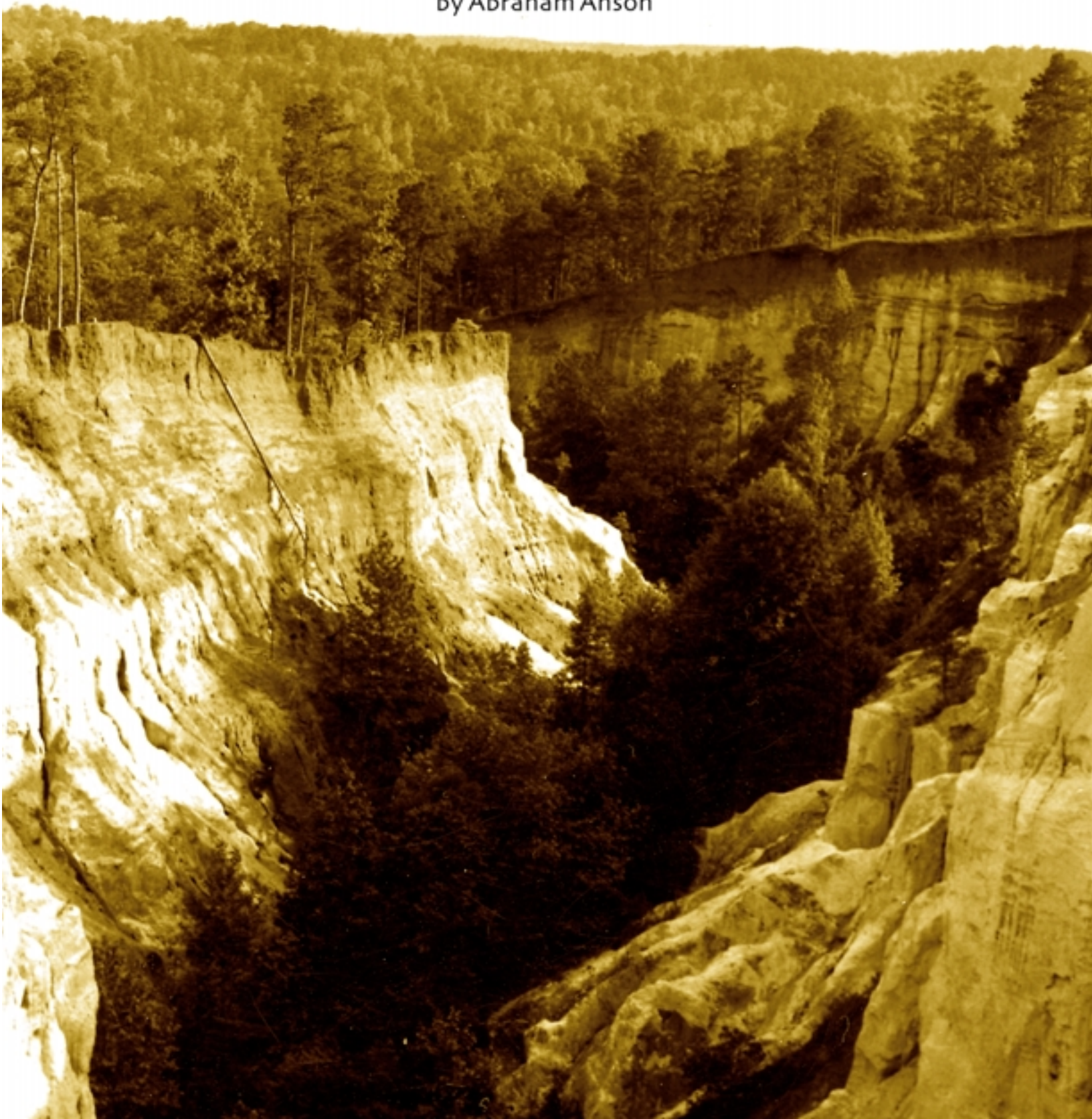


# Topographic Mapping

With Plane Table and Alidade in the 1940s

by Abraham Anson



# Preface

by

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**A**lthough times may change, the value of devoted workers does not, and the high quality of the mapping done by the United States Geological Survey is due in no small measure to the resourcefulness and the dedication of those men and their wives, who accepted the rigors of field assignments as a way of life.

The work described in this book by Mr. Abraham Anson, typifies the minor problems and skirmishes with the natural and man-made obstacles endured by the field staff. The U.S.G.S. was created by an Act of Congress, March 3, 1879. The Topographic Division is responsible for the basic mapping of the United States, to serve not only for other Divisions of the Survey, but also to serve other Federal and State agencies and the general public. Plane table mapping as described by Mr. Anson has been used from ancient days to represent the Earth's Surface, the major difference in modern times is in the design of the instrument used to read the stadia rod. The chapters which include field methods of plane table mapping, field completion, supplemental photograph control and map revision are technically accurate.

When I first met Mr. Anson, he was part of Bill McKinley's group of trainees in Fair Haven, Vermont in September 1946. In this book he has echoed some of the feelings I have had over the years when I was engaged in similar activities during my field assignments for the U.S. Geological Survey. In some way we like to think that we were the last of the pioneers in the sense that topographic maps are no longer prepared on the ground, but are drawn in darkened rooms from aerial photographs obtained remotely, without getting the mapper's skin torn by briars and without getting their feet muddy.

A field staff is still needed to establish geodetic control in order that topographic maps can be drawn accurately from the aerial photographs, and also to locate civil boundaries, classify roads and buildings, and to determine the correct geographic names for mapped features. The relative size of the field staff, however is smaller than it was during the period from 1946-1951 which Mr. Anson covers, before he left to join the U. S. Army Engineer Topographic Laboratories. "Topographic mapping with Plane Table and Alidade in the 1940s" Presents the romance Of mapping in a less sophisticated Period with which I am quite familiar. In addition to providing a nostalgic glance at the recent past, it well relates the spirit in which the work and life in the field was carried on.

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# Author's Note

## Mapping With Plane Table and Alidade in the 1940s How It Was Done 1946-1952

by Lt. Col. Abraham Anson U.S. Army (Retired)

The development of more Precise aerial cameras, and higher resolution aerial Photography plus more exotic programs designed for computer operations gradually eliminated the need for the Plane Table Topographer working for the United States Geological Survey, who made the bulk of the quadrangle maps, which comprise their Archives. Advances in Spatial imagery, Automatic Mapping equipment and Remote Sensing hardware also reduced the need for those latter day pioneers. The field topographers used ground methods and equipment plus their own training, and initiative to construct the topographic map in the field. The methods and equipment employed to make topographic maps are similar to those used by the Roman engineers 2,000 years ago. In this book are described the personal adventures of a U.S.G.S. Topographic Engineer, from 1946 through 1952 as he mapped in the Atlantic Region of the U.S.G.S., East of the Mississippi River from Maine to Florida and in Puerto Rico, while preparing topographic maps and aerial photograph ground control on various assignments. He surveyed the land in height, width and breadth, locating and sketching topographic features, certifying their names and contouring the land. The book is illustrated with 51 personal photographs made in the field during operations and 40 quadrangle sections of some of the areas for which he was personally responsible either for complete topography or obtaining photographic control. Mapping problems and the peculiarities of the terrain are discussed with a minimum of surveyor's jargon.

The lessons learned in the field, led to an additional six years in photogrammetry at the U.S. Geological Survey's Atlantic Region Headquarters where the author prepared topographic maps from aerial photographs on various stereoplotters. This background led to a distinguished career at the U.S. Army Topographic Engineering Center at Fort Belvoir, Virginia, from 1957-1973.

*All quadrangle map sections courtesy of the United States Geological Survey.*

