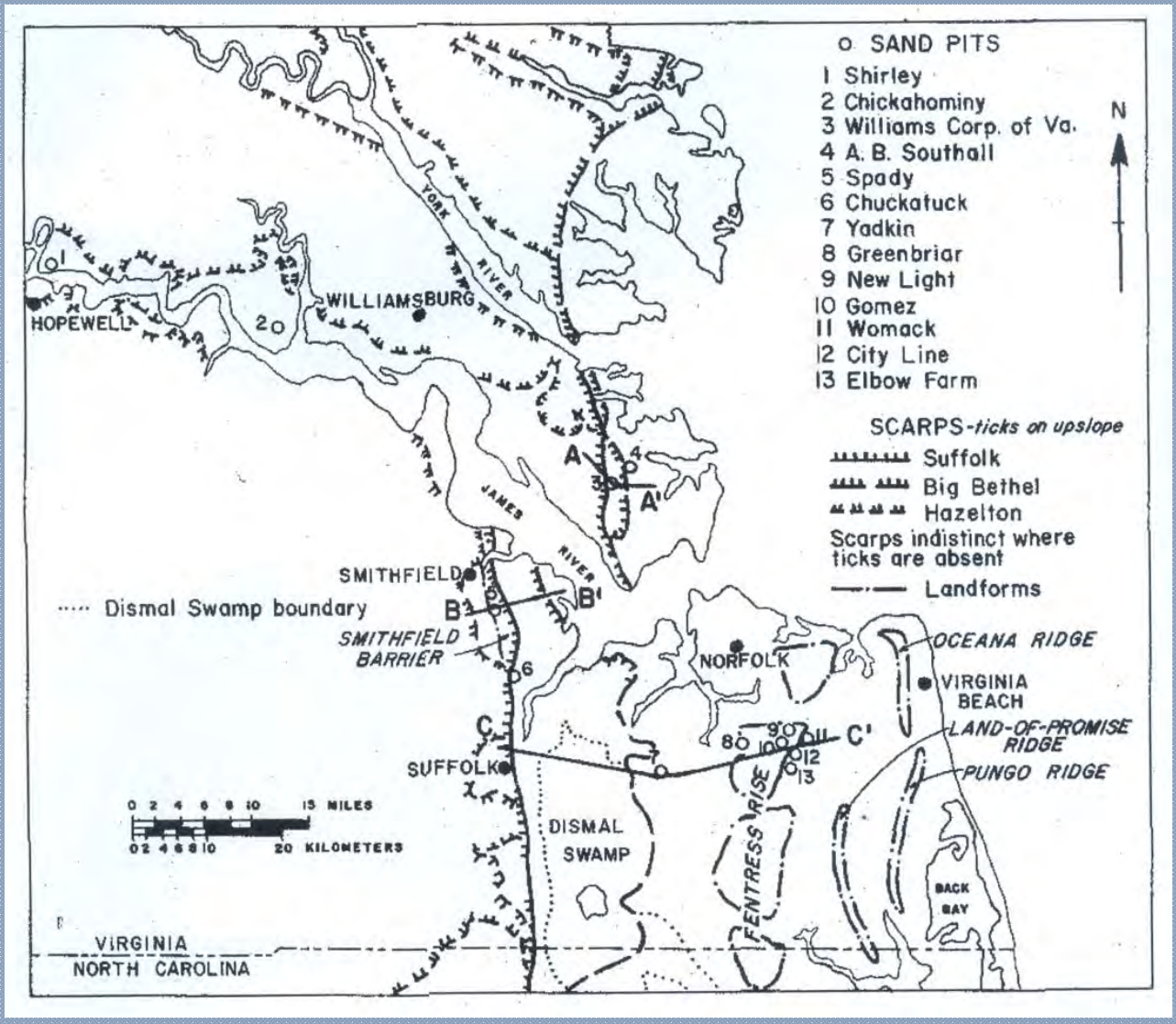


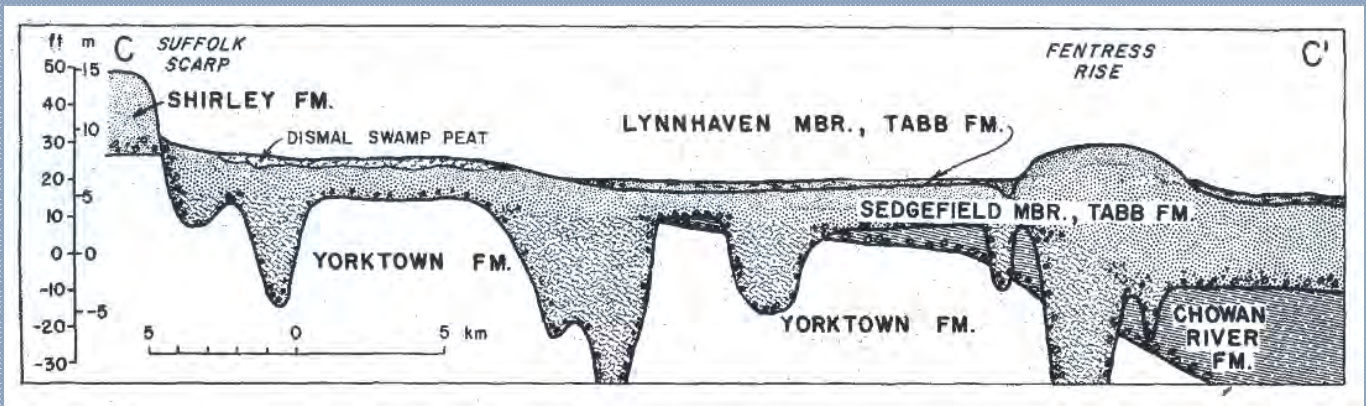
The Tidewater Cross Section
Isle of Wight



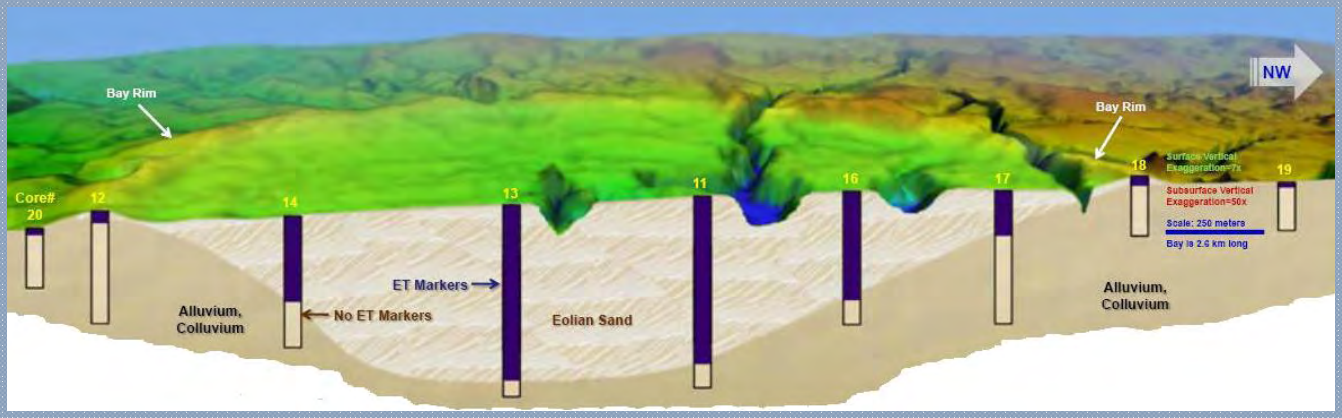


The Tidewater Cross Section
Virginia Beach-Suffolk





Carolina Bays – A Geologic Mystery



Because the bays are depressions, they tend to be wetlands Indians called them pocosins. They came to be known as bay swamps because of the trees that grew there: sweet bay and loblolly bay and red bay Then, because they were first noticed in N and South Carolina they began to be called Carolina bays

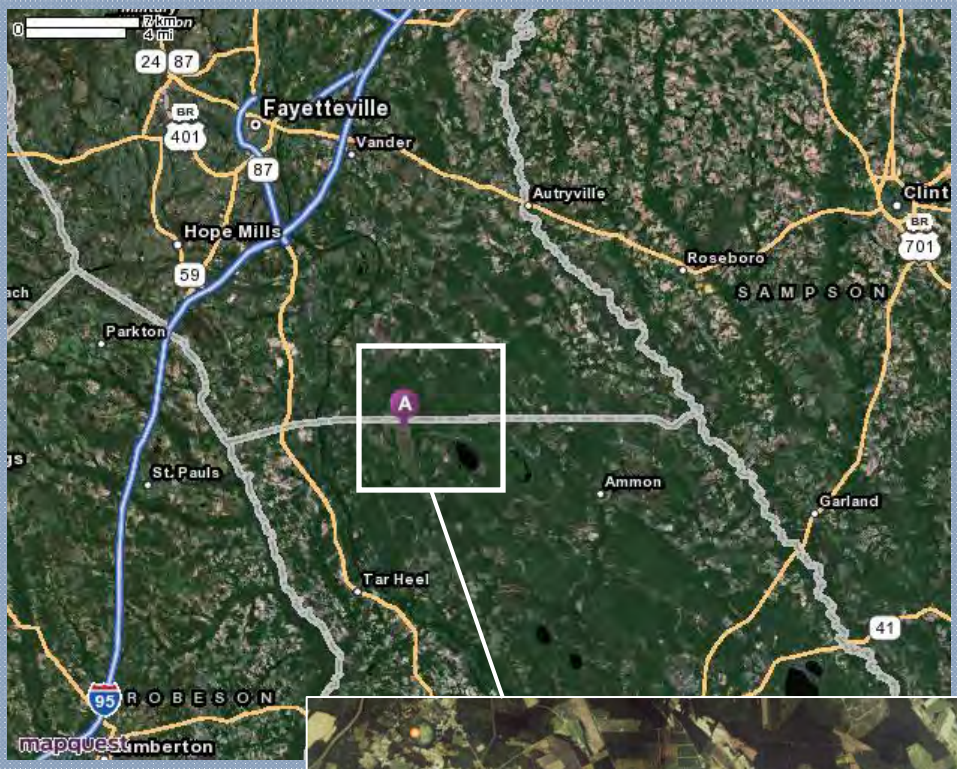
zonemapcolor.pdf

They are generally elliptical in shape although those from Virginia in the north to Georgia in the south tend to be a little rounder They are oriented in the same direction, roughly northwest although again, there are caveats: the ones from Virginia north tend to point a little more to the west while the southern ones tend to point a little more north

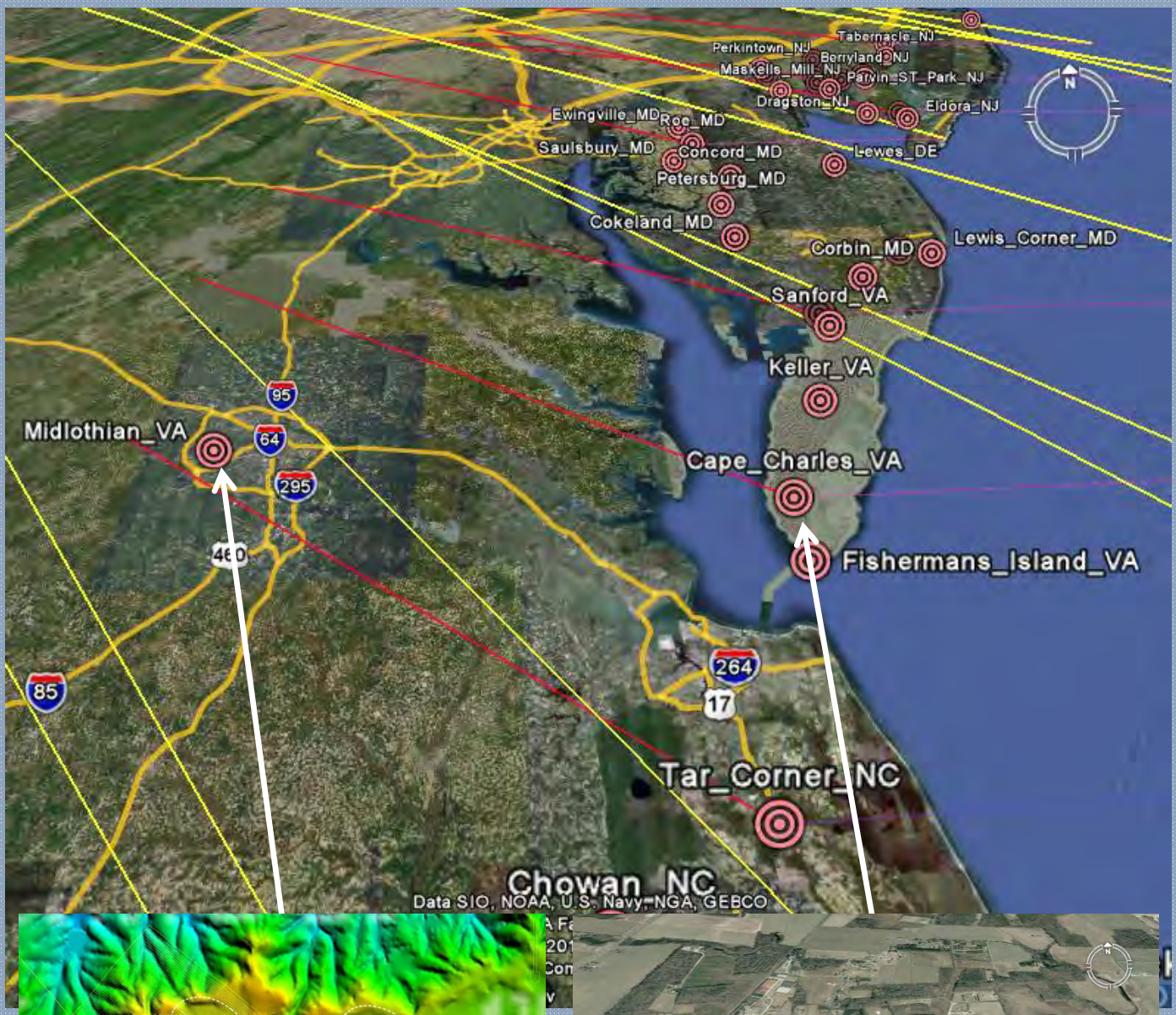
They have white sand rims, thicker on the southeast edge, that stand anywhere from a few inches to several feet in height Some bays overlap others and where they do the rim of the top bay is in place and the bottom rim obliterated

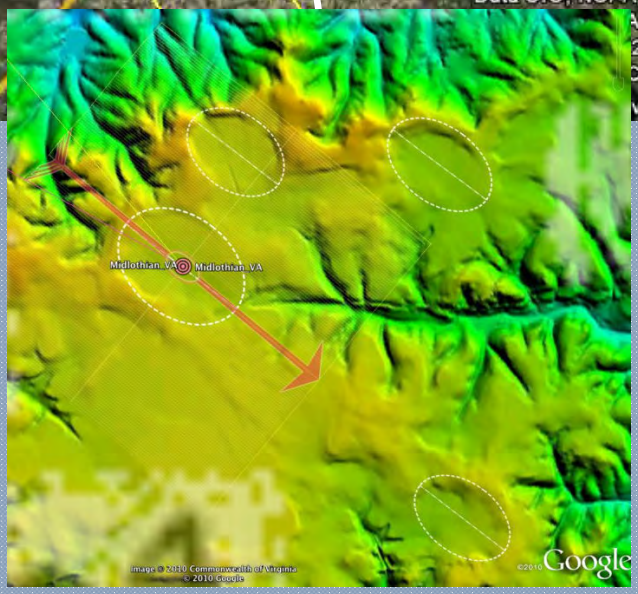
Bays are found by the hundreds on the Eastern Shore, by the tens in Currituck and Chowan counties in North Carolina, and a very few near Richmond. There may even be a few right outside Washington D.C.

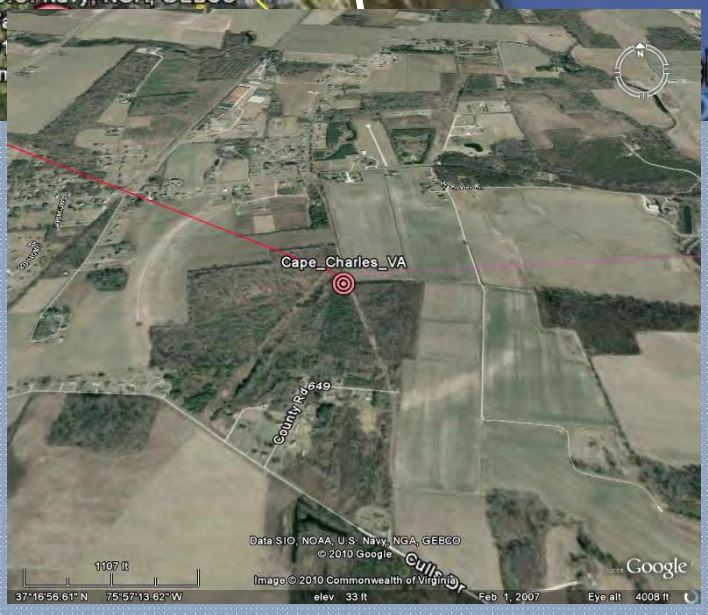
Carolina Bays – A Geologic Mystery



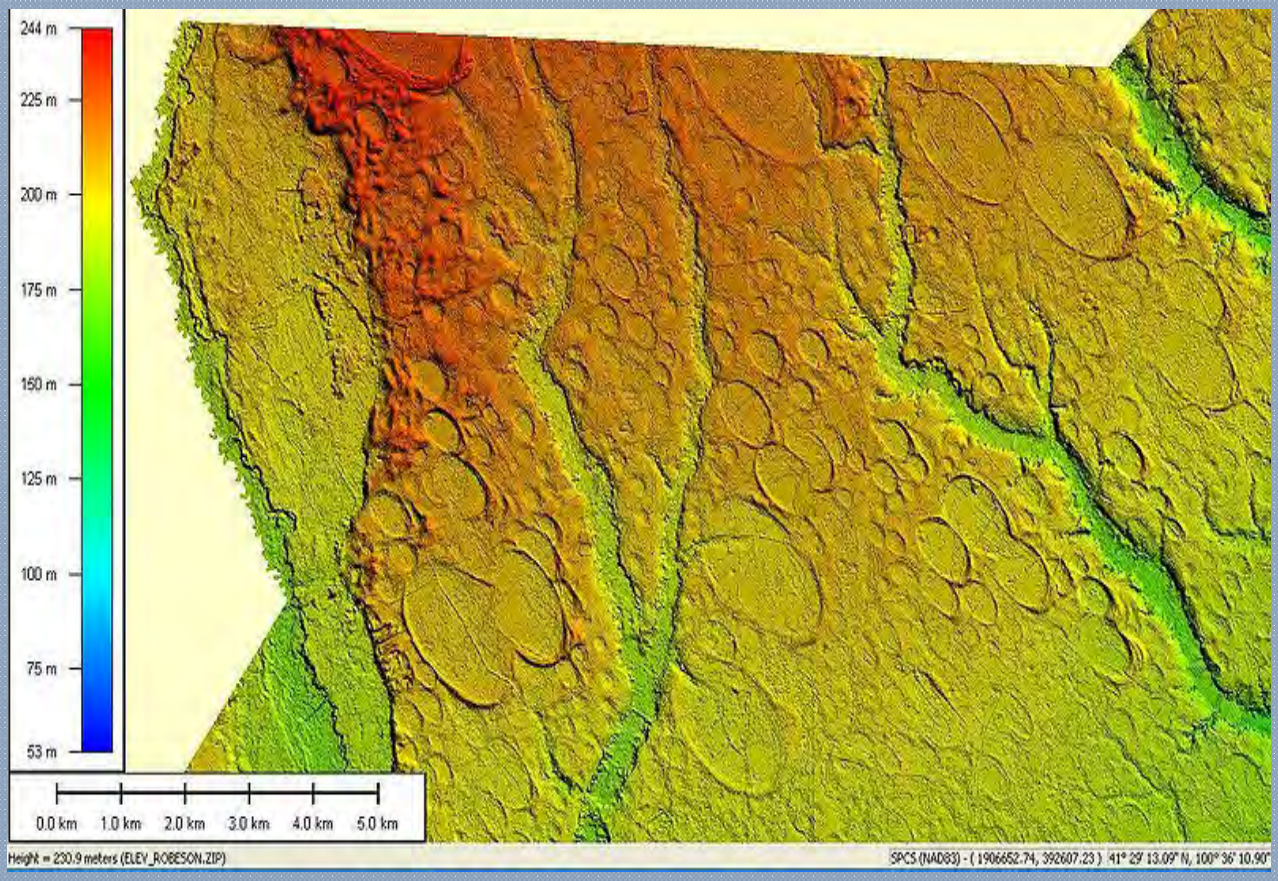
Carolina Bays – A Geologic Mystery







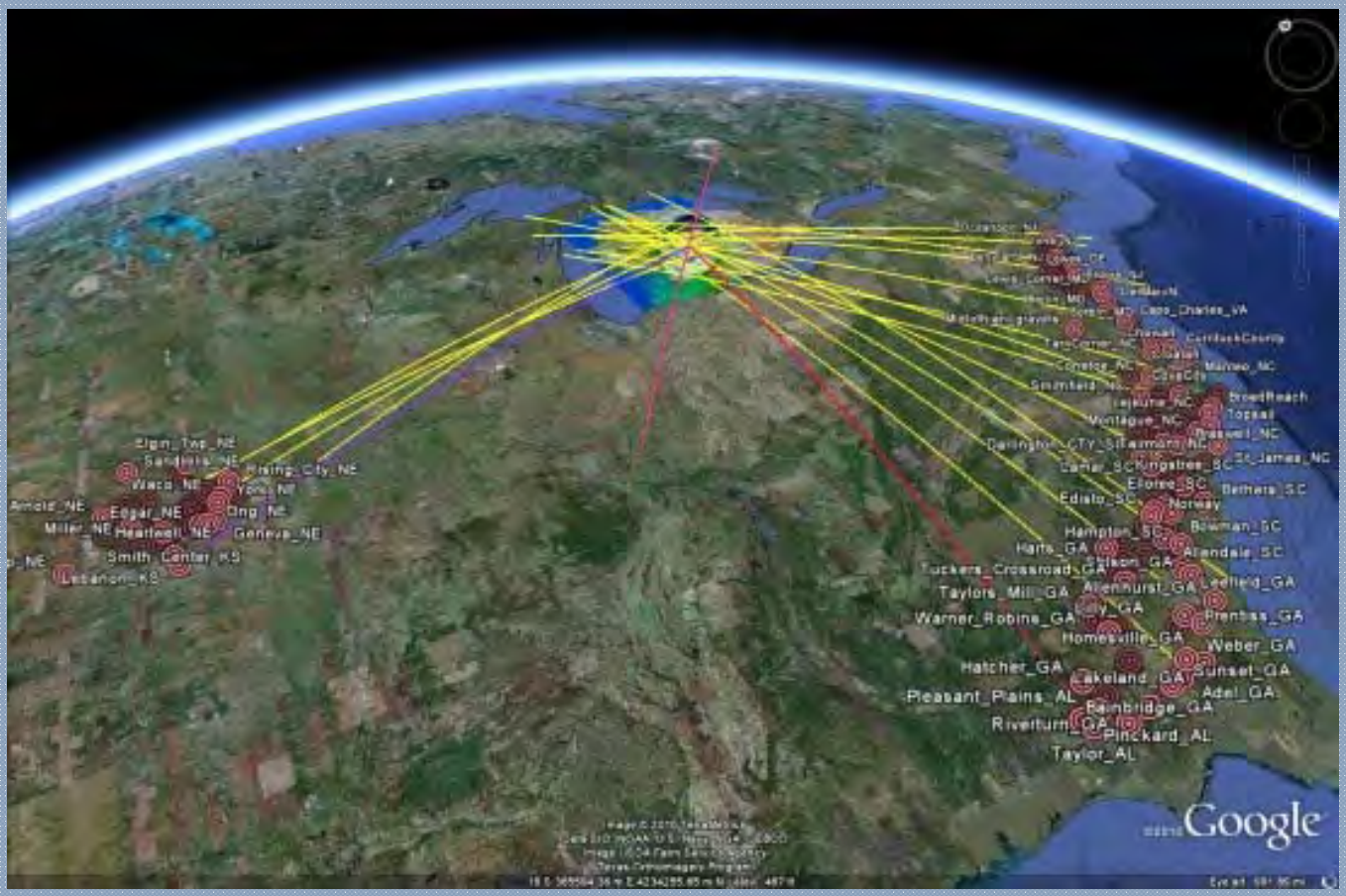
Carolina Bays – A Geologic Mystery

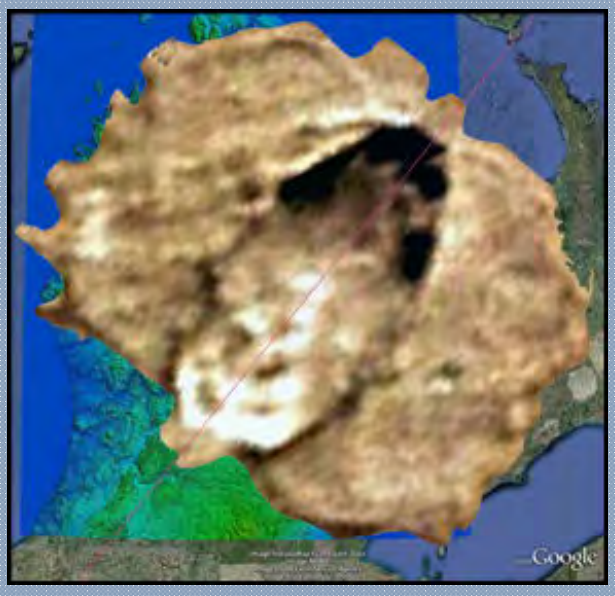


LIDAR elevation data –Robeson Co., NC NCDOT

1. Spring basins
2 Sandba dams of drowned valleys
3. Depressions dammed by giant sand ripples
4 Craters from a meteor swarm
5. Submarine scour by eddies currents, or undertow
6. Segmentation of lagoons and formation of crescentic keys
7. Lakes in sand elongated in the direction of maximum wind velocity
8. Solution dep essions, with wind-drift sand forming the rims
9 Solution depressions, with magnetic highs near bays due to redeposition of iron compounds leached from basins
10. Basins scoured out by confined gyroscopic eddies
11. Solution basins of artesian springs with lee dunes
12 Eolian blowouts (deflation)
13. Fish nests made by giant schools of fish waving their fins in unison

Carolina Bays – A Geologic Mystery





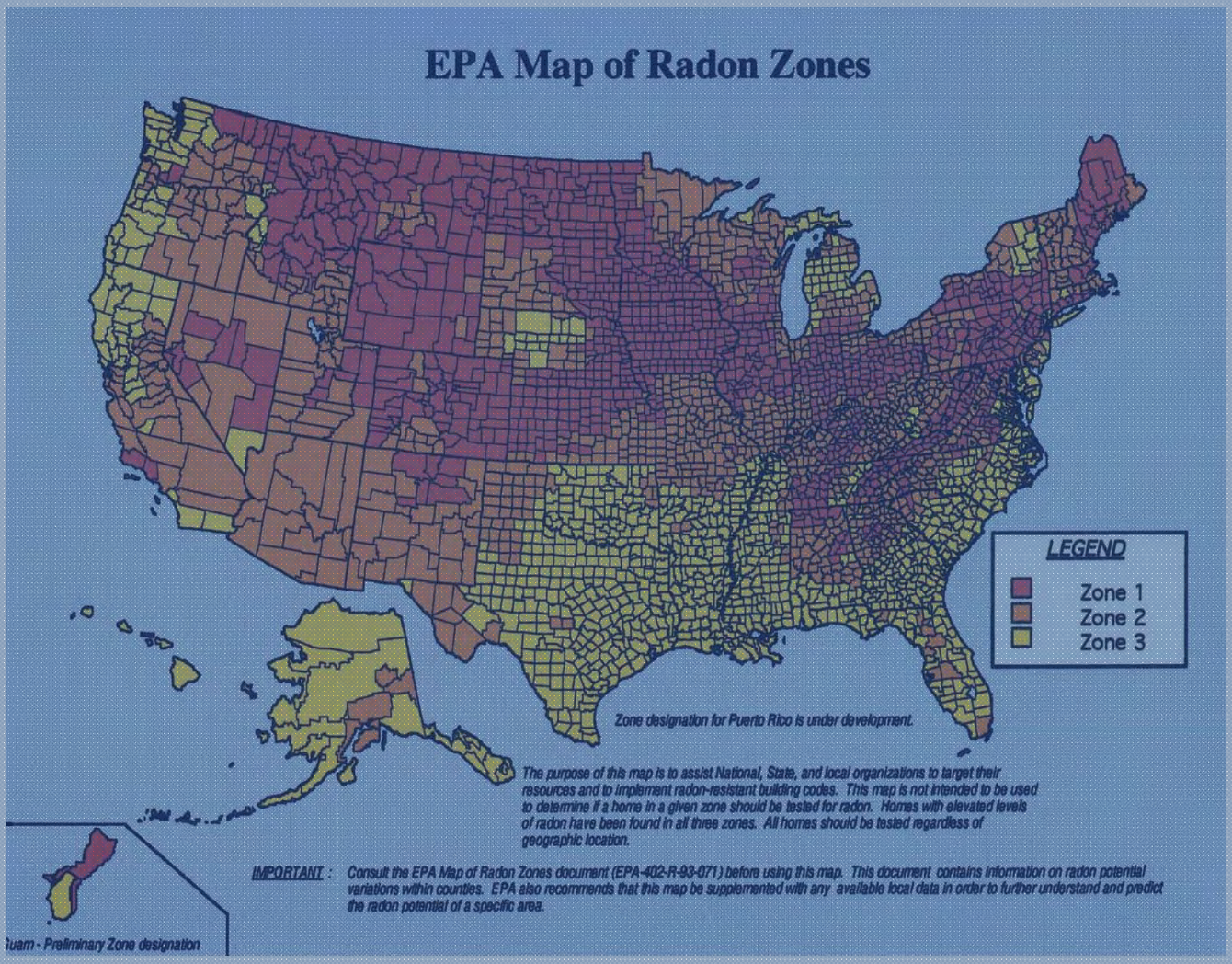
A mean average of all optimum trajectories was used to generate a proposed single point loci for an impact point. The location at 43 6259 North Latitude and 89 7043 West Longitude was computed…… Manitoba, Michigan

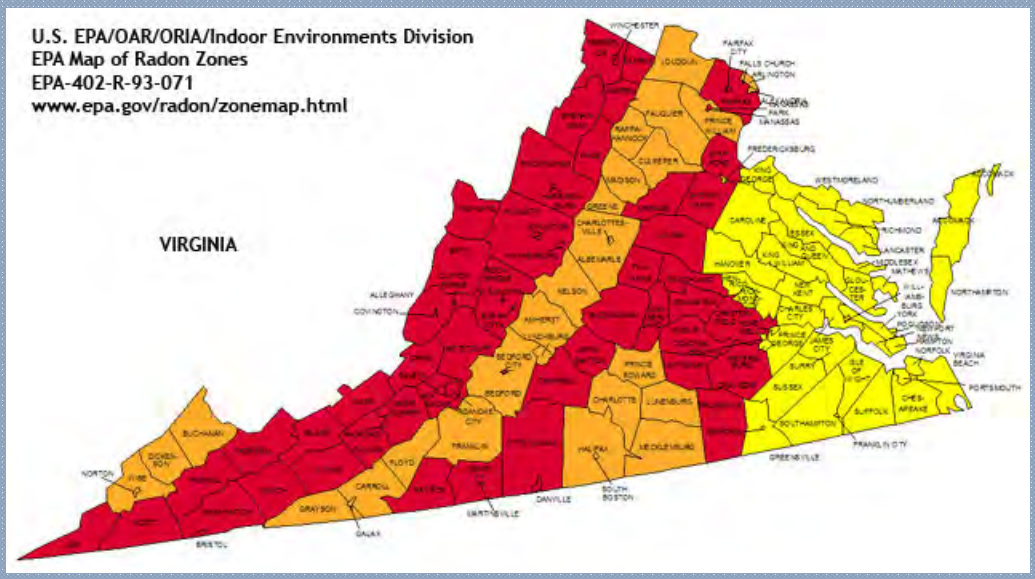
Michael Davias
cintos org

Digging a footing in a Carolina Bay
Midlothian, VA

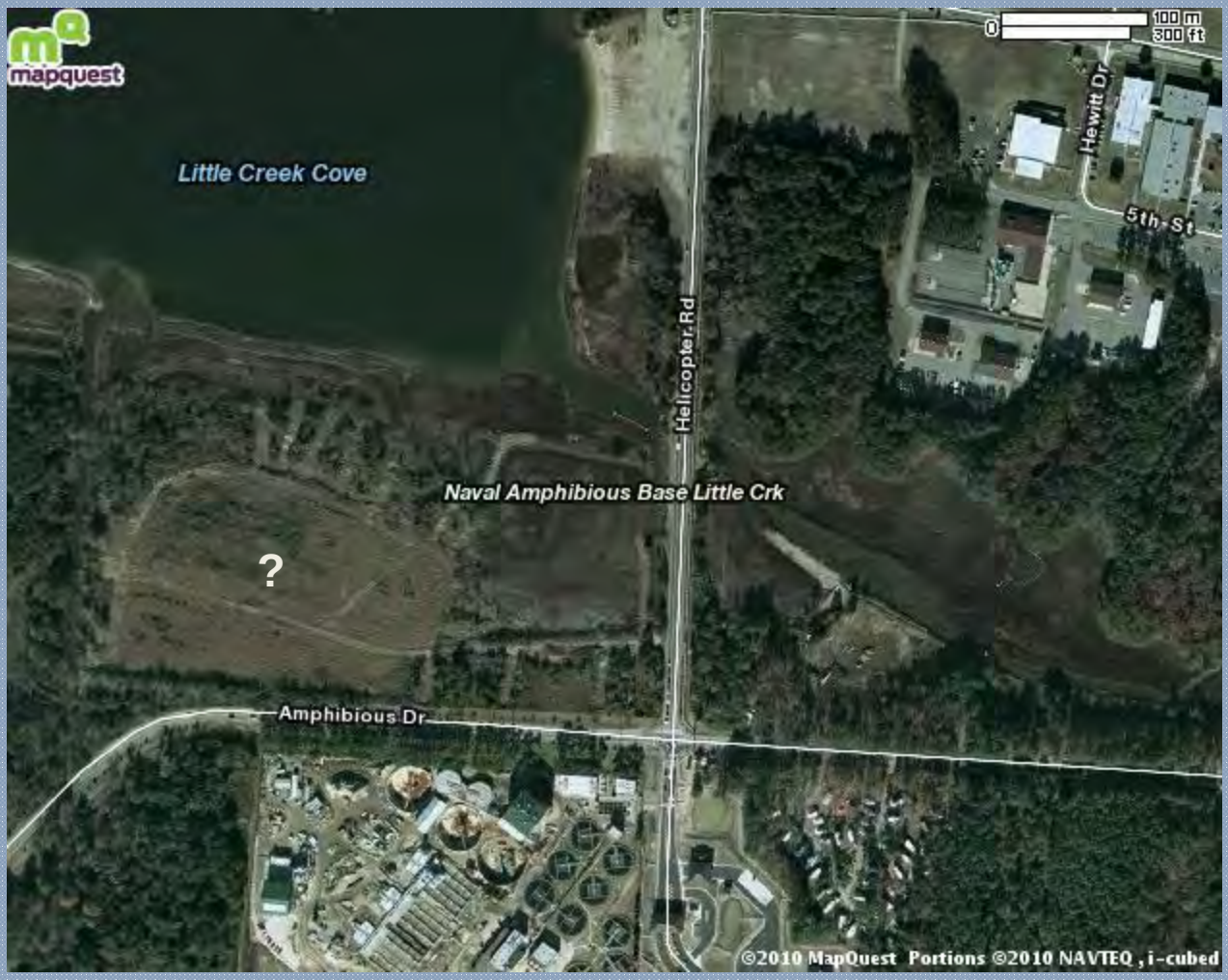
Radon

All rock/soil contains radon. It's the mechanism of delivery that determines the hazard; depth to rock/sedimentary cover groundwater table, foundation exposure



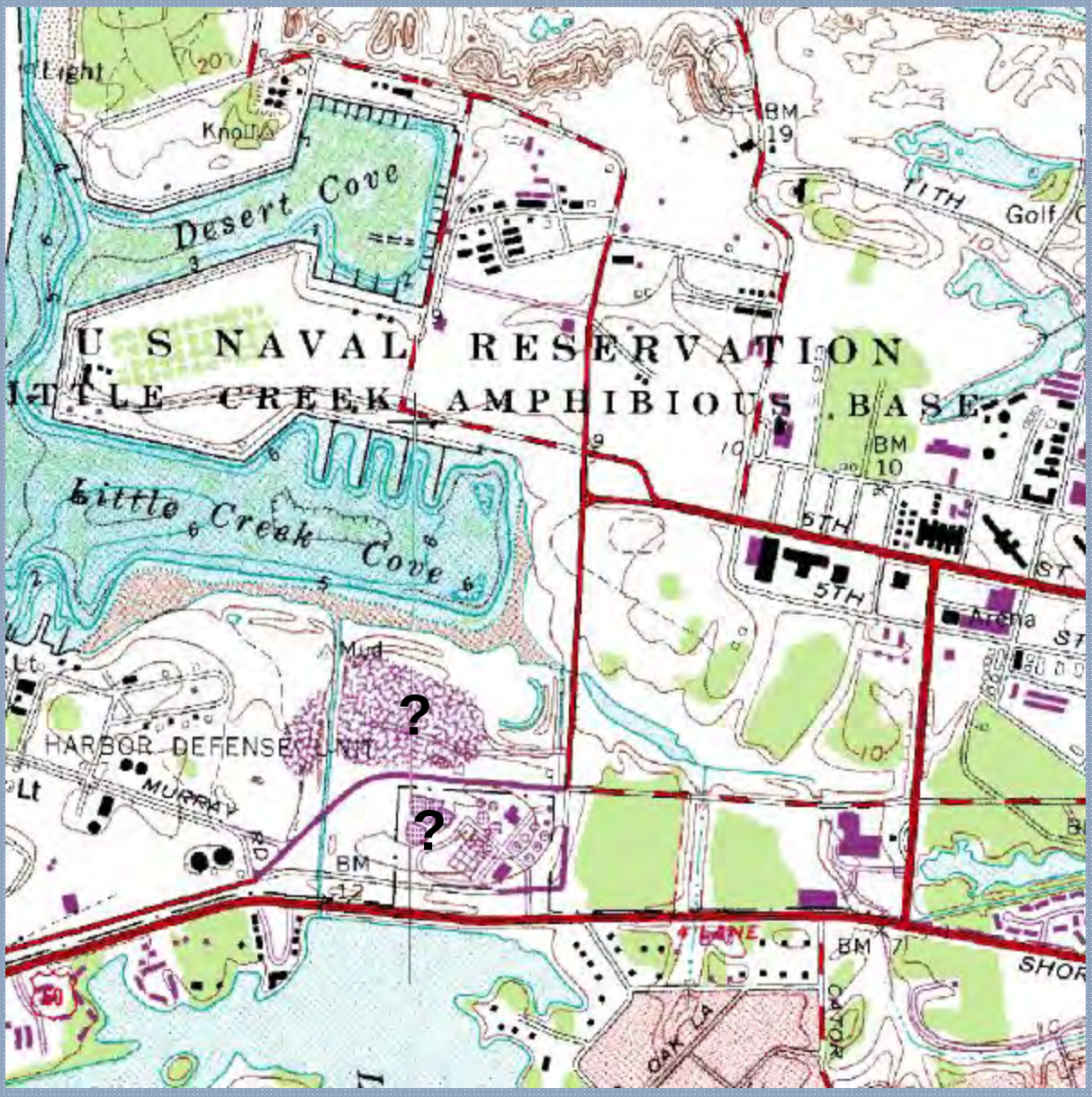


Tools for Chairborne Site Investigation: Arial Photography



- http://terraserver-usa.com/
- http://www.mapquest.com/
- http://earth.google.com/

Tools for Site Investigation:
U.S G S. Topo



- http://msrmaps.com/

Tools for Site Investigation: USDA Soil Survey

- http://websoilsurvey.nrcs.usda.gov/

Tools for Site Investigation: Geologic Mapping

http://geology.er.usgs.gov/
http://web.wm.edu/geology/virginia/

Please, that's enough geology for one day.