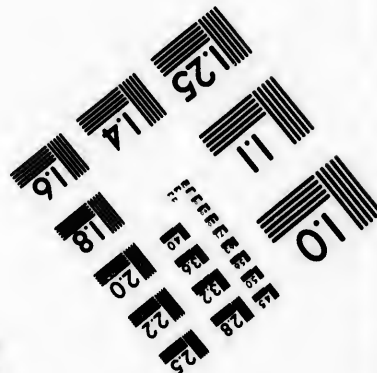
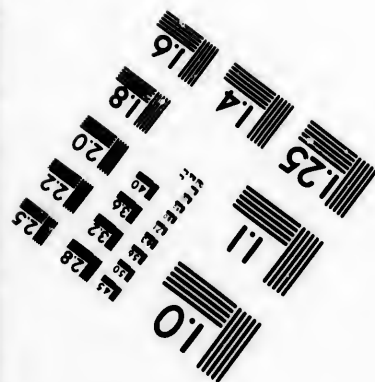
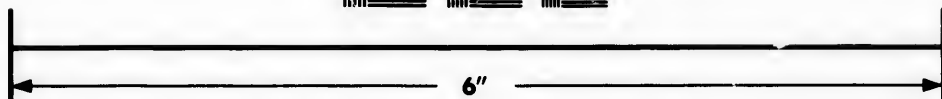
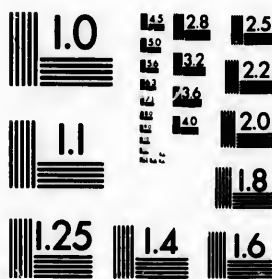


**IMAGE EVALUATION  
TEST TARGET (MT-3)**



**Photographic  
Sciences  
Corporation**

23 WEST MAIN STREET  
WEBSTER, N.Y. 14580  
(716) 872-4503

LES  
1.8  
1.9  
2.0  
2.2  
2.5  
2.8  
3.2  
3.6

**CIHM/ICMH  
Microfiche  
Series.**

**CIHM/ICMH  
Collection de  
microfiches.**



**Canadian Institute for Historical Microreproductions / Institut canadien de microreproductions historiques**

10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64  
65  
66  
67  
68  
69  
70  
71  
72  
73  
74  
75  
76  
77  
78  
79  
80  
81  
82  
83  
84  
85  
86  
87  
88  
89  
90  
91  
92  
93  
94  
95  
96  
97  
98  
99  
100

**© 1982**

Technical and Bibliographic Notes/Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

- Coloured covers/  
Couverture de couleur
- Covers damaged/  
Couverture endommagée
- Covers restored and/or laminated/  
Couverture restaurée et/ou pelliculée
- Cover title missing/  
Le titre de couverture manque
- Coloured maps/  
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black)/  
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations/  
Planches et/ou illustrations en couleur
- Bound with other material/  
Relié avec d'autres documents
- Tight binding may cause shadows or distortion  
along interior margin/  
La reliure serrée peut causer de l'ombre ou de la  
distortion le long de la marge intérieure
- Blank leaves added during restoration may  
appear within the text. Whenever possible, these  
have been omitted from filming/  
Il se peut que certaines pages blanches ajoutées  
lors d'une restauration apparaissent dans le texte,  
mais, lorsque cela était possible, ces pages n'ont  
pas été filmées.
- Additional comments:/  
Commentaires supplémentaires:

- Coloured pages/  
Pages de couleur
- Pages damaged/  
Pages endommagées
- Pages restored and/or laminated/  
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/  
Pages décolorées, tachetées ou piquées
- Pages detached/  
Pages détachées
- Showthrough/  
Transparence
- Quality of print varies/  
Qualité inégale de l'impression
- Includes supplementary material/  
Comprend du matériel supplémentaire
- Only edition available/  
Seule édition disponible
- Pages wholly or partially obscured by errata  
slips, tissues, etc., have been refilmed to  
ensure the best possible image/  
Les pages totalement ou partiellement  
obscurcies par un feuillet d'errata, une pelure,  
etc., ont été filmées à nouveau de façon à  
obtenir la meilleure image possible.

This item is filmed at the reduction ratio checked below/  
Ce document est filmé au taux de réduction indiqué ci-dessous.

|                          |                          |                          |                          |                          |                          |                                     |                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 10X                      | 12X                      | 14X                      | 16X                      | 18X                      | 20X                      | 22X                                 | 24X                      | 26X                      | 28X                      | 30X                      | 32X                      |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

The copy filmed here has been reproduced thanks to the generosity of:

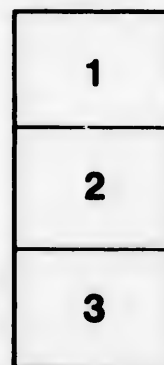
Library Division  
Provincial Archives of British Columbia

The images appearing here are the best quality possible considering the condition and legibility of the original copy and in keeping with the filming contract specifications.

Original copies in printed paper covers are filmed beginning with the front cover and ending on the last page with a printed or illustrated impression, or the back cover when appropriate. All other original copies are filmed beginning on the first page with a printed or illustrated impression, and ending on the last page with a printed or illustrated impression.

The last recorded frame on each microfiche shall contain the symbol  $\rightarrow$  (meaning "CONTINUED"), or the symbol  $\nabla$  (meaning "END"), whichever applies.

Maps, plates, charts, etc., may be filmed at different reduction ratios. Those too large to be entirely included in one exposure are filmed beginning in the upper left hand corner, left to right and top to bottom, as many frames as required. The following diagrams illustrate the method:



L'exemplaire filmé fut reproduit grâce à la générosité de:

Library Division  
Provincial Archives of British Columbia

Les images suivantes ont été reproduites avec le plus grand soin, compte tenu de la condition et de la netteté de l'exemplaire filmé, et en conformité avec les conditions du contrat de filmage.

Les exemplaires originaux dont la couverture en papier est imprimée sont filmés en commençant par le premier plat et en terminant soit par la dernière page qui comporte une empreinte d'impression ou d'illustration, soit par le second plat, selon le cas. Tous les autres exemplaires originaux sont filmés en commençant par la première page qui comporte une empreinte d'impression ou d'illustration et en terminant par la dernière page qui comporte une telle empreinte.

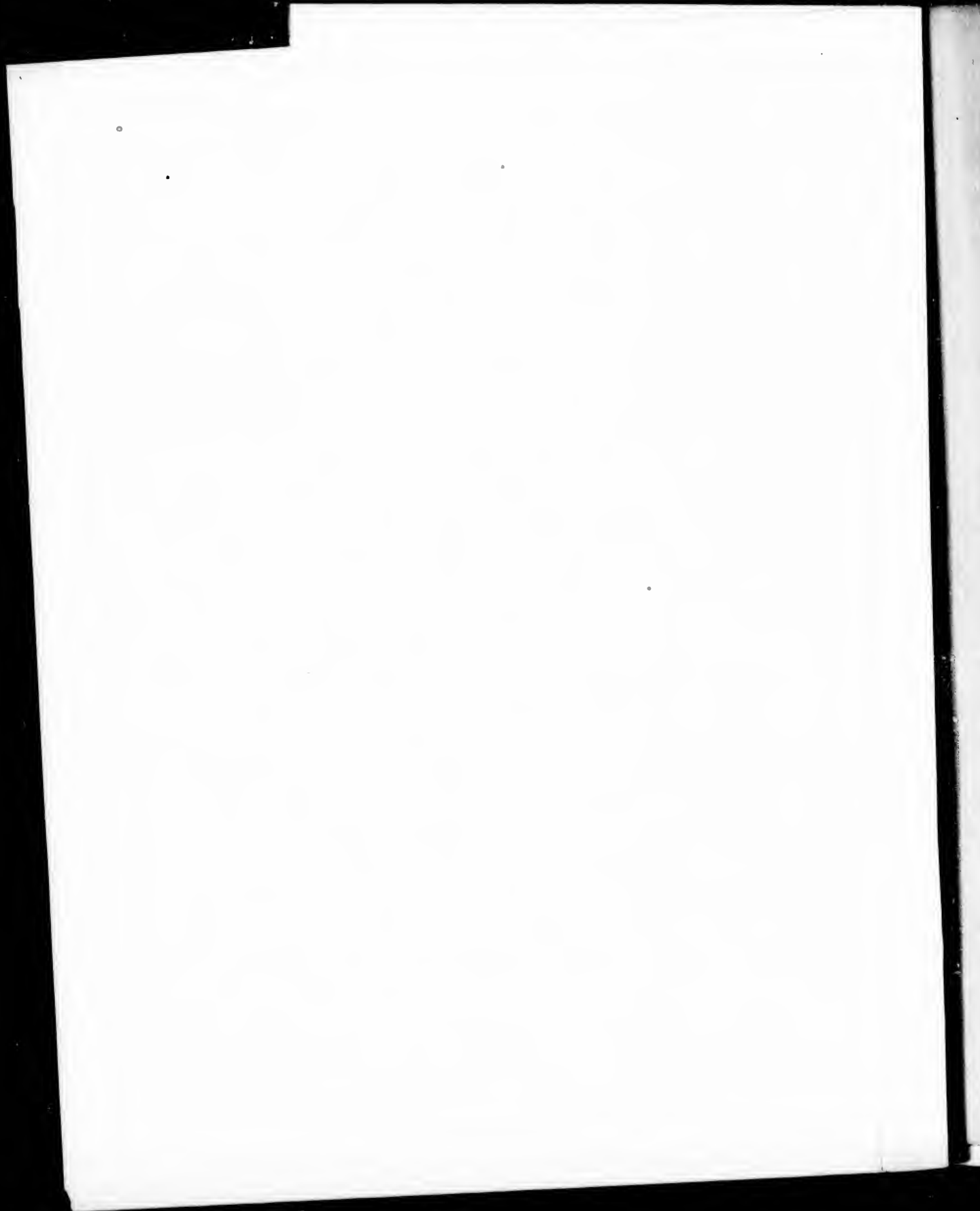
Un des symboles suivants apparaîtra sur la dernière image de chaque microfiche, selon le cas: le symbole  $\rightarrow$  signifie "A SUIVRE", le symbole  $\nabla$  signifie "FIN".

Les cartes, planches, tableaux, etc., peuvent être filmés à des taux de réduction différents. Lorsque le document est trop grand pour être reproduit en un seul cliché, il est filmé à partir de l'angle supérieur gauche, de gauche à droite, et de haut en bas, en prenant le nombre d'images nécessaire. Les diagrammes suivants illustrent la méthode.

ails  
du  
odifier  
une  
mage

rrata  
to

pelure,  
n à



# New Westminster, British Columbia.

## ABSTRACT OF METEOROLOGICAL OBSERVATIONS,

TAKEN AT THE ROYAL ENGINEER CAMP;

During the Year 1862, by order of Col. R. C. MOODY, R. E., Commanding the Troops.

LATITUDE, 49° 12' 47" 5 N.      LONGITUDE, 122° 53' 19" W.

|  |     |     |                    |       | INCHES.  |                       |
|--|-----|-----|--------------------|-------|----------|-----------------------|
| The highest reading of the Barometer, corrected for temperature, was |     |     |                    |       | 30.517   | 9th Feb.              |
| The mean height  | do. | do. | do., at 9.30. A.M. |       | 29.983   |                       |
| Do.  | do. | do. | do., at 3.30. P.M. |       | 29.963   |                       |
| The lowest   | do. | do. | do.                | ..... | 29.071   | 22nd Jan.             |
|  |     |     |                    |       | DEGREES. |                       |
| Maximum temperature in sun's rays (black bulb,)                      |     |     |                    | ..... | 104.0    | 29th Aug.             |
| Maximum temperature of Air, in shade                                 |     |     |                    | ..... | 88.5     | do.                   |
| Do.  | do. | do. | 9.30. A.M.         | ..... | 73.9     | 23rd July.            |
| Do.  | do. | do. | 3.30. P.M.         | ..... | 86.0     | 28th Aug.             |
| Mean temperature of Air, in shade.....                               |     |     | 9.30. A.M.         | ..... | 46.8     |                       |
| Do.  | do. | do. | 3.30. P.M.         | ..... | 51.2     |                       |
| Minimum temperature of Air, in shade                                 |     |     | 9.30. A.M.         | ..... | 2.0      | below zero, 15th Jan. |
| Do.  | do. | do. | 3.30. P.M.         | ..... | 6.0      | 15th Jan.             |
| Minimum temperature on the Grass                                     |     |     |                    | ..... | 15.0     | below zero, 16th Jan. |
| Greatest amount of Humidity  |     |     |                    | ..... | 1.000    |                       |
| Mean   | do. | do. | 9.30 A.M.          | ..... | .842     |                       |
| Do.  | do. | do. | 3.30 P.M.          | ..... | .772     |                       |
| Least  | do. | do. |                    | ..... | .320     | 3rd Jan.              |

*The cistern of the Barometer is about 54 feet above the level of the Sea. All the Observations were made at 9.30. A.M. and 3.30. P.M. daily throughout the year.*

There were slight frosts nearly every night in the month of April, and once in May (16th;) they did not recommence until the 9th of October. The severe frosts of January, and February, have been unknown for many years.

Thunder and Lightning occurred on the 24th May, 24th July, and 22nd, 29th, and 30th of August.

Table shewing the depth of rain, the number of days on which it fell, the mean humidity (9.30. A.M. and 3.30. P.M.) mean temperature of the air in shade, and the lowest temperature on the grass in each month.

|           | INCHES. | DAYS. | HUMIDITY. | 9. 30. A.M. | 3. 30. P.M. | MIN. ON GRASS, |             |
|-----------|---------|-------|-----------|-------------|-------------|----------------|-------------|
| January   | 3.480   | 9     | .855      | 19.0        | 23.0        | 15.0           | below zero. |
| February  | 5.727   | 8     | .815      | 30.3        | 34.2        | 2.0            |             |
| March     | 5.830   | 17    | .862      | 38.0        | 41.7        | 23.0           |             |
| April     | 2.345   | 14    | .767      | 45.5        | 51.3        | 26.0           |             |
| May       | 3.415   | 13    | .718      | 57.1        | 62.1        | 31.5           |             |
| June      | 2.760   | 10    | .712      | 62.7        | 67.1        | 40.0           |             |
| July      | 2.709   | 12    | .713      | 63.2        | 67.7        | 44.0           |             |
| August    | 2.930   | 8     | .787      | 63.5        | 69.8        | 43.0           |             |
| September | 1.625   | 9     | .751      | 58.4        | 62.7        | 33.5           |             |
| October   | 4.605   | 10    | .869      | 49.3        | 52.9        | 23.0           |             |
| November  | 4.050   | 8     | .938      | 37.9        | 41.7        | 22.0           |             |
| December  | 7.990   | 17    | .948      | 36.7        | 39.7        | 18.5           |             |

TOTAL.....47.466      135

Rain fell on 8 days when the wind was South, 4—S.W., 3—W., 5—N.W., 8—N.E., 43—E., 26—S.E. and 38 when calm.

The greatest fall of rain in 24 hours measured 2.260 inches, and was on the 20th March. The average fall for every day of the year was 0.130 inches, and for each wet day it was 0.352.

The amount of Ozone this year was very small, its mean daily number would be represented by 3 on the scale, and it seldom exceeded 6. During the greater part of October, November, and December, there was little indication of its presence. In November and the early part of December there were heavy fogs, during which there was no Ozone.

Comparison of mean results for three Years.

| Years. | Rain,   |       | Mean Temperature. |            | Min. on Grass | Humidity   |            | Mean height of Barometer. |            |
|--------|---------|-------|-------------------|------------|---------------|------------|------------|---------------------------|------------|
|        | INCHES. | DAYS. | 9.30. A.M.        | 3.30. P.M. |               | 9.30. A.M. | 3.30. P.M. | 9.30. A.M.                | 3.30. P.M. |
| 1860   | 54.420  | 151   | 49.9              | 54.0       | 15.6          | .847       | .796       | 29.042                    | 29.919     |
| 1861   | 60.485  | 104   | 48.8              | 52.2       | 10.0          | .764       | .854       | 29.943                    | 29.889     |
| 1862   | 47.406  | 135   | 46.8              | 51.2       | 15.0 below z. | .842       | .772       | 29.983                    | 29.968     |
| Means. | 54.124  | 150   | 48.5              | 52.5       |               | .818       | .797       | 29.956                    | 29.924     |

Rain was more equally distributed throughout all the months this year than in 1860 or 1861.

In the winter months, January to March, and October to December, 31.682 inches of rain fell in 1862, 41.230 in 1861, and 40.586 inches in 1860. In the remaining months 15.785 inches fell in 1862, 19.255 in 1861 and 13.834 in 1860.

The prevailing direction of the wind during rain in each year was E. and S.E. The absolute limiting nights of frost in the three years were nearly the same.

The Fraser River at New Westminster,

| Year. | Highest level. | lowest level | Diff. of level | Remarks.  |
|-------|----------------|--------------|----------------|---|
| 1860  | 12th June      | 4th March    | 10.5 Feet      | From 22nd May to 12 Aug. ships did not swing to the flood tide. |
| 1861  | 8th June       | 17th March   | 9.5 Feet       | " 19th May to 10th Aug. Do. do.                                 |
| 1862  | 14th June      | 19th April   | 10.5 Feet      | " 1st May to 2nd September. Do. do.                             |

Ice appeared on the 1st of January 1862, and the river at New Westminster was unnavigable on the 4th, it was completely frozen over on the 9th, and the Ice attained a thickness of 13 inches in the channel opposite the R. E. Camp, on the 12th of February. Sleighs were running from Langley, to several miles below New Westminster, and persons walked from Hope to the latter place, a distance of 80 miles on the ice, at the end of January. Lake Harrison and the other Lakes were frozen. Navigation from New Westminster was open to the mouth of the river on the 11th of March, and from Yale on the 12th April. Again on the 5th December, there was Ice in the River at New Westminster for one day. In January, 1861 there was ice at New Westminster, but the Navigation to the mouth of the River was not impeded. In 1860 there was no Ice.

*The Observations were taken by 2nd Corporal P. J. LEECH, and Lance Corporal J. CONROY, R. E.*

R. M. PARSONS, Captain R. E.

S.E.

erage

8 on  
there  
y fogs,

1862,  
19.255

limiting

able on  
in the  
several  
miles on  
m New  
April.  
January,  
impeded.

E.

in R. E

