

**FBI
FILE
COPY**

CLASSIFICATION **CONFIDENTIAL**
 CENTRAL INTELLIGENCE AGENCY
 INFORMATION FROM
 FOREIGN DOCUMENTS OR RADIO BROADCASTS

REPORT []
 CD NO. []

50X1-HUM

COUNTRY USSR

DATE OF INFORMATION 1946

SUBJECT Scientific - Aerial surveying

HOW PUBLISHED Book

DATE DIST. 23 May 1950

WHERE PUBLISHED Moscow/Leningrad

NO. OF PAGES 2

DATE PUBLISHED 1946

SUPPLEMENT TO REPORT NO.

LANGUAGE Russian

See RDB TRASS III

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF ESPIONAGE ACT 50 U. S. C. 31 AND 32, AS AMENDED. ITS TRANSMISSION OR THE REVELATION OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW. REPRODUCTION OF THIS FORM IS PROHIBITED.

THIS IS UNEVALUATED INFORMATION

SOURCE Aerogeos'yemka, Ministry of Geology USSR; (ID 416629).

REVIEW OF AEROGEO-SURVEYING BY V. P. MIROSHNICHENKO

The Application of Aerial Surveying to Geological Investigations

The year 1925 marked the beginning of the use of aerial surveying for civilian purposes. At that time, special experimental projects were established for an area of 400 hectares in Mozhaysk for surveying at scales of from 1:2,000 to 1:17,000. The success of these projects determined the future development of aerial surveying in the USSR. Later, aerial surveying was widely used in the central part of the RSFSR, the Ukraine, Central Asia, the Urals, Kuznetsk Basin, Azerbaydzhan, and on the Volga and Angara rivers. The rapid tempo of development of aerial surveying is indicated by the fact that of the half-million square kilometers covered by aerial surveying by 1933, more than half of this area had been surveyed during 1932 and 1933.

In 1931, a special division was established in the Central Scientific-Research Institute of Aerial Surveying Geodesy and Cartography (TsNIAGIK) to study methods of using aerial surveying data for various economic purposes. A number of special experimental studies were made, with particular regard to the use of aerial photographs for geological and geomorphological study of the country. The first of these studies were conducted in Central Asia, i.e., in the Fergana valley, Turkmenia, and the Kara-Tau mountains. These studies resulted in a great collection of factual material, upon which this book was based.

The geological surveys which followed fully confirmed the high value of the results obtained. In particular, interesting new data was obtained on Turkmenia in geological mapping from aerial photographs. This data considerably changed previously existing ideas on its geological structure. The studies, however, were not completed by the TsNIAGIK because of its transfer to Moscow. The geological part of the work was transferred to the All-Union Geological Institute, and the Leningrad Mining Institute, in which processing of the geological data of the Central Asia expeditions was finished under the direction of the author. In addition, the application of aerial photographs

CONFIDENTIAL

CLASSIFICATION		CONFIDENTIAL		DISTRIBUTION					
STATE	<input checked="" type="checkbox"/> NAVY	<input checked="" type="checkbox"/> NSRB							
ARMY	<input checked="" type="checkbox"/> AIR	<input checked="" type="checkbox"/> FBI							

CONFIDENTIAL

CONFIDENTIAL

50X1-HUM

for geological mapping of the taiga and wooded regions of the USSR was studied in the Northern Urals in cooperation with the Leningrad Bureau of the Solikamsk hydro unit. A special course in the application of aerial surveying data for mining, geology, and geography students has been taught since 1938 at the Leningrad Mining Institute and at Leningrad University.

TABLE OF CONTENTS

	<u>Page</u>
Preface	5
Part 1. Aerial Surveying, Its Principles, Techniques and Products	
I. History of the Problem	9
II. General Principles of Aerial Surveying	21
III. Techniques of Aerial Surveying and Its Products	39
IV. Properties of Aerial Photographs as Applied to Geology	53
V. Instruments for Field and Office Work	79
Part 2. The Aerial Photograph as a New Surveying Principle	
I. Mapping of Geologically Denuded Regions	99
II. Mapping of Wooded Regions	182
Part 3. Methodology of Aerial Photograph Application and Organization of Work	
I. Plan of Geological Aerial Photograph Interpretation	247
II. The Process of Geological Studies	263
III. Special Demands on Aerial Surveying	275
IV. Visual Observations from an Airplane	284
V. Changes in Norms and the Economics of Geological Studies	294
Conclusion	300

- E N D -

- 2 -

CONFIDENTIAL

CONFIDENTIAL