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### Open File

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

Ber Jack Mar Donald - 10po 55

CLASSIFICATION YOUR FILE No. JOSICAL INFORM Votre dossier OUR FILE No. 111-1-3 630031 Notre dossier FEB 18 DATE February 17, 1971 NOSMIG DNISE GEOLO( V. R. Slaney FE0 JO 1971

Dr. A. G. Dafnley, Chief. Exploration Geophysics Division

OLD

SUBJECT Suiet

V. R. Slaney, FROM De

Remote Sensing Section, Exploration Geophysics Division

C. Lord

Request for Open File Announcement

Permission is requested for information (flight logs, index map, samples of photography) relating to 3 high altitude photography missions by a C.A.F. jet aircraft for GSC to be placed on Open File.

It is proposed to deposit the original imagery with the Air Photo Library (Remote Sensing Section) where it could be viewed and copies obtained as

I suggest the following for the distribution notice:

### OPEN FILE

The following flight data, index maps and samples of imagery are being placed on Open File at the Library of the Geological Survey of Canada, 601 Booth Street, Ottawa 4, Ontario. A C.F. 100 jet photo reconnaissance aircraft fitted with 4 70 mm cameras flew 3 missions at 44,000' over test areas selected by the Geological Survey.

- West from Bancroft, Ontario, 15 miles long, scale 1:176,000. Flight 1 Films- Panchromatic , Infrared, Colour, False-colour.
- Flight 2 Southwest from Mont Tremblant, Quebec, 18 miles long, scale 1:176,000. Films- Colour, Panchromatic colour separation negatives, red, green, blue.
- West from Bancroft, Ontario, 50 miles long, scale 1:299,000. Flight 3 Films- Infrared, Colour, False-colour (negative), false-colour (positive).

The photography took place between May and July 1968. Copies of flight data, index maps and imagery may be obtained from the Air Photo Library, 615 Booth Street, Ottawa 4.

my pens,

Chief Geologist

FEB 18 1971

DIVISION

## HIGH ALTITUDE PHOTO MISSIONS, MONT TREMBLANT, QUEBEC AND BANCROFT, ONTARIO

The following flight data, index maps and samples of imagery 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 aircraft 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 summary of the flight data is presented in illustration I while illustration 2 provides location map of the areas flown.

Flight I: Mont Tremblant. Four standard films, Colour, Colour-infrared, Panchromatic and Infrared, exposed simultaneously for comparison.

Stereo coverage (60% overlap) is provided by the following frames:

Roll S68/5 Pan + Wratten 12 Nos. 84, 110, 132, 202, 273, 343, 418, 467
Roll S68/6 Colour 8442 Nos. -- -- 7, 83, 160, 244, 299
Roll S68/7 Infrared Nos. -- 1, 27, 106, 184, 263, 349, 403
Roll S68/8 Colour I.R. Nos. 2, 33, 56, 135, 216, 294, 380, 436
8443 + Wratten 12

Flight 2: Bancroft. Three cameras carried Panchromatic 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:

Roll 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
Roll S68/4 Pan. + Blue pass filter Nos. 6, 10, 84, 165, 242, 324, 399
Roll 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:

National Air Photo Library, Remote Sensing Distribution Centre, Department of Energy, Mines and Resources, 615 Booth Street, Ottawa, Ontario, Canada.

The cost for the photography is:

Flight 1 (stereo coverage as listed) \$19.00 Flight 2 (stereo coverage as listed) \$9.00 Flight 3 (complete coverage) \$308.00

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) <u>Bancroft</u>: 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.

Area/ Date	Roll No.	Film	Filter**	Wavelength Sensitivity (microns)	Altitude A.G.L. (feet)	Lens "F" (ins.)	Lens f-stop	Rated Shutter Speed	Devel- opment	Film Scale (approx.)
(1)	5/898	Plus X Aero 5401	12	0.5-0.7	44,000	3	5.6-8.0	1/1000	Neg.	1:176,000
Tremblant	9/898	Ektachrome 8442*	la	0.39-0.7	44,000	ĸ	5.6-8.0	1/1000	Neg.	1:176,000
3 May 68	2/898	Infrared (IR) 5424	895	0.7-0.9	44,000	3*** 5.6	5.6	1/1000	Neg.	1:176,000
	8/898	Ektachrome-IR 8443	12	0.5-0.9	44,000	n	4.0-5.6	1/1000	Neg.	1:176,000
(2)	868/1	Plus X Aero 5401	57	0.48-0.59	44,000	m	2.8-4.0	1/1000	Neg.	1:176,000
Bancroft	868/2	Plus X Aero 5401	25	0.59-0.7	44,000	m	4.0-5.6	1/1000	Neg.	1:176,000
6 May 68	868/3	Ektachrome 8442	Ta	0.4-0.7	44,000	m	5.6-8.0	1/1000	Neg.	1:176,000
	868/4	Plus X Aero 5401	2a+47	0.41-0.5	44,000	m	2.8	1/1000	Neg.	1:176,000
(3) Uplands &	6/898	Ektachrome 8442	La B	0.4-0.7	1,000 & 44,000	1.75	5.6-8,0	1/1000	Pos.	1:6,800 & 1:299,000
Bancroft	868/10	Ektachrome-IR 8443	12	0.5-0.9	1,000 &	1.75	4.0-5.6	1/1000	Pos.	1:6,800 & 1:299,000
89 kTnr cr	868/11	Infrared (IR) 5424	89b	0.7-0.9	1,000 &	1.75	4.0-5.6	1/1000.	Neg.	1:6,800 & 1:299,000
	868/12	Ektachrome-IR 8443	12	0.5-0.9	1,000 & 44,000	1.75	4.0-5.6	1/1000	Neg.	1:6,800 & 1:299,000
* camera jammed	mmed @ 75'	; ** Wratten Filters		*** Lens focal distance extended for Infrared (IR) film	distance ex	tended	for Infra	red (IR) f	ilm	

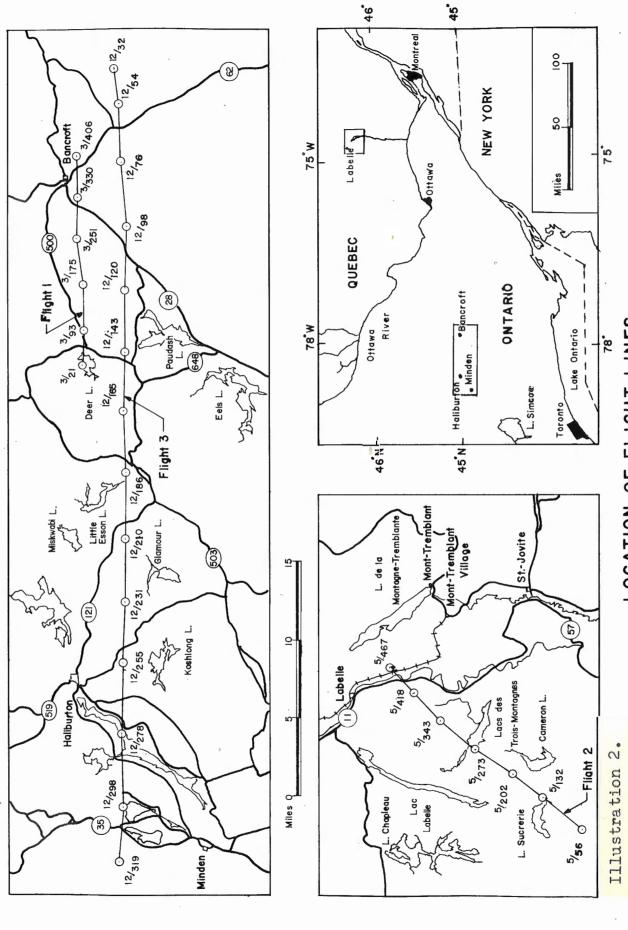
Illustration I.

# SUMMARY OF FLIGHT DATA

# SUMMARY OF FLIGHT DATA

# NOTES

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



LOCATION OF FLIGHT LINES



Flight 2, Roll 568/3

BANCROFT.

Film, Colour 8442. Scale 1:176,000.



Flight 1, Roll S68/6 MONT TRENBIANT

Film, Colour 8442.



Flight 1, Roll S68/5
MONT TREMBLANT
Film, Plus X, minus Blue
film, Plus X, filter.
Negative scale,1:176,000
Print scale



Flight 1, Roll S68/7.

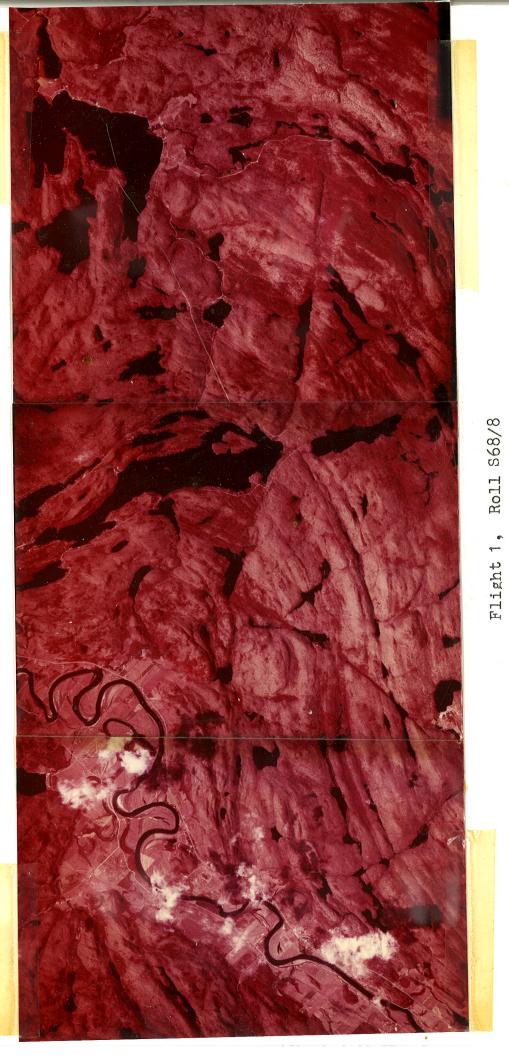
MONT TREMBLANT

Film, Infrared 5424, 89b

filter.

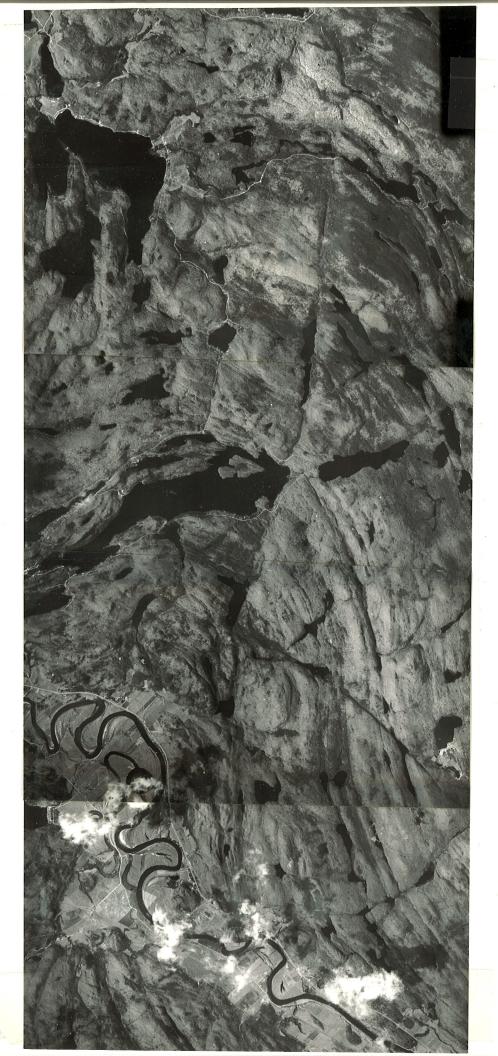
Negative scale,1:176,000

Print scale 1:75,000



Negative scale 1:176,000 Film, Colour-Infrared 8443, dev. Neg. MONT TREMBLANT

Colour print scale 1:90,000



Flight 1, Roll S68/8

MONT TREMBLANT
Film, Colour-Infrared 8443
developed negative
Negative scale 1:176,000
B+W print scale 1:90,000



Flight 2, Roll S68/1

BANCROFT (east half)

Film Plus X 5401,57 filte.

Negative scale 1:176,000

Print scale 1:75,000



Flight 2, Roll S68/1

BANCROFT (west half)

Film Plus X 5401,57 filter

Negative scale 1:176,000

Print scale 1:176,000



Flight 2, Roll S68/2

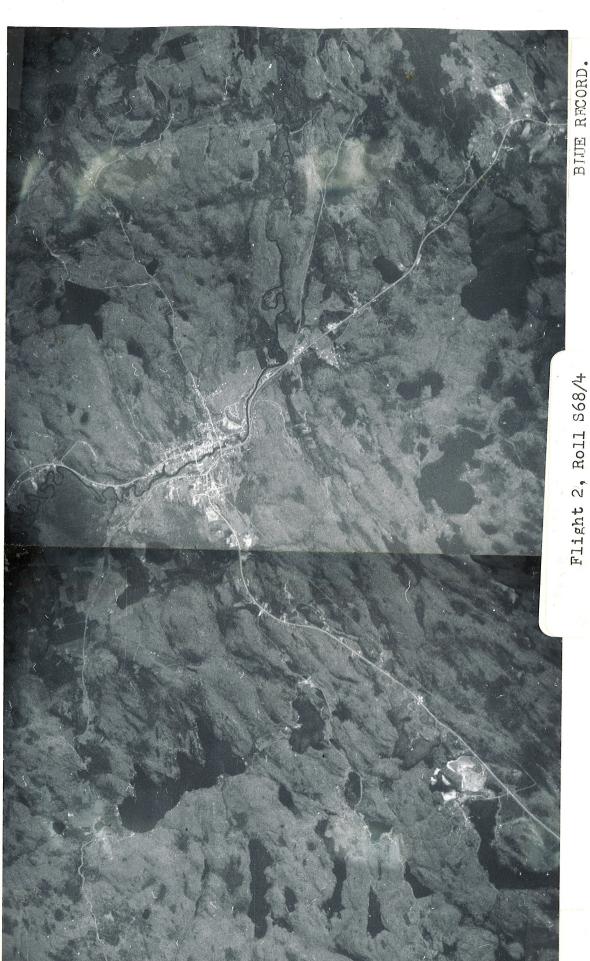
RED RECORD

BANCROFT (East half)
Film, Plus X 5401, Red(25)
filter.
Negative scale 1:176,000
Print scale 1:75,000



RED RECORD.

Eilm Plus X 540M Red(25)
Film Plus X 540M Red(25)
filter.
Negative scale 1:176,000
Print scale 1:75,000 Flight 2, Roll S68/2



Flight 2, Roll S68/4

BANCROFT (east half)

Film Plus X 5401 2a+47 filters
Negative scale 1:176,000 Print scale 1:75.000



BLUE RECORD.

Flight 2, Roll S68/4
BANCROFT (west half)
Film, Plus X 5401, 2a+47
filters
Negative scale 1: 176,000
Print scale 1: 75,000

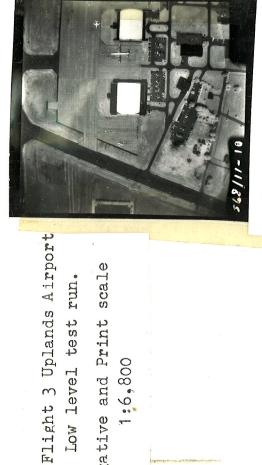


Low level test run.

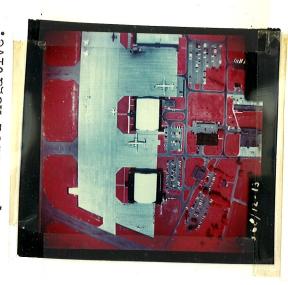
Roll S68/9 Colour 8442 processed Positive



Roll S68/10 Colour-Infrared processed Positive. 8443



Roll S68/11 Infrared 5424 89b filter. processed negative.



Roll S68/12 Colour-Infrared processed Negative.

