

AIRBORNE RADIOACTIVITY SURVEY OF PARTS OF THE
ATLANTIC OCEAN BEACH, VIRGINIA TO FLORIDA

By R. M. Moxham and R. W. Johnson

The accompanying maps show the results of an airborne radioactivity survey along the Atlantic Ocean beach from Cape Henry, Virginia to Cape Fear, North Carolina and from Savannah Beach, Georgia to Miami Beach, Florida. The survey was made March 23-24, 1953, as part of a cooperative program with the U. S. Atomic Energy Commission.

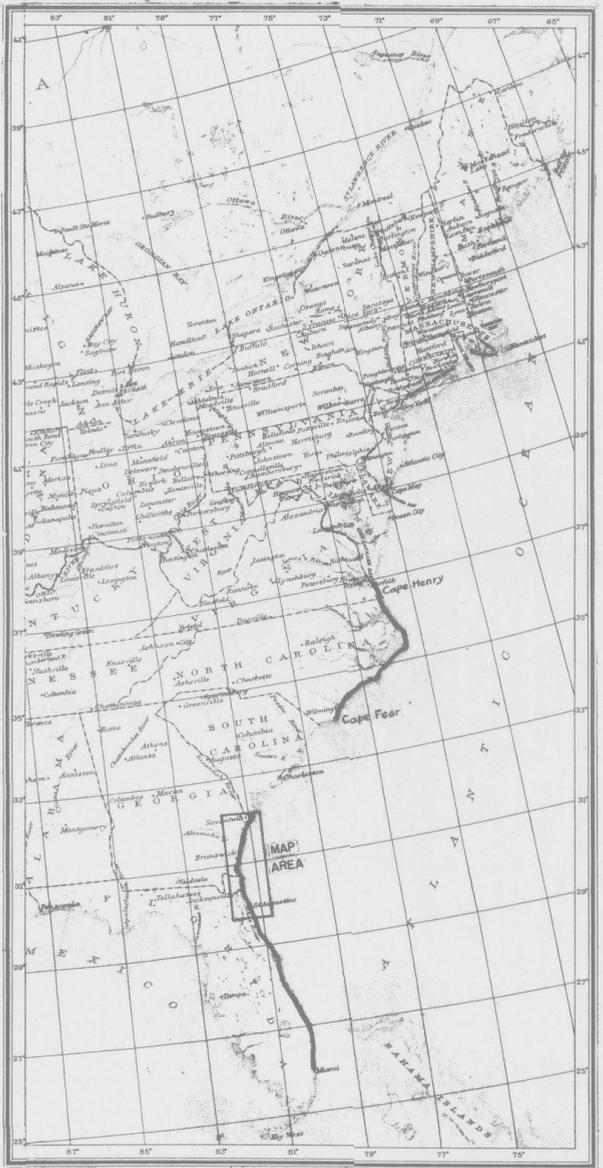
The survey was made with scintillation detection equipment mounted in a Douglas DC-3 aircraft and consisted of one flight line, at a 500-foot altitude, parallel to the beach. The vertical projection of the flight line coincided approximately with the landward limit of the modern beach.

The width of the zone on the ground from which anomalous radiation is measured at the normal 500 foot flight altitude varies with the areal extent and intensity of radioactivity of the source. For strong sources of radioactivity the width of the zone would be as much as 1,400 feet.

The location of the flight lines is shown on the index map below. No abnormal radioactivity was detected along the northern flight line between Cape Henry, Virginia and Cape Fear, North Carolina. Along the southern flight line fourteen areas of abnormal radioactivity were detected between Savannah Beach, Georgia and Anastasia Island, Florida as shown on the map at left. The abnormal radioactivity is apparently due to radioactive minerals associated with "black sand" deposits which occur locally along the beach in this region.

The present technique of airborne radioactivity measurement does not permit distinguishing between activity due to thorium and that due to uranium. An anomaly, therefore, may represent radioactivity due entirely to one or to a combination of these elements.

It is not possible to determine the extent or radioactive content of the materials responsible for the abnormal radioactivity. The information given on the accompanying map indicates only those localities of greater-than-average radioactivity and, therefore, suggest areas in which uranium or thorium deposits are more likely to occur.



INDEX MAP SHOWING LOCATION OF LINE TRAVERSED
AND MAP AREA

EXPLANATION

- | Line traversed
- ▨ Anomaly: area of greater-than-average radioactivity

This map has been released without editorial and technical review for conformity with Geological Survey standards.

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