

ANNUAL REPORT
OF THE
DIRECTOR, UNITED STATES COAST AND
GEODETIC SURVEY

TO THE
SECRETARY OF COMMERCE

FOR THE
FISCAL YEAR ENDED JUNE 30, 1920



WASHINGTON
GOVERNMENT PRINTING OFFICE
1920

REVISION OF THE COAST OF NEW JERSEY.

In March, 1920, the Army Air Service photographed the coast line of New Jersey from Cape May to Seabright. A single flight was made, using the k-1 camera. The plane flew at an altitude of 10,000 feet, and under very good air conditions. The camera was mounted in gimbals, with a lead weight at the lowest point to assist in maintaining the optical axis of the camera in a vertical position. Level bubbles were placed on the camera to aid in keeping the camera in the proper position. The photographs are being used for a revision of the charts of the coast of New Jersey. The individual photographs are 18 by 24 cm. in size, and the approximate scale is 1:10000. The photographs are mounted in strip mosaics, for convenience sake, not over 4 feet in length. The length is generally determined by the position of control points. This composite photograph is compared with the topographic sheet of the same area and control points identified. The scale of the photographic mosaic is determined, and by means of the pantograph the data are reduced to the scale of the chart and transferred from the photographs to tracing paper.

The photographing of this 120 miles of coast line took less than 2 hours' time in an airplane. The development of the films and printing took 2 days' time of one man. Two rolls of film were used, a total of 183 photographs. The work of interpreting the photographs, assembling mosaics, comparison with topographic sheets, and reduction to the scale of the chart of the outside shore line required 15 days of office work by one engineer.