

# Photogrammetric Engineering

Volume XIX

JUNE, 1953

Number 3

## CONTENTS

List of Sustaining Members . . . . .	359
Board of Direction and Committee Chairmen . . . . .	361
Information—MANUAL OF PHOTOGRAMMETRY . . . . .	363
Announcement—Award for Manual Sales . . . . .	369
Notice—Index to PHOTOGRAMMETRIC ENGINEERING . . . . .	373
Panel on Arctic Mapping—Introduction by <i>Marc Boyer</i> , Moderator . . . . .	375
The Contribution of Explorers to the Mapping of Arctic North America— <i>N. L. Nicholson</i> . . . . .	380
Arctic Air Photography . . . . .	
Operational Problems in Arctic Survey Photography— <i>R. I. Thomas</i> . . . . .	385
R.C.A.F. Photo Equipment and Techniques— <i>D. S. Ross</i> . . . . .	388
Arctic Mapping— <i>Paul E. Gremmler</i> . . . . .	391
Control for Arctic Mapping— <i>C. H. Ney</i> . . . . .	392
Horizontal and Vertical Control for Arctic Mapping— <i>Hubert A. Paton</i> . . . . .	395
Charting Northern Seas and Harbors— <i>F. C. G. Smith</i> . . . . .	400
Hydrographic Surveying in the Arctic— <i>T. K. Treadwell</i> . . . . .	402
Arctic Mapping— <i>B. W. Waugh</i> . . . . .	404
Mapping in the Arctic— <i>Gerald FitzGerald</i> . . . . .	406
U. S. Mapping in the Arctic and Sub-Arctic Regions of the Western Hemi- sphere— <i>Albert L. Nowicki</i> . . . . .	408
Questions and Answers . . . . .	410
Weather Forecasts for Aerial Photographers— <i>Carl M. Reber</i> . . . . .	413
Photo Interpretation Symposium—Continued from March issue . . . . .	
An Aspect of Color Photography and Interpretation— <i>R. G. Tarkington</i> . . . . .	418
The Status of Interpretation in Natural Resource Inventories—Photo Mag- netometer Interpretation— <i>Donald J. Belcher</i> . . . . .	421
Keys for Interpreting Vegetation from Air Photographs— <i>Dr. Hugh T. O'Neill</i> . . . . .	422
The Dilemma of Military Photo Interpretation— <i>Frank C. Whitmore, Jr.</i> . . . . .	425

(Continued on page 357)

Entered as second-class matter at the Post Office at Menasha, Wisconsin, under the Act of August 24, 1912. Additional entry as second-class matter at the Post Office at Washington, D. C. Acceptance for mailing at the special rate of postage provided for in section 34.40, paragraph d, P.L.&R.

Published five times a year, during the months of March, April, June, September and December, by the American Society of Photogrammetry. Publication Office 450-458 Ahnaip St., Menasha, Wis. and at Society's Address—1000 Eleventh St., N.W., Washington, D. C.

Copyright 1953 by the American Society of Photogrammetry. Reproduction of this issue or any part thereof, may be made only after obtaining the specific approval of the Society's Chairman of the Publications Committee.

The Society is not responsible for any statements made or opinions expressed in its publications.

Subscription Rates—No charge to Society members in good standing; \$6 annually for subscribers in United States and its possessions; and \$6.50 annually, elsewhere. Society pays the postage. Price of individual back numbers—in U. S. and its possessions, \$1.75 per copy for single purchase of 3 or less and \$1.65 per copy, for 4 or more; elsewhere \$1.85 per copy for single purchase of 3 or less and \$1.75 per copy, for 4 or more. Orders for subscriptions or for individual copies should be sent to the Society's address.

Printed in the United States of America

CONTENTS (Continued from page 355)

Factors Limiting the Use of Aerial Photographs for Analysis of Soil and Terrain— <i>Robert E. Frost</i> . . . . .	427
Questions and Answers . . . . .	436
Announcement—Semi Annual Meeting. . . . .	441
Reports by the Photo Interpretation Committee— <i>Laurence Brundall</i> , Chairman	
Procedures and Problems of Photogeologic Evaluation— <i>Robert F. Thurrell, Jr.</i> . . . . .	443
Air Photo Criteria of Ore Localization in the Corbin-Wickes Mining District, Jefferson County, Montana— <i>W. S. Levings</i> and <i>K. S. Herness</i> . . . . .	450
Interpretation of a Stereo Pair of Cross Mountain, Colorado— <i>B. M. Bench</i> and <i>D. W. Bell</i> . . . . .	461
A Geological Interpretation of an Air Photograph of British Somaliland— <i>W. E. Johnstone</i> . . . . .	466
Report of Unclassified Military Terrain Studies Section— <i>Page E. Truesdell</i> . . . . .	468
Index to Aerial and Ground Photographic Illustrations of Geological and Topographic Features Throughout the World— <i>R. C. Sager</i> . . . . .	472
Abstract of Thesis—Contributions to the Study of Antarctic Surface Features by Photogeographical Methods— <i>Dr. John H. Roscoe</i> . . . . .	473
The Use of Air Photos for Terrain Interpretations at Long Range— <i>M. M. Elias</i> . . . . .	474
Photo Interpretation in Forestry— <i>Kendall B. Wood</i> . . . . .	477
Air-Photo Interpretation in Natural Resources Inventories— <i>H. L. Cameron</i> . . . . .	481
Use of Air Photographs for Terrain Interpretation Based on Field Mapping— <i>William S. Benninghoff</i> . . . . .	487
A Simplified Analytical Method for the Adjustment of Aerial Triangulation— <i>R. J. Owen</i> . . . . .	491
Photo Interpretation in Forest Inventories— <i>Karl E. Moessner</i> . . . . .	496
Aeronautical Chart Research and Development— <i>D. L. Radcliffe</i> . . . . .	508
USAF Type T-11 Mapping Camera— <i>Leonard W. Crouch</i> . . . . .	513
Optical and Sensitometric Developments— <i>Paul L. Pryor</i> . . . . .	518
Application of Variable Contrast Papers to Aerial Photo Reconnaissance— <i>L. A. Williams</i> . . . . .	527
Control Extension by Photogrammetric Methods— <i>Lewis A. Dickerson</i> . . . . .	533
News Notes . . . . .	495 & 539
Notes from the President. . . . .	540
News of Photogrammetrists . . . . .	541
Resolving Power . . . . .	541
Index to Advertisers . . . . .	359

---

Established 1910

**JAMES W. SEWALL COMPANY**

**OLD TOWN, MAINE**

FOREST ENGINEERING  
TOPOGRAPHIC MAPPING  
AERIAL SURVEYS

BRANCH: James W. Sewall Co. (Canada) Ltd.  
Fredericton, New Brunswick

---