C.F. 100 Photo Reconnaisance Missions in the Bancroft, Ontario, and Mont Tremblant, Quebec, districts.

GSC open file 55
C. 1

Air photo library at 615 Booth has a storage problem and left the rolls of film at Uplands. They can borrow them and let one scan them on the viewer for 70 mm at 615 Booth, but you would have to set up an appointment. They have a regular delivery service with Uplands.



Open File 55
HIGH ALTITUDE PHOTO MISSIONS, MONT TREMBLANT, QUEBEC AND BANCROFT, ONTARIO

The following flight data, index maps and samples of inagery are placed on open file at the Library of the Geological Survey of Canada.

In the summer of 1968, the Canadian Armed Forces experimental photographic group, A.E.T.E. (Commander Major Laukes) carried out three flights over two test areas selected by the Geological Survey of Canada. The aircraft used was a CF 100 twin jet aircraft fitted with four 70 mm . Vinten cameras which were installed in the bomb bay. The cameras were not accessible in flight and there was no intervalometer to enable photographs to be exposed at set intervals.

On the first two flights the cameras were turned on and ran freely at the normal camera speed of four frames per second providing imagery with $\pm 98 \%$ overlap.

On the third flight, the cameras were fired by the adrcraft photograph/navigator in five second bursts which increased the effective length of photo line from about 15 miles in the first and second flights to 50 miles in the third flight.

## Description of flights

A sumary of the flight data is presented in illustration I while illustration 2 provides location map of the areas flown.

Flicht I: Mont Tremblant. Four standard films, Colour, Colour-infrared, Panchromatic and Infrared, exposed simultaneously for comparison. Sterso coverage ( $50 \%$ overlap) is provided by the following frames:

Ro11 S68/5 Pan + Wratten 12 Nos. 84, 110, 132, 202, 273, 343, 418, 467 Roll S68/6 Colour 8442 Nos. -- - -... $\quad 7,83,160,244,299$ Koll S68/7 Infrared Nos. -- 1, 27, 106, 184, 263, 349, 403 Roil S68/8 Colour I.R. Nos. 2, 33, 56, 135, 215, 294, 380, 436 8443 + Wratten 12

Flight 2: Bancroft. Three cameras carried Panchronatic film and Wratten colour separation filters (red, green and blue pass) and the fourth camera, colour film.

Stereo cover ( $60 \%$ forward overlap) is provided by the following frames:

| Ro11 S68/1 | Pan. + Green pass filter | Nos. | $5,25,97,170,256,336,413$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Roll S68/2 | Pan. + Red pass filter | Nos. $5,25,90,164,233,304,374$ |  |
| Ro11 S68/4 | Pan. + Blue pass filter | Nos. $6,10,84,165,242,324,399$ |  |
| Ro11 S68/3 | Colour 8442 | Nos. $3,21,93,175,251,330,406$ |  |

Flight 3: Bancroft. Lenses with a focal length of 1.75 " were used to give negative scales of 1:299,000.

Colour, infrared and colour-infrared film (in two cameras) was exposed.

The flight began with a low level pass over Uplands Airport to test cameras and exposures, $2-4$ tenth cloud and heavy haze over Bancroft marred the photography but provided evidence of the relative haze penetrative qualities of the films.

Copies of the photography may be obtained from:

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National Air Photo Library,
Remote Sensing Distribution Centre,
Department of Energy, Mines and Resources,
615 Booth Street,
Ottawa, Ontario, Canada.
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The cost for the photography is:
$\begin{array}{ll}\text { Flight } 1 \text { (stereo coverage as listed) } & \$ 19.00 \\ \text { Flight } 2 \text { (stereo coverage as listed) } & \$ 9.00 \\ \text { Flight } 3 \text { (complete coverage) } & \$ 308.00\end{array}$
Please note that these prices are presently under review and are subject to change without notice.

## SUMMARY OF FLIGHT DATA

(1) Mont Tremblant: Cameras were free running at four frames per second. The weather was sunny with very light haze and visibility of over twenty miles.
(2) Bancroft: Cameras were free running at four frames per second. The weather was sunny with no haze and visibility of over twenty miles.
(3) Uplands \& Bancroft: Cameras were operated in five second bursts at ten second intervals. The weather was clear at Uplands, but Bancroft had three tenths scattered cumulus cloud cover and thick haze. The visibility was from ten to fifteen miles.

| Areal <br> Date | Roll No. | Fil成 | Filter** | Wavelength Sensitivity (microns) | $\begin{aligned} & \text { Altitude } \\ & \text { A.G.L. } \\ & \text { (feet) } \end{aligned}$ | Lens " F " (ins.) | $\begin{aligned} & \text { Lens } \\ & \text { f-stop } \end{aligned}$ | Rated <br> Shutter <br> Speed | Development | Film Scale (approx.) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (1) <br> Mont Tremblant $3 \text { May } 68$ | S68/5 | Plus X Aero 5401 | 12 | 0.5-0.7 | 44,000 | 3 | 5.6-8.0 | 1/1000 | Neg. | 1:176,000 |
|  | S68/6 | Ektachrome 8442* | 1 a | 0.39-0.7 | 44,000 | 3 | 5.6-8.0 | 1/1000 | Neg. | 1:176,000 |
|  | S68/7 | Infrared (IR) 5424 | 89b | 0.7-0.9 | 44,000 | 3*** | 5.6 | 1/1000 | Neg. | 1:176,000 |
|  | S68/8 | Ektachrome-IR 8443 | 12 | 0.5-0.9 | 44,000 | 3 | 4.0-5.6 | 1/1000 | Neg. | 1:176,000 |
| (2) <br> Bancroft <br> 6 May 68 | S68/1 | Plus X Aero 5401 | 57 | 0.48-0.59 | 44,000 | 3 | 2.8-4.0 | 1/1000 | Neg. | 1:176,000 |
|  | S68/2 | P1us X Aero 5401 | 25 | 0.59-0.7 | 44,000 | 3 | 4.0-5.6 | 1/1000 | Neg. | 1:176,000 |
|  | S68/3 | Ektachrome 8442 | 1 a | 0.4-0.7 | 44,000 | 3 | 5.6-8.0 | 1/1000 | Neg. | 1:176,000 |
|  | S68/4 | P1us X Aero 5401 | $2 a+47$ | 0.41-0.5 | 44,000 | 3 | 2.8 | 1/1000 | Neg. | 1:176,000 |
| (3) <br> Uplands \& Bancroft 15 July 68 | S68/9 | Ektachrome 8442 | 1 a | 0.4-0.7 | $\begin{aligned} & 1,000 \propto \\ & 44,000 \end{aligned}$ | 1.75 | 5.6-8,0 | 1/1000 | Pos. | $\begin{aligned} & 1: 6,800 \& \\ & 1: 299,000 \end{aligned}$ |
|  | S68/10 | Ektachrome-IR 8443 | 12 | 0.5-0.9 | $\begin{aligned} & 1,000 \& \\ & 44,000 \end{aligned}$ | 1.75 | 4.0-5.6 | 1/1000 | Pos. | $\begin{aligned} & 1: 6,800 \& \\ & 1: 299,000 \end{aligned}$ |
|  | S68/11 | Infrared (IR) 5424 | 89 b | 0.7-0.9 | $\begin{aligned} & 1,000 \& \\ & 44,000 \end{aligned}$ | 1.75 | 4.0-5.6 | 1/1000. | Neg. | $\begin{aligned} & 1: 6,800 \& \\ & 1: 299,000 \end{aligned}$ |
|  | S68/12 | Ektachrome-IR 8443 | 12 | 0.5-0.9 | $\begin{array}{r} 1,000 \& \\ 44,000 \end{array}$ | 1.75 | 4.0-5.6 | 1/1000 | Neg. | $\begin{aligned} & 1: 6,800 \& \\ & 1: 299,000 \end{aligned}$ |
| * camera jammed @ 75' ** Wratten Fi |  |  | *** Lens focal distance extended for Infrared (IR) film |  |  |  |  |  |  |  |
| Illustration I. |  |  | SUMMARY OF FLIGHT DATA |  |  |  |  | Se | over | for note |

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(2)
(3)

## NOTES

(2) Bancroft: リ

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LOCATION OF FLIGHT LINES











no
BANCROFT (west half)
Film, Plus $\mathrm{X} 5401,2 a+47$
Negative scale 1: 176,000
Print scale $1: 75,000$
Roll S68/11 Infrared 5424
$89 b$ filter.

Rol1 S68/12 Colour-Infrared

## 8443

processed Neqative.
Flight 3 Uplands Airport
Low level test run.
Negative and Print scale
$1: 6,800$


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