M.Sc. Geography

AN ASSESSMENT OF THE ICE MASSES OF AXEL HEIBERG ISLAND, N.W.T.
A STUDY IN GLACIER INVENTORY

by

C. Simon L. Ommanney

ABSTRACT

The measurements proposed for a glacier inventory, including the form of a basic data sheet suitable for computer analysis, are discussed in Part I. The importance of standardizing the glacier identification, the quantitative data (elevation, linear, area and volume measurements and their accuracy) and the qualitative information (glacier description and classification) is stressed. Elevation of the snow line and of the mean accumulation and ablation areas is included in the inventory.

The feasibility of the inventory proposals was successfully tested in a pilot study on the 1101 glaciers of Axel Heiberg Island (80°N, 90°W), Canadian Arctic Archipelago. The great variety of glaciers, covering 31.5 per cent of the island, permitted evaluation of many critical problems. Basic data for each glacier is presented as a computer printout, accompanied by an index map, and the physiography and climate of the area and a list of source material included. Part II can be considered the first completed example of an International Hydrological Decade world glacier inventory.

GLACIER INVENTORY

OF

AXEL HEIBERG ISLAND, N.W.T.

C.S.L. OMMANNEY

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A STUDY IN GLACIER INVENTORY

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A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of Master of Science.

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INTRODUCTION

In 1958 a study of the world-wide distribution and amount of land ice cover was recommended for the International Geophysical Year (IGY), but only completed by a few countries. With the start of the International Hydrological Decade (IHD), the first systematic study of the world's water resources, it became important to know more about the distribution and volume of water in the frozen state. Most of the world's solid water resources are concentrated in the polar regions, particularly Antarctica and Greenland, but a reduction in the volume of permanent ice, of the order of one per cent, would produce as much fresh water as the present total volume in fresh water lakes (Table I).

Table I: DISTRIBUTION OF THE EARTH'S WATER (x $10^6 km^3$)

	Bauer[1]	Nace[2]	Shumskii[3]	Thiel[4]
Atmospheric Water Vapour	.012	.013		
Rivers and Ground Water		.025		
Circulating Ground Water	.25			
Freshwater Lakes		.25		
Inland Waters	.25			
Permanent Ice	21.74	16.7	24.23	24.0

1. Bauer, 1955; 2. Nace, 1967; 3. Shumskii et al, 1964; 4. Thiel, 1962

The figures in Table I demonstrate the order of magnitude involved and the uncertainty, in the literature, as to the true values.

In May 1966, shortly after the onset of the International Hydrological Decade, the Co-ordinating Council for the IHD passed a recommendation re-inforcing the International Geophysical Year attempts to make a world-wide glacier inventory. This formed the framework for this dissertation. Firstly, the thesis sets out to contribute to a guide which was to be produced by a Working Group of the International Commission of Snow and Ice under the Chairmanship of the thesis supervisor, Dr. Fritz Müller. Secondly, it is an initial application of this Guide to an area in the Canadian High Arctic, Axel Heiberg Island (80°N, 90°W).

Nace (1962), in an early proposal for an international programme in hydrology, mentioned several areas of research to which glaciology should contribute. He suggested studies of glaciers, ice caps and snowfields to determine:

1) a quantitative average and seasonal distribution of water,
2) fluctuations in relation to climate,
3) the hydrological cycle in areas with subzero temperatures,
4) variations in the hydrological cycle through area studies.

Nace further suggested that certain glaciated areas (i.e. Axel Heiberg Island) should be selected for 'type area studies' which would determine whether inferences could be drawn about these areas on the basis of known facts but without specific hydrological data. These type studies would be based on air photo interpretation or photohydrology. The IHD proposal suggested that national inventories of perennial and annual snow and ice masses be undertaken throughout the world (UNESCO, 1964, Annex I, p.4). Although this was to be a compilation of all available hydrological data, presented as monographs or published in reference books, year books or as maps (Annex II, p.4), other suggestions in the proposal implied that countries were expected to collect data on their own hydrological resources by setting up inventory programmes. Some of the objectives in the field of glaciology were stated as follows:

1) evaluation of the distribution of snow and glaciers for each country,
2) comparative studies on the dispersion of snow and ice around the world in a variety of climatological and topographical settings,
3) long term mass balance studies of glaciers and ice caps,
4) variations in glaciers and snowfields.

Thus one important aspect of the IHD is the compilation of a glacier inventory which is most valuable if carried out simultaneously and systematically by all the countries involved.

The 1966 Resolution I-12 of the Co-ordinating Council of the IDH recommended that a Working Group of the International Commission of Snow and Ice should "prepare a manual making recommendations for recording and mapping the perennial ice and snow masses of the world on and beneath the land surfaces, taking into account the recent Russian manual on the subject" (Ice, 1966, p.11). As the author of this thesis worked in close co-operation with the Working Group much of the methodological material was incorporated in the "Guide to a World Inventory of Perennial Ice and Snow Masses on and beneath the Land Surfaces" (UNESCO in press, a). The second part of this thesis, the application of the Guide to the Axel Heiberg Area, was accepted as an official contribution to the Canadian IHD programme (R-SIG-14: NORTH 6). Problems arising out of this application are discussed and the data presented as a 'type' example of an inventory submission.

PART I

HOW TO MAKE A GLACIER INVENTORY

CHAPTER 1.

INTRODUCTION

Emphasis has been placed on developing an inventory system which will be relatively simple and easy to use with a minimum of possible contradictions so that the bulk of the work can be carried out by unqualified personnel. This will leave the specialists free to supervise the work and analyse results.

All available literature was studied to assess the type of information that might be included in a glacier inventory. The main source material and related work is discussed in Chapter 2.

Chapter 3 deals with the development of a standard data sheet. The format of this sheet is suitable for transfer of the data on to computer punch cards. The classification of glaciers has been considered separately in Chapter 4 because of the large amount of contradictory material available and the problems of producing a simple, but comprehensive, classification for this inventory.

Chapter 5 deals with the standard computer line print out format of the data presentation and other related information which should be included in an international data submission.

CHAPTER 2.

EARLIER AND CURRENT RELATED INVENTORY WORK

In 1955 the Comité Spécial de l'Année Géophysique Internationale (CSAGI), meeting in Brussels, passed several resolutions relating to glaciology. The most significant of these for glacier inventory was as follows:

> IX.2. The CSAGI resolves that at the conclusion of the IGY there be published as complete a list as possible of all known glaciers, recording as a minimum:
> 1) location and elevation
> 2) name
> 3) area (approximate)
> 4) volume (estimated)
>
> further, if possible
> 5) photograph
> 6) measurement of activity
> 7) other observations of glaciological and meteorological value
>
> (after, Lorenzo, 1959)

In accordance with this resolution several countries began a census of glaciers within national boundaries.

By 1959 recommendations for the collection and presentation of glaciological data had been finalized and were published in the Annals of the IGY (1959, p.289-292). Basic Data Form A (Table II) listed the data required by the World Data centres (WDC). By 1967 seven countries had published results of glacier inventory studies undertaken during the IGY. The Norwegian study (Hoel and Werenskjold, 1962) is based on work done mostly in the 1930's but the

Table II: IGY BASIC DATA FORM A

Basic Data	Mexican	U.S.A.	Norwegian	Argentinian	Italian	Russian	French	Canadian
1. Name and Geographical Location	x	x	x	x	x	x	x	x
2. Latitude and Longitude	x	x	x	x	x	x	x	x
3. Thermal Type	x							
4. Morphological Type	x		x	x	x	x		x
5. Total Area	x	x	x	x	x	x	x	x
6. Length			x		x	x	x	x
7. Maximum Elevation	x		x	x	x	x	x	x
8. Terminal Elevation	x	x	x		x	x	x	x
9. Maximum Elevation of Snow Limit			x	x		x		
10. Elevation of Firn Limit			x			x		
11. Accumulation Area Ratio								
12. Specific Total Accumulation		x	x				x	
13. Specific Total Ablation		x	x				x	
14. Specific Budget							x	
15. Net Accumulation Region		x				x		
16. Net Ablation Region		x				x		
17. Increase or Decrease of glacier Area during year		x	x				x	
18. Increase or Decrease of glacier Volume		x	x					
19. Advance or Retreat of glacier Terminus		x	x		x		x	
<u>Unrequested Information included:</u>								
Width			x		x		x	x
Slope			x		x		x	
Orientation; exposure	x		x		x	x	x	x
Summary Remarks	x		x		x	x	x	
Bibliography	x	x	x	x	x	x	x	
Photographs	x		x		x		x	

approach and content is similar to that required for the IGY and for the purpose of this summary has been included and compared with the IGY inventories. Some countries, including Canada, only partly completed the work and the results were not published. Table II lists the requirements which have been fulfilled by the eight countries known to have completed a census. Many countries included some information for the census not requested and the most common of these are shown at the bottom of Table II. The Table demonstrates variations in the kind of data produced by different countries. Norway was already engaged in an extensive and intensive glaciological programme prior to the IGY and the Norwegian publication is a comprehensive study (Hoel and Werenskjold, 1962). Argentina, lacking good maps and air photo coverage, only partly completed the basic requirements (Colqui, 1962).

In terms of a world glacier inventory the most suitable studies, from the IGY censuses, were those of the Italians (Comitato Glaciologico Italiano, 1959-1962), and the Russians (Vinogradov and Psareva, 1965). Additions were made to the IHD data requirements as a result of these two publications.

Any proposal for world-wide data collection must be guided more by the minimum requirements than the maximum that might be obtained. If data requirements are too comprehensive countries without established glaciological programmes and personnel will be unable to complete the inventory. Full benefit from such studies can be obtained only if all countries with glaciers complete an inventory. To demonstrate the different levels of completeness reached in studies prior to the IHD the main works are reviewed below.

1. Los Glaciares de México (Lorenzo, 1959)

The Mexican census was carried out in accordance with the 1955 CSAGI resolution but completed before the IGY glaciology requirements had been finalized. All Mexican glaciers are listed with maximum and minimum elevations, name, approximate area, photographs and a sketch. A detailed report of the glacial history of each area is included as well as a discussion and extension of Ahlmann's morphological classification (Ahlmann, 1948).

2. Distribution and Variations of Glaciers in the United States exclusive of Alaska (Meier, 1961)

In the United States' report all glaciers are not listed separately but data on groups of glaciers, area and mean altitude are summarized in tables. Surveying and mass balance results for seven glaciers are given and particular attention paid to fluctuations of three glaciers between 1956 and 1959. This is the only one of the eight inventories that attempts to estimate volume in accordance with the IGY resolution.

3. <u>Glaciers and Snowfields in Norway</u> (Hoel and Werenskjold, 1962)

In the comprehensive study on glaciological work undertaken in the Norwegian polar regions and in Norway data is included on surveying and mapping, mass balance, glacier fluctuations, movement studies and other glaciological field work, the historical background to glaciology in Norway and the history of exploration and utilization of the glaciers. The work was published posthumously and is based mainly on field observations in the 1930's. It includes no new material after the middle of the 1950's.

4. <u>Argentine Glaciology</u> (Colqui, 1962)

The Argentinian is the least complete inventory because of lack of adequate maps and photographs. Geographical co-ordinates were provided for all glaciers and, where possible, altitude, area and glacier classification. observations on four glaciers provided information on glacier fluctuation.

5. <u>Catasto dei Ghiacciai Italiani, Anno Geofisico, 1957-1958 (Comitato Glaciologico Italiano, 1959-1962)</u>

For the Italian census, the country is divided into three regions and every glacier assigned a number. Each glacier is represented by a dot and a number on an index map of the region. Volumes II, III and IV provide detailed information, by region, on every glacier (Table III) including a recent photograph and map. Volume I summarizes all the data in Table III and contains an extensive bibliography with references to each glacier. Also included is data on extinct glaciers for which reliable historical information is available. This Italian study follows closely the recommendations of the CSAGI but provides no information on glacier volume.

6. Katalog Lednikov, SSSR; Tome 3, Part I Franz-Josef Land (Vinogradov and Psareva, 1965)

Some of the results of Russian glaciological work for the IGY were made known at the Snow and Ice Commission meeting in Helsinki in 1961 (Dolgushin, p.335; p.348; Zabirov, p.405; Bondarev, p.412) but the first main inventory work completed was that by Vinogradov and Psareva (1965) on Franz-Josef Land. This inventory and the data summaries are more detailed than those in the Italian work, though the Russian study does not include photos and maps of every glacier. Like the Italian census, a glacier numbering system with index maps was adopted. Translations of the table headings are provided in Table IV for comparison with the Italian data. The Russian inventory makes a distinction

TABLE III: ITALIAN GLACIER INVENTORY

SUMMARY DATA, Vol.I

Glac Name	Geogr Coord	Existing or Dead	Surface Area ha	Exposure 16 point	Map Ref	2 Order Basin	3 Order Basin	Mtn Group	Glac No.	Obs-erver

DATA, Vols II, III, IV

Glacier Name:____ Glacier Number:____
Mountain Group:____ Nearest Big Mountain:____ Valley Associated with Glac:____
Latitude:____ Longitude:____
Hydrological Basin:____ Height of Local Mtn.(m):____ Highest point of Glac:____
Lowest point of Glacier:____
Length of Glacier (m):____ Greatest Width (m):____ Area (ha):____ Slope:____
Alimentation:____ Exposure:____ Classification:____
Snout Fluctuations between dates:____ Bibliographic References:____
Summary Description of Glacier:____
Recent Photograph:____
Map with outline of measured area or location of extinct glacier:____
Observer:____ Supervisor:____

TABLE IV: SUMMARY OF RUSSIAN GLACIER INVENTORY TABLES

Table I, p.44, p.56 — BASIC INFORMATION ABOUT GLACIERS* — (Vinogradov and Psareva, 1965)

Glacier No.	Name	Name of Bay, Inlet or Sound where glacier ends	Type of Glacier	Number of Glacier Tributaries	Number of Subdividing Domes	General Exposure 8 points	Total Area km^2	Greatest Length km
1	2	3	4	5	6	7	8	9

Alimentation	Elevation of Snow Line	Method of Establishment and date (air photo and comparative interpolation)	Area of Accumulation	Area of Ablation
10	11	12	13	14

Table II, p.114 — LIST OF HYDROMETEOROLOGICAL STATIONS IN THE REGION OF GLACIERS — (ibid, 1965)

Name of the Island with Station	Name of the Station	Ownership	Absolute Height	Period of Observation			Additional Information
				Basic Meteorology	Precipitation	Snow Depth	

Table IV, p.116 — EXPEDITIONARY AND STATIONARY EXPLORATION (RESEARCH) OF THE GLACIER — (ibid, 1965)

Glacier No.	Name of Island & number of glaciers according to scheme	Period of Research (month, yr)	Basic Work of Conducted Research	Name of Person or Organization undertaking work	Source Reference

Table V, p.123 — LIST OF PAPERS CONTAINING INFORMATION ABOUT GLACIERS — (ibid, 1965)

Glacier Number	Name of Island and number of glacier according to scheme	Author of paper and title	Place of Publication	Abstract

* This table is also found in Rudovodstvo Po..., 1966, p.142 where it includes details on ice cored moraines and 'total' vs. 'exposed' glacier ice.

TABLE IV: SUMMARY OF RUSSIAN GLACIER INVENTORY TABLES (Contd.)

COMPARATIVE CHARACTERISTIC OF GLACIATION OF REGIONS OF FRANZ-JOSEF LAND#

Morphological Indices	West	South	Central	North	East	Northeast	Total Archipelago
Area of Islands							
Area of Glaciation							
Intensity of Glaciation							
Area of Outlet Glaciers							
Area of Dome Glaciers							
Area of Mountain Glaciers							
Number of Outlet Glaciers - a) Simple							
b) Complex							
Number of Glacier Tributaries included - a) Simple							
b) Complex							
Number of Subsiduary Domes (in complex)							
Number of Mountain Glaciers							
Average Area of: Outlet Glaciers							
Dome Glaciers							
Mountain Glaciers							
Distribution of Outlet Glaciers according to Exposure							
N a) Quantity, b) Area; NE a) Quantity, b) Area; etc. 8 point compass							
Area of Ablation							
Area of Accumulation including - a) Ice zone							
b) Firn zone							
Methods of Establishing Zonation							
Glacier Coefficient							
Length of Shorelines							
Length of Ice Shores (includes frontage of outlet glaciers)							

From Vinogradov and Psareva, 1965, Table 6, p.23, 43 and 54

between the 'exposed' (white) part of a glacier, and the 'total' glacier which includes all debris covered ice and ice cored moraines. By the end of 1967 two more volumes in the Russian glacier inventory series had become available, the inventory of the Northern Urals by Troitskii (1966) and that of the Northern Caucasus by Panov and Kravtsova (1967), as well as "Directions for Compiling a Glacier Catalogue of the USSR" (Rudovodstvo, 1966).

The Russian work indicates well the problems that arise when recommendations are not specific. The IGY Basic Data Form A (Table II) requested a morphological classification of glaciers without stating which one should be used. All other inventories used the Ahlmann classification (Ahlmann, 1948), sometimes with modifications. The Russians distinguished 33 glacier types to be used in their study only 8 of which fall within the Ahlmann classification. This indicates the need for an universal classification.

7. Fiches des Glaciers Français (Vivian, 1967a, b, c)

The French is not a general study of all glaciers but is limited to specific glaciers covered in considerable detail. An example of the data included in each study is given in Table V. Although no volume estimates are given the French census is more comprehensive than the Italian, but only covers three glaciers. Much of the information

TABLE V: FRENCH GLACIER INVENTORY

Name of Glacier - Observer

A) Location
- Latitude and Longitude
- Mountain Range
- Geological Nature of Basin
- Exposure (North to South)
- Hydrological Basin

B) Maps and Aerial Photographs
- complete historical sequence

C) Means of Access
- trains, cable cars, ski trails etc.

D) Chronological Reference to Work on the Glacier

E) Bibliography (alphabetic)

F) Glacier - Principal Geographical Characteristics
- Description
- Surface Area for different dates (hectares)
- Length (m)
- Description of Longitudinal profiles and Slope angles for main parts of the glacier
- Width (m)
- Accumulation in metres of water
- Ablation in metres of water
- Mass Balance in metres of water
- Description of Budget changes in the past

G) Snout Recession
- Description

H) Periglacial Morphology
- quarter page description

I) Illustrations Included
- Photograph of Glacier
- Sketch Map of Glacier
- Area Distribution Curve
- Longitudinal Profile (position marked on map)
- Cross Profile (position marked on map)

included in this study is based on ground observations and field work and therefore could not be requested for the world glacier inventory.

8. Inventory of Canadian Glaciers (Falconer, Falconer and Kellerhals, 1958)

The Canadian IGY census was submitted to the WDC as a mimeograph copy but never published. Detailed information was obtained for the Canadian Arctic but data for the rest of Canada was summarized. A numbering system, similar to the Italian and Russian was developed. The Arctic was divided into two main regions, the Queen Elizabeth Islands and the area south of Lancaster Sound and then further subdivided. The poor definition of the small scale maps used (1:506,880) prevented a satisfactory division into hydrological basins and individual glaciers. Data obtained for Axel Heiberg Island is not directly comparable with that given in the Appendix of this thesis.

Associated IHD Work

As a part of the IHD some working groups have been set up to prepare instructions dealing with the collection of data on other snow and ice problems.

a) Seasonal Snow Cover and Sea, Lake and River Ice (part of IHD Resolution I-12)

b) Measurement of Glacier Variations on a World-wide

Basis (IHD Resolution I-13). A Permanent Service on the Fluctuation of Glaciers has been established and a pilot study completed (Kasser, 1967).

c) Combined Heat, Ice and Water Balance at Selected Representative Glacier Basins (IHD Resolution I-14)

Consideration must be given to the work covered by these working groups to avoid duplication.

The world inventory guide discussed in Chapter 3 incorporates most of the features that can be obtained from maps and photographs that are included in the Italian and Russian inventories.

CHAPTER 3.

GUIDE TO A WORLD GLACIER INVENTORY

As the guide to glacier inventory, being Part I of the 'Guide to World Inventory of Perennial Ice and Snow Masses on and beneath the Land Surfaces' (UNESCO in press, a), was developed in close consultation with the author of this thesis much of the material present in this chapter is similar in content and wording to the official Guide.

One of the main purposes of the IHD world glacier inventory programme is to obtain values of area and, as far as possible, volume for all glacierized areas. Such a large scale investigation will be dependent on adequate cartographic and photographic coverage of the world's ice masses. The inventory guide has been developed so that all or most of the required data can be obtained from maps and photographs. Field observations, where available, may be used to increase the accuracy of data from studied areas and as a check on data from neighbouring regions.

If the data is to be utilized fully the compilation and presentation must be standardized so that final results from different areas can be directly compared. For this purpose a 'Standard Data Sheet' has been developed (Table VI). The four blocks on the right hand side of the sheet, designated B in Table VI, represent the data and the format re-

TABLE VI: STANDARD DATA SHEET FOR WORLD GLACIER INVENTORY

A

State, Province or Region: ________
Mountain Area: ________
Hydrological Basin:
1st Order: ________
1 2nd Order: ________
3rd Order: ________
4th Order: ________
Glacier Name: ________

2 Sources: Maps
Map Title and Number: ________
Compiled by: ________
Date: ________
Scale: ________
Contour Interval: ________
Reliability:
Vertical: ________
Horizontal: ________

3 Sources: Photographs
Type: ________
Serial Number: ________
Date: ________
Flying Height: ________
Focal Length: ________
Remarks: ________

Other: ________

4 Sources: Literature

5 Date Compiled by: ________
Date: ________
Supervisor: ________
Centre: ________

6 Remarks:

B

1 Region and basin identification
Glacier Number
Longitude
2 Latitude
U.T.M.
3 Orientation: Accumulation Area
Ablation Area
4 Highest Glacier Elevation (m)
Lowest Glacier Elevation (m): Exposed
Total
5 Elevation of Snow Line (m)
1

Region and basin identification
Glacier Number
5 Date of Snow Line
Mean Accumulation Area Elevation (m)
6 Accuracy Rating
Mean Ablation Area Elevation (m)
Accuracy Rating
2

Region and basin identification
Glacier Number
Maximum Length (km): Ablation Area
Exposed
7 Total
Mean width of main stream (km)
Surface Area (km^2): Exposed
8 Total
Accuracy Rating
Area of Ablation (km^2)
Accuracy Rating
9 Accumulation Area Ratio (%)
10 Mean Depth (m)
3

Region and basin identification
Glacier Number
10 Volume (km^3), in ice
Accuracy Rating
11 Classification and Description
4

quired for international submission. The left side, designated by A in Table VI, lists other information relating to the glacier and allows for greater detail where available. The right side has been arranged to facilitate punching of the data on to computer cards. The itemized discussion in the subsequent paragraphs of the data requirements follows the numbering system of Table VI.

A: STANDARD DATA SHEET: LEFT SIDE

A.1. Region and Basin Identification

Although co-ordinates, either geographical or the Universal Transverse Mercator (UTM), provide each glacier with an unique 'address' they can only be used satisfactorily as a filing system within a computerized data storage and retrieval programme. For the filing of data outside the computer each glacier is given an 'address' placing it within a particular region and basin. A basin may contain several glaciers so each is assigned a number. Six digits have been allotted for the region and basin identification. Firstly, as a two digit letter code, is the name of a sizable political unit, for example Canada, for which the World Data centres will assign a code. This major region is then subdivided into drainage basins or areas of 1st (A to Z), 2nd (0 to 9), 3rd (0 to 9) and if necessary, 4th (A to Z), etc. orders of basin. The ordering of basins is the reverse of that developed for stream numbering as the largest region will be the first determined and further subdivision will lead to smaller and smaller units. The lettering and numbering starts from the mouth of the major stream and proceeds clockwise around the basin or area. A reference map is drawn showing the assigned letters and numbers. This map may be combined with the index map. Every glacier in the final order basin (2nd to 4th) is given a number starting with '1' at the outlet of the drainage basin and proceeding clockwise to '999' if necessary. Index maps showing each glacier represented by a dot and it's number are provided. This indexing system provides a satisfactory basis for filing individual data sheets and related material such as photographs and maps, as well as quick reference to all the data on glaciers within a certain area. Should later work necessitate the further subdivision of glaciers already indexed the data sheet is adjusted to include an alphabetic character after the three digits assigned for the glacier number.

A.2. Sources: Maps

Standard topographic maps are the basis of most inventory measurements. The minimum suitable scale at which individual glaciers and drainage areas can be delineated is probably 1:250,000 but large scale maps are used whenever available. The exact shape and extent of glaciers and perennial snow fields are checked as many topographic maps are not sufficiently accurate. Correct delineation of ice divides and boundaries is made on the maps with the aid of photographs and any changes listed on the Standard Data Sheet (Table VI).

A small scale map is required, perhaps at 1:500,000 or less, depending on the size of the area, to determine the region and basin identification and the coding system. The maps used for the inventory data compilation, 1:250,000 or better, are specified on the Standard Data Sheet with the compiler, date of publication and of the field survey on which they were based. The scale, contour interval, and vertical and horizontal accuracy estimates are needed.

A.3. Sources: Photographs

Aerial and terrestrial photographs are required to confirm and, where necessary, to adjust glaciological information on the maps. In particular photographs are useful for snow line determination, a feature rarely shown on conventional topographic maps. It is essential to record the type of photograph, the photo number, the date of photography, flying height above sea-level and above ground if known, the focal length of the camera lense and any other pertinent information. If an earlier series of photography or ground photographs are available they are listed and copies of these photographs kept with the data sheets.

A.4. Sources: Literature

Much useful material relating to the past and present state of a glacier may exist in various publications. Reference is made to all such literature on the Standard Data Sheet. Literature covering general aspects of the ice cover of the whole area is included with the data for that area.

A.5. Compiler and Centre

The person who carried out the measurements, the supervisor of the project and the location of the data sheets are listed for the benefit of researchers studying a particular area or problem. Any additional information which has been compiled is also kept in the national centre.

A.6. Remarks

Under remarks are listed all information pertinent to the glacier that is not included in the data columns on the right hand side of the sheet. This includes a brief description of the glacier, notes on special geomorphological features, any abnormal characteristics, source information on which depth estimates were based and any observations on the glacier regime for the year of the inventory and for any previous years that might be available. The amount of information available might necessitate the inclusion of a supplementary data sheet.

B: STANDARD DATA SHEET: RIGHT SIDE

Before discussing the right side of the questionnaire item by item a few general comments must be made with regard to catchment area, tributaries and the snow and ice boundaries.

i) Catchment: Measurement of all glacier dimensions is made within the carefully delineated drainage area of the individual ice stream. The drainage divide of outlet glaciers, draining ice caps and ice fields, is determined by a study of changing flow patterns and contour lines.

ii) Tributaries: Where tributaries join and cannot be differentiated from the main stream they are included with it. Any coalescing ice body that can be distinguished from the main glacier, by moraine or other features, is measured separately.

iii) Snow and Ice Boundaries: For most glaciers it is necessary to distinguish several boundaries. Figure 1 shows these boundaries diagrammatically. Depending on the source material used three boundaries can be distinguished in the accumulation area of a glacier; (a) the limit of seasonal, non-permanent snow, (b) the glacierized area or ice divide and (c) the limit of the active glacier, usually marked by a bergschrund. In the ablation area the boundary

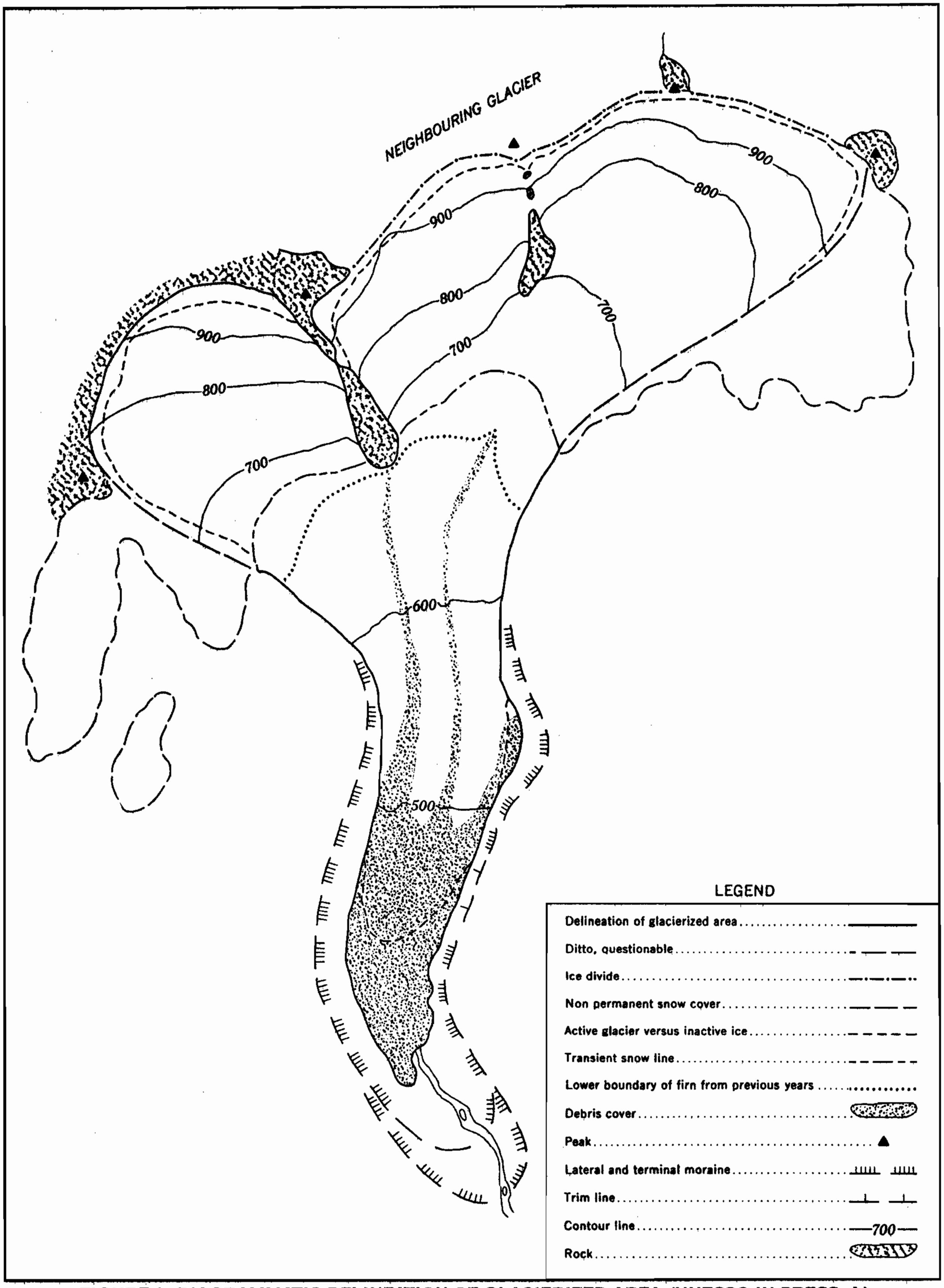

FIGURE 1: DIAGRAMMATIC DELINEATION OF GLACIERIZED AREA (UNESCO IN PRESS, A)

may be taken as the limit of white ice, or the 'exposed' part of the glacier, the end of the active, debris-covered ice, or the end of the debris cover which may include dead ice. As the purpose of the IHD inventory is to obtain values for perennial ice and snow masses the limits used for this study are those shown in Figure 1 as the delineation of the glacierized area and ice divide. In some areas, particularly the Arctic, terminal and lateral moraines are included with the glacier ice as the ice content of these features is 80 per cent or more. When the terminal feature is in the form of a push moraine it is excluded as the ice content is small being mainly interstitial. The principle of differentiating between the 'exposed' and 'total' parts of the glacier, as proposed in the Russian glacier census, is adopted in this inventory.

B.1. Region and Basin Identification, Glacier Number

A glacier is assigned a number and placed within a hierarchy of drainage areas as discussed under A.1. (p.22). The drainage area coding and glacier number heads each block on the right side of the Standard Data Sheet. Thus every computer punch card with a data on a particular glacier can be identified and there is no chance of data from one glacier being assigned to another.

B.2. Co-ordinates

A single point is placed on the map to identify every glacier and is used for the co-ordinate measurements. This point is in the upper reaches of the terminal area, high enough that it will still mark the glacier if there should be recession.

1) Longitude and Latitude: Both co-ordinates are measured to the nearest tenth of a minute.

2) Universal Transverse Mercator (UTM): This is a metric military grid that is much easier to use than the conventional geographical co-ordinates (U.S.Department of the Army, 1958). Some civilian maps are now overprinted with this grid. Although computer programmes are available for converting from geographical to UTM co-ordinates both are included on the Standard Data Sheet. The UTM co-ordinate is given to the nearest 100 m.

B.3. Orientation

Orientation is measured according to an eight point compass and entered on the data sheet as a compass bearing, i.e. N or NE. The cardinal points are entered in the right hand of the two spaces provided. There is frequently a difference between the orientation of the accumulation and the ablation areas which affects the glacier regime; the main orientation of both parts is determined.

B.4. Upper and Lower Glacier Elevations

All elevation values are given in metres above sea-level to the greatest accuracy possible from the scale of the map. The highest glacier elevation is the greatest elevation reached by the glacierized area (Fig.1). The lowest 'exposed' elevation is that point where the white glacier ice becomes obscured by debris cover or where, without a debris cover or adjoining moraines, the glacier terminates. The lowest total elevation is the limit of the glacierized area in the ablation zone (Fig.1), it may be measured at the base of the terminal moraine if it can be established that the moraine is ice cored. As the inventory is concerned with all perennial ice and snow ice cored moraines that are separated from the glacier are included as remnant features.

B.5. Snow Line and Date

Three different lines can be identified on a glacier separating accumulation from ablation.

a) The transient snow line, usually simply called the snow line, is defined as the continuously shifting line separating areas with a closed snow cover from areas free of snow (UNESCO in press, b).

b) The firn line is defined as the line limiting a recent snow deposit which is carried over as firn to the next winter (UNESCO in press, b).

c) The equilibrium line separates areas of equal accumulation and ablation for a given balance year, as observed at the end of the ablation season (UNESCO in press, b). On some glaciers the firn line may be separated from the equilibrium line by areas of superimposed ice.

The equilibrium line is only available for those glaciers on which field work has been undertaken. For the inventory it is necessary to quote the (transient) snow line as recognized on terrestrial or aerial photographs. The snow line is not a completely reliable separator of areas of accumulation and ablation. Where possible an estimate of the end of season snow line is made from the transient snow line and an attempt made to determine the probable equilibrium line. The date of the snow line is usually that of the photographs from which the line was taken. Where no snow line assessment is possible an approximate elevation for the climatic equilibrium line is established using some morphological criteria, such as; the change in shape of contour lines from convex, in the ablation area, to concave in the accumulation area, or the upper visible limit of moraines.

B.6. Mean Accumulation and Ablation Area Elevations

The mean elevation of the accumulation and ablation areas is important in studies of the effect of climate on glaciers. In the accumulation area a contour line is selected such that the total area below that line to the snow line is equal to the area above the line to the ice divide or edge of the glacierized area. For small glaciers this elevation value can be estimated by eye. Occasional instrumental checks are made to ensure the accuracy of the visual approximation. The mean elevation line in the ablation area is determined the same way between the snow line and the terminus of the glacier taking into account the debris covered part of the glacier. Accuracy values are given for all elevation measurements according to the ratings listed in Table VII. On most topographic maps contouring in the glacierized area is quite inaccurate. These inaccuracies are most pronounced in the accumulation area so that accumulation elevation values may sometimes be assigned a lower accuracy rating than those of the ablation area.

TABLE VII: DATA SHEET ACCURACY RATINGS

Code	Rating	Elevations	Area	Volume
1	Excellent	0- 25 m	0- 5%	0- 10%
2	Good	25- 50 m	5-10%	10- 25%
3	Fair	50-100 m	10-15%	25- 50%
4	Acceptable	100-200 m	15-25%	50-100%
5	Unreliable	> 200 m	> 25%	> 100%

B.7. Linear Measurements

If the 1:250,000 map scale is used, measurements are made to a tenth of a kilometre. The total length of the ablation area is measured as the distance from the snow line to the terminus including the debris covered part. Two measurements are made of the length of the glacier, along the main flow line. The first is of the exposed, white, part of the glacier and the second of the total length which includes the debris cover or ice cored moraine at the snout if properly recognizable as such. In the accumulation area the 'inactive' ice apron above the bergschrund, Figure 1, is included in the length measurement as this ice is perennial. Seasonal snow fields are not included. If a glacier flows within a valley or has a well developed regular main stream the mean width of this ice stream is entered on the data sheet.

B.8. Area Measurements

The total glacier area, the exposed area and the area of ablation are measured. For the inventory of Axel Heiberg Island standard square counting and planimeter measurements were compared with a new technique that provides rapid determination of area values without any great reduction in accuracy. This method involves the use of a Bruning areagraph random dot overlay with 100 dots per square inch in conjunction with a dot counter developed by the Engineering Research Service of the Canada Department of Agriculture. More modern area measuring techniques involving the use of XY co-ordinate plotters and pen followers linked to computers are still under study. Accuracy ratings are determined for all area measurements following the ranges shown in Table VII.

B.9. Accumulation Area Ratio

Although the transient snow line is not a reliable dividing line between the areas of accumulation and ablation with photographs taken close to the end of the ablation season it is possible to calculate an approximate Accumulation Area Ratio (AAR). This value is the percentage that the accumulation area represents of the total glacier area.

$$AAR(\%) = \left(\frac{\text{Accumulation Area}}{\text{Total Area}}\right) \times 100 = \left(1 - \frac{\text{Ablation Area}}{\text{Total Area}}\right) \times 100$$

B.10. Depth and Volume

Depth values are known for an extremely small number of glaciers, particularly in the Arctic. In spite of the inherent inaccuracies of estimates it is reasonable to attempt an assessment of glacier volume. Based on values obtained from the few glaciers for which detailed depth measurements are available estimates of the mean ice depth are made using a combination of surface area and glacier type. The depth estimates used for the Axel Heiberg Island glacier inventory are presented and discussed in Part II.

The development of practical radio echo sounding techniques for the measurement of depth profiles (Waite, 1959; Evans, 1963; Rinker et al, 1966) may rapidly increase the amount of data on glacier depths. For areas where few depths are known a systematic assignation of depth values by type and area facilitates up-dating volumetric estimates as new data becomes available; however, for areas with more information it is better to consider each glacier individually for the determination of volume. An assessment of the accuracy of each volume estimate is entered on the Standard Data Sheet according to the ratings set out in Table VII.

B.11. Glacier Classification and Description

Because of the many different classifications mentioned in the literature and the confusion about many of the terms used an attempt was made to develop a standard classification from the existing terms. The classifications at present in use, the reasons for incorporating a glacier classification into the inventory and the glacier types finally used are discussed separately in the following chapter.

CHAPTER 4.

GLACIER CLASSIFICATION

Mention of glaciers in the literature has often been of a descriptive nature but no system of classification was developed before the late nineteenth century because the glaciers observed, although varied in size and shape, were basically similar. Classifications began to develop when glaciers in different parts of the world were investigated and compared to those already known. More and more regional types were then identified. Many regional types were described in the literature without sufficient explanation of their differences - Alpine, Himalayan, Scandinavian, Spitzbergen, Turkestan, Mustag types etc. The exploration of Alaska by men such as Russell, Gilbert and Hobbs, and that of Antarctica by Ferrar, Gourdon, Nordenskjöld, Wright, Priestley and others demonstrated that many of the regional types could exist side by side in the same area and that regional classifications were no longer sufficient. Gradually more emphasis was placed on the morphological and physical nature of glacier classifications.

There are many reasons for attempting a qualitative classification despite its obvious drawbacks.

1. Standardization of Description: By establishing a classification based on specific features observers can

describe glaciers from the same and different regions in comparable terms.

2. Comparison of Regions: Once the same classification has been used to describe the glaciers of a region or regions it is possible to determine similarities and differences.

3. Intuitive Impression: A qualitative classification, e.g. valley glacier, conveys a certain impression to the reader that cannot be conveyed with the same convenience by a more quantitative classification based on ratios of length, width, perimeter and area.

4. Volume Estimates: It is believed that a morphological classification which distinguishes certain glacier types permits, within limits, estimates of glacier depth.

Consequently a morphological classification has been adopted for the glacier inventory based primarily on existing literature and terminology.

Morhological Classification:

The classification used for the glacier inventory is based on characteristics easily identifiable from aerial photographs and maps. However the quality and scale of photographs and maps will naturally influence the identification of features.

Classification Matrix (Table VIII)

As the data will be stored and analysed in computers the classification is presented in the form of a 10 x 6 matrix to facilitate coding. Each column represents a particular feature of the glacier. The first column, Digit 1, lists the main characteristics of the ice mass. Digit 2 develops the primary classification in terms of the form of the ice mass. Digit 3 lists frontal characteristics that may be of significance in the analysis of glacier movement. The longitudinal profile, Digit 4, permits more detailed description of a particular ice body. Digit 5 allows for distinction between the several ways by which glaciers may be nourished. The final category, Digit 6, permits inclusion of information relating to glacial activity. The various types, or row characteristics, listed in the six columns are described in detail below. The discussion of each term is followed by a list of related features and their references.

Digit 1: PRIMARY CLASSIFICATION

1.0. Uncertain or Miscellaneous

Any type not listed in column one.

1.1. Continental Ice Sheet

An ice mass that inundates areas of continental

TABLE VIII: GLACIER CLASSIFICATION AND DESCRIPTION

	Digit 1	Digit 2	Digit 3	Digit 4	Digit 5	Digit 6	
	Primary Classification	Form	Frontal Characteristic	Longitudinal Profile	Major source of Nourishment	Activity of Tongue	
0	Uncertain or Misc.	Uncertain or Misc.	Normal or Misc.	Uncertain or Misc.	Uncertain or Misc.	Uncertain	0
1	Continental ice sheet	Compound basins	Piedmont	Even - Regular	Snow &/or Drift snow	Marked retreat	1
2	Ice field	Compound basin	Expanded Foot	Hanging	Avalanche ice &/or avalanche snow	Slight retreat	2
3	Ice cap	Simple basin	Lobed	Cascading	Superimposed ice	Stationary	3
4	Outlet glacier	Cirque	Calving	Ice fall		Slight advance	4
5	Valley glacier	Niche	Coalescing, non-contributing	Interrupted		Marked advance	5
6	Mountain glacier	Crater				Possible surge	6
7	Glacieret	Ice apron				Known surge	7
8	Ice shelf	Group				Oscillating	8
9	Rock glacier	Remnant					9

size (greater than $10^6 km^2$). Subsurface topographic features are small compared to the thickness of the ice so that few features are visible on the surface. The ice may flow in any direction and spill over at the margins forming most types of glaciers. At present such sheets exist only in Greenland and Antarctica. Similar terms and their authors are:

Continental Ice Sheet: Charlesworth (1957)
Continental Glaciers: Ahlmann (1933), Roscoe (1952)
    U.S.Air Force (1953), Air University (1955)
Continental Ice: Wright and Priestley (1922)
Ice Sheet: U.S.Navy (1952), Air University (1955)
    Swithinbank (1959, a), Mellor (1964)
Inland Ice: Drygalski (1897), Markham and Mill (1901),
    Gourdon (1908), Hobbs (1910), Nordenskjöld (1918)
Greenland Type: Visser (1933) and others

1.2. Ice Field

An ice mass of sheet or blanket type whose form and flow pattern may be strongly influenced by the underlying topography as it's thickness may be small in relation to the topographic irregularities. It varies in size from features just larger than glacierets to those of continental size.

Highland Ice: Drygalski (1897), Nordenskjöld (1918)
    Wright & Priestley (1922), U.S.Navy (1952),
    Roscoe (1952), U.S.Air Force (1953), Mercer (1954)
    Air University (1955)
Minor Ice Sheet: Mellor (1955)
Highland Glacier: Glen (1939), Air University (1955)
Ice Field: Air University (1955)
Transection Glacier: Ahlmann (1933), Baird (1955),
    Air University (1955)

Reticular Glacier: Charlesworth (1957)
Plateau Ice: Russell (1885), Ahlmann (1933), Air University (1955), Charlesworth (1957)
Firn Plateau Glaciation Type: Visser (1933)
Scandinavian Type: Keunen (1963) and others

1.3. Ice Cap

Any dome-shaped ice mass with divergent or radial flow may be considered an Ice Cap. Ice Caps submerge all but the major subsurface topographic irregularities and may mark a stage in the dissolution of larger Ice Fields. The Greenland Continental Ice Sheet may also be considered an Ice Cap.

Ice Cap: Hobbs (1911), Meinzer (1942), Armstrong & Roberts (1958), Swithinbank (1959, a), Mellor (1964)
Highland Ice Caps: Charlesworth (1957)
Highland Ice: Ahlmann (1933)
Highland Glacier: Ahlmann (1933), Baird (1955)
Island Ice: Wright & Priestley (1922), Ahlmann (1933), U.S.Navy (1952), Roscoe (1952), U.S.Air Force (1953), Air University (1955), Charlesworth (1957)
Carapace: Charlesworth (1957)

1.4. Outlet Glacier

An ice stream issuing from and draining an Ice Field or Ice Cap. It has a definite shape and may be channeled into a valley at the edge of the field or cap. The catchment area of an Outlet Glacier may not be clearly delineated. Included in this type should be those parts of an Ice Field or Ice Cap in which the ice flows more rapidly, but not necessarily in the same direction, than the surrounding ice and which has been called an Ice Stream.

Outlet Glacier: Meinzer (1942), U.S.Navy (1952),
Mercer (1954), Air University (1955),
Nobles (1961)
Wall-sided Glacier: Wright & Priestley (1922)
Ahlmann (1933), Bentham (1941), U.S.Navy (1952),
Roscoe (1952); U.S.Air Force (1953)
Intermontane Glacier: Meinzer (1942), Air University (1955)
Ice Stream: Armstrong & Roberts (1958), Swithinbank (1959, a)
Channel Glacier: Roscoe (1952), U.S.Air Force (1953),
Air University (1955)

1.5. <u>Valley Glacier</u>

An ice stream flowing within a well defined valley. These glaciers are characteristically longer than broad. In general, the catchment area can be delineated easily.

Valley Glacier: Hobbs (1911), Tarr & Martin (1914),
Air University (1955), Charlesworth (1957),
Armstrong & Roberts (1958), Chercasov (1961),
Mellor (1964)
Dendritic Glacier: Wright & Priestley (1922),
Ahlmann (1933), Lockington Vial (1952),
U.S.Navy (1952)
Alpine Glacier: Gilbert (1910) and others

1.6. <u>Mountain Glacier</u>

Included in this category are those glaciers listed under Digit 2 as Cirque, Niche, Crater and Ice Apron.

Mountain Glacier: Meinzer (1942), Air University
(1955), American Geographical Society (1958)

1.7. Glacieret

A small perennial ice mass of indefinite shape often developed from drift snow accumulating in hollows or rivers beds, avalanching and/or especially heavy accumulation on a protected slope. Regelation creates a solid ice body which is maintained through at least two consecutive summers. No marked flow pattern is visible. If the photographic coverage of an area is limited to one set of flight lines they may be difficult to distinguish from annual snow patches.

Glacieret: Gilbert (1904), U.S.Navy (1952), Baird (1955), Air University (1955), Flint (1957), Ice (1966)
Nivation Glacier: Hobbs (1911)
Snowbank Glacier: Charlesworth (1957)
Slab Glacier: Grove (1961)
Snowdrift Ice: Wright & Priestley (1922), Bentham (1941), U.S.Navy (1952), Nichols (1964)
Drift Ice: Air University (1955)
Glacierlet: Tarr & Martin (1914)
Ice Fields: Ahlmann (1933)
Transient Glacier: Spur (1898)
Interglacier: Russell (1898)
Cliff Glacieret: Hobbs (1911)

1.8. Ice Shelf

A thick and extensive slab of ice attached to the coast. The Ice Shelf is maintained by flow from inland glaciers and/or by snow accumulation on the surface. Whilst primarily an Antarctic feature it is also found in the Arctic (e.g. Ward Hunt Ice Shelf).

Ice Shelf: Wright & Priestley (1922), Ahlmann (1933), Swithinbank (1959, b), Mellor (1964)

1.9. Rock Glacier

An unexposed moving mass of ice with angular rock debris having most of the characteristics of a true glacier. It may be a rock and moraine covered glacier remnant or a mass developed by avalanching snow, ice and rock from an avalanche couloir. The former has a much larger percentage of ice than the latter. The two types should be differentiated on the left side of the data sheet.

Rock Glacier: Howe (1909), Capps (1910), Kesseli (1941), Wahrhaftig & Cox (1959), Thompson (1962), Outcalt & Benedict (1965)

Digit 2: FORM

2.0. Uncertain or Miscellaneous

Any indeterminate or unlisted form.

2.1. Compound Basins

A qualifying term for those glaciers which have two or more individual accumulation basins feeding two or more individual valley glaciers issuing from tributary valleys and coalescing.

Compound Valley Glacier: Air University (1955)
Twinned Glacier Type: Charlesworth (1957)
Confluent Glacier: Charlesworth (1957)

2.2. Compound Basin

A qualifying term for those glaciers which have two or more individual accumulation basins.

2.3. Simple Basin

A qualifying term for those glaciers which have a single accumulation basin.

2.4. Cirque

A glacier occupying a deep, rounded, hollow with a steep headwall (cirque, corrie, cwm) on a mountainside or at the head of a valley. This term will usually be used in conjunction with Mountain Glacier (1.6.) but if the glacier flows out from the cirque it may be combined with 1.5. for a Cirque Valley Glacier.

Cirque Glacier: Matthes (1940), Roscoe (1952), U.S.Navy (1952), U.S.Air Force (1955), Baird (1955), Charlesworth (1957), Armstrong & Roberts (1958), Mellor (1964)
Circus: Ahlmann (1933)
Cwm Ice: Wright & Priestley (1922), Bentham (1941)
Corrie: Mercer (1954), Keunen (1963)
Radiating (Alpine) Type: Hobbs (1911)

2.5. Niche

A small glacier developed in an initially V-shaped gully or depression on a mountain slope. As the small glacier develops the gully is modified to a rounded funnel-shaped hollow. Generally Niche glaciers are more common than the genetically further developed cirque glaciers.

Niche Glacier: Groom (1959)

2.6. Crater

Ice masses occurring in an extinct or dormant volcanic crater which rises above the regional snow line are called Crater glaciers.

Crater Glacier: American Geographical Society (1958)
Cauldron: Hobbs (1911)

2.7. Ice Apron

An irregular, usually thin, ice mass plastered along a mountain slope, or ridge, or descending from the mountain summit.

Ice Apron: Hubley (1956), American Geographical Society (1958)
Leaning Glacier: Dolgushin (1961, a)
Névé-sheathed Slope: Tarr and Martin (1914)

2.8. Group

If a number of small Mountain glaciers, Glacierets or Rock glaciers occur in close proximity but are too small to be listed individually they are inventoried together as a Group.

2.9. Remnant

An inactive, usually small, ice mass left by a receding glacier or separated from it's source of nourishment.

Horseshoe Glacier: Hobbs (1911)

Digit 3: FRONTAL CHARACTERISTICS

3.0. Normal or Miscellaneous

The regular convex snout of a receding glacier, the slight cliff of an advancing glacier snout or any other not listed.

3.1. Piedmont

An ice field formed by the coalescence of two or more glaciers on a lowland, often the union of Expanded Foot glaciers. The front may be multi-lobate and the ice streams forming the piedmont commensal.

Piedmont Glacier: Reid (1896), Sherzer (1907), Gourdon (1908), Gilbert (1904), Hobbs (1911), Nordenskjöld (1918), Wright & Priestley (1922), Ahlmann (1933), Bentham (1941), Meek (1948) U.S.Navy (1952), Roscoe (1952), U.S.Air Force (1953), Air University (1955), Baird (1955), Charlesworth (1957), Armstrong & Roberts (1958), Keunen (1963), Mellor (1964)

3.2. Expanded Foot

A lobe or fan of ice formed when an independent glacier issues from the confining walls of a valley and extends on to a less restrictive and more level surface.

Expanded Foot Glacier: Hobbs (1911), Wright & Priestley (1922), U.S.Navy (1952), Air University (1955), Charlesworth (1957), Mellor (1964)

3.3. Lobed

That part of an Ice Field or Ice Cap with a determinable flow direction, much broader than long, which spills over at the margin. It cannot be considered as either an Outlet or a Valley glacier.

Lobe: Air University (1955)

3.4. Calving

A qualifying term for glaciers whose terminus extends sufficiently far into sea or occassionally lake water to produce icebergs. For this inventory it includes dry land calving normally recognizable from the 'lowest glacier elevation.'

3.5. Coalescing, non-contributing

This relates to those glaciers whose snout touches the margin of another glacier but is separated from it by an easily identifiable feature such as moraine.

Digit 4: LONGITUDINAL PROFILE

4.0. Uncertain or Miscellaneous

Any indeterminate or unlisted form

4.1. Even

This includes the normal regular or slightly irregular and stepped longitudinal profile.

4.2. Hanging

A glacier perched on a steep mountainside or issuing from a hanging valley.

Hanging Glacier: Sherzer (1907), Gilbert (1910), Hobbs (1911), Tarr & Martin (1914), Lockington Vial (1952), Air University (1955), Charlesworth (1957), American Geographical Society (1958)

4.3. Cascading

A glacier flowing over a steep or uneven bedrock surface that causes the glacier surface to be broken at several points with crevasse fields and seracs.

Cascading: Russell (1885), Tarr & Martin (1914), Field (1941), Bentham (1941)

4.4. Ice Fall

A glacier with a considerable drop in the longitudinal profile at one point causing a heavily broken surface.

4.5. Interrupted

Glaciers that break off over a cliff and reconstitute below. They are characterized by a large quantity of seracs and crevasses above the cliff.

Avalanche Ice: Wright & Priestley (1922), Roscoe (1952), U.S.Air Force (1953)
Ice Foot: Ahlmann (1933)
Reconstructed Glacier: Hobbs (1911), Charlesworth (1957)
Regenerated Glacier: Air University (1955), American Geographical Society (1958)

Digit 5: MAJOR SOURCE OF NOURISHMENT

5.0. Uncertain or Miscellaneous

Any indeterminate or unlisted

5.1. Snow and/or Drift Snow

The normal form of nourishment for most glaciers.

5.2. Avalanche Ice and/or Avalanche Snow

In high mountainous regions, such as the Himalayas, the major source of nourishment may be by avalanching snow and ice from the steep mountain slopes surrounding the glacier.

5.3. Superimposed Ice

In some areas, such as the Arctic, the major source of nourishment may be superimposed ice.

Digit 6: ACTIVITY OF TONGUE

As the inventory data, in most cases, is based on analysis of a single observation in time quantitative information on snout changes is not available. Simple qualitative estimates of tongue activity must be made from map and photo analysis. A difficulty arises from the fact that a 'spectacular' retreat of 5 m in one year in an area might be considered insignificant in another area. As a rough guide 20 metres per year is taken as the dividing line between marked and slight retreat or advance.

6.1. Marked Retreat Greater than or equal to 20 m/yr.

6.2. Slight Retreat Less than 20 m/yr.

6.3. Stationary

6.4. Slight Advance Less than 20 m/yr.

6.5. Marked Advance Greater than or equal to 20 m/yr but less than 500 m/yr.

6.6. Possible Surge Probably 500 m/yr or greater.

6.7. Known Surge Established velocity of 500 m/yr or more.

6.8. Oscillating Known variations in snout position on the basis of regular observations.

Summary

The classification, by using combinations of the row types in the first four columns, allows for a considerable variation in the types that can be used. Every attempt was made to fit awkward cases into the scheme of Table VIII. Not only did the classification help in volumetric estimates but it served as a useful key for later computer analysis of the data.

Ideally a classification should be more quantitative than that outlined above to eliminate operator variance. A start on such classifications has been made and some are discussed below.

Thermal Classification:

Ahlmann (1948) proposed the division of glaciers into three types, Temperate, Subpolar and Polar. Avsiuk (1955) expanded this into five classes - Dry Polar, Humid Polar, Cold, Maritime and Continental, and other modifications have been made (Lagally, 1932; Court, 1957). Although the basic scheme is useful for comparing glaciers where there is a large latitudinal range under study it is of little use in differentiating glaciers within a small area. The knowledge of temperature implicit in such a classification cannot be obtained from aerial photographs but recent advances in infra-red imagery may result in a solution to this problem.

Dynamic Classification:

Dynamic activity has been considered by Ahlmann (1948) in terms of active, passive, inactive or dead glaciers. Demorest (1941) considered two main types, pressure and drainage controlled and these he divided respectively into extrusion and obstructed extrusion flow, and gravity and obstructed gravity flow. Lliboutry (1965) suggests that a distinction be made between the 'glaciers réservoirs' and the 'glaciers évacuateurs' with the purpose of differentiating between glaciers with little or no movement and those with movement subject to the normal flow laws, or those to which these flow laws cannot be applied. However such quantitative information about glacier movement cannot be obtained from aerial photographs but only from extensive field observations.

Area Distribution:

The concept of classifying glaciers by area distribution curves as suggested by Ahlmann (1948) and discussed by Lliboutry (1965) is useful but presupposes that large scale maps of an area are available. Of the glacier inventories completed for the IGY only one used area distribution curves (Vivian, 1967, a).

Glacier Snouts:

Many have considered glacier snouts as important indicators of glacier activity. Lliboutry (1965) classifies snouts according to their position relative to the land and the amount of debris cover whereas Pracchi (1949) classifies them purely according to shape. It was decided that neither of these classifications was suitable for the purpose of this inventory.

Other Classifications:

There are other, more quantitative, classifications based on climate, mass balance or the genesis of ice, (Shumskii, 1964, p.384; Lliboutry, 1965) but none proved practical for this inventory.

Mention should be made of methods of determining the shape indices of lakes which might be applicable to the description of glaciers. Exploratory studies are needed to determine whether measurement of shape indices would be useful in glacier classification.

CHAPTER 5.

DATA PRESENTATION

Data from the world glacier inventory is submitted to the IGY World Data centres, Glaciology, A (New York), B (Moscow) and C (Cambridge), and also to the office of the Permanent Service on the Fluctuation of Glaciers. Modern data storage and retrieval systems at the four centres will assure full access and utilization of the results.

To facilitate storage and analysis of data the form of the submission is standardized. The inventory submission consists of two sets of information, first the supplementary information which consists of an introduction to the area, appropriate references to the literature and summaries of data not included on the right side of the Standard Data Sheet (Table VI), and second, the submission of data from the right side.

A. SUPPLEMENTARY INFORMATION

1. Physiography:

A reference map is included showing the position of the inventoried area together with a brief discussion of it's geographical location. Information on the geology and physiography of the area is presented. A value is given for the proportion that the glacierized area represents of the total land area. Selected photographs of the main features of the glacierized area are also provided.

2. <u>Climate</u>:

Summaries of mean temperature, precipitation and the prevailing wind characteristics are included together with information on meteorological stations within and bordering the area.

3. <u>History</u>:

A brief history of the area indicates the amount of information likely to be available for studies of historic changes. Description of early and recent field work in the area is useful.

4. <u>Summaries of General Data</u>:

Information on the left side of the Standard Data Sheet will not be listed on the data print out and must therefore be summarized.

i) <u>Maps</u>: The following information for all the maps used in the glacier inventory is needed.

a) map title
b) date of field survey
c) date of publication
d) scale
e) contour interval
f) vertical and horizontal accuracy

Similar information on earlier maps is included.

ii) <u>Photographs</u>: The following data for photographs is summarized.

a) type of photography
b) flight line numbers
c) date of photography
d) flying height
e) focal length of camera lense

Any other photography that covers the area is listed with mention of the quality of such photographs and the organization from which they may be obtained.

iii) <u>Compiler and Supervisor</u>: The name(s) of the compiler(s) and supervisor(s) is given together with the name of the centre(s) where the original material is held. This will permit those interested to obtain data for further study and any information not included in the data submission.

Information on the methods and equipment used to obtain area and volume values is included with the Supplementary Information.

I. <u>Area</u>: The type of equipment used for the area measurements together with accuracy statements on the equipment is mentioned.

II. <u>Volume</u>: The methods used to determine volume are discussed and tables of depths for different glacier types and sizes given.

B. GLACIER INVENTORY DATA

An index map showing the hydrological basin and area divisions and the glacier numbering system with each glacier identified by a number is submitted.

The information in the blocks on the right side of the Standard Data Sheet (Table VI) is presented in the format of a computer line print out like that shown in Part II for the Axel Heiberg Island inventory data. The data is submitted is this form, rather than on punch cards or tape, as not all computer systems are compatible. If the amount of data does not justify the use of a computer, or if the facilities are not available, the data is typed in the same format. All data, including computer punch cards if they have been used, are kept in the national centres.

If it is not possible to complete the inventory according to the recommendations made in Chapters 3 and 4 a list of the changes is included with the data submission.

PART II

THE GLACIER INVENTORY OF AXEL HEIBERG ISLAND, N.W.T.

CHAPTER 1.

INTRODUCTION

In Part II the inventory requirements outlined and discussed in Part I are applied to the ice masses of Axel Heiberg Island with the aim firstly, of completing a feasibility study and secondly, of providing a sample glacier inventory. In fact, the first of these aims has almost been submerged within the work of this thesis because of considerable feedback to the inventory guide from it's application to Axel Heiberg Island.

Axel Heiberg Island, in the Canadian Arctic Archipelago, was selected for a pilot study in glacier inventory for the following reasons:

1) The ice cover on the island is quite varied and includes a large number of glacier types.

2) The island is remote and most glacier inventory information is only obtainable from aerial photographs and maps. This situation is common to many areas for which glacier inventories are required.

3) Vertical air photo coverage is available for the whole of Axel Heiberg Island. A small portion of the western part was flown in 1958 and the remainder of the island in 1959.

4) Excellent large scale maps are available for part of central western Axel Heiberg Island (the Expedition Area) for determination of errors on the small scale Canadian topographical maps.

5) Since 1959 detailed field work in the earth sciences has been carried out in the Expedition Area by McGill University.

6) The author is familiar with the Expedition Area where he worked for five field seasons. This knowledge facilitated air photo interpretation.

In the presentation of the material in Part II the sequence of descriptions follows quite closely that outlined in Part I and is in essence that of the Standard Data Sheet. Although this might not make for the most interesting reading it has the advantage of proceeding logically for the general physiographic, climatic and historical introduction to a discussion of the nature and problems of the source material and only then to the glacier inventory itself.

Part of this study, the inventory of Steacie Ice Cap (Area 1), was included as one of three pilot studies for the 'Guide to World Inventory of Perennial Ice and Snow Masses On and Beneath the Land Surfaces' and will be published with the guide (UNESCO, a, in press).

CHAPTER 2.

PHYSIOGRAPHY

Axel Heiberg Island is the second most northerly of the major islands in the Canadian Arctic Archipelago, situated between latitudes 78°08'N and 81°21'N and longitudes 85°W and 96°W (Figure 2). It lies on the edge of the Arctic Ocean to the west of Ellesmere Island from which it is separated by the large fiord-like channels of Nansen and Eureka sounds. Topographically the island is a mountainous, glacierized region rising to 2000 metres above sea-level and containing a wide variety of glaciers (Figure 3).

Geology

Some geological data on Axel Heiberg Island was collected in 1955 by 'Operation Franklin' of the Geological Survey of Canada, and during subsequent field work (Fortier, 1963; Thorsteinsson and Tozer, 1957, 1960; Tozer, 1960, 1961). The detailed geology of the Expedition Area was analysed by Fricker (1963).

Axel Heiberg Island lies within the Sverdrup Basin, an area of heavy sedimentation from the middle Pennsylvanian to the early Tertiary. Studies by Thorsteinsson and Tozer (1961) indicate that the axis of the basin extends

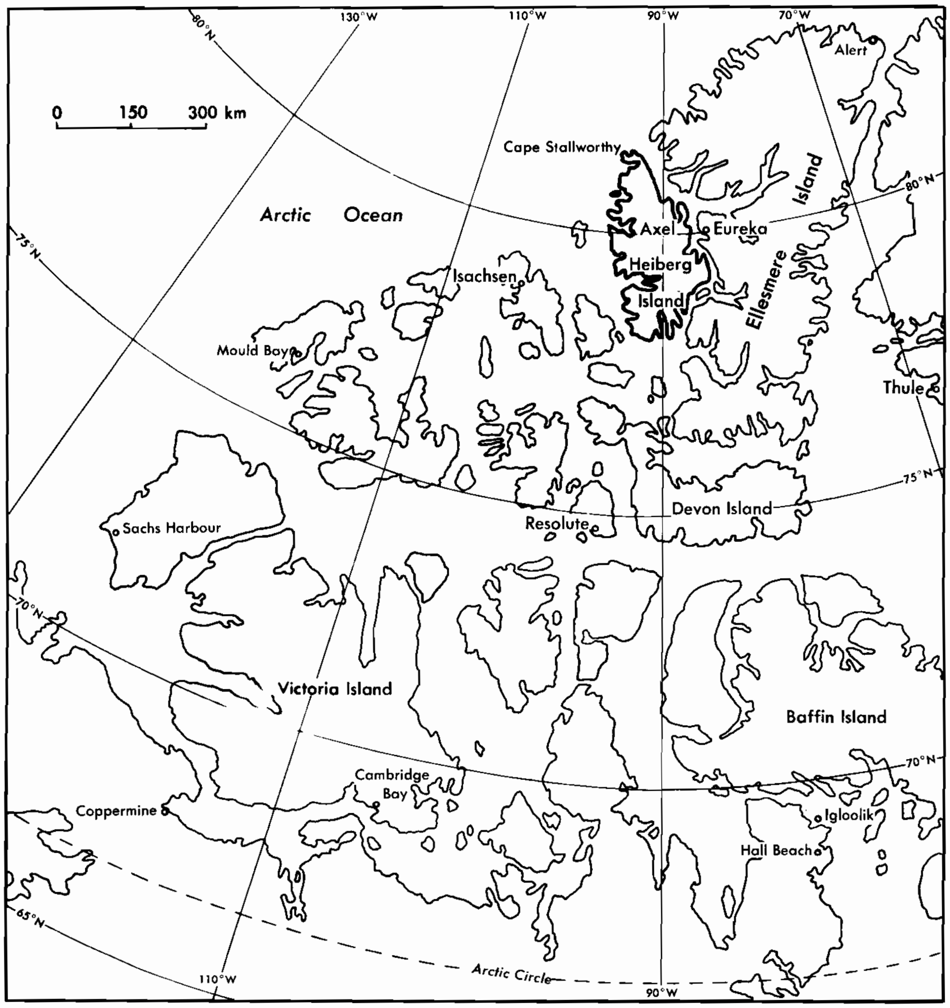

Figure 2.

LOCATION OF AXEL HEIBERG ISLAND
(Courtesy of Axel Heiberg Expedition)

Figure 3. CENTRAL WESTERN AXEL HEIBERG ISLAND LOOKING NORTH SHOWING THE WHITE (4E14) AND THOMPSON (4E20) GLACIERS AND THE MCGILL ICE CAP (4L29). (Courtesy of the National Air Photo Library, Ottawa)

from northern Sabine Peninsula on Melville Island, north-easterly through the Rignes islands and Axel Heiberg Island, to northern Ellesmere Island.

In Tertiary times folding and thrust faulting took place throughout the Queen Elizabeth Islands and nearly all of Axel Heiberg Island was affected. The principal Tertiary structures strike north to south and strongly influenced the orography and subsequently the present ice distribution and movement. The Tertiary anticlines of the southern part of the island characteristically have long axes, flat crests and steeply inclined limbs. In the west central part the folds have short plunging axes and the anticlines commonly have diapiric cores. Diapirs and piercement domes are characteristic of the axial part of the Sverdrup Basin (Kranck, 1961 a, b; Hoen, 1964).

Glaciation

Little is known of the extent or date of Pleistocene glaciation of Axel Heiberg Island. Elevated strandlines, that indicate glacio-isostatic recovery, have been observed in many places along the coast. These strandlines, together with erratics found in many places, support the theory that ice covered considerably more of the island on at least one occasion. It is possible that at some time the ice masses of Axel Heiberg, Ellesmere and Devon islands combined to form one large ice mass. Smith (1961) maintains that Nansen and Eureka sounds were probably eroded by outlet glaciers from Ellesmere Island when the ice cover was more extensive.

Climatic Change

Information on climatic change in postglacial times has been obtained for Axel Heiberg Island by the dating of shells, moraines, peat deposits and driftwood, as well as, for a shorter time period, studies on deep snow pits. Conclusions drawn by Müller (1966) indicate that changes in the last 9000 years have been considerably smaller than in more southerly latitudes. During this period it is unlikely that the glaciers have been more advanced than a few hundred metres beyond their present terminal positions. Evidence was found by Müller (1966) for a postglacial optimum about 6000 B.P.

Present Ice Cover

Measurements made for this inventory show that at present 31.5 per cent of the total land area of 37,200 km^2 is ice covered. Most of this ice is found in the two major ice fields, the McGill Ice Cap and the Steacie Ice Cap, separated by a major structural trough extending from the head of Wolf Fiord in the south to Strand Fiord. Many other small ice caps are found along the southern, western and northern margins of the island. Outlet glaciers from the McGill Ice Cap drain mainly westward and one, Iceberg Glacier (4F51), reaches tidewater. From the main north-northwest to south-southeast mountain range of the island the ice spreads out in a large undulating sheet to the east terminating in a series of lobes. The eastern lowlands are essentially ice free.

Regime of Glaciers

Studies undertaken on glaciers in the Expedition Area and on the McGill Ice Cap provide some information on the present regime of the glaciers. Analysis of a deep shaft on the McGill Ice Cap (Müller, 1963, p.27) has yielded a figure for mean accumulation on the ice cap of 37.1 cm of water for a 41 year period. This indicates that the previously accepted 'desert' value of about 15 cm of water for the mean precipitation of this area may have to be revised.

CHAPTER 3.

INFORMATION ON WEATHER AND CLIMATE

Detailed meteorological observations have been made on Axel Heiberg Island only since 1960. Records are thus too short for definite statements to be made about the climate.

AXEL HEIBERG ISLAND WEATHER STATIONS

Table IX lists the stations and their approximate number of days of operation and Table X the main meteorological parameters recorded at each station. The location of the main stations is shown in Figure 4. The installations at Sherwood Head and Moraine Camp were designed for year round operation but the record is not complete. The following stations have operated intermittently since 1960.

The Base Camp Station (72°25'N, 90°45'W) is situated on ice free ground, near a small lake, 190 metres above sea-level, and approximately 6.5 km inland from the head of Expedition Fiord. It is somewhat protected by mountainous country, Wolf Mountain about 5 km northwest is 1000 metres higher than the station and Bastion Ridge, 7 km southwest, reaches the same elevation. In 1965 a long term recorder was installed which provides year round information on temperature and wind.

TABLE IX: NUMBER OF DAYS OF METEOROLOGICAL OBSERVATIONS

Stations	1960	1961	1962	1963	1964	1965	1966	1967
Base Camp	108	100	71	70	10	40	60	115
Lower Ice	108	100	56	-	-	-	-	-
Moraine Camp	-	-	-	-	-	189	365	365
Upper Ice I	92	-	-	-	-	-	-	-
Upper Ice II	-	100	4	-	-	-	-	-
Sherwood Head	-	130	365	365	366	120	-	-
Eureka	366	365	365	365	366	365	365	365
Isachsen	366	365	365	365	366	365	365	365
Decca Green	-	65	-	-	-	-	-	-
Meighen Ice Cap	65	92	76	-	-	-	-	-

TABLE X: METEOROLOGICAL PARAMETERS OBSERVED

Stations	Years of Operation	Synoptic	Pressure	Temperature	Precipitation	Wind Mileage	Radiation	Upper Air	Humidity
Base Camp	*1960-1967	x	x	x	x	x	x		x
	1965-			x		x			
Lower Ice	*1960-1962	x	x	x	x	x	x		x
Moraine Camp	1965-		x	x		x			x
Upper Ice I	*1960	x	x	x	x	x	x		x
Upper Ice II	*1961-1962	x	x	x	x	x	x		x
Sherwood Head	1961-1965	x							
Eureka	1947-	x	x	x	x	x	x	x	x
Isachsen	1948-	x	x	x	x	x		x	x
Decca Green	*1961			x	x	x			x
Meighen Ice Cap	*1959-1962			x	x				x

* Summer Observation only

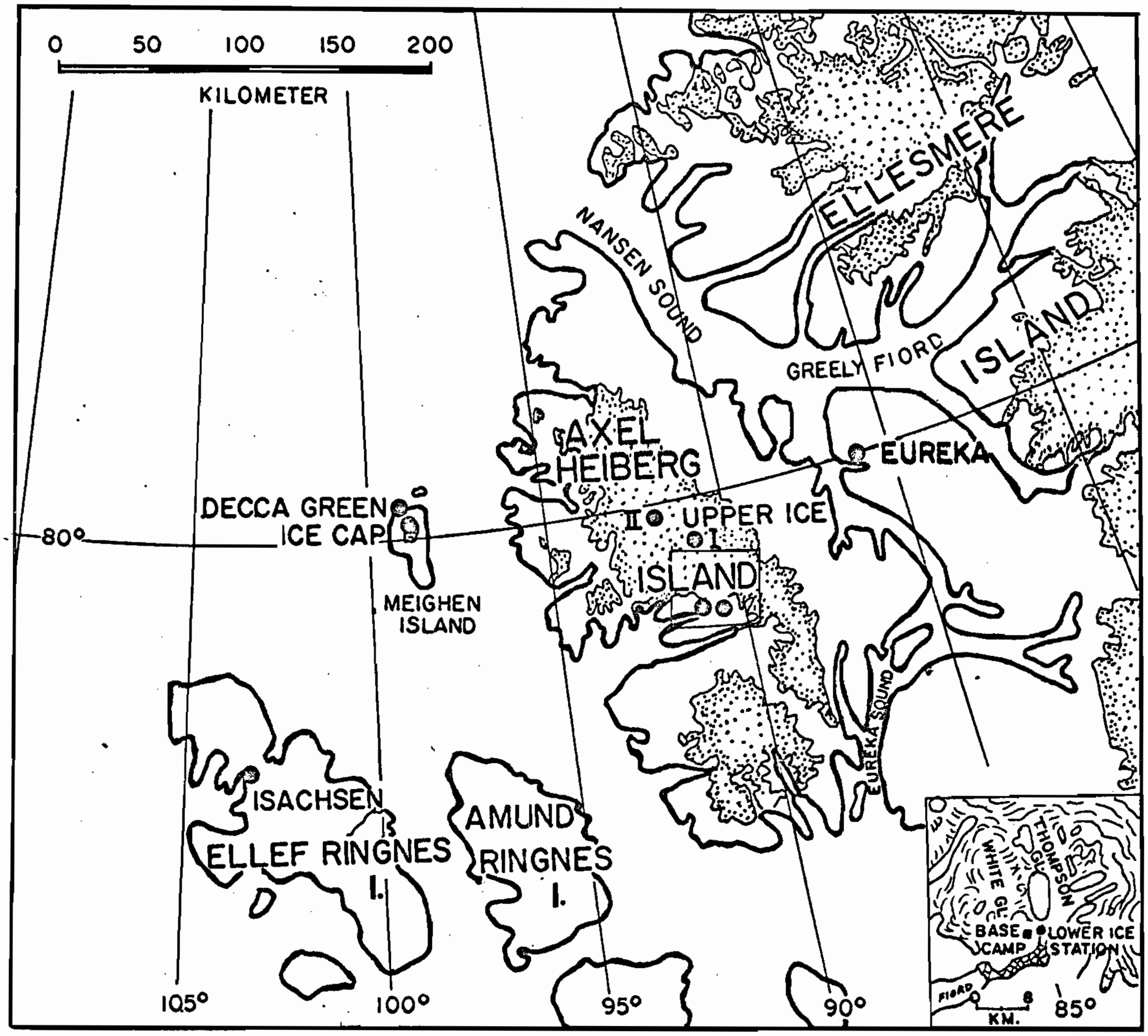

Figure 3.

LOCATION OF MAIN WEATHER STATIONS
(after Müller and Roskin-Sharlin, 1967)

The Lower Ice Station (79°26'N, 90°39'W) is located on a slight ice dome, 208 metres above sea-level, in the centre of the tongue of White Glacier, some 3 km to the north-northeast of the Base Camp. North of the station the mountainous country surrounding White Glacier rises to 1800 metres above sea-level but in all other directions the site is open. The Lower Ice Station is considered to be representative of meteorological conditions in the ablation area of glaciers of this region.

The Moraine Camp Station (79°29'N, 90°49'W) was established in 1965, 890 metres above sea-level, at the approximate elevation of the mean equilibrium line. The station consists of three two-channel long term recorders measuring wind speed and direction, temperature and humidity and pressure and sunshine duration. Measurements are made every six minutes throughout the year.

The Upper Ice Station I (79°36'N, 90°12'W) was situated on an ice dome of the McGill Ice Cap 1530 metres above sea-level. It occupied the south-central part of the ice cap and it's elevation roughly corresponded to that of the ice cap as a whole. The station was only occupied in 1960.

The Upper Ice Station II ($79^{\circ}56'$N, 92°W) was situated on the McGill Ice Cap, 65 km north-northwest of the Base Camp, at an elevation of 1920 metres above sea-level. Located on a slight saddle the station was about 1.5 km east-southeast of the highest mountain on the island, White Crown, from which the McGill Ice Cap slopes gradually to the northeast and drops off sharply to the southwest. The site was open to cyclonic systems moving from the south and southwest. Upper Ice II was considered to be representative of a large portion of the ice cap. The station was occupied in the summer of 1961 and thereafter for two very short periods in the summers of 1962 and 1963.

Sherwood Head ($78^{\circ}12'$N, $89^{\circ}43'$W) was located on the southern tip of Axel Heiberg Island on the peninsula which separates Wolf and Glacier fiords. The nuclear powered weather station, 61 metres above sea-level, was a joint Canadian-United States project and transmitted synoptic weather data to Resolute Bay on Cornwallis Island. Unfortunately very few observations were obtained in the last two years of operation due to instrumental and transmission problems.

NEIGHBOURING WEATHER STATIONS

The Isachsen and Eureka weather stations have been recording continuously since the late 1940's. Decca Green and the Meighen Island Ice Cap stations were part of the Polar Continental Shelf Project of the Department of Energy, Mines and Resources.

Eureka (80°N, $85^{\circ}56'$W), 7 metres above sea-level, is situated on the west coast of Ellesmere Island close to the centre of the land mass of Ellesmere and Axel Heiberg islands, the two being separated by the narrow channel of Eureka and Nansen sounds. Hills reach up to an elevation of 1000 metres about 10 km from the station in the northwest, northeast and southwest quadrants. The station was established as a joint Canadian-United States weather station and commenced observations in April 1947.

Isachsen ($78^{\circ}47'$N, $103^{\circ}32'$W), 30 metres above sea-level, is situated on the northwest coast of Ellef Rignes Island on a minor indentation at the head of Deer Bay. A rocky ridge about 1.5 km south of the station has an elevation of 180 metres. Inland the hills rise to approximately 250 metres above sea-level 7 km north and northwest of the station and to about 150 metres 5 km to the southeast. Like Eureka, Isachsen is also a joint Canadian-United States weather station and began observations in April 1948.

Decca Green (80°02'N, 100°W), 10 metres above sea-level, was situated at the northwest corner of Meighen Island on a gravel plain about 3 km from the edge of the Arctic Ocean. From southwest to northeast it is wide open and to the southeast the land rises gently to the hills 7 km away and to the Meighen Island Ice Cap.

Meighen Island Ice Cap Station (79°58'N, 99°09'W), 241 metres above sea-level, was located on top of a small ice cap (76 km^2) which covers about one tenth of Meighen Island.

An analysis of the climate of Axel Heiberg Island was made recently by Müller and Roskin-Sharlin (1967) based on data from most of the stations mentioned above.

It appears that the circumpolar atmospheric circulation described by Hare and Orvig (1958) and Hare (1959) strongly influences the weather of Axel Heiberg Island. Surface pressure systems were found to be shallow and mainly dependent on the upper air flow though the distribution of land, water, ice and mountains had a noticeable effect on local weather.

Andrews (1964) noted that in the summer of 1960 the heaviest snowfalls and the significant rainfalls at Lower Ice occurred in connection with cyclonic disturbances which tracked from the west and southwest across the Queen

Elizabeth Islands from north of Siberia or Alaska. At Upper Ice I it was observed that winds from the southeast quadrants, associated with approaching cyclones, brought the highest snowfalls to the ice cap. The study by Müller and Roskin-Sharlin (1967) confirms the influence of these major upper air movements on the amount of precipitation received. Thus it appears that the major source of nourishment for the glaciers of Axel Heiberg Island are the moisture laden cyclones that swing across the northern Queen Elizabeth Islands. Comparison of precipitation values for the various stations revealed marked differences. Isachsen was found to have a considerably more maritime climate than Eureka which showed some continental features. Axel Heiberg Island, situated between the two, has a transitional character.

It is considered unlikely that the cyclones which frequently develop over Davis Strait and Baffin Bay and largely nourish the glaciers of Devon and southwest Ellesmere islands (Koerner, 1966) contribute in any noticeable measure to the development of glaciers on Axel Heiberg Island.

CHAPTER 4.

HISTORICAL INFORMATION

Axel Heiberg Island was discovered by members of the "Second Norwegian Polar Expedition in the Fram, 1898-1902", led by Otto Sverdrup and named after one of the sponsors of the expedition. Peary (1907), writing some years after the publication of the results of Sverdrup's expedition claims to have discovered the island first.

> ...Nansen's Strait and beyond it the northern part of that western land which I saw from the heights of the Ellesmere Land ice cap in July, 1898, and named Jesup Land, though Sverdrup has later given it the name of Heiberger Land. (Peary, 1907, p.202)

However Peary would have had no way of knowing that what he saw in 1898 was not merely an extension of the west coast of Ellesmere Island unless Sverdrup (1904) had given an account of his sledge trips almost the whole way around the island.

It is generally agreed that on April 26th, 1899, Sverdrup and Bay were the first to recognize Axel Heiberg Island.

> There we saw, far away on the horizon, a chain of mountains which we had already faintly seen from the place of the slaughter. It was a true Alpine landscape, with sharp crags and snow-covered peaks... The other side of the fjord was a great chain of mountains, several thousand feet in

> height, with snow-filled clefts and black abysses, jagged peaks and wild precipices. (Sverdrup, 1904, p.130, 136)

Work by Sverdrup, Isachsen, Fosheim and Hassel, of the Norwegian expedition, resulted in the first map of all but a small stretch of the coast of Axel Heiberg Island.

All the early expeditions travelled in the spring along the coast on sea ice and no attempt was made to penetrate into the interior. Sverdrup and Schei have few comments on the glaciers and glaciation of Axel Heiberg Island. In Skaare Fiord Sverdrup made the following observation.

> On its west side were three short bits of glacier falling abruptly down to the bottom of the valley... A little south of the mouth of the valley a glacier snout protruded towards a big stretch of sands... Several icebergs inside the fjord, some of them fairly large, seemed to point to a largish glacier at the head of it. It was proved later, however, that our surmise was incorrect. (Sverdrup, 1904, p.234)

Continuing his trip along the south coast Sverdrup passed Gletscherfjord (Glacier Fiord) where "in the inner part of the fjord protruded glaciers, which appeared to fall into the sea"(Sverdrup, 1904, p.245). The Norwegians did take some photographs of Axel Heiberg Island but the most interesting trip, that along the west coast, was plagued by bad weather and few pictures were taken.

Schei, in his account of the geology, includes a section on the glaciation of Ellesmere and Heiberg Lands.

> Although the actual glacial covering disappears on the west coast of Ellesmere Island, a covering of the kind is again to be found on Heiberg Land, in the tracts adjacent to Gletscherfjord, Ulvefjord, and Skaarefjord... The position of the marine terraces with regard to now existing glaciers indicates very conspicuously that the glaciation during the last great submersion of the land was not in any case of greater intensity than it is now, and that it has never since that period exceeded its present intensity. (Sverdrup, 1904, p.465)

In June 1906 Peary reached the northern part of Axel Heiberg Island and left a cairn which Cook (1911) was unable to find. Cook commented on the "high glacier-abandoned valleys" (Cook, 1911, p.193) which he observed on the northeastern side of the island.

MacMillan (1916) was the next visitor to the area and Green, a member of his party, was able to map that section of the northwest coast not covered by Sverdrup's expedition.

Stefansson, who discovered Meighen Island in the spring of 1917, states that "there are glaciers of considerable size in Ellesmere and Axel Heiberg Islands" (Stefansson, 1921, p.12). This observation appears to have been based on information from other explorers.

Towards the end of the 1920's the Royal Canadian

Mounted Police (RCMP) began a series of patrols through the arctic islands in support of Canadian claims to soverignity over the area discovered by the Norwegians (Fetherstonhaugh, 1938). These patrols were coastal sledge trips so whilst there was much discussion on the condition of the sea ice there were few observations on the distribution of land ice (Dominion of Canada, 1927-30, 1932-34). Constable R.W.Hamilton, who visited the southern part of the island in the spring of 1929, refers to a glacier seen in Glacier Fiord (personal communication, 1965). About the same time Corporal E.Anstead visited other parts of Axel Heiberg Island and made the following observation from the vicinity of Schei Peninsula.

> In the dim distance the land was very mountainous, at least four or five thousand feet high with what appeared to be a great hang-over from the ice cap. (personal communication, 1965)

Anstead appears to have been the first to have seen the ice cap on Axel Heiberg Island.

On March 20th, 1932, Corporals H.W.Stallworthy and R.W.Hamilton left Bache Peninsula on a search for the missing German Arctic Expedition under Dr. H.E.K.Krueger. Stallworthy completed a remarkable sledge trip around Axel Heiberg Island and found a note from Krueger in Peary's cairn at Cape Thomas Hubbard. The RCMP report deals with sledging conditions, wildlife and cairns visited but makes no mention of observations on the interior. An unfortunate accident destroyed all the pictures taken by Stallworthy on his trip.

A sledge trip along the south coast was made in 1938 by David Haig-Thomas.

> ...as far as I could judge by this walk into Axel Heiberg Island, and from my sledge journey along the east and south coasts, it was a land almost free from ice-cap. (Haig-Thomas, 1939, p.211)

Another visit to the southern part of the island was made in 1940 by G.Thorlaksson and C.Vibe of the Danish Thule and Ellesmere Land Expedition, 1939-1941, led by James van Hauen (Vibe, 1948). The glaciers mapped by them in Skaare, Glacier and Wolf fiords do not represent any new information from that depicted on Isachsen's map of some 40 years earlier, in fact the outline of the coast north of Mokka Fiord is more inaccurate than the early map.

The work of the Danish expedition marked the end of the early period of exploration on Axel Heiberg Island. The post war years ushered in an era of intense interest in northern research albeit motivated by reasons of security. Experienced pilots and versatile small aircraft enabled scientists to visit previously inaccessible regions. In 1953 the first aircraft landing on Axel Heiberg Island was made on Buchanan Lake, at the head of Mokka Fiord. Two year later, during 'Operation Franklin' two geologists, J. MacMillan and J.G. Souther, made crossings of the island and the latter dug a series of snow pits on the Strand Glacier (personal communication, 1963).

In July 1959 a reconnaissance party of four from McGill University visited Axel Heiberg Island to undertake preliminary investigations and determine the location of a base camp for a large scientific expedition. The base camp was set up beside a small lake in central western Axel Heiberg Island (79°25'N, 90°45'W). This camp provided easy access on foot to four glaciers on which scientific observations were made, the White, Thompson, Baby and Crusoe glaciers. Logistic support by a Piper Super Cub equipped with balloon tires enabled landings to be made on snow, ice and unprepared ground in many parts of the island. In 1960 thirty-four people, scientists, assistants and technicians participated in the Jacobsen-McGill University Arctic Research Expedition to Axel Heiberg Island under the leadership of Dr. Fritz Müller. In 1961 twenty-two people returned to the island for the summer season and by 1962 the number had been further reduced to nine. By 1963 the long term programmes were well established and from that year to the present field parties of three to eight, sponsored by McGill University and financed by the National

Research Council of Canada, have returned to the island every summer to continue glaciological and related studies.

Preliminary accounts of the field work have been published (Müller, 1961; Müller et al, 1963). Results of the detailed scientific investigations are published as a series of continuing reports known as the Axel Heiberg Island Research Reports. By the end of 1967 nine of these reports had been published, three geological (Fricker, 1963; Fricker and Trettin, 1963; Hoen, 1964), four meteorological (Andrews, 1964; Havens, 1964; Havens, Müller and Wilmot, 1965; Müller and Roskin-Sharlin, 1967), one geophysical (Redpath, 1965) and a glaciological report (Adams, 1966).

Some general studies of Axel Heiberg Island have been produced based mainly on early Canadian and United States' aerial photography. A study by Taylor for the American Geographical Society devoted a volume to Axel Heiberg Island and discussed the ice cover in detail in a general volume on glaciology (Taylor, 1950, 1955, 1956 a, b). Dunbar and Greenaway (1956), in a somewhat similar study, provide information on the ice masses of Axel Heiberg Island from an air photo interpretation of Arctic Canada. Based mainly on the work of Taylor two other general studies have been completed which include comments on the ice cover of the island, Sharp (1956) and Mercer and Hatcher (1958).

Summary

The reports of those who visited Axel Heiberg Island up to the middle of the 1950's contain almost no information on the limits of the land ice. It is therefore impossible to assemble sufficient detail to establish glacier fluctuations as has been done for Baffin Island by Falconer (1962). However the work of the McGill parties has determined, for a small area, the nature of glacier fluctuations for the last 9000 years (Müller, 1966) from which inferences may be made to other parts of the island.

CHAPTER 5.

MAP SOURCES

The maps available for a given area have considerable bearing on the quality of an inventory. Although the maps of Axel Heiberg Island, up to 1965, would have provided the basis for a reasonable assessment of the ice covered areas they were not at a scale suitable to provide all the detailed information required for this inventory.

The five maps available for Axel Heiberg Island in 1965 were:

(1) The map accompanying Sverdrup's report (1904)
(2) 1:506,880 Canadian Aeronautical (1944, 1946)
(3) 1:250,000 American Aeronautical (1948)
(4) 1:506,880 Canadian Aeronautical (1955, 1960, 1963)
(5) 1:500,000 Canadian Topographical (1960, 1963)

(1) Map accompanying Sverdrup's report

The first map of Axel Heiberg Island accompanied the account of the Second Norwegian Polar Expedition (Sverdrup, 1904). The map simply shows the coastline based on a series of ground surveys carried out by Rittmeister Isachsen during his sledge journeys in 1900 and 1901 (Figure 5).

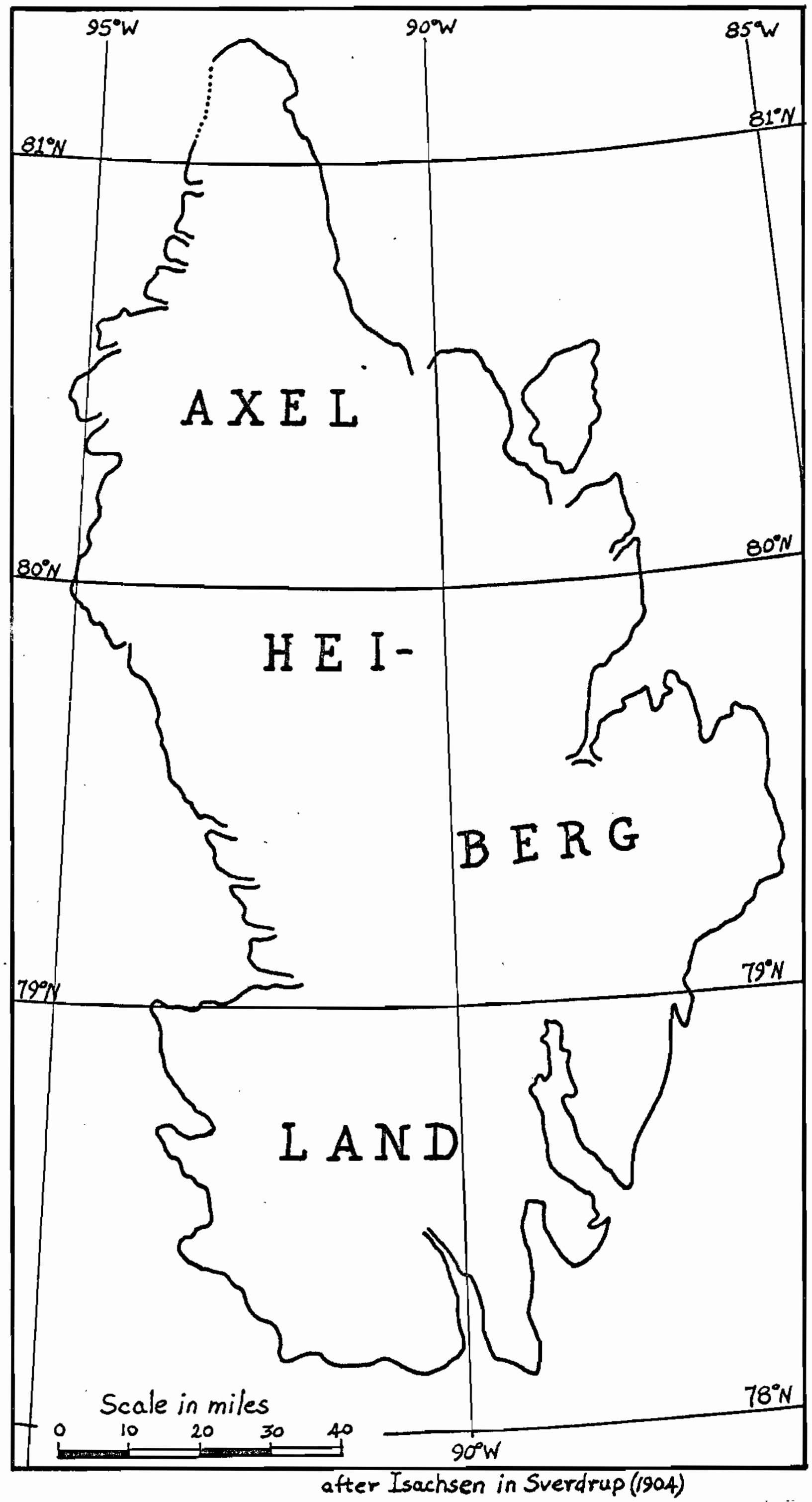

Figure 5.

MAP ACCOMPANYING SVERDRUP'S REPORT

(2) <u>Canadian Aeronautical, 1:506,880</u>

Fourty years later, in 1944, the first Canadian map of Axel Heiberg Island was published. This, and a revised edition of 1946, was based mainly on Isachsen's map with additional observations from later explorers. The coastal outline remained virtually unchanged.

Neither of these maps was considered for the inventory as more recent editions were available. They are of historical interest only.

(3) <u>American Aeronautical, 1:250,000</u>

The first trimetrogon air photo coverage of the island was obtained in 1947 during the United States Army Air Force Operation Polaris. The flight lines mainly covered coastal areas and the photos were used to compile maps at a scale of 1:250,000, published in 1948, which were superior to the Canadian maps. Details of this American map series, produced by the Aeronautical Chart Service, Washington, are given in Table XI.

TABLE XI: AMERICAN AERONAUTICAL EDITION, 1:250,000

Map Sheet	Date of Photography	Publication Date	Contour Int.(ft)
Wolf Fiord (21BIII)	April-Aug., 1947	Nov.1948	1000
Mökka Fiord (21BII)	July, 1947	Nov.1948	1000
Bukken Fiord (7DIII)	July, 1947	Oct.1948	1000
Emma Fiord (7DII)	Sept., 1944-Feb., 1945	Feb.1947	1000

The photographic coverage was not complete. Flight lines seldom crossed the interior of the island so that most glaciers were poorly depicted. In addition, the fact that some photographs were taken in April when the winter snow still hid the boundary between the ice and the land contributed to the inadequacy of these maps as a basis for glacier inventory. All elevation values were based on aircraft radar measurements and the contours, which are basically form lines, were used with very little change on all but the most recent Canadian maps of the area.

(4) Canadian Aeronautical, 1:506,880

In the early 1950's the Royal Canadian Air Force extended the trimetrogon air photo coverage to include Axel Heiberg Island. The Aeronautical edition was compiled from these photo using contours from the American Aeronautical maps (3). However, ice cover and individual glaciers are still poorly shown on these maps and the contours are unreliable. For example, the highest ice-covered peak on the island was located in a non-existent mountain range along the eastern side of the ice cap, over 40 km east of its true position.

(5) Canadian Topographical, 1:500,000

The representation of the glacierized area is much better on the 1:500,000 map and many of the inaccuracies present on the Canadian Aeronautical map (4) have been corrected. This map is also based on the trimetrogon photography of the early 1950's. At the time of photography there was a considerable snow cover. Numerous glaciers shown on the map are only small valleys filled with drift snow. The scale is twice the minimum suggested for a world glacier inventory and is not ideal for mapping and measuring the smaller ice bodies.

For a comparison of the qualities of maps (4) and (5) an identical area was chosen, bounded by latitudes 79°20'N and 79°35'N and longitudes 90°W and 91°W. The two areas, which are supposed to be identical, are shown in Figure 6. The differences in detail and accuracy between the two maps are considerable. The contour lines given on the maps are still no more than form lines from which it is not possible to obtain elevation values of any accuracy.

(6) Air Photo Compilation

Even the best of the maps discussed above would not have been adequate for producing a glacier inventory

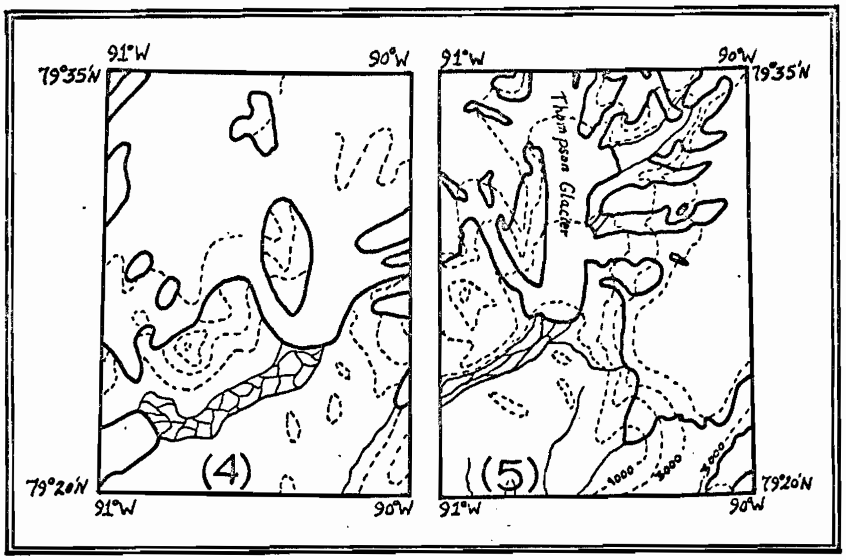

Figure 6.

MAP COMPARISON OF TWO SUPPOSEDLY IDENTICAL REGIONS
(after Department of Mines and Technical Surveys)

at the recommended level without the aid of aerial photographs. To obtain greater detail and accuracy for area measurements a map was drafted from the aerial photographs of a limited area, the same as that shown in Figure 6, part of central Axel Heiberg Island. The scale of the photographs used varied from approximately 1:50,000 to 1:60,000. The scale of the air photo map is discussed in detail later.

Tracings were made of the glacierized area on each photograph, the line of flight drawn in and the tracings combined for each flight line. Once the six flight lines had been completed they were fitted together as best as side lap would permit and the outline of glaciers for the whole area drafted. Whenever possible only the central portion of each photograph was used. The resulting map is shown in reduced size in Figure 7.

Considerable difficulties wre encountered in determining the scale of the air photo map. Normally 60 per cent forward lap and 30 per cent side lap is required but although the former was mostly satisfied adequate side lap was not often achieved in the test area. Variations in aircraft altitude, drift and divergence of the camera axis from the vertical are further sources of error for which no allowance could be made in the con-

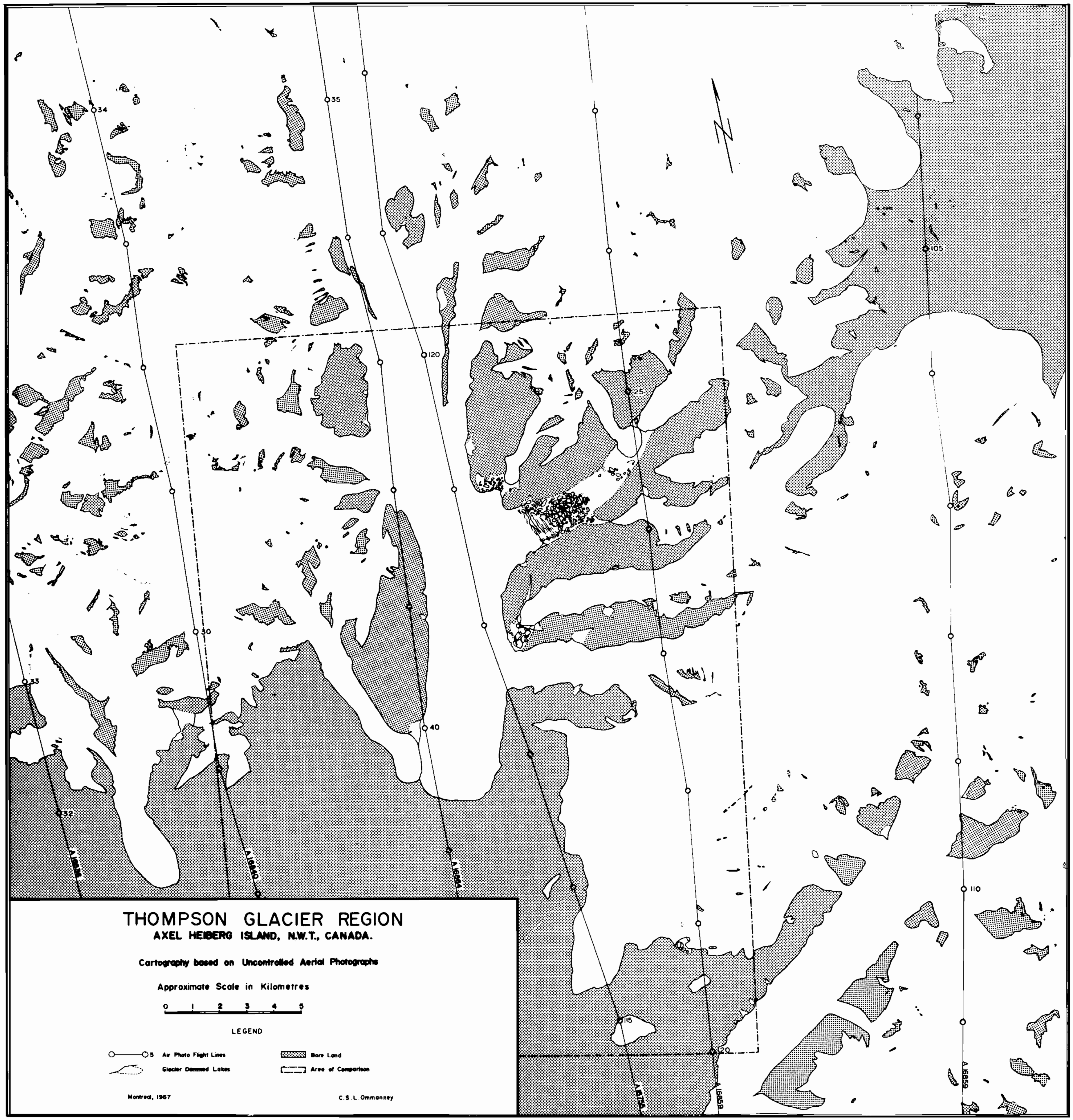
THOMPSON GLACIER REGION
AXEL HEIBERG ISLAND, N.W.T., CANADA.
Cartography based on Uncontrolled Aerial Photographs
Approximate Scale in Kilometres
0 1 2 3 4 5
LEGEND
Air Photo Flight Lines
Bare Land
Glacier Dammed Lakes
Area of Comparison
Montreal, 1967
C.S.L. Ommanney

Figure 7.

struction of the map. It is also difficult to compensate for distortions in the photographs caused by variations in ground elevation. Within the Thompson Glacier region elevations range from sea-level to 1800 metres. A further complication was caused by the fact that the camera lense used for the photography in the test area was different for some flight lines. Half the flight lines were taken at f = 152.38 mm and the other half at f = 152.16 mm. In determining the map scale allowance was made wherever possible for the scale complications mentioned above. A final scale of 1:53,000 was calculated by weighting the ice-covered areas at different elevation intervals, as shown in Table XII.

TABLE XII: SCALE CALCULATIONS FOR AIR PHOTO MAP

Elev. ft sal	Elev. above ground (m)	Scale for f=152.38	Scale for f=152.16	% of Area	Mean Scale
750	8115.4	1:58,508	1:58,592	2	1:58,550
1500	8686.8	1:57,007	1:57,090	11	1:57,048
2500	8382.0	1:55,007	1:55,087	18	1:55,047
3500	8077.2	1:53,007	1:53,084	24	1:53,046
4500	7772.4	1:51,007	1:51,080	45	1:51,044

Finally the total ice cover within the designated test area, 79°20'- 79°35'N and 90°- 91°W, was measured on three comparable maps; the Canadian Topographical map (5), the air photo compilation (6) and a map of the Thompson Glacier Region (1:50,000) produced as a result of field work by McGill University parties. The latter map, the accuracy of which is discussed by Blachut and Müller (1966), served as the standard for this comparison. The result of the comparison is shown in Table XIII.

TABLE XIII: COMPARISON OF AREA MEASUREMENTS FOR LARGE AREA

Maps	Map Scale	Glacierized Area (km^2)	Per Cent of Standard
Topographical (5)	1:500,000	314.94	112
Air Photo Map (6)	1:53,000	266.08	94
Thompson Region	1:50,000	282.87	100

The Topographical map (5) gives a 12 per cent deviation and the Air Photo map (6) only half that error. Therefore the measurement of large area is more accurate using the air photo compilation.

Comparison of area measurements for two individual glaciers in the test area, the Baby and White glaciers, revealed a similar result (Table XIV).

TABLE XIV: COMPARISON OF AREA MEASUREMENTS FOR SMALL AREA

	Baby Glacier sq. km	%	White Glacier sq. km	%
Topographical (5)			39.09	104
Air Photo Map (6)	0.80	102	37.12	98
Thompson Region	0.78	100	37.88	100

The results of the above investigation shows that good linear and area measurements for a glacier inventory can be obtained from air photo compilations alone if suitable maps are not available.

Air photo maps are considerably more accurate if side lap deficiencies and elevation differences are small and plenty of ground features permit proper alignment of the photos. For this reason air photo maps of large ice masses could not achieve the accuracy obtained in the test area.

(7) Canadian Topographical Map, 1:250,000

By 1967 it was possible to obtain advance prints, at a scale of 1:125,000, of an excellent new Canadian Topographical map series produced by the Department of Energy, Mines and Resources. This map series, published at a scale of 1:250,000, covers Axel Heiberg Island with eleven sheets, details of which are listed in Table XV.

TABLE XV: CANADIAN TOPOGRAPHICAL MAP, 1:250,000

Map Sheets	Survey	Compi-lation	Publi-cation	Contour Interval
49F Eureka Sound South	1962	1965-6	1967	500 ft
59E Glacier Fiord	1961	1965	1966	500 ft
59F Haig Thomas Island	1961	1965	1966	200 ft
49G Eureka Sound North	-	1965	1966	500 ft
59H Strand Fiord	not yet published			500 ft
59G Middle Fiord	1961	1966	1967	500 ft
69H Meighen Island South	1959-1961	1965	1966	500 ft
340B Greely Fiord West	1962	1965	1966	500 ft
560A Bukken Fiord	1960, 1962	1965	1967	500 ft
560B Meighen Island North	1960-1961	1965	1966	500 ft
560D Cape Stallworthy	1962	1965	1966	500 ft

The maps were compiled from the 1958 and 1959 aerial photographs.

For these maps the accuracy of the tellurometer traverse survey is considered to be in the order of 1/7,000 and is adjusted to shoran positions. Theoretically points of detail should be within 200 feet of their true position or within plotting accuracy but there may be further deviation in weakly controlled parts. The contouring was done by projection plotters based on airborne profile records so elevations should be good to within one-half the contour interval.

It was decided to use the advance prints of the 1:250,000 map series for the glacier inventory of the whole of Axel Heiberg Island as they would permit detailed plotting of drainage divides and small patches of snow and ice.

CHAPTER 6.

PHOTOGRAPHIC SOURCES

Good air photo coverage of Axel Heiberg Island was an important element in the successful compilation of a glacier inventory. Photographs, in conjunction with maps, permitted the accurate delineation of the ice, assessment of the transient snow line elevation, delineation of the catchment area for each glacier and a classification of the glaciers.

There are several sets of photographs available for the island although the time period covers only some twenty years.

Operation Polaris Photography

Partial trimetrogon air photo coverage of the island was obtained by the United States Army Air Force in 1947, during Operation Polaris. Unfortunately at the time of photography much of the island was cloud covered and the termini of many glaciers obscured. Furthermore the quality of the prints was not good so it may be difficult to use some of the photographs for comparative studies. The flight line numbers and other details are listed in Table XVI. Prints of these photographs are held by the National Air Photo Library, Ottawa.

TABLE XVI: OPERATION POLARIS PHOTOGRAPHS

Flight Line Number	Date of Photography	Height above sea-level(ft)	Focal Length of Camera(ins)
7M157	28/7/47	19,500	6
7M168	28/7/47	20,000	6
8M160	28/7/47	20,000	6
8M200	28/7/47	20,000	6
8M219	30/7/48	22,000	6

Canadian Trimetrogon Photography

A much more complete set of photographs of Axel Heiberg Island was obtained by the Royal Canadian Air Force between 1950 and 1952. The quality of the photography is reasonably good and fewer parts of the island were cloud covered than in 1947. Unfortunately either a recent snowfall or a larger snowpack than usual makes it difficult to distinguish the boundary between annual and perennial snow and ice. Details of the photographs are given in Table XVII. Prints of the photographs and the flight line index are also available through the National Air Photo Library, Ottawa.

TABLE XVII: CANADIAN TRIMETROGON PHOTOGRAPHS

Flight Line Number	Date of Photography	Height above sea-level(ft)	Focal Length of Camera(mm)
T - 404	16/7/50	20,000	151.61
T - 405	15/7/50	20,000	161.29
T - 408	16/7/50	20,000	161.29
T - 410	16/7/50	20,000	161.29
T - 411	16/7/50	20,000	161.29
T - 412	16/7/50	20,000	161.29
T - 440	18/7/50	20,000	161.29
T - 491	28/7/52	20,000	153.85
T - 492	28/7/52	20,000	153.85
T - 498	28/7/52	20,000	153.85

Canadian Vertical Photography

In 1958 and 1959 complete vertical air photo coverage of Axel Heiberg Island was flown. The quality of the photographs is excellent and hardly any part of the island was cloud-covered at the time of photography. Contrast on the prints varies depending on the process used and it has been found that the recent prints, using a new automatic process, have excellent contrast on the ice and snow. Forward lap on all flight lines is better than fifty per cent but side lap between some flight lines is missing. Details of these photographs, obtainable from the National Air Photo Library, Ottawa, are summarized in Table XVIII.

TABLE XVIII: CANADIAN VERTICAL PHOTOGRAPHS

Flight Line Number	Date of Photography	Height above sea-level(ft)	Focal Length of Camera(mm)
A16186	22/7/58	30,000	152.17
A16197	24/7/58	30,000	152.17
A16753	22/7/59	30,000	152.16
A16754	28/7/59	30,000	152.16
A16755	28/7/59	30,000	152.16
A16765	29/7/59	30,000	152.16
A16836	28/7/59	30,000	152.46
A16840	13/8/59	30,000	152.38
A16858	28/7/59	30,000	152.38
A16859	28/7/59	30,000	152.38
A16860	29/7/59	30,000	152.46
A16861	5/8/59	30,000	152.46
A16862	4/8/59	30,000	152.46
A16863	13/8/59	30,000	152.16
A16864	13/8/59	30,000	152.38
A16865	17/8/59	30,000	152.16
A16866	16/8/59	30,000	152.38
A16876	23/8/59	12,000	152.50

Low Level Photography

In 1960 a complete set of low level aerial photographs were taken of the Expedition Area for the purpose of compiling the large scale maps of the Expedition Area mentioned in Chapter 5. Details of this set of photography are given in the Canadian Surveyor by Haumann (1963, p.89).

In 1961 M. Dunbar took several photographs of the glaciers in Glacier Fiord.

In 1964 A. Post, whilst collecting information for a study on fluctuating glacier termini, took a large number of low level photographs all over Axel Heiberg Island. The approximate location of these photographs is shown in Figure 8.

Since 1959 a large number of low level and ground photographs have been taken by those working with the McGill University expeditions.

Further details of the above mentioned low level and ground photographs may be obtained from the author.

Although the glaciers of Axel Heiberg Island are not very active there is a sufficient time period now covered by photography to make it possible to determine snout activity in quantitative terms.

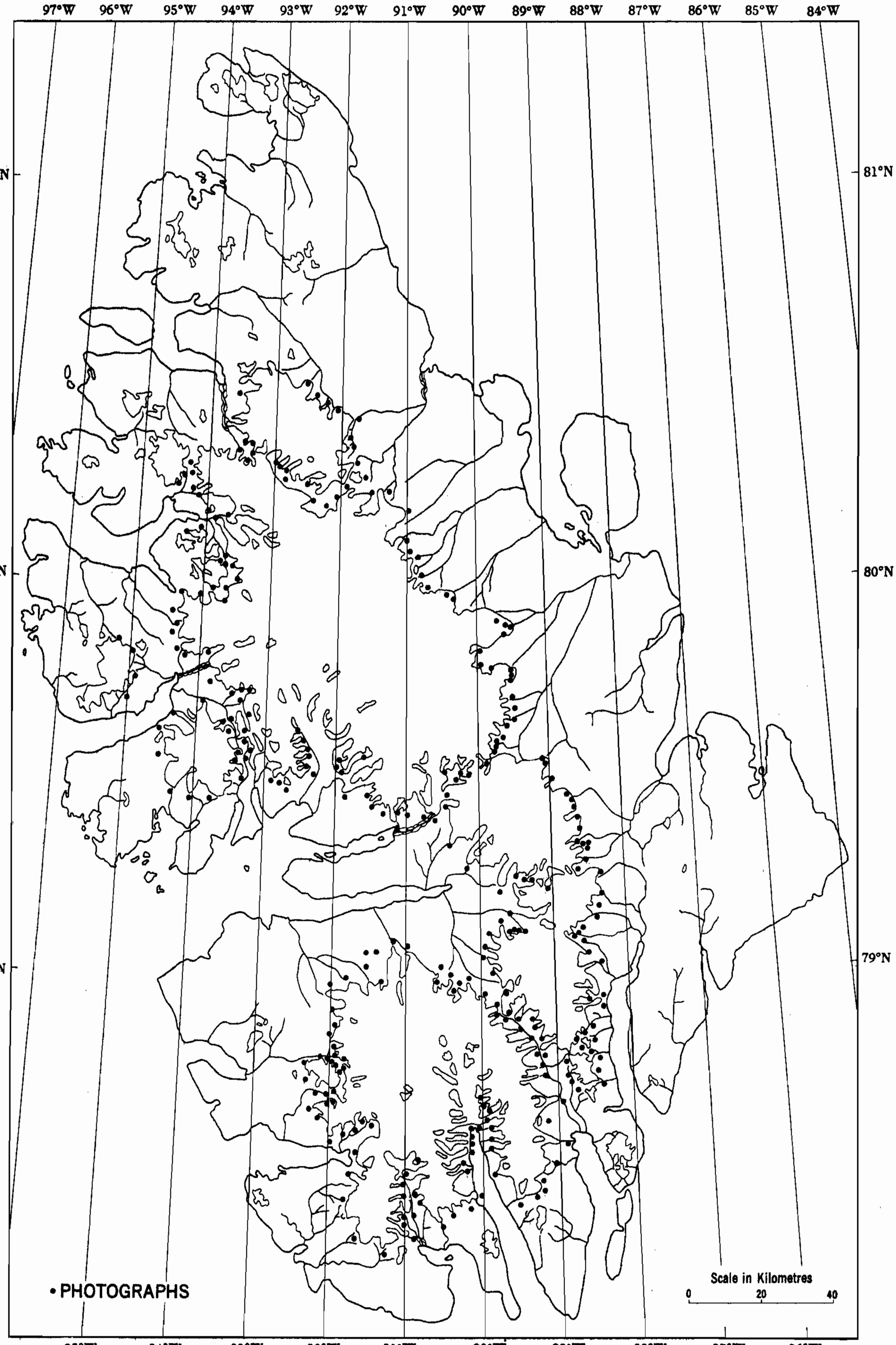

Figure 8. Map Showing Location of Photos taken by A.Post

In summary, it can be said that there is excellent photographic material available for Axel Heiberg Island on which to base a glacier inventory for this remote area.

CHAPTER 7.

DESCRIPTION OF WORK PROCEDURE

In order to carry out the inventory as rapidly as possible a definite procedure was developed. The procedure used for the inventory of the glaciers of Axel Heiberg Island is discussed step by step.

1) The 1:500,000 map of the island was used to divide the glacierized area into five major organic units (Figure 9, arabic numbers one to five).

2) A further tentative division of the major regions was made on the same small scale map. To simplify this division the small ice caps along the western and northern coasts of the island were considered as single units although they drained in several directions and are not therefore hydrological units as recommended by the guide. These sub-divisions are shown in Figure 6 by letters within the major regions.

3) The extent of the glacierized area was identified according to the limits shown on the 1:125,000 advance prints. This was necessary because the ice delineation in places is difficult to recognize on these single colour maps.

4) Rather than complete one aspect of the inventory for the whole island, i.e. glacier length measurements, small

units were taken and the whole inventory completed for each one of them before the next region was started.

5) The air photos of a unit were assembled and examined. Extensive use of a stereoscope is necessary at this stage. The ice limits on the map were compared with those on the photographs and where necessary corrections made on the map.

6) The transient snow line was determined on the photographs and then transferred to the map.

7) The delineation of the catchment areas of the individual glaciers was determined from changes in slope observed under the stereoscope. These limits were then compiled on the map.

8) The individual glaciers on the map were marked with an identification dot and numbered clockwise.

9) Each glacier was assigned a Standard Data Sheet.

10) In order to complete that part of the work requiring air photos the following information was extracted, classification, description and orientation of each glacier and entered on the data sheet together with the air photo number, data and other relevant particulars.

11) The Geographical and UTM co-ordinates were measured with a transparent overlay.

12) All elevations were listed on a supplementary

data sheet (Table XIX) as the map values had to be converted from feet to metres. This supplementary data sheet has one column for the map data followed by a column for the converted figures. This conversion could probably have been done more conveniently in a computer.

13) Another supplementary data sheet, similar to that for the elevations, was drawn up for the linear and area measurements (Table XX). The length measurements were made in millimetres on the map. The area columns are for the entry of the planimeter units.

14) Converted data from the two supplementary data sheets was transferred to the Standard Data Sheet.

15) Accumulation Area Ratios were calculated.

16) Depth values were assigned according to Table XXI, discussed in Chapter 9.

17) Volumes of ice were calculated from the area and depth values.

18) The various accuracy ratings were determined.

19) After checking of the Standard Data Sheet the right hand side was put onto computer punch cards.

20) An index map of the area was compiled showing the glacier numbers and filed with the computer print out sheet of the inventory data. The inventory of the next area was then started.

TABLE XIX: SUPPLEMENTARY SHEET FOR ELEVATION DATA

	E L E V A T I O N								MEAN ELEVATION			
No.	High	High	Exp	Exp	Tot	Tot	Snow	Snow	Accu	Accu	Abla	Abla

TABLE XX: SUPPLEMENTARY SHEET FOR LINEAR AND AREA DATA

	L E N G T H						W I D T H		S U R F A C E A R E A					
	Abla.		Whole Glacier											
No.	Tot	Tot	Exp	Exp	Tot	Tot	Wide	Wide	Acc	Acc	Abl	Abl	Exp	Exp

CHAPTER 8.

SPECIFIC PROBLEMS ENCOUNTERED

Some problems were encountered which by their very nature could not be covered by the recommendations in Part I.

In some cases it was not practical to divide up the smaller ice bodies in the southern, western and northern parts of the island into individual hydrological basins. In other areas sub-division into hydrological basins resulted in the break-up of organic units such as the Steacie and McGill ice caps. The major ice mass of the eastern McGill Ice Cap, for example, presented particular difficulties in locating the drainage divides between different catchment basins. Poor contour lines in the accumulation area, particularly on the flat parts of the ice cap, made it difficult to dissect into organic units. In retrospect it is now clear that the decision to isolate five of the major outlet glaciers and lobes from the main central part of almost 1000 km^2 was incorrect and under the circumstances the only practical solution would have been to consider the whole eastern part as one accumulation/ablation system.

On the whole the depiction of the glacierized area on the maps was found to correspond closely to that observed on the photographs. Generalization of ice limits on the map, for the planned scale of publication, necessitated the elimination of some of the small ice bodies. The largest of these bodies added to the map were less than half a square kilometre.

All values measured in the English system of units were converted to metric units directly without any rounding-off of the figures. This was very time consuming and will be done by computer for other areas. Although the elevation values given in the Appendix are listed to the nearest metre the figure can only be considered accurate within ± 20 metres, as elevations are measured to the nearest 50 feet, to which must be added the stated accuracy of the contours of plus or minus half a contour interval, or 250 ft (Tuttle, personal communication).

It was found necessary to include one additional symbol for the Orientation. 'R' was used for those small ice caps which had no preferred orientation.

Considerable difficulties were encountered in determining the mean elevation of the transient snow line for compound basin glaciers. For such glaciers the snow line may fall in a complex zone varying in elevation by several hundred metres through the different basins. The mean value was determined from individual assessments of each basin.

On Axel Heiberg Island field work has shown that a considerable amount of superimposed ice and slush usually forms below the transient snow line (Müller, 1962,a) This superimposed ice contributes to the accumulation but can hardly be differentiated from the ice of the ablation area. Thus the transient snow line given in the data for this inventory will be above the equilibrium line at the time of photography. It is thought that in the few weeks that elapsed between the time of photography and the end of the ablation season the equilibrium line would have retreated to the approximate location of the transient snow line measured from the photographs. This possibility is borne out by observations of the 1959 Axel Heiberg Island party which established that on the White and Baby glaciers some 75 cm of ablation occurred after the aerial photograps were taken in the lower part of the ablation area. If one could determine how much the snow line would rise corresponding to a certain amount of ablation in the lower part of a glacier, that is if one knew the ablation gradient, then adjustments could be made for the snow line elevation of other glaciers in the area and a more accurate end of season equilibrium line approximately established. To do this the available data for the White Glacier, considered to be representative of part of the island, would have to be analysed and the relationship determined.

Adjusted values have not been provided, partly because it is beyond the scope of this thesis and partly because the original measurements should always be given in case the adjustments need revision.

CHAPTER 9.

AREA AND VOLUME MEASUREMENTS

All areas greater than one square kilometre were measured with a Bruning areagraph random dot overlay as suggested in Part I (p.33). The manufacturer's claim that the degree of precision for areas greater than twelve square inches was better than 97 per cent was supported in tests against other standard planimeters and square counting techniques. Experiments carried out by the Glaciology Sub-division have proved that operator variance with the random dot planimeter is small compared to other methods (Stanley, 1967, personal communication). The use of a random dot planimeter provided a considerable saving in time for the large number of area measurements that had to be made. For areas less than one square kilometre a millimetre grid was used so that the same level of accuracy could be maintained.

An XY co-ordinate plotter connected to a computer would provide a more accurate and even faster method of determining linear, area and co-ordinate measurements.

To establish the mean glacier depth either measured values are available or an estimate must be made. On Axel Heiberg Island measured depth values have only been obtained for the White and Thompson glaciers and for one profile on the McGill Ice Cap (Redpath, 1965; Becker in Müller, 1961). In 1966 about 120 km of radio echo sounding values were measured over the Thompson Glacier, Hidden Ice Field and the McGill Ice Cap by Robin and Evans of the Scott Polar Research Institute, Cambridge, but final results are not available yet. From the available data for Axel Heiberg Island and from known depth values for similar glacierized areas in the Arctic Table XXI was compiled. For establishing depth estimates it was sufficient to distinguish four major glacier types. Each of these types was then subdivided into four to six size classes for which a specific depth value was assigned.

TABLE XXI: ESTIMATED MEAN DEPTH VALUES FOR THE GLACIERS OF AXEL HEIBERG ISLAND

Type	Area (km^2)	Depth (m)
ICE FIELDS	0 - 5	20
	5 - 20	30
	20 - 100	50
	100 - 300	100
	300 - 1000	150
	1000	200-500
ICE CAPS	0 - 1	15
	1 - 5	25
	5 - 20	75
	20 - 100	150
	100 - 300	250
	300	250
OUTLET AND VALLEY GLACIERS	0 - 5	50
	5 - 20	125
	20 - 100	200
	100	250-500
SMALL MOUNTAIN GLACIERS	0 - 1	15
	1 - 2	20
	2 - 5	35
	5 - 20	50
	20	50

The depth values given in the table are applicable only to Axel Heiberg Island and would require modification for use in other areas and climatic environments. Table XXI was strictly applied is assigning values for depth with the few exceptions of some valley and outlet glaciers with areas around 5 km^2 for which a value of 75 metres depth was given.

Despite the temptation to make individual adjustments of glacier depth when assigning a value from the table this was seldom done because of the following consideration. If the information obtained from the new depth sounding techniques enable improvements to be made on Table XXI the necessary adjustments can be completed in a simple computer operation.

CHAPTER 10.

DATA PRESENTATION AND STORAGE

The inventory data for the glaciers of Axel Heiberg Island is presented in the Appendix. There, a list of abbreviations used on the computer print out sheet is followed by a key map of the region and basin divisions (Figure 9). The completed data for the five areas shown in Figure 9 is preceded by an index map, or maps, showing the location and number of every glacier in that area. The inventory data itself is listed on two consecutive pages. The first page lists all the data contained in the first two blocks on the right side of the Standard Data Sheet (Table VI) and the second page data from the remaining two blocks. The information for each individual glacier is listed as a single line on the two consecutive sheets identifiable by the area coding and glacier number on the left side of each page.

A Control Data Corporation (C.D.C.) 3100 computer was used for the print out and the programme is easily adaptable to most other computers. The print out sheets were photographically reduced so that information on about 100 glaciers could be presented on two printed pages.

The first part of the data compilation was completed at McGill University as part of the Axel Heiberg Island research project, under the supervision of Dr. F. Müller. E.D. Ommanney, J.N. Ommanney and R.L. Ommanney assisted in the time consuming work of abstracting data from the maps and photographs. The rest of the measurements were carried out with the assistance of M.S.P. Kennedy and M.M. Strome at the Glaciology Sub-division, Inland Waters Branch, Department of Energy, Mines and Resources, Ottawa, where the author has been employed since June 1967.

The completed Standard Data Sheets, work maps, computer punch cards, photographs and related data will be available from the author at the Glaciology Sub-division, or from Dr. F. Müller with the Axel Heiberg Island Expedition, McGill University, Montreal. Any new information on the Axel Heiberg Island inventory will be filed in Ottawa and at McGill University.

CHAPTER 11.

DATA SUMMARY

In considering glacier inventory data there are three main stages, the initial data compilation, the assessment of the data and the data analysis. Although this thesis is primarily concerned with the first of these stages as soon as data summaries are made it becomes necessary to consider questions belonging to the second stage.

The data for the 1101 glaciers included in the glacier inventory of Axel Heiberg Island are summarized in Table XXII. As the first set of values are dependent on the snow line determination only those based on the 1959 photography have been used. The figures in brackets indicate the degree to which the 1959 values are changed if 1958 data is included. Total area values for 1959 are given separately so that the mean Accumulation Area Ratio could be determined.

The total number of glaciers on Axel Heiberg Island is slightly more than 1101 as in a few cases small features were listed together as a group. If the eastern McGill Ice Cap is considered as one accumulation/ablation system then the total remains about 1100.

The accuracy of the snow line and the extent to which it reflects the end-of-season situation must be

TABLE XXII: SUMMARY OF DATA FOR THE AXEL HEIBERG ISLAND GLACIER INVENTORY, BASED ON 1959 VALUES

		MEAN VALUES FOR 1958-59 BALANCE YEAR					LARGEST GLACIERS IN BASIN				
Basin Identification	Number of Glaciers	Snow Line (m)	Mean Accu. Elevation (m a.s.l.)	Mean Abla. Elevation (m a.s.l.)	Area of Ablation (km^2)	Mean AAR (%)	Maximum Length (km)	Maximum Area (km^2)	Maximum Volume (km^3)	Total Area (km^2)	Total Volume (km^3)
AREA 1											
Wolf Fiord	24	980	1100	760	207.0	46	15.9	88.0	17.6	379.8	66.5
Glacier Fiord	48	750	930	600	314.0	58	33.3	382.9	95.5	731.0	146.4
Surprise Fiord	30	740	860	540	420.5	58	45.0	641.1	160.3	983.3	217.4
Good Friday Bay and Sand Bay	(61) 47	(750) 830	(850) 930	(610) 620	(216.5) 209.6	(55) 53	10.2	53.2	10.6	(474.5) 445.5	71.2
Strand Fiord	37	1010	1130	880	161.2	66	25.8	149.3	37.3	462.9	88.4
	(200) 186				(1319.1) 1312.2	(57) 56				(3031.4) 3002.4	589.7
AREA 2											
South and Middle fiords	(47) 16	(640) 730	(770) 870	(520) 630	(179.0) 75.1	(53) 41	16.4	82.4	16.5	(378.5) 127.0	60.0
Middle and Li fiords	(26) 3	(620) -	(670) -	(450) 380	(153.0) 0.8	(17) 0	22.5	155.2	15.2	(183.0) 0.8	15.9
Li Fiord	(28) 24	(730) 730	(800) 800	(560) 600	(64.3) 63.5	(45) 45	9.9	21.9	4.4	(115.0) 114.2	12.8
Li and Bals fiords	11	-	-	230	14.3	0	3.2	7.0	0.2	14.3	0.3
Bals and Bunde fiords	24	610	620	460	38.1	27	6.0	19.8	1.5	51.8	2.4
Bunde Fiord	16	740	780	630	11.4	22	4.7	4.6	0.2	14.6	0.3
	(152) 94				(460.2) 203.2	(40) 30				(757.3) 322.7	91.7
AREA 3											
Bukken and Aurland fiords	43	-	-	350	72.1	0	9.6	21.8	1.1	72.1	2.4
Rens Fiord	10	-	-	480	8.4	0	2.9	1.8	0.1	8.4	0.2
Northern Ice Caps	47	-	-	320	98.7	0	9.2	18.3	0.7	98.7	3.9
South East	58	-	-	660	54.0	0	3.8	4.5	0.2	54.0	1.3
	158				233.2	0				233.2	7.8
AREA 4											
Bear Strait Ice Field	16	-	-	740	42.5	0	7.0	11.0	1.4	42.5	2.9
Skaare Fiord ice fields	31	1010	1060	880	51.0	22	6.9	12.1	1.5	65.2	4.4
Wolf Fiord	15	1020	1210	840	72.7	63	17.3	65.3	13.0	195.3	34.3
Strand Fiord	48	1050	1200	880	248.8	65	25.3	171.2	68.5	705.7	158.3
Expedition Fiord	49	980	1140	870	231.7	53	35.5	230.3	115.2	486.6	154.2
Iceberg Bay	64	890	1030	640	423.4	62	37.5	776.8	388.4	1125.5	460.7
Middle Fiord	(36) 29	(820) 830	(960) 1000	(650) 680	(222.0) 187.3	(70) 72	41.2	529.2	264.6	(739.0) 627.3	279.8
Li Fiord	(117) 64	(860) 860	(1080) 1090	(690) 520	(269.8) 185.6	(64) 70	24.3	166.5	40.2	(745.5) 627.3	126.7
Bunde Fiord	18	800	960	640	60.5	58	8.1	47.8	9.6	144.2	17.9
Northern Ice Cap	93	1020	1120	870	296.8	57	18.1	130.6	39.2	695.4	147.0
Eastern - Shei Peninsula	(61) 60	(1030) 1030	(1150) 1150	(850) 850	(567.0) 559.0	(76) 75	64.5	994.6	496.0	(2352.5) 2325.6	792.4
Skaare Fiord	36	1060	1180	910	176.2	53	16.3	64.5	13.2	370.8	65.3
	(584) 523				(2662.6) 2535.6	(66) 66				(7668.2) 7459.6	2261.8
AREA 5											
Skaare and Mokka fiords	7	1190	1200	910	7.3	18	3.5	4.1	0.1	8.8	0.2
TOTAL	(1101) 968				(4682.4) 4291.5	(60) 61				(11698.8) 11026.7	2951.3

() Includes 1958 data

assessed before an analysis is made. The only glacier for which field observations, on the height of the snow line at the end of the 1959 season, are available is the White Glacier. The inventory value for the snow line on this glacier (1010 m) is about 100 metres below the approximate end-of-season line determined in the field (1120 m) (Müller, 1968, personal communication). The equilibrium line on the White Glacier for 1959 may lie somewhat below the observed snow line and therefore closer to the snow line value obtained in the inventory. On the other hand, it might be possible to use 'net ablation gradients' for the White Glacier (Müller, 1962 b) to adjust the inventory value.

The elevation values in the table are arithmetic means of the individual values. For analysis it will be necessary to weight each elevation value according to the area of the glacier to obtain a more sophisticated average.

From the data summary (Table XXII) it appears that there is a gradient in the elevation of the snow line and the mean elevations of the ablation and accumulation areas of some 200 metres from the eastern and southern parts of the island to the west and northwest. However there are some small ice masses along the southern and western sides which do not fit this picture. A more accurate assessment of variations in the snow line height, over the island, could easily be accomplished with existing computer techniques.

The Accumulation Area Ratio values (AAR) are useful indicators of the mass balance of glaciers for a particular year. Studies on the mass balance of the White Glacier have shown that the glacier is in equilibrium when the ratio of area of wastage to that of nourishment is in the order of 1:2 (Müller, 1962, b). Unfortunately it is not yet sufficiently established to which degree the White Glacier is representative of the ice masses in the area. It is possible that for a healthy mass balance the ratio should be closer to 1:2.5, i.e. the AAR would be about 70 per cent. Therefore the mean AAR for 1959 for the island of 60 per cent indicates a slightly negative mass balance situation. Even the 66 per cent obtained for Area 4, the McGill Ice Cap, is slightly below the amount needed for a balanced year. It seems that those parts of the McGill Ice Cap draining into Middle and Li fiords and to the east were in balance or maybe slightly positive in 1959.

The total land area of Axel Heiberg Island was found to be 37,185 km^2 (14,525 sq. miles). This value is about 1000 square miles less than the figure obtained by Taylor (1955) but 1000 square miles greater than earlier estimates. The value of 5,170 square miles for the total glacierized area given by Sharp (1956) and that of 4,850 square miles quoted by Taylor (1956a) are both greater than the ice covered area obtained in this investigation: 11,699 km^2, that is 4,570 square miles. This difference is in no way an indication of glacier retreat but purely a question of map accuracy and measuring techniques.

It may be of interest to have information not only for hydrological basins but also for particular glaciological units such as the continuous ice mass of the 'Greater McGill Ice Cap'. This information can be obtained easily using the index maps and the data sheets given in the Appendix.

CHAPTER 12.

APPLICATION OF GLACIER INVENTORY TO CANADIAN SITUATION

The inventory of the Axel Heiberg Island ice masses is the first in a series of glacier inventories for the Canadian IHD programme.

The most recent estimate of the total glacierized area in Canada is 203,363 km^2 (Henoch, 1967). This means that the ice covered area on Axel Heiberg Island constitutes about seven per cent of the Canadian total. On the basis of the glacier inventory of Axel Heiberg Island it is estimated that the total number of glaciers in Canada will be greater than 15,000. This estimate is based on the assumption that there are the same number of glaciers per area in the rest of Canada as have been found on Axel Heiberg Island.

Experience with the glacier inventory has shown that if one considers the amount of time involved in analysing the photographs and maps, in transferring data from one to the other and in completing the inventory measurements and conversions only 10 to 15 glaciers can be inventoried in one day. Measurements for the Axel Heiberg Island inventory were completed in about six months. Thus approximately five man years of work will be needed to complete the Canadian inventory.

Because all the photographs and maps of the glacierized areas in Canada will be examined some additional information will be collected that will add little to the time or cost of the work. This additional information is listed on a revised data sheet (Table XXIII) which also contains all the data on the Standard Data Sheet (Table VI). On this revised form the standard data, i.e. that required for the world inventory, is presented in the first three blocks on the right side of the page. These blocks are set up so the data from each of them will fit onto one computer card. The auxillary information is contained in the fourth block.

Special Comments (see fourth block on right of Table XXIII) holds a five digit code that indicates the amount of literature or field observations available for that glacier, the amount and type of photography and three digits to indicate special characteristics and geomorphological features.

SPECIAL COMMENTS

Digit 1: Work done on glacier; references

0. No literature or field observations
1. General descriptions of region
2. General description(s) of ice cover in region
3. General description(s) of glaciers in region

TABLE XXIII: DATA SHEET FOR CANADIAN GLACIER INVENTORY

Province or Territory: __________
Mountain Area: __________
Hydrological Basin:
1st Order: __________
2nd Order: __________
3rd Order: __________
4th Order: __________

Sources: Maps
Map Title and Number: __________
Compiled by: __________
Date: __________
Scale: __________
Contour Interval: __________
Reliability:
Vertical: __________
Horizontal: __________

Sources: Photographs
Type: __________
Serial Number: __________
Date: __________
Flying Height: __________
Focal Length: __________
Remarks: __________

Work Done on Glacier:	References
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	

Other Photos	Special	Moraine	Lake
0			
1			
2			
3			
4			
5			
6			
7			
8			
9			

Remarks:

Region and basin identification
Glacier Number
Longitude
Latitude
U.T.M.
Orientation: Accumulation Area
Ablation Area
Highest Glacier Elevation (m)
Lowest Glacier Elevation (m): Exposed
Total
Elevation of Snow Line (m)
1

Region and basin identification
Glacier Number
Date of Snow Line
Mean Accumulation Area Elevation (m)
Accuracy Rating
Mean Ablation Area Elevation (m)
Accuracy Rating
Maximum Length (km): Ablation Area
Exposed
Total
Mean Width of main stream (km)
2

Region and basin identification
Glacier Number
Surface Area (km^2): Exposed
Total
Accuracy Rating
Area of Ablation (km^2)
Accuracy Rating
Accumulation Area Ratio (%)
Mean Depth (m)
Volume (km^3), in ice
Accuracy Rating
Classification and Description
3

Region and basin identification
Glacier Number
Comments: Special
General

Glacier Name
4

Data Compiled by: __________
Date: __________
Supervisor: __________
Centre: __________

4. General description(s) of particular area
5. Specific comments on a single glacier
6. Specific details on a single glacier
7. Specific details on a single glacier with historical review included
8. Specific details of a single glacier on a continuing basis, now abandoned
9. Specific details of a single glacier on a continuing basis, IHD project

Digit 2: Photographs

0. No Photographs
1. Aerial Photographs - Old
2. Aerial Photographs - New
3. Old Photographs - Ground
4. Old Photographs - Low Level
5. Old Photographs - Terrestrial Photogrammetry
6. Continuing Ground Photography
7. Continuing Low Level Photography
8. Continuing Terrestrial Photogrammetry

Digit 3: Special Features

The purpose of this digit is to draw attention to particular, representative, examples of glacier features. The type of features included might be ogives, foliations, crevasses, moulins, prominent surface drainage channels, dirt cones etc. Thus a glacier with only one outstanding feature, e.g. ogives, would be coded '1' whereas a glacier that exhibited many different features of interest would be assigned a higher code number.

Digit 4: Moraines

0. No Moraines
1. Terminal and/or Lateral and/or Ablation Moraines
2. Medial Moraine
3. Push Moraine
4. Combination of 1 and 2
5. Combination of 1 and 3
6. Combination of 2 and 3
7. Combinations of 1, 2 and 3

Digit 5: Glacier Dammed Lakes

The total number of glacier dammed lakes in association with one glacier is listed. Glacier dammed lakes provide an indication of glacier thickness so that an increase in the number of lakes might indicate a thickening of the glacier and conversely a reduction in the number of lakes a thinning of the glacier.

GENERAL COMMENTS

To allow for the reproduction of some of the Remarks about the glacier, listed on the bottom left hand side of the data sheet, 33 digits are provided for a summary of the most important information.

GLACIER NAME

Although only a few of the glaciers in Canada are named 21 digits are provided so that those which do have names can be identified quickly on the data print out.

CHAPTER 13.

CONCLUSIONS

The number of glaciers on Axel Heiberg Island, constituting about seven per cent of the total glacierized area in Canada, and condensed onto 25 pages of computer print out in the Appendix of this study, is slightly larger than that listed in the four volume glacier inventory of Italy (Comitato Glaciologico Italiano, 1959-1962).

Although all the measurements for this glacier inventory were completed in about six months the whole project took much longer as different ideas were tested and either accepted, modified or rejected.

Experience with the inventory has indicated that it would be possible to delegate a considerable amount of the inventory compilation to non-glaciologists. The most critical decisions involve the determination of ice limits, transient snow lines and the classification of glaciers. If assistants can be obtained who have had some training in air photo interpretation and ideally who have some field experience on glaciers then many of these critical decisions can be left to them and large areas inventoried with a minimum of supervision.

The discussion of the data summary in Chapter 11 made it clear that the assessment of the data, in particular the snow line elevation for a given year and the other values dependent on it, as well as the accuracy of area and especially volume measurements, is of great importance. Further evaluation is necessary before many of the values can be used in an analysis.

The data analysis itself will be relatively easy because of the attention paid to the format of the data compilation. A computer programme is already being developed which will complete fourty analyses in one run.

The application to Axel Heiberg Island of the inventory recommendations outlined in Part I was accomplished without any great difficulty. From this it can be concluded, in view of the complexity of the Axel Heiberg Island glaciers, that the guide proposals are reasonable and should be applicable to most other areas.

It is already apparent that the lengthy operation of a glacier inventory will not only produce new, more reliable, values for the areas covered by permanent snow and ice, its distribution and an improved estimate of the ice volume but will also provide a wealth of fringe benefits; a useful identification system for the many un-named glaciers, information on the regional variations of the snow line and subsequently the mass balance, on the lower limits of the glacierization, on the present snout activity, on the distribution of glacier types and on the documentation (maps, photographs and literature) of glaciers.

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APPENDIX

GLACIER INVENTORY DATA

FOR

AXEL HEIBERG ISLAND

LIST OF ABBREVIATIONS

IDENT = Region and Basin identification

NO. = Glacier Number

U.T.M. = Universal Transverse Mercator Grid location

ORIENT - AC = Orientation of the Accumulation Area

ORIENT - Ab = Orientation of the Ablation Area

ELEVATIONS - HIGH = Highest Elevation on the Glacier

ELEVATIONS - L.EX = Lowest Exposed Elevation of Glacier

ELEVATIONS - L.TL = Lowest (total) elevation of Glacier

ELEVATIONS - SNOW = Elevation of the Snow Line

MEAN ELEVATION - ACCU = Mean Elevation of the Accumulation Area

MEAN ELEVATION - ABLA = Mean Elevation of the Ablation Area

TOTAL LENGTH - ABLA = Length of Ablation Area including Debris

TOTAL LENGTH - EXP = Total Length of Exposed part of Glacier

TOTAL LENGTH - TOTAL = Total Length including debris cover

SURFACE AREA - EXP = Area of Exposed part of Glacier

SURFACE AREA - TOTAL = Total Area of all Glacier

SURFACE AREA - ABLATION = Total area of Ablation

AAR = Accumulation Area Ratio

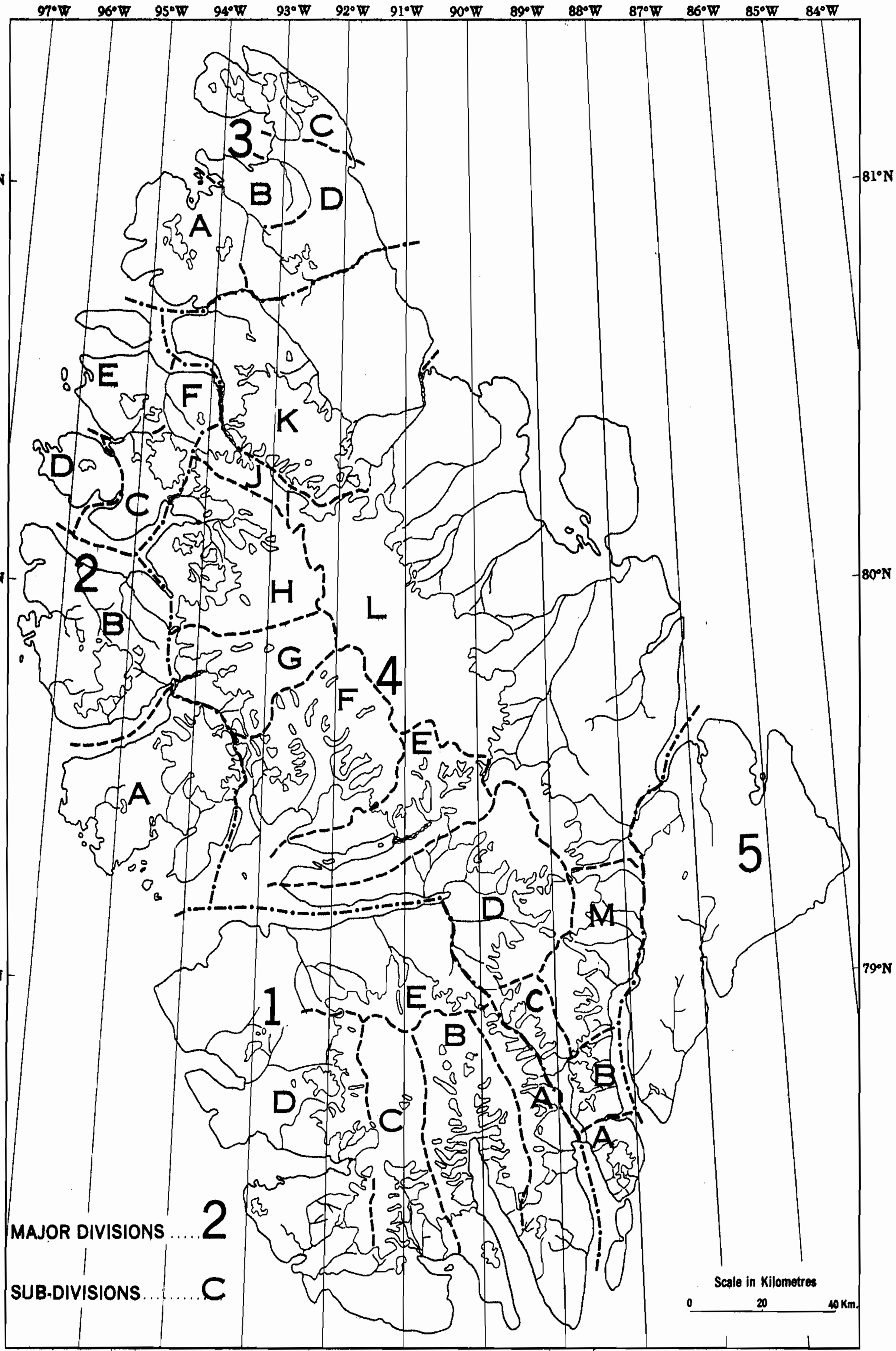


Figure 9. Key to Region and Basin Identification

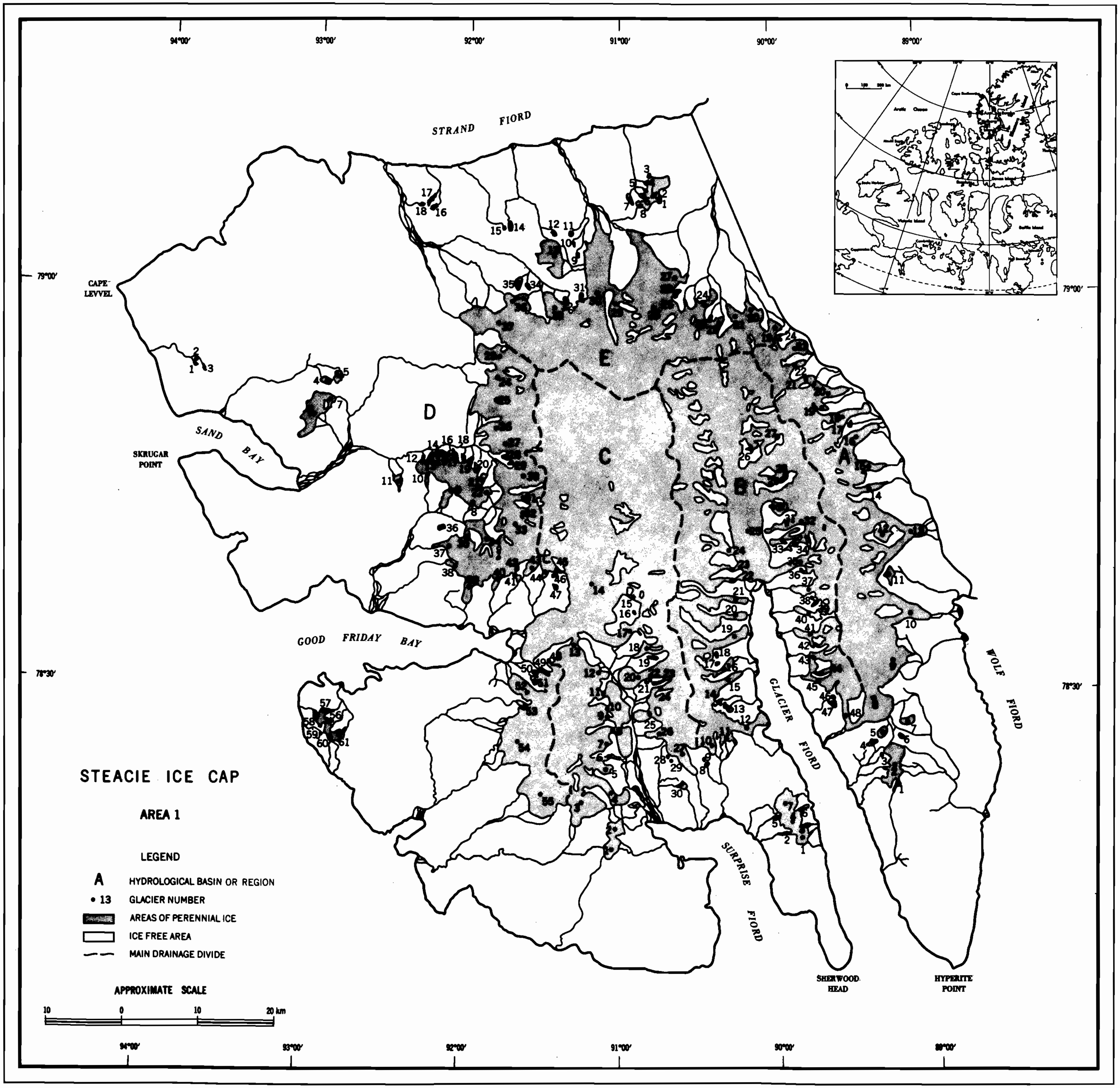

STEACIE ICE CAP
AREA 1
LEGEND
A HYDROLOGICAL BASIN OR REGION
• 13 GLACIER NUMBER
AREAS OF PERENNIAL ICE
ICE FREE AREA
MAIN DRAINAGE DIVIDE
APPROXIMATE SCALE
STRAND FIORD
CAPE LEVVEL
SAND BAY
SKRUGAR POINT
GOOD FRIDAY BAY
GLACIER FIORD
SURPRISE FIORD
WOLF FIORD
SHERWOOD HEAD
HYPERITE POINT
94°00′
93°00′
92°00′
91°00′
90°00′
89°00′
79°00′
78°30′

Figure 10.

WORLD INVENTORY OF PERENNIAL ICE AND SNOW MASSES

AREA 1 STEACIE ICE CAP AXEL HEIBERG ISLAND N.W.T. C.S.L.OMMANNEY MCGILL UNIVERSITY AND INLAND WATERS BRANCH 1967

WOLF FIORD

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT			ELEVATIONS			DATE	MEAN ELEVATION	
					AC	AB	HIGH	L.EX	L.TL	SNOW		ACCU	ABLA
1A	1	W 89 11.0	N 78 22.2	16XDC450987005		S	640	427	427		28 7 59		549 3
1A	2	W 89 11.0	N 78 24.0	16XDC451087040		W	884	290	290		28 7 59		686 3
1A	3	W 89 16.0	N 78 24.8	16XDC449287053		W	686	655	655		28 7 59		667 3
1A	4	W 89 19.0	N 78 25.8	16XDC448387072		NW	686	457	457		28 7 59		625 3
1A	5	W 89 15.0	N 78 26.5	16XDC449687084		NW	769	625	625		28 7 59		686 3
1A	6	W 89 08.0	N 78 26.2	16XDC452287079		NW	762	670	670		28 7 59		701 3
1A	7	W 89 05.0	N 78 27.2	16XDC453287099		NW	792	610	610		28 7 59		838 3
1A	8	W 89 19.0	N 78 29.3	16XDC448487137	SE	S	1280	396	396	823	28 7 59	945 4	594 3
1A	9	W 89 11.0	N 78 32.3	16XDC451687191	E	E	1180	259	259	869	28 7 59	960 4	610 3
1A	10	W 89 03.0	N 78 35.5	16XDC454787250	E	E	1234	137	137	884	28 7 59	991 4	625 3
1A	11	W 89 13.0	N 78 38.3	16XDC451387303	NE	NE	1097	610	610	1067	28 7 59	1082 4	823 3
1A	12	W 89 14.0	N 78 41.5	16XDC451287365	NE	NE	1052	549	549	945	28 7 59	991 4	808 3
1A	13	W 89 03.0	N 78 41.5	16XDC455487364	E	E	1378	137	137	975	28 7 59	1128 4	655 3
1A	14	W 89 17.0	N 78 45.0	16XDC450587428	E	E	1341	290	290	1006	28 7 59	1128 4	823 3
1A	15	W 89 18.0	N 78 46.5	16XDC450287456	NE	E	1341	274	274	975	28 7 59	1112 4	823 3
1A	16	W 89 21.0	N 78 49.0	16XDC449087503	NE	NE	1402	244	244	884	28 7 59	1052 4	762 3
1A	17	W 89 26.5	N 78 49.4	16XDC447287515		SE	1021	914	914		28 7 59		960 3
1A	18	W 89 26.0	N 78 50.5	16XDC447487533	E	E	1524	259	259	975	28 7 59	1128 4	762 3
1A	19	W 89 36.5	N 78 51.1	16XDC443887544	SE	SE	1097	762	762	975	28 7 59	1036 4	884 3
1A	20	W 89 34.0	N 78 52.2	16XDC444787565	E	E	1686	335	335	1006	28 7 59	1189 4	823 3
1A	21	W 89 43.0	N 78 53.0	16XDC441487583	E	E	1554	442	442	1067	28 7 59	1234 4	853 3
1A	22	W 89 48.0	N 78 54.2	16XDC439887602	NE	E	1524	564	564	1067	28 7 59	1250 4	869 3
1A	23	W 89 46.0	N 78 50.7	16XDC441087630	NE	NE	1387	442	442	1128	28 7 59	1295 4	808 3
1A	24	W 89 52.0	N 78 56.2	16XDC438487643		NE	1067	732	732		28 7 59		899 3

GLACIER FIORD

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT			ELEVATIONS			DATE	MEAN ELEVATION	
					AC	AB	HIGH	L.EX	L.TL	SNOW		ACCU	ABLA
1B	1	W 89 48.0	N 78 18.5	16XDB436886942		S	799	305	305		28 7 59		660 3
1B	2	W 89 53.0	N 78 19.0	16XDB435086949		W	732	274	274		28 7 59		550 3
1B	3	W 89 45.0	N 78 19.2	16XDB438086956		E	732	122	122		28 7 59		460 3
1B	4	W 89 52.0	N 78 19.8	16XDB435886964		E	792	442	442		28 7 59		640 3
1B	5	W 89 55.0	N 78 20.0	16XDB434086972		W	777	320	320		28 7 59		600 3
1B	6	W 89 47.0	N 48 20.5	16XDB437486980		E	777	91	91		28 7 59		460 3
1B	7	W 89 53.0	N 78 21.5	16XDB435086994		N	777	213	213		28 7 59		610 3
1B	8	W 90 22.5	N 78 24.2	15XWT559087044		NE	651	579	579		13 8 59		600 3
1B	9	W 90 28.0	N 78 24.5	15XWT558787050		S	549	488	480		13 8 59		515 3
1B	10	W 90 22.0	N 78 25.5	15XWT559287068	SE	E	686	290	290	655	13 8 59	670 4	518 3
1B	11	W 90 15.0	N 78 26.0	15XWT561487080	S	S	732	488	488	640	13 8 59	686 4	594 3
1B	12	W 90 09.0	N 78 26.8	15XWT563687096	SE	E	930	15	15	579	13 8 59	747 4	411 3
1B	13	W 90 14.0	N 78 28.2	15XWT561687124		E	610	427	427		13 8 59		490 3
1B	14	W 90 19.0	N 78 28.8	15XWT560187132	E	E	792	427	427	579	13 8 59	655 4	500 3
1B	15	W 90 15.0	N 78 30.5	15XWT561287162	E	NE	1173	137	137	564	13 8 59	732 4	320 3
1B	16	W 90 16.0	N 78 31.2	15XWT560687176	E	NE	1173	137	137	579	13 8 59	732 4	366 3
1B	17	W 90 19.0	N 78 31.8	15XWT559687183		NE	686	594	594		13 8 59		640 3
1B	18	W 90 18.5	N 78 32.5	15XWT559787197	N	N	640	427	427	533	13 8 59	610 4	457 3
1B	19	W 90 16.0	N 78 33.5	15XWT560687216	E	E	1410	30	30	579	13 8 59	823 4	335 3
1B	20	W 90 14.0	N 78 35.2	15XWT561087252	E	E	1410	76	76	533	13 8 59	762 4	290 3
1B	21	W 90 13.5	N 78 36.8	15XWT561287278	E	E	1410	91	91	518	13 8 59	777 4	335 3
1B	22	W 90 12.0	N 78 38.2	15XWT561687306	E	E	1387	122	122	533	13 8 59	800 4	366 3
1B	23	W 90 12.0	N 78 39.2	15XWT561387322	E	E	1387	137	137	518	13 8 59	800 4	366 3
1B	24	W 90 13.0	N 78 40.0	15XWT561087345	E	E	1387	152	152	488	13 8 59	792 4	366 3
1B	25	W 90 08.0	N 78 41.5	15XWT562887368	S	S	1685	91	91	640	13 8 59	920 4	427 3
1B	26	W 90 05.0	N 78 48.0	15XWT563287490	W	W	884	579	579	792	13 8 50	820 4	701 3
1B	27	W 89 56.0	N 78 48.7	16XDC436587501	E		1250	1052	1052		13 8 59	1158 4	
1B	28	W 89 52.0	N 78 46.2	16XDC437687455	SE	SE	1494	914	914	1067	13 8 59	1250 4	975 3
1B	29	W 89 53.0	N 78 45.8	16XDC437587448	SE	SE	1494	884	884	1097	13 8 59	1250 4	991 3
1B	30	W 89 58.0	N 78 43.5	16XCD435487410	W	NW	1067	610	610	792	13 8 59	823 4	732 3
1B	31	W 89 54.0	N 78 42.2	16XDC436787386	W	W	1265	244	244	914	13 8 59	1082 4	701 3
1B	32	W 89 47.0	N 78 42.2	16XDC439187384	SW		1250	1189	1189		28 7 59	1200 4	
1B	33	W 89 55.0	N 78 41.2	16XDC436387366	W	W	1219	274	274	914	13 8 59	1067 4	747 3
1B	34	W 89 52.0	N 78 40.8	16XDC437287354	W	W	1219	305	305	914	28 7 59	1036 4	701 3
1B	35	W 89 48.0	N 78 39.2	16XDC438787328	SW	W	1378	76	76	945	28 7 59	1128 4	457 3
1B	36	W 89 44.5	N 78 38.8	16XDC439887316	W	N	975	427	427	975	28 7 59	930 4	716 3
1B	37	W 89 43.0	N 78 37.5	16XDC440387292	W	W	1341	168	168	945	28 7 59	1067 4	732 3
1B	38	W 89 41.0	N 78 37.0	16XDC440887282		NW	914	564	564		28 7 59		747 3
1B	39	W 89 40.0	N 78 36.5	16XDC441287271	SW	SW	975	457	457	945	28 7 59	955 4	777 3
1B	40	W 89 41.0	N 78 35.5	16XDC440887254	W	W	1219	198	198	945	28 7 59	1036 4	732 3
1B	41	W 89 40.0	N 78 34.0	16XDC440987228	W	W	1234	137	137	914	28 7 59	1040 4	716 3
1B	42	W 89 40.0	N 78 33.2	16XDC441087214	W	NW	1097	427	427	1090	28 7 59	1093 4	732 3
1B	43	W 89 40.0	N 78 32.4	16XDC440787197	W	S	1280	137	137	1006	28 7 59	1128 4	716 3
1B	44	W 89 38.0	N 78 31.2	16XDC441487175	W	SW	1097	381	381	975	28 7 59	1037 4	762 3
1B	45	W 89 39.0	N 78 30.6	16XDC441287166	W	W	1097	122	122	975	28 7 59	1006 4	701 3
1B	46	W 89 34.5	N 78 29.6	16XDC442687148		SW	762	564	564		28 7 59		686 3
1B	47	W 89 35.0	N 78 29.0	16XDC442587137		W	975	610	610		28 7 59		838 3
1B	48	W 89 30.5	N 78 28.3	16XDC444287122	S	S	1143	137	137	884	28 7 59	995 4	640 3

SURPRISE FIORD

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT			ELEVATIONS			DATE	MEAN ELEVATION	
					AC	AB	HIGH	L.EX	L.TL	SNOW		ACCU	ABLA
1C	1	W 90 59.0	N 78 17.8	15XWS545486916		SE	640	411	411		28 7 59		533 3
1C	2	W 90 58.0	N 78 19.1	15XWS546986944		NW	640	259	259		28 7 59		442 3
1C	3	W 91 10.0	N 78 21.0	15XWS541186978	SE	SE	967	259	259	701	28 7 59	777 4	533 3
1C	4	W 90 59.0	N 78 21.8	15XWS545386992	E	SE	967	76	76	610	28 7 59	747 4	411 3
1C	5	W 91 03.0	N 78 23.8	15XWT543787028		E	762	152	152		28 7 59		564 3
1C	6	W 91 01.0	N 78 24.5	15XWT544587046	E	NE	945	122	122	670	28 7 59	762 4	457 3
1C	7	W 91 02.0	N 78 25.3	15XWT543987060	E	NE	762	305	305	670	28 7 59	700 4	550 3
1C	8	W 91 00.5	N 78 26.5	15XWT544687082	E	S	998	107	107	686	28 7 59	770 4	472 3
1C	9	W 91 03.0	N 78 27.5	15XWT543887102	E	E	823	183	183	686	28 7 59	770 4	472 3
1C	10	W 91 00.5	N 78 28.2	15XWT544587115	E	E	1072	122	122	732	28 7 59	853 4	427 3
1C	11	W 91 03.0	N 78 29.5	15XWT543487136	E	E	975	137	137	716	28 7 59	838 4	488 3
1C	12	W 91 06.0	N 78 31.0	15XWT542487164	E	E	792	244	244	732	28 7 59	732 4	518 3
1C	13	W 91 16.0	N 78 32.5	15XWT538487191	NE	N	960	366	366	732	28 7 59	853 4	640 3
1C	14	W 91 10.0	N 78 37.0	15XWT540687274	S	S	1750	46	46	762	13 8 59	975 4	488 3
1C	15	W 90 52.0	N 78 36.8	15XWT547187273	W	NW	945	533	533	792	17 8 59	884 4	670 3
1C	16	W 90 52.5	N 78 35.9	15XWT547087255		NW	594	533	533		17 8 59		560 3
1C	17	W 90 54.5	N 78 34.1	15XWT546487223	W	SW	1410	274	274	792	17 8 59	960 4	442 3
1C	18	W 90 48.0	N 78 32.5	15XWT548787196	W	W	1097	290	290	884	17 8 59	1052 4	640 3
1C	19	W 90 45.0	N 78 32.2	15XWT550187190		W	1067	610	610		17 8 59		850 3
1C	20	W 90 50.0	N 78 30.8	15XWT548287162	W	W	1204	183	183	762	17 8 59	960 4	442 3
1C	21	W 90 46.0	N 78 30.5	15XWT545787197		NW	549	503	503		17 8 59		520 3
1C	22	W 90 45.0	N 78 30.5	15XWT550287158		N	610	549	549		17 8 59		575 3
1C	23	W 90 41.5	N 78 30.5	15XWT551487159	W	SW	1097	610	610	945	17 8 59	1067 4	823 3
1C	24	W 90 42.0	N 78 29.8	15XWT551287145	W	SW	1097	457	457	869	17 8 59	975 4	610 3
1C	25	W 90 44.5	N 78 27.8	15XWT550187110	W	W	1204	152	152	701	17 8 59	884 4	503 3
1C	26	W 90 41.0	N 78 26.3	15XWT551787080		W	640	152	152		17 8 59		518 3
1C	27	W 90 32.0	N 78 24.5	15XWT555487051	S	S	962	259	259	701	17 8 59	823 4	545 3
1C	28	W 90 37.5	N 78 24.8	15XWT553287053		W	549	503	503		17 8 59		525 3
1C	29	W 90 37.0	N 78 24.5	15XWT553487049		W	549	503	503		17 8 59		525 3
1C	30	W 90 32.0	N 78 23.0	15XWT555387020		N	610	442	442		17 8 59		515 3

WORLD INVENTORY OF PERENNIAL ICE AND SNOW MASSES

AREA 1 STEACIE ICE CAP AXEL HEIBERG ISLAND N.W.T. C.S.L.OMMANNEY MCGILL UNIVERSITY AND INLAND WATERS BRANCH 1967

WOLF FIORD

IDENT	NO.	TOTAL LENGTH			WIDTH	SURFACE AREA					AAR	DEPTH	VOLUME		TYPE
		ABLA	EXP	TOTAL		EXP	TOTAL		ABLATION						
1A	1	2.2	2.2	2.2	.3	.91	.91	3	.91	3	0	15	.01	3	650132
1A	2	6.1	6.1	6.1	.	11.39	11.39	3	11.39	3	0	75	.85	3	300132
1A	3	.2	.2	.2	.	.10	.10	3	.10	3	0	15	.00	3	300132
1A	4	1.4	1.4	1.4	.	.50	.50	3	.50	3	0	15	.01	3	300132
1A	5	1.7	1.7	1.7	.	1.71	1.71	3	1.71	3	0	25	.04	3	300132
1A	6	.9	.9	.9	.	.40	.40	3	.40	3	0	15	.01	3	300132
1A	7	2.0	2.0	2.0	.	1.51	1.51	3	1.51	3	0	25	.04	3	300132
1A	8	9.2	14.5	14.5	2.4	48.28	48.28	3	25.70	3	47	200	9.66	3	532114
1A	9	4.0	7.1	7.1	.	8.68	8.68	3	1.72	3	80	30	.26	3	200112
1A	10	10.0	13.9	13.9	1.9	64.21	64.21	3	34.88	3	46	200	12.84	3	510114
1A	11	1.5	2.0	2.0	.	2.62	2.62	3	2.32	3	11	25	.58	3	300112
1A	12	1.2	2.4	2.4	.	4.03	4.03	3	2.82	3	30	25	.10	3	300112
1A	13	11.0	15.9	15.9	1.8	88.00	88.00	3	44.76	3	49	200	17.60	3	510114
1A	14	6.2	7.9	7.9	.9	10.59	10.59	3	7.26	3	32	125	1.33	3	530112
1A	15	6.2	8.8	8.8	1.0	16.54	16.54	3	12.00	3	27	125	2.07	3	520112
1A	16	7.0	10.4	10.5	1.0	24.19	24.59	3	11.99	3	51	200	4.92	3	530112
1A	17	.9	.9	.9	.	.40	.40	3	.40	3	0	15	.01	3	300132
1A	18	8.6	11.4	11.6	.8	34.27	35.38	3	18.75	3	47	200	7.08	3	512112
1A	19	1.2	1.8	1.8	.	1.11	1.11	3	1.01	3	9	20	.02	3	650112
1A	20	6.4	10.2	10.2	1.1	23.28	23.58	3	10.28	3	56	200	4.72	3	536112
1A	21	4.2	6.1	6.1	.8	9.17	9.17	3	4.13	3	55	125	1.15	3	505112
1A	22	3.2	4.2	4.2	.6	5.64	5.64	3	1.51	3	73	125	.71	3	522112
1A	23	6.2	8.8	8.8	1.1	19.05	19.05	3	9.57	3	51	125	2.38	3	532112
1A	24	1.4	1.4	1.4	.2	1.41	1.41	3	1.41	3	0	50	.07	3	520112

GLACIER FIORD

IDENT	NO.	TOTAL LENGTH			WIDTH	SURFACE AREA					AAR	DEPTH	VOLUME		TYPE
		ABLA	EXP	TOTAL		EXP	TOTAL		ABLATION						
1B	1	2.8	2.8	2.8	.	3.33	3.33	3	3.33	3	0	25	.08	3	300132
1B	2	2.6	2.6	2.6	.	1.71	1.91	3	1.91	3	0	50	.01	3	400132
1B	3	2.7	2.7	2.7	.	1.51	1.51	3	1.51	3	0	50	.01	3	400132
1B	4	3.6	3.6	3.6	.	5.04	5.04	3	5.04	3	0	75	.37	3	300132
1B	5	2.0	2.0	2.0	.4	1.41	1.41	3	1.41	3	0	50	.01	3	400132
1B	6	3.5	3.5	3.5	.	2.92	3.12	3	3.12	3	0	50	.16	3	400132
1B	7	3.0	3.0	3.0	.	5.94	5.94	3	5.94	3	0	75	.45	3	300132
1B	8	.8	.8	.8	.	.30	.30	3	.30	3	0	15	.00	3	300132
1B	9	.2	.2	.2	.	.15	.15	3	.15	3	0	15	.00	3	650112
1B	10	4.0	4.4	4.4	1.0	7.87	7.87	3	7.06	3	10	125	.98	3	530110
1B	11	1.5	1.9	1.9	.	2.01	2.01	3	1.31	3	35	20	.04	3	200112
1B	12	8.5	13.1	13.2	.8	30.44	30.44	3	14.62	3	54	200	6.31	3	520112
1B	13	.9	.9	.9	.	.50	.50	3	.50	3	0	20	.01	3	220102
1B	14	1.4	1.6	1.6	.	.70	.70	3	.30	3	57	15	.01	3	650110
1B	15	4.6	9.0	9.0	.8	14.02	14.52	3	4.94	3	66	125	1.82	3	520114
1B	16	4.6	8.4	8.4	.8	9.98	10.68	3	4.33	3	59	125	1.33	3	530112
1B	17	.4	.4	.4	.	.20	.20	3	.20	3	0	15	.00	3	650112
1B	18	.6	1.0	1.0	.	.25	.25	3	.15	3	30	15	.00	3	650112
1B	19	7.8	13.6	13.7	1.4	34.27	35.08	3	13.61	3	61	200	7.02	3	510112
1B	20	4.5	11.0	11.2	.8	15.42	15.92	3	4.53	3	72	125	2.00	3	520112
1B	21	5.0	10.6	10.8	.9	15.42	16.12	3	5.03	3	69	125	2.01	3	520112
1B	22	3.8	8.8	8.8	.6	11.49	11.89	3	3.12	3	74	125	1.49	3	535112
1B	23	3.2	9.1	9.1	.6	10.69	10.69	3	2.12	3	80	125	1.34	3	535112
1B	24	5.0	8.2	8.2	1.0	32.36	32.36	3	7.06	3	80	200	6.47	3	415112
1B	25	23.2	33.2	33.3	4.6	382.13	382.94	3	135.88	3	65	250	95.53	3	410114
1B	26	.9	1.2	1.2	.2	.60	.60	3	.40	3	33	15	.01	3	620112
1B	27	.0	.4	.4	.	.11	.11	3	.00	3	100	15	.00	3	650112
1B	28	1.2	1.2	1.2	.1	.50	.50	3	.10	3	80	15	.01	3	650112
1B	29	.7	1.4	1.4	.2	.60	.60	3	.30	3	50	15	.01	3	620112
1B	30	.5	.8	.8	.	.70	.70	3	.30	3	57	15	.01	3	650112
1B	31	3.6	5.8	5.8	.5	5.35	5.35	3	3.33	3	38	75	.40	3	520112
1B	32	.0	.2	.2	.	.20	.20	3	.00	3	100	20	.00	3	003112
1B	33	3.9	4.8	5.1	.5	4.38	4.43	3	3.73	3	16	50	.22	3	520112
1B	34	1.6	2.5	2.5	.2	1.31	1.31	3	.91	3	31	20	.03	3	620112
1B	35	11.9	15.6	15.7	1.6	49.39	50.80	3	24.59	3	52	200	10.16	3	512114
1B	36	1.4	1.4	1.4	.2	.23	.28	3	.28	3	0	15	.00	3	650112
1B	37	6.2	7.2	7.4	.9	14.51	14.91	3	9.77	3	34	125	1.87	3	513112
1B	38	.8	.8	.8	.	.19	.19	3	.19	3	0	15	.00	3	650102
1B	39	1.4	1.6	1.6	.1	.54	.54	3	.38	3	30	15	.01	3	650112
1B	40	5.6	6.9	7.0	1.1	8.16	8.16	3	6.04	3	29	125	1.06	3	530112
1B	41	5.9	7.0	7.0	1.1	11.89	12.19	3	8.26	3	32	125	1.52	3	510110
1B	42	2.5	2.9	2.9	.5	1.81	1.91	3	1.71	3	10	20	.04	3	655112
1B	43	6.2	7.4	7.4	.5	7.86	7.86	3	6.65	3	15	125	.98	3	525112
1B	44	2.8	3.4	3.4	.4	2.42	2.42	3	1.41	3	42	50	.11	3	535112
1B	45	5.0	5.0	5.1	.6	4.33	4.33	3	4.33	3	4	50	.23	3	535112
1B	46	.6	.6	.6	.	.40	.40	3	.40	3	0	15	.01	3	650102
1B	47	1.0	1.0	1.0	.	.60	.60	3	.60	3	0	15	.01	3	300102
1B	48	7.1	10.6	10.6	1.1	17.74	17.74	3	12.80	3	28	125	2.22	3	535112

SURPRISE FIORD

IDENT	NO.	TOTAL LENGTH			WIDTH	SURFACE AREA					AAR	DEPTH	VOLUME		TYPE
		ABLA	EXP	TOTAL		EXP	TOTAL		ABLATION						
1C	1	3.4	3.4	3.4	.	10.48	10.48	3	5.44	3	0	30	.31	3	200102
1C	2	2.8	2.8	2.8	.	5.04	5.04	3	5.04	3	0	30	.15	3	200112
1C	3	3.8	5.9	5.9	2.0	18.44	18.59	3	15.67	3	16	125	2.32	3	403112
1C	4	8.1	10.6	10.8	1.3	18.45	20.77	3	15.73	3	24	200	4.15	3	522112
1C	5	2.6	2.6	2.6	.	2.87	2.92	3	2.92	3	0	20	.06	3	200112
1C	6	4.0	4.4	4.6	.6	3.75	3.83	3	2.72	3	29	50	.19	3	530112
1C	7	1.5	1.9	1.9	.	1.41	1.41	3	1.11	3	21	20	.03	3	655112
1C	8	8.5	11.6	11.7	1.0	43.14	45.06	3	23.79	3	47	200	9.11	3	422112
1C	9	4.8	7.2	7.2	.6	10.28	10.58	3	7.46	3	29	30	.32	3	205112
1C	10	7.8	12.1	12.1	1.1	34.67	34.67	3	15.52	3	55	200	6.94	4	402114
1C	11	5.5	10.2	10.2	.9	27.72	27.72	3	14.01	3	49	200	5.54	3	402114
1C	12	4.3	5.8	5.8	1.0	9.98	9.98	3	8.37	3	16	125	1.25	3	402114
1C	13	3.8	6.8	6.8	.9	17.34	17.34	3	10.89	3	37	125	2.17	3	405114
1C	14	28.2	45.0	45.0	6.5	641.09	641.09	3	214.10	3	67	250	160.27	3	411114
1C	15	1.4	1.9	1.9	.2	1.51	1.51	3	.81	3	46	50	.08	3	535310
1C	16	.6	.6	.6	.	.25	.25	3	.25	3	0	15	.00	3	650112
1C	17	7.1	10.9	10.9	1.1	26.51	26.51	3	15.32	3	42	200	5.30	3	515114
1C	18	3.8	4.7	4.8	.8	5.74	6.04	3	4.33	3	28	125	.75	3	510112
1C	19	1.0	1.0	1.0	.1	.20	.20	3	.20	3	0	15	.00	3	650112
1C	20	6.8	13.9	13.9	1.4	31.95	32.25	3	14.01	3	57	200	6.45	3	522112
1C	21	.2	.2	.2	.	.10	.10	3	.10	3	0	15	.00	3	650102
1C	22	.4	.4	.4	.	.20	.20	3	.20	3	0	20	.00	3	000101
1C	23	1.0	2.1	2.1	.2	.90	.90	3	.50	3	44	15	.01	3	650112
1C	24	2.8	4.5	4.5	.6	3.32	3.32	3	1.81	3	45	50	.17	3	535112
1C	25	5.0	9.2	9.6	1.4	29.24	29.64	3	15.02	3	49	200	5.94	3	520112
1C	26	4.1	4.1	4.1	.8	5.85	6.45	3	6.45	3	0	125	.81	3	532112
1C	27	6.6	9.2	9.2	1.2	25.30	25.30	3	17.64	3	30	200	5.06	3	533110
1C	28	.2	.2	.2	.	.10	.10	3	.10	3	0	15	.00	3	700102
1C	29	.1	.1	.1	.	.10	.10	3	.10	3	0	15	.00	3	700102
1C	30	.9	.9	.9	.	.91	.91	3	.91	3	0	15	.01	3	300132

GOOD FRIDAY BAY AND SAND BAY

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT AC	ORIENT AB	ELEVATIONS HIGH	ELEVATIONS L.EX	ELEVATIONS L.TL	ELEVATIONS SNOW	DATE	MEAN ELEVATION ACCU	MEAN ELEVATION ABLA
1D	1	W 93 42.0	N 78 53.3	15XVT485087574	NE	NE	549	290	290	305	22 7 58	442 4	295 3
1D	2	W 93 46.0	N 78 53.5	15XVT483687578	NE	NE	427	274	274	305	22 7 58	366 4	290 3
1D	3	W 93 47.0	N 78 53.5	15XVT583287578	NE	NE	442	229	229	305	22 7 58	381 4	274 3
1D	4	W 92 48.5	N 78 53.0	15XWT504287568	N	N	935	427	427	823	22 7 58	884 4	610 3
1D	5	W 92 53.5	N 78 52.7	15XWT502487561	NW	NW	853	411	411	750	22 7 58	650 4	610 3
1D	6	W 92 52.0	N 78 51.2	15XWT503087535	NE		732	305	305		22 7 58	686 4	
1D	7	W 92 57.5	N 78 50.0	15XWT501087513	NW	NW	972	305	305	777	22 7 58	853 4	670 3
1D	8	W 91 49.0	N 78 44.7	15XWT525787416	E	E	1106	564	564	823	25 7 59	1006 4	732 3
1D	9	W 91 51.5	N 78 45.8	15XWT525087436	NE	NE	1067	549	549	853	25 7 59	914 4	716 3
1D	10	W 91 53.0	N 78 46.5	15XWT524287446	NE	NE	1028	518	518	869	25 7 59	914 4	716 3
1D	11	W 91 56.0	N 78 47.0	15XWT523387457		NE	1028	549	549		25 7 59		762 3
1D	12	W 91 58.5	N 78 47.0	15XWT522387457	N	N	1028	442	442	930	25 7 59	960 4	732 3
1D	13	W 92 03.0	N 78 47.5	15XWT520687466	N	N	1006	244	183	930	25 7 59	975 4	762 3
1D	14	W 92 05.0	N 78 47.5	15XWT519887465	N	N	991	305	305	945	25 7 59	975 4	762 3
1D	15	W 92 07.0	N 78 47.5	15XWT519287466	N	N	991	427	427	945	25 7 59	975 4	792 3
1D	16	W 92 10.0	N 78 47.5	15XWT518287464	N	N	945	366	366	884	25 7 59	930 4	762 3
1D	17	W 92 12.0	N 78 47.0	15XWT517487456	NE	NE	884	244	244	853	25 7 59	869 4	640 3
1D	18	W 92 14.5	N 78 46.8	15XWT516587452	NE	NE	914	229	213	792	25 7 59	869 4	625 3
1D	19	W 92 24.5	N 78 45.3	15XWT512987424	N	N	747	411	411	610	22 7 58	686 4	533 3
1D	20	W 92 11.0	N 78 45.8	15XWT517987432	S	S	1057	366	366	869	25 7 59	914 4	655 3
1D	21	W 92 04.5	N 78 44.4	15XWT520287411	SW	SW	1057	183	183	914	25 7 59	1006 4	576 3
1D	22	W 91 55.0	N 78 43.7	15XWT523987397	S	SW	1106	457	457	823	25 7 59	960 4	670 3
1D	23	W 91 47.5	N 78 55.0	15XWT526087607	W	NW	1485	564	564	823	28 7 59	960 4	747 3
1D	24	W 91 45.0	N 78 53.2	15XWT526887575	W	NW	1372	579	579	823	28 7 59	975 4	762 3
1D	25	W 91 48.0	N 78 51.2	15XWT525887539	W	W	1372	427	427	838	28 7 59	1173 4	732 3
1D	26	W 91 47.0	N 78 49.5	15XWT526387505	W	W	1372	305	305	838	28 7 59	1082 4	686 3
1D	27	W 91 45.0	N 78 48.2	15XWT527287582	W	W	1250	290	290	777	28 7 59	930 4	610 3
1D	28	W 91 42.0	N 78 47.3	15XWT528287464	W	W	823	579	579	777	28 7 59	808 4	686 3
1D	29	W 91 41.5	N 78 46.8	15XWT528587455	W	W	823	594	594	747	28 7 59	808 4	686 3
1D	30	W 91 38.0	N 78 45.9	15XWT529787438	W	W	1204	427	427	777	28 7 59	1006 4	670 3
1D	31	W 91 38.0	N 78 44.2	15XWT529987408	W	NW	1204	320	320	792	28 7 59	975 4	625 3
1D	32	W 91 39.0	N 78 43.5	15XWT529587395	W	NW	1072	320	320	732	28 7 59	869 4	625 3
1D	33	W 91 41.0	N 78 42.8	15XWT528887382	NW	NW	1072	274	274	701	28 7 59	838 4	655 3
1D	34	W 91 50.0	N 78 41.4	15XWT525687354	NW	NW	1250	274	274	747	25 7 59	884 4	549 3
1D	35	W 91 57.0	N 78 41.2	15XWT523087352	NE	N	960	290	290	762	25 7 59	899 4	550 3
1D	36	W 92 07.5	N 78 41.8	15XWT519287361		NW	755	610	610		25 7 59		670 3
1D	37	W 92 05.0	N 78 40.6	15XWT520287339	NW	N	975	229	229	762	25 7 59	838 4	594 3
1D	38	W 92 02.0	N 78 39.2	15XWT521487310	W	W	945	427	427	914	25 7 59	925 4	640 3
1D	39	W 91 56.0	N 78 37.7	15XWT523787283	S	S	1006	274	274	777	25 7 59	884 4	594 3
1D	40	W 91 44.5	N 78 38.0	15XWT527887292	S	S	1250	290	290	777	25 7 59	960 4	564 3
1D	41	W 91 38.0	N 78 38.3	15XWT530287298	SE	SE	1250	427	427	777	28 7 59	1036 4	564 3
1D	42	W 91 37.0	N 78 39.0	15XWT530487310	SE	SE	945	747	747	838	28 7 59	880 4	780 3
1D	43	W 91 32.0	N 78 38.8	15XWT532387306	S	S	1067	457	457	823	28 7 59	960 4	701 3
1D	44	W 91 25.5	N 78 38.7	15XWT534887306	S	S	1067	549	549	823	28 7 59	884 4	670 3
1D	45	W 91 21.0	N 78 38.8	15XWT536487308	S	SE	869	427	427	823	28 7 59	840 4	655 3
1D	46	W 91 22.5	N 78 38.2	15XWT535887298		NE	655	579	579		28 7 59		610 3
1D	47	W 91 22.5	N 78 37.3	15XWT535987280		NE	670	579	579		28 7 59		615 3
1D	48	W 91 27.5	N 78 31.7	15XWT534587174		NW	762	366	366		28 7 59		579 3
1D	49	W 91 26.0	N 78 30.8	15XWT534987159	NW	NW	1072	137	137	823	28 7 59	975 4	457 3
1D	50	W 91 29.5	N 78 30.8	15XWT533587159	W	NW	853	533	533	853	28 7 59	835 4	670 3
1D	51	W 91 31.0	N 78 30.3	15XWT533187151		NW	853	533	533		28 7 59		670 3
1D	52	W 91 31.5	N 78 29.2	15XWT532987129	W	NW	1072	152	152	823	28 7 59	960 4	564 3
1D	53	W 91 31.5	N 78 28.3	15XWT532887114	W	W	1072	427	427	823	28 7 59	960 4	670 3
1D	54	W 91 34.0	N 78 25.8	15XWT532087064	W	SW	1072	274	274	686	28 7 59	884 4	564 3
1D	55	W 91 24.0	N 78 22.1	15XWS536186996	SW	SW	967	274	274	747	28 7 59	808 4	579 3
1D	56	W 92 46.0	N 78 26.8	15XWT505186079	E	E	845	244	244	411	22 7 58	610 4	335 3
1D	57	W 92 48.0	N 78 27.5	15XWT504586093	NE	E	701	213	213	457	22 7 58	594 4	381 3
1D	58	W 92 51.0	N 78 25.8	15XWT503486063	W		792	488	488		22 7 58	670 4	
1D	59	W 92 51.0	N 78 25.8	15XWT503486063	NW	NW	823	335	335	457	22 7 58	655 4	427 3
1D	60	W 92 46.0	N 78 25.5	15XWT505286056	S	S	549	366	366	457	22 7 58	518 4	427 3
1D	61	W 92 42.0	N 78 25.8	15XWT506886062	NE	NE	610	183	183	396	22 7 58	503 4	290 3

STRAND FIORD

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT AC	ORIENT AB	ELEVATIONS HIGH	ELEVATIONS L.EX	ELEVATIONS L.TL	ELEVATIONS SNOW	DATE	MEAN ELEVATION ACCU	MEAN ELEVATION ABLA
1E	1	W 90 41.0	N 79 06.8	15XWT548787834		N	975	808	808		13 8 59		945 3
1E	2	W 90 44.0	N 79 07.0	15XWT547687837	E	E	1250	762	762	1067	13 8 59	1220 4	960 3
1E	3	W 90 45.0	N 79 09.2	15XWT547287880		N	716	670	670		13 8 59		690 3
1E	4	W 90 47.0	N 79 08.2	15XWT546687860	W	W	1250	762	762	1158	13 8 59	1204 4	1052 3
1E	5	W 90 47.0	N 79 07.6	15XWT546687846	W	NW	1250	884	884	1158	13 8 59	1204 4	1052 3
1E	6	W 90 47.0	N 79 07.0	15XWT546587836	W	NW	1250	732	732	1158	13 8 59	1204 4	1036 3
1E	7	W 90 49.0	N 79 06.2	15XWT546087823	W	N	1250	914	914	1158	13 8 59	1204 4	1006 3
1E	8	W 90 54.0	N 79 06.9	15XWT544387834		NE	1006	914	914		13 8 59		960 3
1E	9	W 91 16.0	N 79 02.8	15XWT536787753		N	1021	678	678		13 8 59		1006 3
1E	10	W 91 17.0	N 79 03.5	15XWT536387768		N	1021	945	945		13 8 59		1006 3
1E	11	W 91 18.0	N 79 04.2	15XWT535987783		N	1067	844	844		13 8 59		975 3
1E	12	W 91 24.0	N 79 04.1	15XWT533787778		N	960	823	823		13 8 59		930 3
1E	13	W 91 24.0	N 79 02.4	15XWT534087745	W	W	1128	754	754	1067	13 8 59	1097 4	991 3
1E	14	W 91 42.0	N 79 04.3	15XWT527587782		N	914	640	640		28 7 59		945 3
1E	15	W 91 45.0	N 79 04.3	15XWT528487782		NW	975	869	869		28 7 59		945 3
1E	16	W 92 10.0	N 79 06.0	15XWT517587813		NE	960	762	762		25 7 59		914 3
1E	17	W 92 12.0	N 79 06.8	15XWT517087824		N	945	564	564		25 7 59		762 3
1E	18	W 92 15.5	N 79 06.3	15XWT515687818		W	670	335	335		25 7 59		457 3
1E	19	W 89 54.0	N 78 57.2	15XWT438187663	NE	NE	1387	594	594	1006	28 7 59	1219 4	823 3
1E	20	W 90 04.0	N 78 58.0	15XWT562887681	N	N	1494	457	457	945	13 8 59	1067 4	762 3
1E	21	W 90 10.0	N 78 58.0	15XWT560487676	N	NW	1494	427	427	945	13 8 59	1112 4	777 3
1E	22	W 90 17.0	N 78 57.5	15XWT557987668	NE	N	975	488	488	792	13 8 59	899 4	701 3
1E	23	W 90 22.0	N 78 57.6	15XWT556287668	NE	N	823	488	488	792	13 8 59	805 4	640 3
1E	24	W 90 22.0	N 78 59.0	15XWT556287696	NE	N	1749	274	274	853	13 8 59	1128 4	716 3
1E	25	W 90 33.0	N 78 59.5	15XWT552287700	NE	NE	1372	899	899	1219	13 8 59	1280 4	1040 3
1E	26	W 90 34.0	N 78 59.7	15XWT551987704	NE	NE	1295	1021	1021	1219	13 8 59	1250 4	1110 3
1E	27	W 90 33.0	N 79 00.8	15XWT552187723	E	N	1250	503	503	1006	13 8 59	1097 4	869 3
1E	28	W 90 47.0	N 78 59.9	15XWT547087706	N	NW	1676	152	152	991	13 8 59	1219 4	808 3
1E	29	W 90 59.0	N 78 59.0	15XWT543287691	NW	NW	1554	701	701	945	28 7 59	1189 4	884 3
1E	30	W 91 06.0	N 78 59.0	15XWT540487688	N	N	1021	122	122	975	13 8 59	1189 4	762 3
1E	31	W 91 13.5	N 78 59.2	15XWT537887690	N	N	1173	732	732	991	13 8 59	1082 4	823 3
1E	32	W 91 19.0	N 78 58.8	15XWT535887682	NE	NE	1189	899	899	991	13 8 59	1052 4	930 3
1E	33	W 91 22.0	N 78 58.0	15XWT534887667	N	N	1530	732	732	991	13 8 59	1190 4	914 3
1E	34	W 91 31.5	N 79 00.2	15XWT531487705		N	808	701	701		28 7 59		762 3
1E	35	W 91 37.0	N 79 00.5	15XWT529487710		NE	975	762	762		28 7 59		945 3
1E	36	W 91 41.0	N 78 58.8	15XWT528187682	NW	N	1067	594	594	972	28 7 59	980 4	914 3
1E	37	W 91 48.0	N 78 57.5	15XWT525687654	NW	N	1485	533	533	869	28 7 59	1158 4	701 3

GOOD FRIDAY BAY AND SAND BAY

IDENT	NO.	TOTAL LENGTH			WIDTH	SURFACE AREA			AAR	DEPTH	VOLUME		TYPE
		ABLA	EXP	TOTAL		EXP	TOTAL	ABLATION					
1D	1	.4	1.6	1.6	.	.40	.40 3	.30 3	25	15	.01	4	700112
1D	2	.2	.5	.5	.	.10	.10 3	.05 3	50	15	.00	3	700112
1D	3	.3	.8	.8	.	.20	.20 3	.10 3	50	15	.00	3	700112
1D	4	1.1	1.9	1.9	.	2.01	2.01 3	1.51 3	25	20	.04	3	200112
1D	5	.4	1.4	1.4	.	1.31	1.31 3	.50 3	62	20	.03	3	650112
1D	6	.0	1.2	1.2	.	1.71	1.71 3	.	100	20	.03	3	640112
1D	7	2.5	3.9	3.9	.	9.97	10.07 3	2.72 3	73	30	.30	3	200112
1D	8	1.4	2.5	2.5	.2	3.73	3.73 3	1.51 3	60	50	.19	3	520112
1D	9	1.5	2.2	2.2	.6	2.32	2.32 3	1.51 3	38	50	.12	3	530112
1D	10	1.8	2.5	2.5	.9	1.41	1.41 3	1.11 3	21	50	.07	3	530112
1D	11	1.9	1.9	1.9	.4	1.71	1.71 3	1.71 3	0	20	.03	3	650112
1D	12	1.9	2.9	2.9	.5	1.61	1.61 3	1.21 3	25	50	.08	3	520112
1D	13	2.8	3.2	3.5	.8	3.32	3.72 3	3.12 3	16	50	.19	3	400212
1D	14	1.8	2.1	2.1	.1	.80	.80 3	.70 3	12	25	.02	3	400212
1D	15	2.1	2.4	2.4	.	2.27	2.27 3	2.12 3	7	50	.11	3	403112
1D	16	1.7	2.0	2.0	.	2.12	2.12 3	2.02 3	5	50	.11	3	403112
1D	17	1.6	1.8	1.8	.2	1.01	1.01 3	.91 3	10	50	.05	3	530112
1D	18	2.3	2.5	2.6	.5	2.41	2.56 3	1.86 3	27	50	.13	3	530112
1D	19	.8	1.6	1.6	.	1.41	1.41 3	.40 3	72	20	.03	3	700112
1D	20	2.5	3.8	3.8	.6	4.63	4.63 3	1.51 3	67	50	.23	3	533112
1D	21	5.1	6.5	6.5	.9	19.56	19.56 3	8.57 3	56	125	2.44	3	522112
1D	22	1.9	2.8	2.9	.5	3.63	3.83 3	1.21 3	68	50	.19	3	530112
1D	23	3.1	9.2	9.2	2.1	25.60	25.60 3	7.26 3	72	200	5.12	3	504112
1D	24	1.6	6.8	6.8	.	8.87	8.87 3	2.52 3	72	125	1.11	3	403112
1D	25	4.1	10.2	10.2	.	32.06	32.06 3	13.51 3	58	200	6.41	3	435112
1D	26	4.6	10.2	10.2	.	32.76	32.76 3	9.27 3	72	200	6.55	3	525112
1D	27	3.9	9.0	9.0	.	18.85	18.85 3	6.96 3	63	125	2.36	3	535112
1D	28	1.1	1.4	1.4	.	1.10	1.10 3	.70 3	36	20	.02	3	650112
1D	29	.6	1.0	1.0	.	.40	.40 3	.20 3	50	15	.01	3	650112
1D	30	2.4	8.0	8.0	2.5	28.23	28.23 3	9.48 3	66	200	5.65	3	421112
1D	31	2.5	6.2	6.2	.9	8.46	8.56 3	2.92 3	66	125	1.07	3	535112
1D	32	4.1	7.1	7.1	.8	10.99	10.99 3	3.23 3	71	125	1.38	3	405112
1D	33	3.1	9.5	9.5	.9	23.88	23.88 3	5.74 3	76	200	4.78	3	402112
1D	34	6.2	9.5	9.5	1.2	22.93	22.98 3	11.39 3	50	200	4.60	3	512112
1D	35	2.6	3.9	3.9	.5	4.13	4.13 3	3.02 3	27	50	.21	3	520112
1D	36	.9	.9	.9	.	.81	.81 3	.81 3	0	15	.01	3	300132
1D	37	4.1	5.6	5.6	.8	9.07	9.07 3	4.84 3	47	125	1.13	3	533113
1D	38	2.1	2.4	2.4	.5	1.71	1.71 3	1.61 3	6	20	.03	3	650112
1D	39	4.5	4.5	7.5	1.2	18.35	18.35 3	8.57 3	53	125	2.30	3	532114
1D	40	2.3	5.0	5.0	.8	6.75	6.95 3	2.92 3	58	125	.87	3	530112
1D	41	2.1	4.0	4.1	.5	3.53	3.83 3	1.81 3	53	50	.19	3	532112
1D	42	.3	.5	.5	.6	.30	.30 3	.20 3	33	15	.00	3	650112
1D	43	2.5	4.0	4.0	1.4	7.45	7.45 3	3.12 3	58	125	.93	3	530114
1D	44	2.1	3.6	3.6	1.0	3.83	3.83 3	2.12 3	45	50	.19	3	530110
1D	45	2.6	3.0	3.0	.5	2.32	2.32 3	2.22 3	4	50	.12	3	535112
1D	46	.9	.9	.9	.	.50	.50 3	.50 3	0	15	.01	3	650112
1D	47	.8	.8	.8	.	.60	.60 3	.60 3	0	15	.01	3	300112
1D	48	1.0	1.0	1.0	.	.40	.40 3	.40 3	0	15	.01	3	730212
1D	49	4.4	5.6	5.6	.2	5.54	5.64 3	2.52 3	55	75	.42	3	405312
1D	50	1.0	1.0	1.1	.	.40	.60 3	.60 3	0	15	.01	3	650112
1D	51	.9	.9	.9	.	.60	.60 3	.60 3	0	15	.01	3	650112
1D	52	4.8	7.8	7.8	1.5	16.33	17.03 3	8.66 3	49	125	2.13	3	400112
1D	53	1.9	4.4	4.4	.6	3.02	3.02 3	1.31 3	57	50	.15	3	400112
1D	54	5.0	8.5	8.5	.	53.22	53.22 3	31.55 3	41	200	10.65	3	403112
1D	55	5.4	8.0	8.0	.	39.61	39.61 3	29.33 3	26	200	7.93	3	403112
1D	56	.6	2.5	2.5	.	3.02	3.02 3	.20 3	93	50	.15	3	526112
1D	57	1.0	2.6	2.6	.2	2.16	2.16 3	.35 3	84	35	.08	3	650112
1D	58	.0	.8	.8	.	1.11	1.11 3	.	100	20	.02	3	730112
1D	59	.6	1.8	1.8	.	1.36	1.36 3	.35 3	74	20	.03	3	650112
1D	60	.2	1.5	1.5	.	1.26	1.26 3	.15 3	88	20	.02	3	730112
1D	61	1.2	3.0	3.0	.5	2.82	2.82 3	.30 3	89	35	.10	3	650112

STRAND FIORD

IDENT	NO.	TOTAL LENGTH			WIDTH	SURFACE AREA			AAR	DEPTH	VOLUME		TYPE
		ABLA	EXP	TOTAL		EXP	TOTAL	ABLATION					
1E	1	1.0	1.0	1.0	.	.40	.40 3	.40 3	0	15	.01	3	650102
1E	2	.6	1.2	1.2	.	1.91	1.91 3	.40 3	52	20	.04	3	203112
1E	3	.3	.3	.3	.	.15	.15 3	.15 3	0	15	.00	3	650112
1E	4	1.0	1.4	1.4	.	.90	.90 3	.70 3	22	15	.01	3	650112
1E	5	.7	1.2	1.2	.	1.00	1.00 3	.50 3	50	20	.02	3	650112
1E	6	1.6	2.1	2.1	.2	1.21	1.21 3	.81 3	33	20	.02	3	650112
1E	7	1.6	2.2	2.2	.	1.91	1.91 3	1.81 3	5	20	.04	3	620112
1E	8	2.2	2.2	2.2	.	.81	.81 3	.81 3	0	15	.01	3	700112
1E	9	.6	.6	.6	.	.20	.20 3	.20 3	0	15	.00	3	650112
1E	10	.6	.6	.6	.	.20	.20 3	.20 3	0	15	.00	3	650112
1E	11	.9	.9	.9	.	.25	.25 3	.25 3	0	15	.00	3	650112
1E	12	.8	.8	.8	.	.30	.30 3	.30 3	0	15	.00	3	650112
1E	13	1.8	6.0	6.0	.	13.91	13.91 3	7.16 3	48	75	1.04	3	300112
1E	14	2.2	2.2	2.2	.	2.02	2.02 3	2.02 3	0	35	.07	3	650112
1E	15	.6	.6	.6	.	.15	.15 3	.15 3	0	15	.00	3	650112
1E	16	.9	.9	.9	.	.60	.60 3	.60 3	0	15	.01	3	650112
1E	17	1.4	1.4	1.4	.	.70	.70 3	.70 3	0	15	.01	3	620112
1E	18	.8	.8	.8	.	.30	.30 3	.30 3	0	15	.00	3	900100
1E	19	3.0	4.7	4.7	.7	7.86	8.06 3	4.84 3	39	125	1.01	3	532112
1E	20	4.6	9.1	9.1	.	21.57	21.77 3	12.80 3	41	200	4.35	3	426112
1E	21	4.8	8.0	8.0	1.5	16.83	17.13 3	7.76 3	55	125	2.14	3	420112
1E	22	2.8	6.5	6.5	.	13.21	13.21 3	3.43 3	74	125	1.64	3	430112
1E	23	1.4	1.5	1.5	.	1.31	1.46 3	1.01 3	31	20	.03	3	650112
1E	24	5.2	21.2	21.2	.8	43.04	43.19 3	10.23 3	76	200	8.64	3	510112
1E	25	1.0	1.2	1.2	.	.70	.70 3	.40 3	43		.01	3	625112
1E	26	.6	.9	.9	.	.30	.30 3	.20 3	33	15	.00	3	655112
1E	27	3.1	4.2	4.2	.5	8.77	8.77 3	3.83 3	56	50	.44	3	640113
1E	28	8.5	15.8	15.8	1.5	53.93	53.93 3	17.04 3	68	200	10.79	3	432112
1E	29	4.2	9.3	9.3	.	21.88	21.88 3	7.36 3	66	200	4.38	3	525410
1E	30	13.5	25.8	25.8	3.6	149.28	149.28 3	44.55 3	71	250	37.32	3	423110
1E	31	1.0	1.2	1.2	.	.81	.81 3	.71 3	12	15	.01	3	650112
1E	32	.6	1.5	1.5	.	1.20	1.20 3	.60 3	50	20	.02	3	650112
1E	33	2.2	6.5	6.5	.	14.92	15.02 3	3.63 3	76	125	1.88	3	510113
1E	34	1.2	1.2	1.2	.	.40	.40 3	.40 3	0	15	.01	3	650112
1E	35	1.9	1.9	1.9	.	1.21	1.21 3	1.21 3	0	20	.02	3	650112
1E	36	2.8	3.1	3.1	.	7.56	7.56 3	6.35 3	16	50	.38	3	620112
1F	37	6.0	16.2	16.2	2.0	70.06	70.06 3	17.34 3	75	200	14.01	3	424112

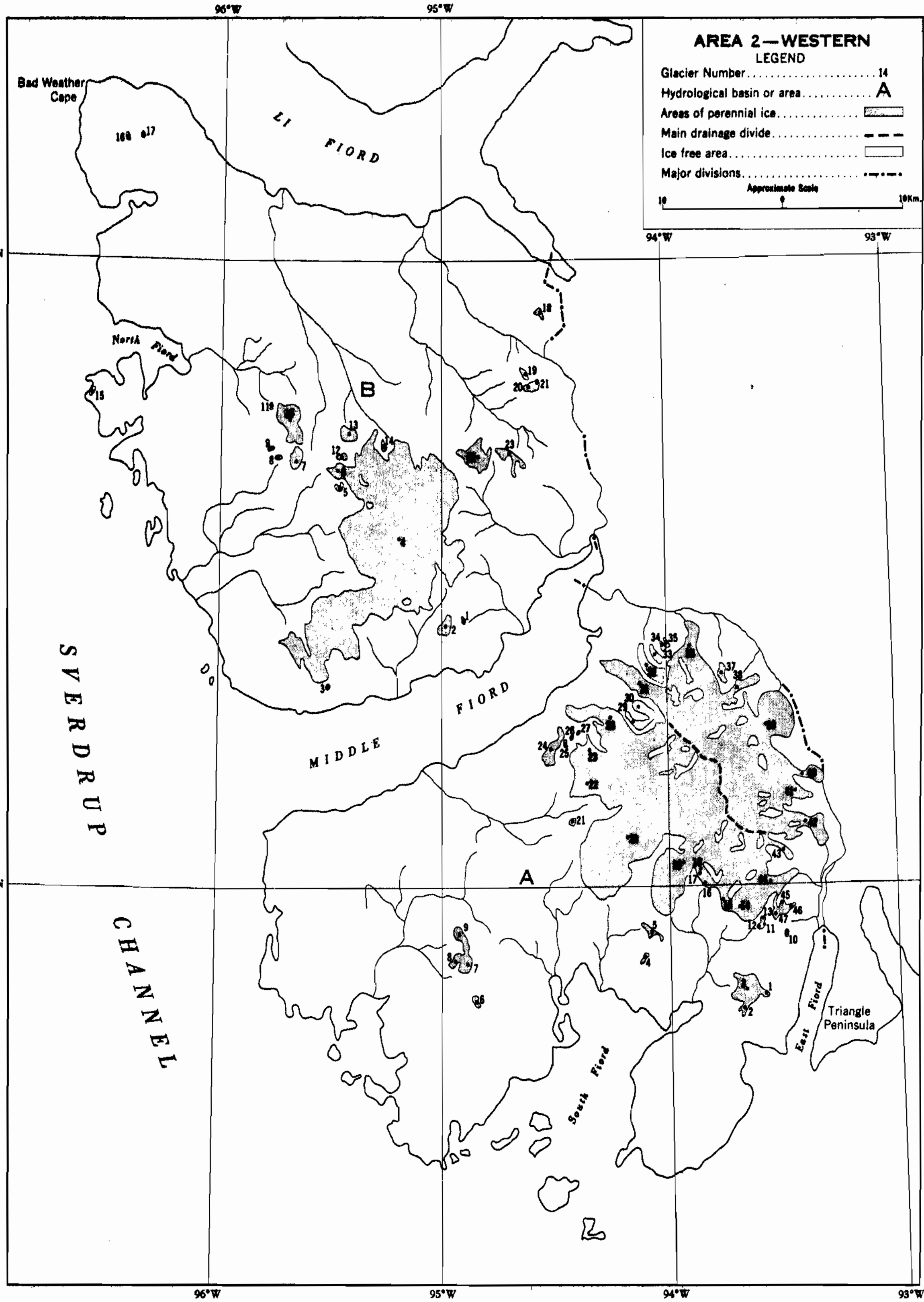

AREA 2—WESTERN
LEGEND
Glacier Number...................... 14
Hydrological basin or area........... A
Areas of perennial ice...............
Main drainage divide...............
Ice free area.......................
Major divisions....................
Approximate Scale
10 0 10Km.
96°W
95°W
94°W
93°W
80°N
79°30'N
Bad Weather Cape
LI FIORD
North Fiord
SVERDRUP CHANNEL
MIDDLE FIORD
South Fiord
East Fiord
Triangle Peninsula
A
B

Figure 11.

AREA 2 WESTERN AXEL HEIBERG ISLAND N.W.T. C.S.L.OMMANNEY MCGILL UNIVERSITY AND INLAND WATERS BRANCH 1967

SOUTH AND MIDDLE FIORDS

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT		ELEVATIONS				DATE	MEAN ELEVATION	
					AC	AB	HIGH	L.EX	L.TL	SNOW		ACCU	ABLA
2A	1	W 93 34.0	N 79 24.3	15XVU488488150		E	610	442	442		22 7 58		518 3
2A	2	W 93 40.0	N 79 23.6	15XVU486588137		W	640	488	488		22 7 59		594 3
2A	3	W 93 38.0	N 79 24.5	15XVU486988152		W	668	244	244		22 7 58		533 3
2A	4	W 94 04.0	N 79 26.4	15XVU478088186		W	381	335	335		22 7 58		360 3
2A	5	W 94 04.0	N 79 27.7	15XVU478488207		SW	381	335	335		22 7 58		360 3
2A	6	W 94 48.0	N 79 22.8	15XVU462888130		NE	320	213	213		24 7 58		274 3
2A	7	W 94 52.0	N 79 25.8	15XVU461688186		W	450	335	335		24 7 58		396 3
2A	8	W 94 54.0	N 79 26.4	15XVU460988192		SW	335	168	168		24 7 58		244 3
2A	9	W 94 53.0	N 79 27.1	15XVU461588209		N	472	274	274		24 7 58		381 3
2A	10	W 93 28.0	N 79 26.8	15XVU490488197		NW	655	610	610		28 7 59		630 3
2A	11	W 93 34.0	N 79 27.5	15XVU488388211		E	914	747	747		28 7 59		838 3
2A	12	W 93 36.0	N 79 27.5	15XVU487988210		W	914	640	640		28 7 59		792 3
2A	13	W 93 34.0	N 79 27.8	15XVU488488217		E	914	610	610		28 7 59		762 3
2A	14	W 93 38.0	N 79 28.5	15XVU486288230	SW	W	914	305	305	457	22 7 58	625 4	396 3
2A	15	W 93 43.0	N 79 30.0	15XVU484988238	SW	SW	975	274	274	457	22 7 58	655 4	396 3
2A	16	W 93 50.0	N 79 29.8	15XVU483288250	SW		747	549	549		22 7 58	640 4	
2A	17	W 93 52.0	N 79 29.8	15XVU482488254	N		610	457	457		22 7 58	533 4	
2A	18	W 93 51.0	N 79 29.9	15XVU482688257	W		670	549	549		22 7 58	610 4	
2A	19	W 94 00.0	N 79 30.0	15XVU481788271	W	SW	792	107	107	427	22 7 58	640 4	366 3
2A	20	W 94 15.0	N 79 30.0	15XVU476488296	W	W	975	122	122	549	28 7 58	777 4	457 3
2A	21	W 94 25.0	N 79 32.8	15XVU471288312		NW	335	274	274		22 7 58		305 3
2A	22	W 94 18.0	N 79 34.7	15XVU473088343	W	W	686	274	274	564	22 7 58	655 4	503 3
2A	23	W 94 18.0	N 79 34.7	15XVU473188376	N	N	701	213	213	579	22 7 58	655 4	472 3
2A	24	W 94 31.0	N 79 36.5	15XVU470588385		NE	488	183	183		22 7 58		503 3
2A	25	W 94 27.0	N 79 36.4	15XVU470788380		N	610	457	457		22 7 58		533 3
2A	26	W 94 25.5	N 79 36.7	15XVU471388382		NE	602	503	503		22 7 58		549 3
2A	27	W 94 23.0	N 79 37.0	15XVU472188389		NE	457	305	305		22 7 58		381 3
2A	28	W 94 10.0	N 79 36.0	15XVU474888396	W	N	1219	137	122	610	22 7 58	716 4	442 3
2A	29	W 94 08.0	N 79 37.4	15XVU476888399	NW	NW	1219	457	457	610	22 7 58	884 4	533 3
2A	30	W 94 06.0	N 79 38.2	15XVU477888410	NW	NW	1219	488	488	610	22 7 58	914 4	533 3
2A	31	W 94 04.0	N 79 39.0	15XVU477688432	NW	NW	1219	122	122	670	22 7 58	853 4	472 3
2A	32	W 94 03.0	N 79 40.0	15XVU478388449	NW	N	1036	305	305	701	22 7 58	853 4	549 3
2A	33	W 96 02.0	N 79 40.8	15XVU479188458	NW	NW	975	396	396	716	22 7 58	838 4	594 3
2A	34	W 94 00.5	N 79 41.8	15XVU479888465	NW	N	945	518	518	762	22 7 58	823 4	610 3
2A	35	W 93 58.5	N 79 41.2	15XVU480388467	NW	N	914	457	457	762	22 7 58	823 4	610 3
2A	36	W 93 50.0	N 79 40.0	15XVU482688463	N	N	1219	122	107	655	22 7 58	838 4	457 3
2A	37	W 93 44.0	N 79 40.0	15XVU485288444		N	914	442	442		28. 7 59		640 3
2A	38	W 93 37.0	N 79 39.5	15XVU486588427	E	NE	838	152	145	747	28 7 59	792 4	503 3
2A	39	W 93 30.0	N 79 38.0	15XVU488888391	E	E	1219	152	152	823	28 7 59	960 4	549 3
2A	40	W 93 28.0	N 79 34.8	15XVU491888342	E	E	1202	229	229	670	28 7 59	930 4	625 3
2A	41	W 93 26.0	N 79 33.8	15XVU491788325	S	SE	975	152	152	670	28 7 59	732 4	610 3
2A	42	W 93 18.0	N 92 32.0	15XWU492688298	SE	E	1128	122	122	792	28 7 59	884 4	472 3
2A	43	W 93 27.0	N 79 31.0	15XVU490488278		SE	823	274	274		28 7 59		503 3
2A	44	W 93 35.0	N 79 30.2	15XVU489488245	S	E	1158	122	122	732	28 7 59	945 4	488 3
2A	45	W 93 28.0	N 79 28.3	15XVU490688226		N	701	610	610		28 7 59		655 3
2A	46	W 93 27.0	N 79 28.2	15XVU490688223		E	914	427	427		28 7 59		670 3
2A	47	W 93 30.0	N 79 28.0	15XVU489688220		W	914	457	457		28 7 59		686 3

MIDDLE AND LI FIORDS

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT		ELEVATIONS				DATE	MEAN ELEVATION	
					AC	AB	HIGH	L.EX	L.TL	SNOW		ACCU	ABLA
2B	1	W 94 53.5	N 79 42.2	15XVU462388489		NW	518	442	442		24 7 58		457 3
2B	2	W 94 57.0	N 79 42.0	15XVU461088487	N	N	594	366	366	488	24 7 58	518 4	457 3
2B	3	W 95 29.0	N 79 39.4	15XVU450288440		S	427	381	381		24 7 58		408 3
2B	4	W 95 11.0	N 79 46.5	15XVU456888570	W	W	823	152	152	610	24 7 58	762 4	518 3
2B	5	W 95 26.0	N 79 48.5	15XVU452088610		W	457	305	305		24 7 58		381 3
2B	6	W 95 28.0	N 79 49.7	15XVU451488631		NW	503	298	298		24 7 58		427 3
2B	7	W 95 39.0	N 79 50.3	15XVU447988645		W	503	411	411		24 7 58		472 3
2B	8	W 95 43.0	N 79 50.2	15XVU446588643		SW	396	305	305		24 7 58		350 3
2B	9	W 95 49.0	N 79 50.5	15XVU444588649		W	335	290	290		24 7 58		305 3
2B	10	W 95 41.0	N 79 51.8	15XVU447488672		N	564	305	305		24 7 58		305 3
2B	11	W 95 46.5	N 79 52.8	15XVU445688690		N	457	366	366		24 7 58		411 3
2B	12	W 95 28.0	N 79 50.3	15XVU451388643		W	518	335	335		24 7 58		457 3
2B	13	W 95 24.5	N 79 51.3	15XVU452588661		N	594	427	427		24 7 58		503 3
2B	14	W 95 15.0	N 79 51.1	15XVU455688656		N	350	259	259		24 7 58		298 3
2B	15	W 96 35.0	N 79 53.3	14XND546988699		N	457	15	15		29 7 59		274 3
2B	16	W 96 27.5	N 80 06.0	14XND548788937		N	583	442	442		29 7 59		549 3
2B	17	W 96 23.0	N 80 06.8	14XND550288944		N	427	229	229		29 7 59		328 3
2B	18	W 94 37.0	N 79 59.7	15XVU468788777		SW	701	549	549		22 7 58		640 3
2B	19	W 94 37.5	N 79 54.4	15XVU468188714		N	640	472	472		22 7 58		549 3
2B	20	W 94 37.0	N 79 53.7	15XVU468588700	W	W	762	450	450	686	22 7 58	716 3	579 4
2B	21	W 94 34.0	N 79 54.0	15XVU469488705	NE	NE	716	503	503	686	22 7 58	701 4	610 3
2B	22	W 94 54.0	N 79 50.5	15XVU462588643		NW	724	503	503		24 7 58		610 3
2B	23	W 94 49.5	N 79 50.8	15XVU464088649		N	724	305	305		24 7 58		610 3
2B	24	W 94 47.0	N 79 50.3	15XVU464988640		NE	724	518	518		24 7 58		610 3
2B	25	W 94 43.5	N 79 50.5	15XVU466088643		NW	762	350	350		22 7 58		472 3
2B	26	W 94 40.5	N 79 50.4	15XVU467088640		NW	800	366	366		22 7 58		518 3

AREA 2 WESTERN AXEL HEIBERG ISLAND N.W.T. C.S.L.OMMANNEY MCGILL UNIVERSITY AND INLAND WATERS BRANCH 1967

SOUTH AND MIDDLE FIORDS

IDENT	NO.	TOTAL LENGTH			WIDTH	SURFACE AREA					AAR	DEPTH	VOLUME		TYPE
		ABLA	EXP	TOTAL		EXP	TOTAL		ABLATION						
2A	1	.6	.6	.6	.	.50	.50	3	.50	3	0	15	.01	3	650112
2A	2	.8	.8	.8	.	.40	.40	3	.40	3	0	15	.01	3	650112
2A	3	3.5	3.5	3.5	.	5.85	5.85	3	5.85	3	0	50	.29	3	300112
2A	4	1.0	1.0	1.0	.	.50	.50	3	.50	3	0	15	.01	3	300112
2A	5	2.5	2.5	2.5	.	1.21	1.21	3	1.21	3	0	25	.03	3	300112
2A	6	1.0	1.0	1.0	.5	.70	.70	3	.70	3	0	15	.01	3	300112
2A	7	1.8	1.8	1.8	.	1.61	1.61	3	1.61	3	0	25	.04	3	300112
2A	8	1.0	1.0	1.0	.	.91	.91	3	.91	3	0	15	.01	3	700112
2A	9	2.4	2.4	2.4	.	1.31	1.31	3	1.31	3	0	25	.03	3	300112
2A	10	.6	.6	.6	.	.25	.25	3	.25	3	0	15	.00	3	300112
2A	11	.6	.6	.6	.2	.25	.25	3	.25	3	0	15	.00	3	630212
2A	12	.2	.2	.2	.	.15	.15	3	.15	3	0	15	.00	3	650112
2A	13	.8	.8	.8	.3	.20	.20	3	.20	3	0	15	.00	3	650112
2A	14	.9	4.2	4.2	1.1	8.07	8.07	3	.81	3	90	125	1.01	3	435114
2A	15	1.2	5.6	5.6	.9	7.76	7.76	3	1.21	3	84	125	.97	3	535114
2A	16	.	.4	.4	.	.40	.40	3	.00	3	100	15	.01	3	703210
2A	17	.	.6	.6	.	.30	.30	3	.00	3	100	15	.00	3	650112
2A	18	.	.6	.6	.1	.25	.25	3	.00	3	100	15	.00	3	700212
2A	19	4.1	10.9	10.9	2.2	31.75	31.75	3	13.61	3	57	200	6.35	3	522114
2A	20	7.6	16.4	16.4	5.0	82.35	82.35	3	38.30	3	54	200	16.47	3	430114
2A	21	.6	.6	.6	.	.35	.35	3	.35	3	0	15	.00	3	300112
2A	22	2.0	4.6	4.6	1.0	14.32	14.32	3	4.64	3	68	50	.72	3	003114
2A	23	1.9	3.5	3.5	.4	5.74	5.74	3	1.71	3	70	75	.43	3	430112
2A	24	3.8	3.8	3.8	.	3.02	3.02	3	3.02	3	0	35	.10	3	700112
2A	25	.9	.9	.9	.1	.40	.40	3	.40	3	0	15	.01	3	700112
2A	26	.2	.2	.2	.	.15	.15	3	.15	3	0	15	.00	3	700112
2A	27	.4	.4	.4	.1	.15	.15	3	.15	3	0	15	.00	3	650112
2A	28	5.0	14.6	14.8	1.0	38.21	38.71	3	8.87	3	77	200	7.74	3	420112
2A	29	1.0	2.9	2.9	.4	2.21	2.21	3	.60	3	73	35	.08	3	650412
2A	30	.3	2.8	2.8	.8	2.37	2.37	3	.25	3	90	35	.08	3	650212
2A	31	4.1	9.5	9.5	1.5	14.51	14.71	3	5.84	3	60	125	1.84	3	430112
2A	32	1.8	3.9	3.9	.6	3.33	3.33	3	.91	3	73	35	.12	3	640112
2A	33	1.0	12.0	12.0	.5	1.10	1.10	3	.45	3	59	20	.02	3	650112
2A	34	.5	1.0	1.0	.2	.35	.35	3	.15	3	57	15	.00	3	650112
2A	35	.8	1.1	11.1	.2	.40	.40	3	.20	3	50	15	.01	3	650112
2A	36	5.0	8.3	8.4	.9	20.57	20.77	3	9.68	3	53	150	3.12	3	422112
2A	37	2.0	2.0	2.0	.4	1.11	1.11	3	1.11	3	0	20	.02	3	650112
2A	38	4.4	5.3	5.5	.8	5.24	5.39	3	4.38	3	19	125	.67	3	430412
2A	39	6.4	9.6	9.6	2.0	68.55	68.80	3	32.71	3	52	200	13.76	3	421114
2A	40	4.2	6.6	6.6	.6	9.27	9.27	3	6.65	3	28	125	1.16	3	422114
2A	41	2.8	3.6	3.6	.6	5.64	5.64	3	4.94	3	12	125	.70	3	530112
2A	42	7.0	8.8	8.8	.9	17.03	17.03	3	11.79	3	31	125	2.13	3	522114
2A	43	2.8	2.8	2.8	.5	1.81	1.81	3	1.81	3	0	50	.09	3	530112
2A	44	6.2	8.1	8.1	.9	15.62	15.62	3	9.37	3	40	125	1.95	3	420114
2A	45	.2	.2	.2	.	.15	.15	3	.15	3	0	15	.00	3	650112
2A	46	1.1	1.1	1.1	.2	.40	.40	3	.40	3	0	15	.01	3	650012
2A	47	1.0	1.0	1.0	.4	.50	.50	3	.50	3	0	15	.01	3	650112

MIDDLE AND LI FIORDS

IDENT	NO.	TOTAL LENGTH			WIDTH	SURFACE AREA					AAR	DEPTH	VOLUME		TYPE
		ABLA	EXP	TOTAL		EXP	TOTAL		ABLATION						
2B	1	.5	.5	.5	.	.10	.10	3	.10	3	0	15	.00	3	650112
2B	2	.8	2.0	2.0	.	1.61	1.61	3	.40	3	75	20	.03	3	200112
2B	3	.5	.5	.5	.	.10	.10	3	.10	3	0	15	.00	3	700112
2B	4	.	22.5	22.5	11.2	155.23	155.23	3	127.01	3	18	100	15.23	3	203112
2B	5	.9	.9	.9	.	.75	.75	3	.75	3	0	15	.01	3	700102
2B	6	1.5	1.5	1.5	.	1.31	1.31	3	1.31	3	0	20	.03	3	650112
2B	7	1.1	1.1	1.1	.	1.61	1.61	3	1.61	3	0	20	.03	3	200112
2B	8	.8	.8	.8	.	.30	.30	3	.30	3	0	15	.00	3	700112
2B	9	.5	.5	.5	.	.20	.20	3	.20	3	0	15	.00	3	700112
2B	10	4.5	4.5	4.5	1.9	5.95	5.95	3	5.95	3	0	30	.18	3	200112
2B	11	.8	.8	.8	.	.30	.30	3	.30	3	0	15	.00	3	700112
2B	12	1.2	1.2	1.2	.	.50	.50	3	.50	3	0	15	.01	3	700112
2B	13	1.9	1.9	1.9	.	2.32	2.32	3	2.32	3	0	35	.08	3	700112
2B	14	1.1	1.1	1.1	.	.50	.50	3	.50	3	0	15	.01	3	700112
2B	15	.2	.2	.2	.	.15	.15	3	.15	3	0	15	.00	3	700112
2B	16	.8	.5	.8	.	.20	.30	3	.30	3	0	15	.00	3	650112
2B	17	.6	.5	.6	.	.20	.30	3	.30	3	0	15	.00	3	650112
2B	18	1.5	1.5	1.5	.	.81	.81	3	.81	3	0	15	.01	3	300112
2B	19	1.4	1.4	1.4	.	.81	.81	3	.81	3	0	15	.01	3	650112
2B	20	1.0	1.4	1.4	.	1.10	1.10	3	.70	3	36	20	.02	3	650112
2B	21	.5	.7	.7	.	.50	.50	3	.40	3	20	15	.01	3	650112
2B	22	1.4	1.4	1.4	.	.91	.91	3	.91	3	0	15	.01	3	650112
2B	23	2.7	2.7	2.7	.4	2.62	2.62	3	2.62	3	0	35	.09	3	650112
2B	24	2.4	2.4	2.4	.3	1.71	1.71	3	1.71	3	0	20	.03	3	650112
2B	25	1.6	1.6	1.6	.	.65	.65	3	.65	3	0	15	.01	3	650112
2B	26	2.4	2.4	2.4	.	2.32	2.32	3	2.32	3	0	35	.08	3	700112

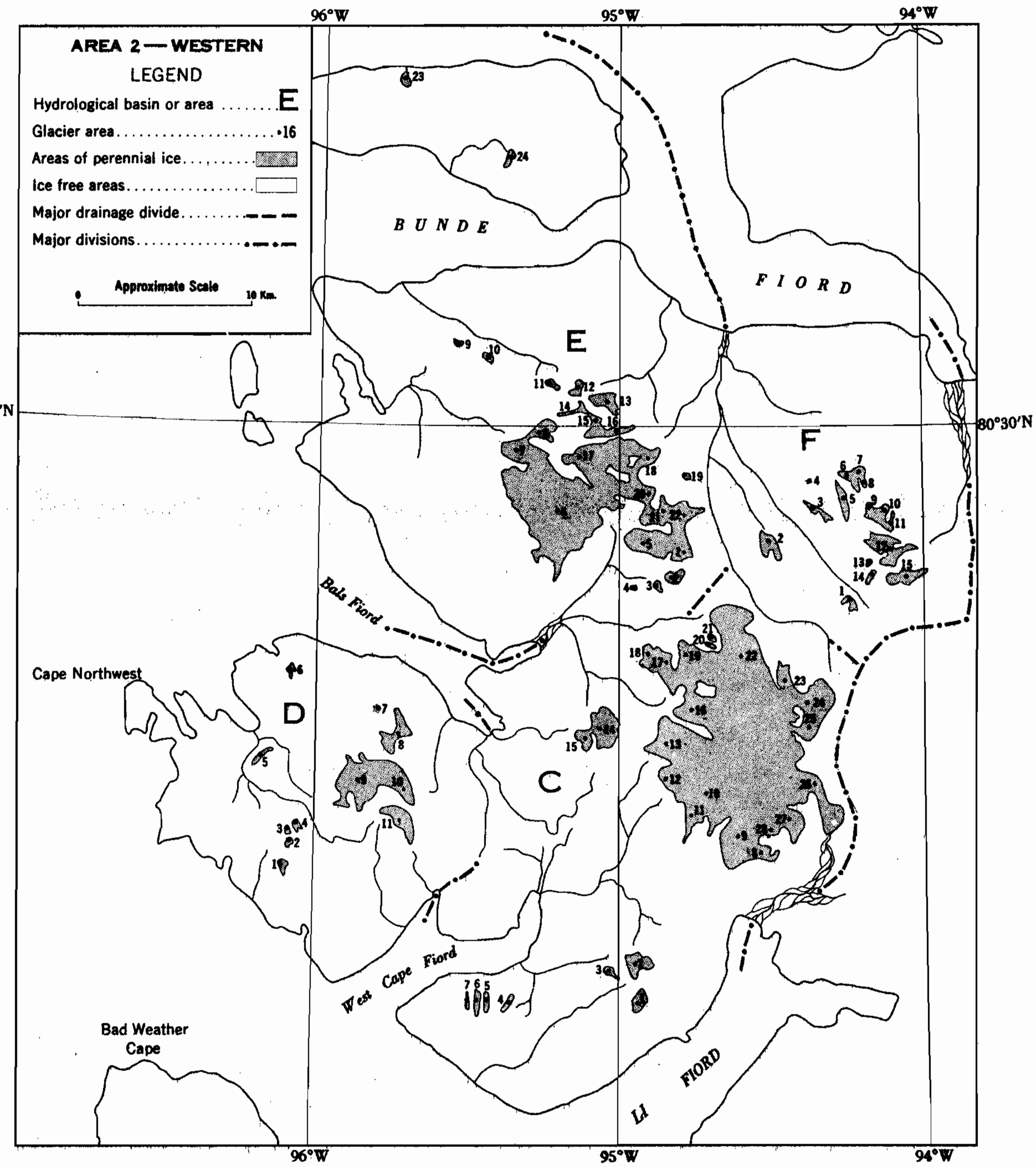

AREA 2 — WESTERN
LEGEND
Hydrological basin or area ....E
Glacier area.....................16
Areas of perennial ice..........
Ice free areas.................
Major drainage divide........
Major divisions..............
Approximate Scale
0
10 Km.
96°W
95°W
94°W
80°30'N
BUNDE
FIORD
E
F
D
C
Cape Northwest
Bad Weather Cape
Bals Fiord
West Cape Fiord
LI FIORD

Figure 12.

L1 FIORD

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT			ELEVATIONS			DATE	MEAN ELEVATION	
					AC	AB	HIGH	L.EX	L.TL	SNOW		ACCU	ABLA
2C	1	W 94 53.0	N 80 11.0	15XVV464089023		NW	610	518	518		28 7 59		549 3
2C	2	W 94 53.5	N 80 12.2	15XVV464089047		N	518	396	396		28 7 59		427 3
2C	3	W 94 57.5	N 80 12.0	15XVV462789044		N	457	366	366		28 7 59		411 3
2C	4	W 95 19.5	N 80 11.2	15XVV455789028		N	457	274	274		24 7 58		381 3
2C	5	W 95 26.0	N 80 11.3	15XVV453589031		N	457	107	107		24 7 58		320 3
2C	6	W 95 28.5	N 80 11.3	15XVV452889033		N	610	122	122		24 7 58		335 3
2C	7	W 95 29.5	N 80 11.2	15XVV452389031		N	488	152	152		24 7 58		335 3
2C	8	W 94 29.0	N 80 15.9	15XVV471989115		NW	762	579	579		28 7 59		640 3
2C	9	W 94 34.0	N 80 16.3	15XVV470589119	S	S	899	335	335	777	28 7 59	823 4	625 3
2C	10	W 94 39.0	N 80 17.6	15XVV468989146	SW	SW	884	549	549	792	28 7 59	838 4	747 3
2C	11	W 94 43.0	N 80 17.0	15XVV467689133		SW	754	457	457		28 7 59		640 3
2C	12	W 94 48.0	N 80 18.4	15XVV466289160		W	762	518	518		28 7 59		610 3
2C	13	W 94 47.5	N 80 19.5	15XVV466589182	NW	NW	884	305	305	693	28 7 59	808 4	594 3
2C	14	W 94 59.5	N 80 20.0	15XVV462689194	N	N	701	457	457	670	28 7 59	678 4	594 3
2C	15	W 95 3.0	N 80 19.5	15XVV461589185		N	686	442	442		28 7 59		549 3
2C	16	W 94 44.0	N 80 20.5	15XVV467689201	NW	W	853	442	442	716	28 7 59	792 4	610 3
2C	17	W 94 48.5	N 80 22.2	15XVV466289233		N	771	427	427		28 7 59		640 3
2C	18	W 94 51.5	N 80 22.5	15XVV465389237		N	773	411	411		28 7 59		594 3
2C	19	W 94 44.0	N 80 22.4	15XVV467789235	NW	NW	792	320	320	640	28 7 59	701 4	549 3
2C	20	W 94 40.0	N 80 22.8	15XVV468889243		NW	655	518	518		28 7 59		610 3
2C	21	W 94 39.5	N 80 23.1	15XVV469089248		NW	625	457	457		28 7 59		564 3
2C	22	W 94 35.0	N 80 23.0	15XVV470689247	N	N	1036	274	274	610	28 7 59	808 4	488 3
2C	23	W 94 24.0	N 80 21.5	15XVV473789216	N	N	823	457	457	670	28 7 59	732 4	640 3
2C	24	W 94 18.0	N 80 20.8	15XVV475689203	E	E	853	411	411	762	28 7 59	823 4	564 3
2C	25	W 94 19.5	N 80 19.9	15XVV475289186		N	914	457	457		28 7 59		762 3
2C	26	W 94 18.5	N 80 18.0	15XVV475389149	SE	S	884	122	122	777	28 7 59	838 4	518 3
2C	27	W 94 24.0	N 80 17.0	15XVV473689134	SE	S	975	488	488	838	28 7 59	930 4	716 3
2C	28	W 94 26.5	N 80 16.7	15XVV472789128	S	S	914	457	457	853	28 7 59	884 4	732 3

L1 AND BALS FIORDS

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT			ELEVATIONS			DATE	MEAN ELEVATION	
					AC	AB	HIGH	L.EX	L.TL	SNOW		ACCU	ABLA
2D	1	W 96 6.0	N 80 15.8	14XNE554889120		N	247	183	183		28 7 59		215 3
2D	2	W 96 4.5	N 80 16.4	14XNE555289133		N	335	259	259		28 7 59		297 3
2D	3	W 96 4.2	N 80 16.7	14XNE555389138		N	244	155	155		28 7 59		185 3
2D	4	W 96 3.3	N 80 17.0	14XNE555589143		N	229	38	38		28 7 59		134 3
2D	5	W 96 7.5	N 80 19.2	14XNE553889185		N	76	38	38		28 7 59		57 3
2D	6	W 96 3.5	N 80 22.1	14XNE554989239		N	152	27	27		28 7 59		91 3
2D	7	W 95 44.5	N 80 21.2	15XVV448789219		N	168	122	122		28 7 59		145 3
2D	8	W 95 42.0	N 80 20.2	15XVV449389201		N	434	145	145		28 7 59		305 3
2D	9	W 95 50.0	N 80 18.4	15XVV446789168		R	427	229	229		28 7 59		305
2D	10	W 95 41.0	N 80 18.5	15XVV449489169		NE	427	297	297		28 7 59		366 3
2D	11	W 95 41.0	N 80 17.1	15XVV449489144		SW	533	297	297		28 7 59		442 3

BALS AND BUNDE FIORDS

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT			ELEVATIONS			DATE	MEAN ELEVATION	
					AC	AB	HIGH	L.EX	L.TL	SNOW		ACCU	ABLA
2E	1	W 94 44.5	N 80 25.9	15XVV467789302		SE	792	579	579		28 7 59		685 3
2E	2	W 94 46.5	N 80 25.0	15XVV466989286		S	792	427	427		28 7 59		609 3
2E	3	W 94 50.5	N 80 24.9	15XVV465789283		S	457	396	396		28 7 59		426 3
2E	4	W 94 55.5	N 80 24.8	15XVV464189283		S	457	366	366		28 7 59		411 3
2E	5	W 94 53.0	N 80 26.3	15XVV465089309	NW	NW	925	335	335	701	28 7 59	813 4	518 3
2E	6	W 95 12.0	N 80 27.8	15XVV459289342	NW	NW	792	396	396	610	28 7 59	401 4	498 3
2E	7	W 95 16.0	N 80 29.3	15XVV458189369		NW	488	305	305		28 7 59		396 3
2E	8	W 95 13.0	N 80 29.8	15XVV459189379		SW	457	335	335		28 7 59		396 3
2E	9	W 95 31.0	N 80 32.9	15XVV453589436		N	366	305	305		28 7 59		330 3
2E	10	W 95 28.0	N 80 32.5	15XVV454889428		N	366	305	305		28 7 59		330 3
2E	11	W 95 16.5	N 80 31.7	15XVV458289413		N	350	305	305		28 7 59		327 3
2E	12	W 95 9.5	N 80 31.6	15XVV460389411		N	366	335	335		28 7 59		350 3
2E	13	W 94 59.5	N 80 30.8	15XVV463389394		NE	640	335	335		28 7 59		487 3
2E	14	W 95 1.0	N 80 29.8	15XVV462689377		NW	777	549	549		28 7 59		663 3
2E	15	W 94 59.0	N 80 30.0	15XVV463589380		NW	701	549	549		28 7 59		625 3
2E	16	W 94 56.0	N 80 29.9	15XVV464689377		N	640	427	427		28 7 59		533 3
2E	17	W 95 4.0	N 80 29.0	15XVV461789363	NW	NW	792	518	518	686	28 7 59	739 4	602 3
2E	18	W 94 51.5	N 80 29.0	15XVV465589361	E	E	792	274	274	701	28 7 59	746 4	492 3
2E	19	W 94 44.0	N 80 28.3	15XVV468089347		NE	488	427	427		28 7 59		457 3
2E	20	W 94 51.0	N 80 27.6	15XVV465789336		NE	762	396	396	488	28 7 59	625 4	442 3
2E	21	W 94 48.5	N 80 27.5	15XVV466589333		N	610	503	503		28 7 59		556 3
2E	22	W 94 44.0	N 80 27.2	15XVV467989326	N	N	914	152	152	488	28 7 59	426 4	336 3
2E	23	W 95 40.0	N 80 41.6	15XVV451989601		N	305	0	0		28 7 59		150 3
2E	24	W 95 18.5	N 80 38.7	15XVV458189544		SW	518	366	366		28 7 59		450 3

BUNDE FIORD

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT			ELEVATIONS			DATE	MEAN ELEVATION	
					AC	AB	HIGH	L.EX	L.TL	SNOW		ACCU	ABLA
2F	1	W 94 11.0	N 80 24.1	15XVV478189265		NE	2600	1800	1800		28 7 59		200 3
2F	2	W 94 29.0	N 80 26.4	15XVV472589308		W	1900	1400	1400		28 7 59		650 3
2F	3	W 94 19.5	N 80 27.4	15XVV475489327		N	610	305	305		28 7 59		457 3
2F	4	W 94 22.0	N 80 28.2	15XVV474789344		NW	518	457	457		28 7 59		487 3
2F	5	W 94 15.0	N 80 27.8	15XVV476989335	SW	SW	701	579	579	670	28 7 59	670 4	500 3
2F	6	W 94 14.0	N 80 28.5	15XVV477189347	W	W	686	488	488	640	28 7 59	663 4	564 3
2F	7	W 94 12.0	N 80 28.6	15XVV477989351		N	686	686	686		28 7 59		695 3
2F	8	W 94 11.0	N 80 28.3	15XVV478289344		N	914	686	686		28 7 59		815 3
2F	9	W 94 10.0	N 80 27.4	15XVV478489328		NW	914	686	686		28 7 59		815 3
2F	10	W 94 8.0	N 80 27.1	15XVV479189322		NE	869	610	610		28 7 59		739 3
2F	11	W 94 6.5	N 80 26.8	15XVV479489316		NE	808	686	686		28 7 59		747 3
2F	12	W 94 4.5	N 80 25.8	15XVV480289295	E	E	914	457	457	792	28 7 59	853 4	624 3
2F	13	W 94 9.3	N 80 25.1	15XVV478689284		SW	792	610	610		28 7 59		701 3
2F	14	W 94 8.0	N 80 24.6	15XVV479089275		W	762	579	579		28 7 59		670 3
2F	15	W 94 1.0	N 80 24.8	15XVV481089278	NE	NE	991	427	427	838	28 7 59	914 4	632 3
2F	16	W 93 53.0	N 80 29.5	15XVV483689366		SW	900	700	700		5 8 59		800 3

LI FIORD

IDENT	NO.	TOTAL LENGTH ABLA	EXP	TOTAL	WIDTH	SURFACE AREA EXP	TOTAL	ABLATION	AAR	DEPTH	VOLUME	TYPE
2C	1	1.2	1.2	1.2	.	.75	.75 3	.75 3	0	15	.01 3	300112
2C	2	1.4	1.4	1.4	.	1.21	1.21 3	1.21 3	0	20	.02 3	200112
2C	3	.8	.8	.8	.	.40	.40 3	.40 3	0	15	.01 3	700112
2C	4	1.4	1.4	1.4	.	.22	.22 3	.22 3	0	15	.00 3	700112
2C	5	1.6	1.6	1.6	.	.24	.24 3	.24 3	0	15	.00 3	700112
2C	6	1.6	1.6	1.6	.	.22	.22 3	.22 3	0	15	.00 3	700112
2C	7	1.1	1.1	1.1	.	.19	.19 3	.19 3	0	15	.00 3	700112
2C	8	.9	.9	.9	.	1.11	1.11 3	1.11 3	0	20	.02 3	200112
2C	9	3.7	5.9	5.9	1.6	10.49	10.49 3	7.16 3	32	125	1.31 3	430113
2C	10	1.9	4.0	4.0	.	9.37	9.37 3	3.63 3	61	30	.28 3	200112
2C	11	1.5	1.5	1.5	.	1.51	1.51 3	1.51 3	0	20	.03 3	650112
2C	12	1.1	1.1	1.1	.	1.61	1.61 3	1.61 3	0	20	.03 3	775112
2C	13	3.4	6.9	6.9	.	14.01	14.01 3	7.96 3	43	125	1.75 3	435112
2C	14	1.5	2.2	2.2	.	2.52	2.52 3	2.32 3	8	25	.06 3	300112
2C	15	1.3	1.3	1.3	.	1.11	1.11 3	1.11 3	0	20	.02 3	200112
2C	16	1.9	5.6	5.6	.	11.39	11.39 3	3.83 3	66	125	1.42 3	435112
2C	17	2.8	2.8	2.8	.	1.71	1.71 3	1.71 3	0	20	.03 3	705112
2C	18	1.8	1.8	1.8	.	1.71	1.71 3	1.71 3	0	20	.03 3	655112
2C	19	1.9	4.4	4.4	.	7.26	7.26 3	3.53 3	51	125	.91 3	420112
2C	20	.5	.5	.5	.	.14	.14 3	.14 3	0	15	.00 3	650112
2C	21	.4	.4	.4	.	.10	.10 3	.10 3	0	15	.00 3	650112
2C	22	3.1	9.9	9.9	.	21.88	21.88 3	7.36 3	66	200	4.38 3	432112
2C	23	1.5	2.5	2.5	.	1.62	1.62 3	.81 3	50	20	.03 3	670112
2C	24	3.1	4.4	4.4	1.1	6.25	6.35 3	4.13 3	35	125	.79 3	435112
2C	25	1.8	1.8	1.8	.	1.71	1.71 3	1.71 3	0	20	.03 3	775112
2C	26	5.6	6.9	6.9	.6	10.89	10.89 3	7.66 3	30	125	1.36 3	432414
2C	27	1.4	4.0	4.0	.	4.53	4.53 3	1.51 3	77	50	.23 3	430112
2C	28	1.2	1.4	1.4	.	.80	.80 3	.50 3	38	15	.01 3	650112

LI AND BALS FIORDS

IDENT	NO.	TOTAL LENGTH ABLA	EXP	TOTAL	WIDTH	SURFACE AREA EXP	TOTAL	ABLATION	AAR	DEPTH	VOLUME	TYPE
2D	1	.4	.4	.4	.	.10	.10 3	.10 3	0	15	.00 3	700112
2D	2	.4	.4	.4	.	.08	.08 3	.08 3	0	15	.00 3	700112
2D	3	.6	.6	.6	.	.08	.08 3	.08 3	0	15	.00 3	700112
2D	4	.6	.6	.6	.	.21	.21 3	.21 3	0	15	.00 3	700112
2D	5	.2	.2	.2	.	.16	.16 3	.16 3	0	15	.00 3	700112
2D	6	.9	.9	.9	.	.19	.19 3	.19 3	0	15	.00 3	700112
2D	7	.5	.5	.5	.	.11	.11 3	.11 3	0	15	.00 3	700112
2D	8	2.8	2.8	2.8	.	1.71	1.71 3	1.71 3	0	20	.03 3	700112
2D	9	3.2	3.2	3.2	.	6.96	6.96 3	6.96 3	0	30	.21 3	200112
2D	10	1.2	1.2	1.2	.	2.42	2.42 3	2.42 3	0	20	.05 3	200112
2D	11	2.6	2.6	2.6	.	2.42	2.42 3	2.42 3	0	20	.05 3	200112

BALS AND BUNDE FIORDS

IDENT	NO.	TOTAL LENGTH ABLA	EXP	TOTAL	WIDTH	SURFACE AREA EXP	TOTAL	ABLATION	AAR	DEPTH	VOLUME	TYPE
2E	1	.7	.7	.7	.	.50	.50 3	.50 3	0	15	.00 3	650112
2E	2	1.5	1.5	1.5	.	1.01	1.01 3	1.01 3	0	20	.00 3	653112
2E	3	.7	.7	.7	.	.13	.13 3	.13 3	0	15	.00 3	700112
2E	4	.6	.6	.6	.	.13	.13 3	.13 3	0	15	.00 3	700112
2E	5	2.0	2.0	2.6	.	4.14	4.14 3	3.03 3	27	35	.13 3	650112
2E	6	2.9	2.9	6.0	.	19.75	19.75 3	12.86 3	35	75	1.48 3	300112
2E	7	2.6	2.6	2.6	.	2.52	2.52 3	2.52 3	0	35	.09 3	650112
2E	8	1.6	1.6	1.6	.	1.11	1.11 3	1.11 3	0	20	.00 3	650112
2E	9	.8	.8	.8	.	.36	.36 3	.36 3	0	15	.00 3	700112
2E	10	2.4	2.4	2.4	.	.38	.38 3	.38 3	0	15	.00 3	700112
2E	11	.5	.5	.5	.	.16	.16 3	.16 3	0	15	.00 3	700112
2E	12	.8	.8	.8	.	.13	.13 3	.13 3	0	15	.00 3	700112
2E	13	2.0	2.0	2.0	.	1.21	1.21 3	1.21 3	0	20	.00 3	700112
2E	14	.1	.1	.1	.	.61	.61 3	.61 3	0	15	.00 3	650112
2E	15	1.3	1.3	1.3	.	.40	.40 3	.40 3	0	15	.00 3	650112
2E	16	1.3	1.3	1.3	.	.61	.61 3	.61 3	0	20	.01 3	650112
2E	17	1.3	1.3	2.3	.	2.52	2.52 3	1.31 3	44	35	.08 3	650112
2E	18	3.8	3.8	4.8	.	8.66	8.66 3	7.55 3	13	50	.44 3	650112
2E	19	.5	.5	.5	.	.14	.14 3	.14 3	0	15	.00 3	700112
2E	20	.6	.6	.6	.	1.51	1.51 3	.60 3	75	20	.00 3	650112
2E	21	1.6	1.6	1.6	.	1.01	1.01 3	1.01 3	0	20	.00 3	650112
2E	22	1.8	1.8	4.3	.	4.35	4.35 3	1.83 3	58	35	.15 3	700112
2E	23	.6	.6	.6	.	.20	.20 3	.20 3	0	15	.00 3	700112
2E	24	.8	.8	.8	.	.28	.28 3	.28 3	0	15	.00 3	700112

BUNDE FIORD

IDENT	NO.	TOTAL LENGTH ABLA	EXP	TOTAL	WIDTH	SURFACE AREA EXP	TOTAL	ABLATION	AAR	DEPTH	VOLUME	TYPE
2F	1	.8	.8	.8	.	.33	.33 3	.33 3	0	15	.00 3	650112
2F	2	1.6	1.6	1.6	.	.87	.87 3	.87 3	0	15	.01 3	650112
2F	3	1.9	1.9	1.9	.	.81	.81 3	.81 3	0	15	.00 3	700112
2F	4	.5	.5	.5	.	.09	.09 3	.09 3	0	15	.00 3	700112
2F	5	2.6	2.6	2.6	.	1.11	1.11 3	.71 3	85	15	.00 3	700112
2F	6	.3	.3	.9	.	.25	.37 3	.12 3	68	15	.00 3	700112
2F	7	.5	.5	.5	.	.26	.26 3	.26 3	0	15	.00 3	700112
2F	8	1.3	1.3	1.3	.	.40	.40 3	.40 3	0	15	.00 3	700112
2F	9	1.1	1.1	1.1	.	.71	.71 3	.71 3	0	20	.00 3	700112
2F	10	1.8	1.8	1.8	.	1.31	1.31 3	1.31 3	0	20	.00 3	700112
2F	11	1.3	1.3	1.3	.	.09	.09 3	.09 3	0	15	.00 3	700112
2F	12	1.9	2.9	2.9	.4	4.65	4.65 3	2.82 3	40	35	.16 3	640112
2F	13	.6	.6	.6	.	.22	.22 3	.22 3	0	15	.00 3	700112
2F	14	1.0	1.0	1.0	.	.22	.22 3	.22 3	0	15	.00 3	700112
2F	15	1.9	1.9	4.7	.6	2.33	2.33 3	1.61 3	31	35	.08 3	640112
2F	16	1.9	1.9	1.9	.	.87	.87 3	.87 3	0	15	.08 3	901020

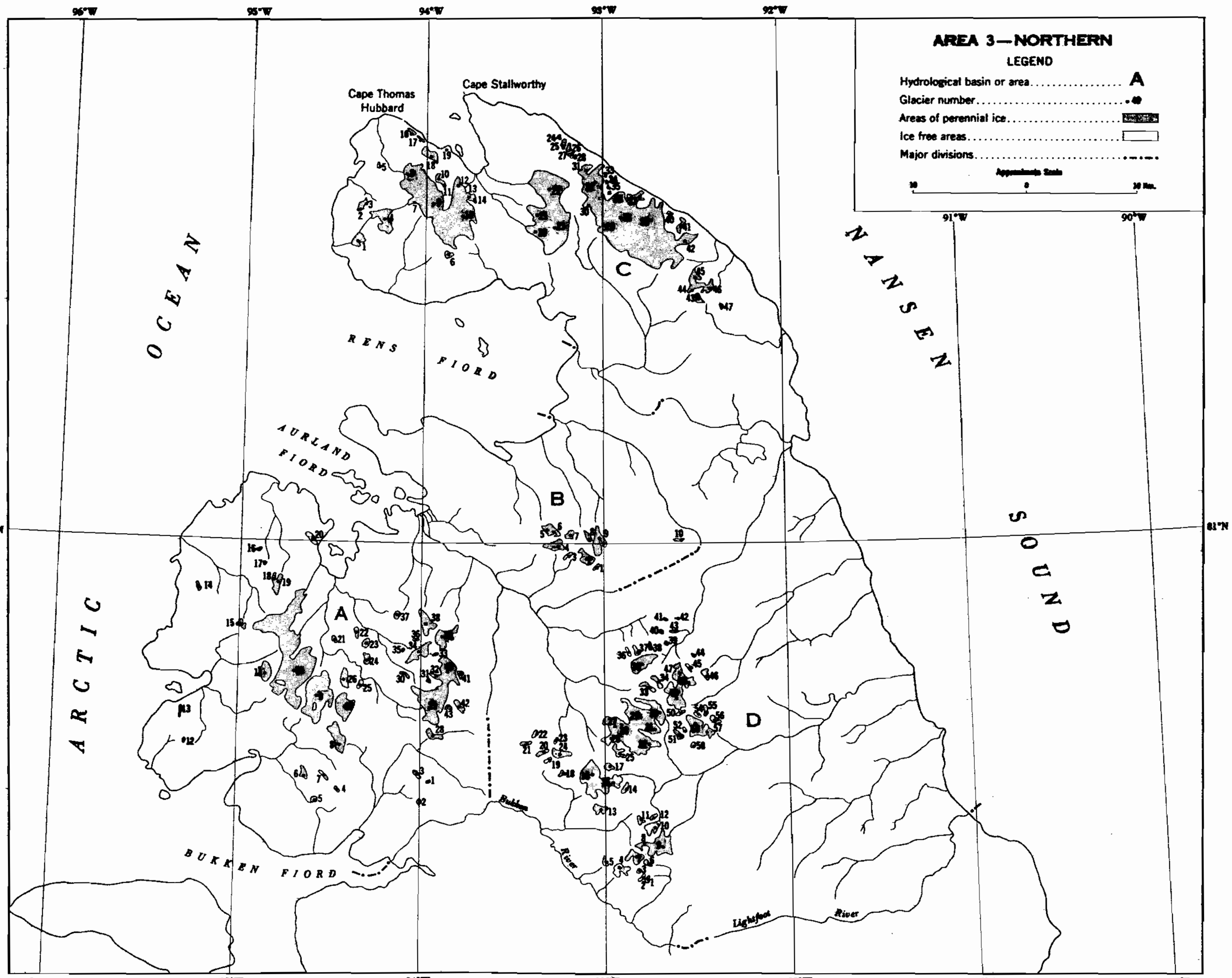

AREA 3—NORTHERN
LEGEND
Hydrological basin or area.................. A
Glacier number.............................
Areas of perennial ice.....................
Ice free areas.............................
Major divisions............................
Cape Thomas Hubbard
Cape Stallworthy
ARCTIC OCEAN
NANSEN SOUND
RENS FIORD
AURLAND FIORD
BUKKEN FIORD
Bukken River
Lightfoot River
A
B
C
D
96°W
95°W
94°W
93°W
92°W
91°W
90°W
81°N

Figure 13.

AREA 3 NORTHERN AXEL HEIBERG ISLAND N.W.T. C.S.L.OMMANNEY MCGILL UNIVERSITY AND INLAND WATERS BRANCH 1967

BUKKEN AND AURLAND FIORDS

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT AC	ORIENT AB	ELEVATIONS HIGH	ELEVATIONS L.EX	ELEVATIONS L.TL	ELEVATIONS SNOW	DATE	MEAN ELEVATION ACCU	MEAN ELEVATION ABLA
3A	1	W 93 51.0	N 80 47.2	15XVV484389692		N	503	396	396		28 7 59		442 3
3A	2	W 93 59.0	N 80 46.1	15XVV482389673		N	472	381	381		28 7 59		411 3
3A	3	W 93 58.0	N 80 47.5	15XVV482889698		NE	744	457	457		28 7 59		610 3
3A	4	W 94 25.0	N 80 47.5	15XVV474789701		NE	488	427	427		28 7 59		457 3
3A	5	W 94 31.0	N 80 46.8	15XVV472889689		N	259	229	229		28 7 59		244 3
3A	6	W 94 34.5	N 80 47.9	15XVV471789708		E	335	259	259		28 7 59		305 3
3A	7	W 94 29.0	N 80 48.0	15XVV473589711		NE	411	366	366		28 7 59		396 3
3A	8	W 94 22.5	N 80 49.2	15XVV475589731		NE	610	244	244		28 7 59		518 3
3A	9	W 94 29.5	N 80 51.8	15XVV473589779		NE	594	152	152		28 7 59		244 3
3A	10	W 94 36.0	N 80 52.9	15XVV471689804		NE	480	152	152		28 7 59		229 3
3A	11	W 94 50.0	N 80 52.7	15XVV467589800		NE	274	213	213		28 7 59		244 3
3A	12	W 95 15.0	N 80 49.6	15XVV459989745		N	305	274	274		28 7 59		290 3
3A	13	W 95 15.0	N 80 51.4	15XVV460089776		N	305	107	107		28 7 59		152 3
3A	14	W 95 08.5	N 80 57.1	15XVV462389887		N	183	137	137		28 7 59		152 3
3A	15	W 94 54.0	N 80 55.5	15XVV466489853		N	564	259	244		28 7 59		335 3
3A	16	W 94 50.0	N 80 59.3	15XVV467989924		NE	305	91	91		28 7 59		137 3
3A	17	W 94 46.0	N 80 58.6	15XVV469189911		NE	335	122	122		28 7 59		229 3
3A	18	W 94 44.0	N 80 57.8	15XVV469489896		NE	320	259	259		28 7 59		290 3
3A	19	W 94 41.5	N 80 57.6	15XVV470389894		NE	350	244	244		28 7 59		274 3
3A	20	W 94 31.0	N 81 00.0	15XVV473389936		N	183	122	122		28 7 59		152 3
3A	21	W 94 22.0	N 80 54.5	15XVV476089831		N	229	152	152		28 7 59		183 3
3A	22	W 94 16.0	N 80 54.9	15XVV477889838		NE	442	183	183		28 7 59		335 3
3A	23	W 94 13.0	N 80 54.5	15XVV478689832		NE	488	198	198		28 7 59		381 3
3A	24	W 94 13.0	N 80 53.7	15XVV478789815		NE	503	259	259		28 7 59		320 3
3A	25	W 94 14.0	N 80 52.5	15XVV478289792		N	305	274	274		28 7 59		290 3
3A	26	W 94 20.5	N 80 52.7	15XVV476389797		N	305	198	198		28 7 59		259 3
3A	27	W 94 21.0	N 80 51.3	15XVV476189770		N	427	213	213		28 7 59		274 3
3A	28	W 93 51.0	N 80 49.8	15XVV485089740		N	518	381	381		28 7 59		442 3
3A	29	W 93 54.0	N 80 51.8	15XVV484389778		NW	645	396	396		28 7 59		564 3
3A	30	W 94 00.5	N 80 52.8	15XVV482289798		N	457	366	366		28 7 59		411 3
3A	31	W 93 53.0	N 80 52.6	15XVV484589793		N	549	427	427		28 7 59		488 3.
3A	32	W 93 52.0	N 80 52.9	15XVV484889798		NW	625	411	411		28 7 59		549 3
3A	33	W. 93 52.0	N 80 54.0	15XVV485089818		N	610	427	427		28 7 59		518 3
3A	34	W 93 58.0	N 80 53.9	15XVV483189818		SW	549	274	274		28 7 59		411 3
3A	35	W 94 01.0	N 80 54.2	15XVV482289823		N	366	305	305		28 7 59		335 3
3A	36	W 93 57.0	N 80 54.7	15XVV483489834		NW	457	396	396		28 7 59		427 3
3A	37	W 94 03.0	N 80 56.0	15XVV481589858		S	305	244	244		28 7 59		274 3
3A	38	W 93 54.0	N 80 55.7	15XVV484489851		N	625	290	290		28 7 59		503 3
3A	39	W 93 47.0	N 80 54.8	15XVV486289836		NE	640	290	290		28 7 59		457 3
3A	40	W 93 46.0	N 80 53.3	15XVV486789806		NE	640	290	290		28 7 59		488 3
3A	41	W 93 41.0	N 80 53.2	15XVV488289804		S	366	274	274		28 7 59		335 3
3A	42	W 93 41.0	N 80 51.2	15XVV488089767		N	701	274	274		28 7 59		442 3
3A	43	W 93 46.0	N 80 51.3	15XVV486489767		N	457	305	305		28 7 59		411 3

RENS FIORD

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT AC	ORIENT AB	ELEVATIONS HIGH	ELEVATIONS L.EX	ELEVATIONS L.TL	ELEVATIONS SNOW	DATE	MEAN ELEVATION ACCU	MEAN ELEVATION ABLA
3B	1	W 92 56.5	N 80 58.0	15XWV501289895		E	670	427	427		28 7 59		549 3
3B	2	W 92 59.5	N 80 58.7	15XWV500489906		NW	670	305	305		28 7 59		518 3
3B	3	W 93 05.0	N 80 48.9	15XWV498689911		E	610	305	305		28 7 59		457 3
3B	4	W 93 08.5	N 80 59.3	15XWV497689920		NE	533	350	350		28 7 59		457 3
3B	5	W 93 13.0	N 81 00.1	15XWV496489935		NW	640	274	274		28 7 59		518 3
3B	6	W 93 10.5	N 81 00.1	15XWV497089935		SE	640	350	350		28 7 59		503 3
3B	7	W 93 04.5	N 80 49.9	15XWV498789929		N	488	350	350		28 7 59		427 3
3B	8	W 92 59.0	N 80 59.7	15XWV500589925		N	579	305	305		28 7 59		533 3
3B	9	W 92 55.5	N 80 59.8	15XWV501589927		N	670	259	259		28 7 59		549 3
3B	10	W 92 33.0	N 81 00.2	15XWV507889937		E	274	213	213		28 7 59		244 3

AREA 3 NORTHERN AXEL HEIBERG ISLAND N.W.T. C.S.L.OMMANNEY MCGILL UNIVERSITY AND INLAND WATERS BRANCH 1967

HOKKEN AND AURLAND FIORDS

IDENT	NO.	TOTAL LENGTH ABLA	EXP	TOTAL	WIDTH	SURFACE AREA EXP	TOTAL		ABLATION		AAR	DEPTH	VOLUME		TYPE
3A	1	.9	.9	.9	.	.30	.30	3	.30	3	0	15	.00	3	700112
3A	2	.8	.8	.8	.	.30	.30	3	.30	3	0	15	.00	3	700112
3A	3	.7	.7	.7	.	.66	.66	3	.66	3	0	15	.01	3	700112
3A	4	.4	.4	.4	.	.20	.20	3	.20	3	0	15	.00	3	700112
3A	5	.4	.4	.4	.	.20	.20	3	.20	3	0	15	.00	3	700112
3A	6	.3	.3	.3	.	.30	.30	3	.30	3	0	15	.00	3	700112
3A	7	.2	.2	.2	.	.10	.10	3	.10	3	0	15	.00	3	700112
3A	8	3.0	3.0	3.0	.	2.72	2.72	3	2.72	3	0	35	.10	3	700112
3A	9	4.0	4.0	4.0	.	9.27	9.27	3	9.27	3	0	30	.28	3	200132
3A	10	9.6	9.6	9.6	.	21.77	21.77	3	21.77	3	0	50	1.09	3	200132
3A	11	1.1	1.1	1.1	.	1.01	1.01	3	1.01	3	0	20	.02	3	300132
3A	12	.5	.5	.5	.	.10	.10	3	.10	3	0	15	.00	3	700112
3A	13	1.0	1.0	1.0	.	.20	.20	3	.20	3	0	15	.00	3	700212
3A	14	.2	.2	.2	.	.30	.30	3	.30	3	0	15	.00	3	700112
3A	15	1.0	1.0	1.0	.	.66	.76	3	.76	3	0	15	.01	3	640112
3A	16	.5	.5	.5	.	.15	.15	3	.15	3	0	15	.00	3	700112
3A	17	.6	.6	.6	.	.20	.20	3	.20	3	0	15	.00	3	700212
3A	18	.4	.4	.4	.	.25	.25	3	.25	3	0	15	.00	3	750112
3A	19	2.1	2.1	2.1	.	1.06	1.06	3	1.06	3	0	20	.02	3	700112
3A	20	.6	.6	.6	.	.71	.71	3	.71	3	0	15	.01	3	700112
3A	21	.8	.8	.8	.	.50	.50	3	.50	3	0	15	.01	3	700112
3A	22	.8	.8	.8	.	.15	.15	3	.15	3	0	15	.00	3	700112
3A	23	.9	.9	.9	.	.35	.35	3	.35	3	0	15	.00	3	700112
3A	24	1.2	1.2	1.2	.	.61	.61	3	.61	3	0	15	.01	3	700112
3A	25	.4	.4	.4	.	.40	.40	3	.40	3	0	15	.01	3	700112
3A	26	1.9	1.9	1.9	.	1.21	1.21	3	1.21	3	0	20	.02	3	700132
3A	27	2.9	2.9	2.9	.	3.43	3.43	3	3.43	3	0	35	.12	3	700132
3A	28	1.8	1.8	1.8	.	1.11	1.11	3	1.11	3	0	20	.02	3	700112
3A	29	3.8	3.8	3.8	.	8.87	8.87	3	8.87	3	0	30	.27	3	200132
3A	30	.4	.4	.4	.	.20	.20	3	.20	3	0	15	.00	3	700112
3A	31	.5	.5	.5	.	.30	.30	3	.30	3	0	15	.00	3	700112
3A	32	1.2	1.2	1.2	.2	.61	.61	3	.61	3	0	15	.01	3	650112
3A	33	.5	.5	.5	.	.30	.30	3	.30	3	0	15	.00	3	700112
3A	34	3.0	3.0	3.0	.	1.51	1.51	3	1.51	3	0	20	.03	3	600112
3A	35	.2	.2	.2	.	.20	.20	3	.20	3	0	15	.00	3	700112
3A	36	.4	.4	.4	.	.20	.20	3	.20	3	0	15	.00	3	700112
3A	37	.5	.5	.5	.	.30	.30	3	.30	3	0	15	.00	3	700112
3A	38	2.4	2.4	2.4	.	2.02	2.02	3	2.02	3	0	30	.06	3	650112
3A	39	2.5	2.5	2.5	.	1.71	1.71	3	1.71	3	0	20	.03	3	650112
3A	40	2.6	2.6	2.6	.	5.14	5.14	3	5.14	3	0	50	.26	3	640112
3A	41	.6	.6	.6	.	.40	.40	3	.40	3	0	15	.01	3	700112
3A	42	1.6	1.6	1.6	.	1.41	1.41	3	1.41	3	0	20	.03	3	750112
3A	43	.8	.8	.8	.	.61	.61	3	.61	3	0	15	.01	3	700112

RENS FIORD

IDENT	NO.	TOTAL LENGTH ABLA	EXP	TOTAL	WIDTH	SURFACE AREA EXP	TOTAL		ABLATION		AAR	DEPTH	VOLUME		TYPE
3B	1	1.0	1.0	1.0	.	.30	.30	3	.30	3	0	15	.00	3	700112
3B	2	2.0	2.0	2.0	.2	1.46	1.46	3	1.46	3	0	20	.03	3	650112
3B	3	.9	.9	.9	.	.30	.30	3	.30	3	0	15	.00	3	700112
3B	4	1.9	1.9	1.9	.2	1.31	1.31	3	1.31	3	0	20	.03	3	650112
3B	5	1.0	1.0	1.0	.2	.50	.50	3	.50	3	0	15	.01	3	650132
3B	6	1.5	1.5	1.5	.2	1.21	1.21	3	1.21	3	0	20	.02	3	650112
3B	7	1.1	1.1	1.1	.	.81	.81	3	.81	3	0	15	.01	3	650112
3B	8	1.1	1.1	1.1	.2	.40	.40	3	.40	3	0	15	.01	3	650112
3B	9	2.9	2.9	2.9	.2	1.81	1.81	3	1.81	3	0	20	.04	3	650112
3B	10	1.1	1.1	1.1	.1	.30	.30	3	.30	3	0	15	.00	3	650112

NORTHERN ICE CAPS

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT		ELEVATIONS				DATE	MEAN ELEVATION	
					AC	AB	HIGH	L.EX	L.TL	SNOW		ACCU	ABLA
3C	1	W 94 13.0	N 81 15.5	15XVA479290218		E	168	91	91		28 7 59		122 3
3C	2	W 94 12.0	N 81 17.0	15XVA479890252		N	183	122	122		28 7 59		152 3
3C	3	W 94 10.0	N 81 17.5	15XVA480490255		N	183	122	122		28 7 59		152 3
3C	4	W 94 04.0	N 81 18.5	15XVA482090239		N	244	122	122		28 7 59		152 3
3C	5	W 94 04.0	N 81 19.5	15XVA481990294		N	183	91	91		28 7 59		137 3
3C	6	W 93 41.0	N 81 14.5	15XVA488490202		E	305	152	152		25 7 59		229 3
3C	7	W 93 52.0	N 81 17.5	15XVA485290255		SW	335	274	274		25 7 59		320 3
3C	8	W 93 55.0	N 81 19.0	15XVA484590282		W	335	183	183		25 7 59		274 3
3C	9	W 93 47.0	N 81 17.0	15XVA487290251		NE	366	122	122		25 7 59		305 3
3C	10	W 93 43.5	N 81 18.5	15XVA487790275		NE	213	107	107		25 7 59		152 3
3C	11	W 93 42.0	N 81 18.2	15XVA488290269		NE	213	122	122		25 7 59		168 3
3C	12	W 93 37.0	N 81 18.0	15XVA489590263		N	152	91	91		25 7 59		122 3
3C	13	W 93 35.0	N 81 17.5	15XVA490690254		NE	122	91	91		25 7 59		107 3
3C	14	W 93 32.0	N 81 17.5	15XVA491090252		N	152	91	91		25 7 59		122 3
3C	15	W 93 36.0	N 81 16.5	15XVA489890240		NW	305	137	137		25 7 59		259 3
3C	16	W 93 50.0	N 81 21.0	15XVA485990319		NW	61	30	30		25 7 59		46 3
3C	17	W 93 47.0	N 81 20.5	15XVA486990310		NW	61	30	30		25 7 59		46 3
3C	18	W 93 46.0	N 81 19.8	15XVA487090299		NW	152	61	61		25 7 59		107 3
3C	19	W 93 41.0	N 81 20.0	15XVA488690304		NW	61	30	30		25 7 59		46 3
3C	20	W 93 12.0	N 81 15.5	15XVA496690221		W	213	122	122		28 7 59		168 3
3C	21	W 93 11.0	N 81 16.5	15XVA497490236		NW	244	91	91		28 7 59		152 3
3C	22	W 93 07.0	N 81 18.0	15XVA498390258		R	244	122	122		28 7 59		198 3
3C	23	W 93 05.0	N 81 16.0	15XVA498690223		SW	290	107	107		28 7 59		213 3
3C	24	W 93 03.0	N 81 20.2	15XVA499390306		NE	610	457	457		28 7 59		533 3
3C	25	W 93 01.0	N 81 20.0	15XVA499790301		NE	640	305	305		28 7 59		549 3
3C	26	W 93 00.0	N 81 19.8	15XVA499990294		NE	640	457	457		28 7 59		579 3
3C	27	W 92 59.0	N 81 19.5	15XWA500390291		NE	640	457	457		28 7 59		610 3
3C	28	W 92 59.0	N 81 19.2	15XWA500390287		NE	640	488	480		28 7 59		625 3
3C	29	W 92 47.0	N 81 16.0	15XWA503590227		SE	670	305	305		28 7 59		518 3
3C	30	W 92 53.0	N 81 17.5	15XWA501690255		W	518	274	274		28 7 59		427 3
3C	31	W 92 53.5	N 81 18.5	15XWA502090276		NE	305	122	122		28 7 59		213 3
3C	32	W 92 52.0	N 81 18.0	15XWA502390269		NE	670	61	61		28 7 59		518 3
3C	33	W 92 48.0	N 81 18.2	15XWA503390269		N	996	305	305		28 7 59		350 3
3C	34	W 92 47.0	N 81 18.0	15XWA503590263		N	610	457	457		28 7 59		518 3
3C	35	W 92 46.0	N 81 17.0	15XWA504090257		N	701	610	610		28 7 59		655 3
3C	36	W 92 45.5	N 81 17.4	15XWA504190253		NE	747	610	610		28 7 59		670 3
3C	37	W 92 37.0	N 81 17.2	15XWA506290250		NE	305	15	15		28 7 59		168 3
3C	38	W 92 41.0	N 81 16.5	15XWA505190231		R	701	244	244		28 7 59		518 3
3C	39	W 92 35.0	N 81 16.0	15XWA507290226		NE	670	0	0		28 7 59		503 3
3C	40	W 92 28.0	N 81 16.5	15XWA509090235		NE	305	61	61		28 7 59		213 3
3C	41	W 92 25.5	N 81 15.5	15XWA509790218		N	488	366	366		28 7 59		335 3
3C	42	W 92 22.0	N 81 15.0	15XWA510490208		E	305	274	274		28 7 59		366 3
3C	43	W 92 20.0	N 81 11.8	15XWA511490152		SE	457	305	305		28 7 59		503 3
3C	44	W 92 23.0	N 81 12.2	15XWA510790158		SW	625	549	549		28 7 59		579 3
3C	45	W 92 21.0	N 81 12.5	15XWA511090170		N	625	305	305		28 7 59		457 3
3C	46	W 92 15.0	N 81 12.5	15XWA512690163		E	610	274	274		28 7 59		366 3
3C	47	W 92 10.0	N 81 11.4	15XWA514190143		N	457	366	366		28 7 59		411 3

SOUTH FAST

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT		ELEVATIONS				DATE	MEAN ELEVATION	
					AC	AB	HIGH	L.EX	L.TL	SNOW		ACCU	ABLA
3D	1	W 92 41.5	N 80 46.8	15XWV505689592		NE	701	594	594		28 7 59		670 3
3D	2	W 92 43.0	N 80 47.0	15XWV505089595		E	732	579	579		28 7 59		670 3
3D	3	W 92 44.0	N 80 47.4	15XWV505089603		NE	732	259	259		28 7 59		594 3
3D	4	W 92 51.0	N 80 47.6	15XWV502689608		N	945	533	533		28 7 59		655 3
3D	5	W 92 56.0	N 80 47.8	15XWV501289614		NE	762	457	457		28 7 59		518 3
3D	6	W 92 42.5	N 80 47.8	15XWV505689611		SE	838	579	579		28 7 59		747 3
3D	7	W 92 46.0	N 80 48.2	15XWV504389619		N	975	457	457		28 7 59		716 3
3D	8	W 92 43.5	N 80 48.8	15XWV505089630		W	823	457	457		28 7 59		625 3
3D	9	W 92 38.5	N 80 48.7	15XWV506589628		E	914	518	518		28 7 59		747 3
3D	10	W 92 39.0	N 80 49.8	15XWV506389647		E	777	442	442		28 7 59		625 3
3D	11	W 92 44.0	N 80 00.0	15XWV504789652		N	792	427	427		28 7 59		610 3
3D	12	W 92 40.5	N 80 45.2	15XWV506089656		E	792	472	472		28 7 59		625 3
3D	13	W 92 57.0	N 80 45.8	15XWV501089666		E	777	564	564		17 8 59		701 3
3D	14	W 92 48.5	N 80 46.7	15XWV503489682		NE	732	396	396		17 8 59		640 3
3D	15	W 92 53.0	N 80 47.2	15XWV502289691		E	1067	472	472		17 8 59		640 3
3D	16	W 92 59.0	N 80 47.8	15XWV500489700		N	823	442	442		17 8 59		640 3
3D	17	W 92 53.0	N 80 47.9	15XWV502089704		SE	792	479	479		17 8 59		701 3
3D	18	W 93 07.0	N 80 47.5	15XWV498089696		W	549	427	427		17 8 59		518 3
3D	19	W 93 12.0	N 80 48.2	15XWV496589711		W	625	396	396		17 8 59		533 3
3D	20	W 93 13.0	N 80 48.8	15XWV496289720		W	732	427	427		17 8 59		549 3
3D	21	W 93 16.5	N 80 49.5	15XWV495189735		W	610	442	442		17 8 59		518 3
3D	22	W 93 12.5	N 80 50.0	15XWV506389744		NE	762	411	411		17 8 59		518 3
3D	23	W 93 08.5	N 80 49.0	15XWV497689725		NE	914	457	457		17 8 59		732 3
3D	24	W 93 07.0	N 80 48.5	15XWV498089714		E	914	518	518		17 8 59		716 3
3D	25	W 92 50.5	N 80 48.8	15XWV502889722		S	792	594	594		28 7 59		701 3
3D	26	W 92 53.5	N 80 49.4	15XWV502089732		W	625	579	579		28 7 59		610 3
3D	27	W 92 52.0	N 80 50.2	15XWV502489746		W	655	442	442		28 7 59		625 3
3D	28	W 92 50.0	N 80 50.3	15XWV503089748		NW	655	396	396		28 7 59		625 3
3D	29	W 92 44.0	N 80 50.5	15XWV504889752		NW	853	411	411		28 7 59		640 3
3D	30	W 92 37.0	N 80 51.0	15XWV506789762		NW	762	427	427		28 7 59		655 3
3D	31	W 92 39.0	N 80 49.8	15XWV506289740		SE	823	549	549		28 7 59		686 3
3D	32	W 92 40.0	N 80 49.1	15XWV505889726		SE	948	457	457		28 7 59		762 3
3D	33	W 92 40.0	N 80 52.2	15XWV505989783		NW	762	350	350		28 7 59		549 3
3D	34	W 92 37.5	N 80 52.4	15XWV506889788		NW	777	335	335		28 7 59		594 3
3D	35	W 92 41.0	N 80 53.4	15XWV505789806		E	884	457	457		28 7 59		701 3
3D	36	W 92 45.5	N 80 53.7	15XWV504489814		N	777	564	564		28 7 59		670 3
3D	37	W 92 43.0	N 80 54.0	15XWV505189816		NE	777	427	427		28 7 59		640 3
3D	38	W 92 39.0	N 80 54.1	15XWV506389819		N	747	594	594		28 7 59		655 3
3D	39	W 92 34.5	N 80 54.3	15XWV507689824		E	792	670	670		28 7 59		762 3
3D	40	W 92 34.5	N 80 54.8	15XWV507789835		NE	747	610	610		28 7 59		686 3
3D	41	W 92 31.5	N 80 55.5	15XWV508489846		N	670	610	610		28 7 59		625 3
3D	42	W 92 29.5	N 80 55.4	15XWV509189844		NE	670	610	610		28 7 59		625 3
3D	43	W 92 31.0	N 80 54.9	15XWV508789836		E	686	457	457		28 7 59		549 3
3D	44	W 92 25.0	N 80 53.8	15XWV510589812		NW	625	564	564		28 7 59		579 3
3D	45	W 92 28.0	N 80 53.0	15XWV509689800		NW	625	564	564		28 7 59		594 3
3D	46	W 92 24.5	N 80 52.8	15XWV510589796		NE	945	686	686		28 7 59		838 3
3D	47	W 92 30.0	N 80 52.9	15XWV508889796		NE	945	518	518		28 7 59		701 3
3D	48	W 92 27.0	N 80 52.2	15XWV509789786		SE	670	579	579		28 7 59		640 3
3D	49	W 92 31.0	N 80 51.4	15XWV508589769		SE	914	579	579		28 7 59		808 3
3D	50	W 92 30.5	N 80 50.5	15XWV508889754		E	701	579	579		28 7 59		640 3
3D	51	W 92 31.0	N 80 49.5	15XWV508689734		N	640	564	564		28 7 59		610 3
3D	52	W 92 29.0	N 80 49.6	15XWV509289736		W	792	701	701		28 7 59		762 3
3D	53	W 92 27.0	N 80 50.2	15XWV509789747		NE	853	564	564		28 7 59		762 3
3D	54	W 92 25.0	N 80 50.5	15XWV510589752		N	838	594	594		28 7 59		762 3
3D	55	W 92 22.0	N 80 50.7	15XWV511389756		NE	838	457	457		28 7 59		732 3
3D	56	W 92 20.5	N 80 50.2	15XWV511789748		SE	823	579	579		28 7 59		747 3
3D	57	W 92 23.0	N 80 49.5	15XWV511089736		E	853	457	457		28 7 59		732 3
3D	58	W 92 26.5	N 80 49.0	15XWV510089725		S	747	594	594		28 7 59		670 3

NORTHERN ICE CAPS

IDENT	NO.	TOTAL LENGTH ABLA	EXP	TOTAL	WIDTH	SURFACE AREA EXP	TOTAL		ABLATION		AAR	DEPTH	VOLUME		TYPE
3C	1	1.8	1.8	1.8	.	1.21	1.21	3	1.21	3	0	25	.03	3	300102
3C	2	.9	.9	.9	.	.40	.40	3	.40	3	0	15	.01	3	700102
3C	3	.5	.5	.5	.	.20	.20	3	.20	3	0	15	.00	3	700102
3C	4	2.1	2.1	2.1	.	2.02	2.02	3	2.02	3	0	20	.04	3	200102
3C	5	.5	.5	.5	.	.20	.20	3	.20	3	0	15	.00	3	700112
3C	6	1.0	1.0	1.0	.	.60	.60	3	.60	3	0	15	.01	3	700102
3C	7	1.2	1.2	1.2	.4	.70	.70	3	.70	3	0	50	.04	3	400112
3C	8	.8	.8	.8	.	.40	.40	3	.40	3	0	50	.02	3	400112
3C	9	9.2	9.2	9.2	.	16.93	16.93	3	16.93	3	0	30	.51	3	200112
3C	10	.9	.9	.9	.	.30	.30	3	.30	3	0	20	.01	3	200102
3C	11	.5	.5	.5	.	.30	.30	3	.30	3	0	15	.00	3	700112
3C	12	4.0	4.0	4.0	.2	1.92	1.92	3	1.92	3	0	50	.10	3	400112
3C	13	.6	.6	.6	.	.50	.50	3	.50	3	0	15	.01	3	750102
3C	14	.9	.9	.9	.	.30	.30	3	.30	3	0	15	.00	3	700102
3C	15	5.2	5.2	5.2	.	5.95	5.95	3	5.95	3	0	30	.18	3	200102
3C	16	.1	.1	.1	.	.20	.20	3	.20	3	0	15	.00	3	700113
3C	17	.1	.1	.1	.	.20	.20	3	.20	3	0	15	.00	3	700113
3C	18	.8	.8	.8	.	1.61	1.61	3	1.61	3	0	15	.02	3	730112
3C	19	.1	.1	.1	.	.10	.10	3	.10	3	0	15	.00	3	700112
3C	20	1.2	1.2	1.2	.4	.50	.50	3	.50	3	0	50	.02	3	400112
3C	21	2.4	2.4	2.4	.5	2.32	2.32	3	2.32	3	0	50	.12	3	400112
3C	22	3.4	3.4	3.4	.	7.56	7.56	3	7.56	3	0	50	.38	3	300112
3C	23	5.1	5.1	5.1	.	9.98	9.98	3	9.98	3	0	30	.30	3	200112
3C	24	.5	.5	.5	.1	.10	.10	3	.10	3	0	15	.00	3	650112
3C	25	1.0	1.0	1.0	.4	.60	.60	3	.60	3	0	15	.01	3	650112
3C	26	1.0	1.0	1.0	.3	.30	.30	3	.30	3	0	15	.00	3	650112
3C	27	.5	.5	.5	.1	.15	.15	3	.15	3	0	15	.00	3	650112
3C	28	.5	.5	.5	.1	.15	.15	3	.15	3	0	15	.00	3	650112
3C	29	2.0	2.0	2.0	.2	2.72	2.72	3	2.72	3	0	50	.14	3	403112
3C	30	1.1	1.1	1.1	.5	.81	.81	3	.81	3	0	50	.04	3	400112
3C	31	1.6	1.6	1.6	.4	1.01	1.01	3	1.01	3	0	20	.02	3	640112
3C	32	5.2	5.2	5.2	.3	6.35	6.35	3	6.35	3	0	75	.48	3	400112
3C	33	.5	.5	.5	.1	.10	.10	3	.10	3	0	15	.00	3	700112
3C	34	.3	.3	.3	.1	.10	.10	3	.10	3	0	15	.00	3	700112
3C	35	.5	.5	.5	.1	.15	.15	3	.15	3	0	15	.00	3	650112
3C	36	.5	.5	.5	.1	.15	.15	3	.15	3	0	15	.00	3	650112
3C	37	.5	.5	.5	.2	.25	.25	3	.25	3	0	15	.00	3	700322
3C	38	6.9	6.9	6.9	.	18.34	18.34	3	18.34	3	0	30	.55	3	204412
3C	39	3.9	3.9	3.9	.4	8.26	8.26	3	8.26	3	0	90	.74	3	400312
3C	40	.6	.6	.6	.	.50	.50	3	.50	3	0	15	.01	3	650412
3C	41	1.1	1.1	1.1	.1	.35	.35	3	.35	3	0	15	.00	3	700112
3C	42	2.1	2.1	2.1	.7	1.11	1.11	3	1.11	3	0	50	.06	3	400112
3C	43	.9	.9	.9	.1	.25	.25	3	.25	3	0	15	.00	3	650112
3C	44	.5	.5	.5	.2	.20	.20	3	.20	3	0	15	.00	3	650012
3C	45	1.8	1.8	1.8	.2	.91	.91	3	.91	3	0	15	.01	3	650112
3C	46	2.1	2.1	2.1	.2	1.21	1.21	3	1.21	3	0	20	.02	3	650112
3C	47	.5	.5	.5	.2	.20	.20	3	.20	3	0	15	.00	3	650112

SOUTH EAST

IDENT	NO.	TOTAL LENGTH ABLA	EXP	TOTAL	WIDTH	SURFACE AREA EXP	TOTAL		ABLATION		AAR	DEPTH	VOLUME		TYPE
3D	1	.7	.7	.7	.	.20	.20	3	.20	3	0	15	.00	3	650112
3D	2	.9	.9	.9	.	.15	.15	3	.15	3	0	15	.00	3	700112
3D	3	.4	.4	.4	.	.20	.20	3	.20	3	0	15	.00	3	700012
3D	4	1.6	1.6	1.6	.	1.31	1.31	3	1.31	3	0	20	.03	3	650112
3D	5	1.0	1.0	1.0	.	.30	.30	3	.30	3	0	15	.00	3	700112
3D	6	1.1	1.1	1.1	.	.40	.40	3	.40	3	0	15	.01	3	700112
3D	7	1.7	1.7	1.7	.	1.11	1.11	3	1.11	3	0	20	.02	3	650112
3D	8	1.8	1.8	1.8	.1	.70	.70	3	.70	3	0	15	.01	3	650112
3D	9	1.9	1.9	1.9	.	3.51	3.51	3	3.51	3	0	20	.07	3	200112
3D	10	2.0	2.0	2.0	.	1.81	1.81	3	1.81	3	0	20	.04	3	650112
3D	11	1.1	1.1	1.1	.	.40	.40	3	.40	3	0	15	.01	3	650112
3D	12	.9	.9	.9	.	.30	.30	3	.30	3	0	15	.00	3	650112
3D	13	1.2	1.2	1.2	.	.81	.81	3	.81	3	0	15	.01	3	650112
3D	14	1.1	1.1	1.1	.	.35	.35	3	.35	3	0	15	.00	3	650112
3D	15	2.6	2.6	2.6	.	2.02	2.02	3	2.02	3	0	30	.06	3	650132
3D	16	3.6	3.6	3.6	.	4.33	4.33	3	4.33	3	0	35	.15	3	650132
3D	17	.9	.9	.9	.	.60	.60	3	.60	3	0	15	.01	3	650112
3D	18	1.1	1.1	1.1	.	.35	.35	3	.35	3	0	15	.00	3	700112
3D	19	.8	.8	.8	.	.20	.20	3	.20	3	0	15	.00	3	700112
3D	20	1.5	1.5	1.5	.	.60	.60	3	.60	3	0	15	.01	3	650112
3D	21	1.1	1.1	1.1	.	.30	.30	3	.30	3	0	15	.00	3	650112
3D	22	1.1	1.1	1.1	.	.40	.40	3	.40	3	0	15	.01	3	650112
3D	23	1.0	1.0	1.0	.	.40	.40	3	.40	3	0	15	.01	3	650112
3D	24	1.4	1.4	1.4	.	1.01	1.01	3	1.01	3	0	20	.02	3	650112
3D	25	1.2	1.2	1.2	.	.60	.60	3	.60	3	0	15	.01	3	700112
3D	26	1.0	1.0	1.0	.	.60	.60	3	.60	3	0	15	.01	3	650112
3D	27	2.6	2.6	2.6	.	2.32	2.32	3	2.32	3	0	30	.07	3	650112
3D	28	1.6	1.6	1.6	.	.70	.70	3	.70	3	0	15	.01	3	650112
3D	29	3.5	3.5	3.5	.2	4.54	4.54	3	4.54	3	0	35	.16	3	650112
3D	30	3.4	3.4	3.4	.2	3.12	3.12	3	3.12	3	0	20	.06	3	200112
3D	31	1.6	1.6	1.6	.	1.31	1.31	3	1.31	3	0	20	.03	3	650112
3D	32	3.8	3.8	3.8	.	5.24	5.24	3	5.24	3	0	40	.21	3	650112
3D	33	1.3	1.3	1.3	.	.50	.50	3	.50	3	0	15	.01	3	650112
3D	34	1.3	1.3	1.3	.	.70	.70	3	.70	3	0	15	.01	3	650112
3D	35	2.9	2.9	2.9	.1	2.42	2.42	3	2.42	3	0	30	.07	3	650112
3D	36	.5	.5	.5	.	.10	.10	3	.10	3	0	15	.00	3	700112
3D	37	1.2	1.2	1.2	.1	.40	.40	3	.40	3	0	15	.00	3	650112
3D	38	.5	.5	.5	.	.10	.10	3	.10	3	0	15	.00	3	750112
3D	39	.4	.4	.4	.	.10	.10	3	.10	3	0	15	.00	3	700112
3D	40	.3	.3	.3	.	.05	.05	3	.05	3	0	15	.00	3	700112
3D	41	.1	.1	.1	.	.10	.10	3	.10	3	0	15	.00	3	700112
3D	42	.1	.1	.1	.	.05	.05	3	.05	3	0	15	.00	3	700112
3D	43	1.1	1.1	1.1	.	.35	.35	3	.35	3	0	15	.00	3	700112
3D	44	.4	.4	.4	.	.10	.10	3	.10	3	0	15	.00	3	700112
3D	45	.4	.4	.4	.	.10	.10	3	.10	3	0	15	.00	3	700112
3D	46	1.2	1.2	1.2	.	.40	.40	3	.40	3	0	15	.01	3	720112
3D	47	1.8	1.8	1.8	.	1.31	1.31	3	1.31	3	0	20	.03	3	650112
3D	48	1.8	1.8	1.8	.	1.51	1.51	3	1.51	3	0	20	.03	3	650112
3D	49	3.0	3.0	3.0	.	3.63	3.63	3	3.63	3	0	30	.11	3	650112
3D	50	1.1	1.1	1.1	.	.40	.40	3	.40	3	0	15	.01	3	650112
3D	51	1.0	1.0	1.0	.	.40	.40	3	.40	3	0	15	.01	3	650112
3D	52	.3	.3	.3	.	.10	.10	3	.10	3	0	15	.00	3	700112
3D	53	1.8	1.8	1.8	.	1.01	1.01	3	1.01	3	0	20	.02	3	650112
3D	54	.9	.9	.9	.	.15	.15	3	.15	3	0	15	.00	3	650112
3D	55	1.4	1.4	1.4	.	.60	.60	3	.60	3	0	15	.01	3	650112
3D	56	1.0	1.0	1.0	.	.35	.35	3	.35	3	0	15	.00	3	650112
3D	57	2.0	2.0	2.0	.	1.81	1.81	3	1.81	3	0	20	.04	3	650112
3D	58	.8	.8	.8	.	.25	.25	3	.25	3	0	15	.00	3	650112

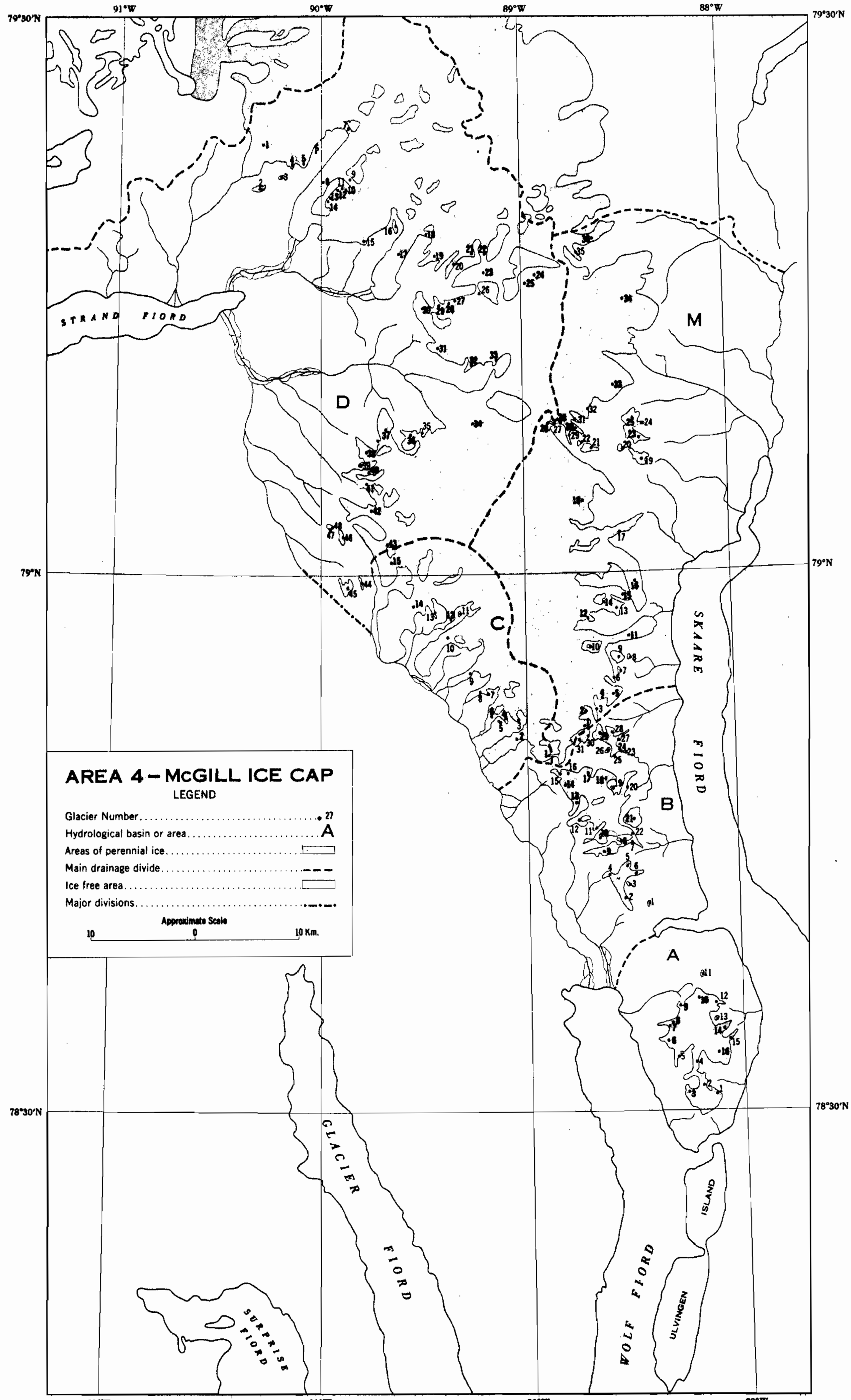
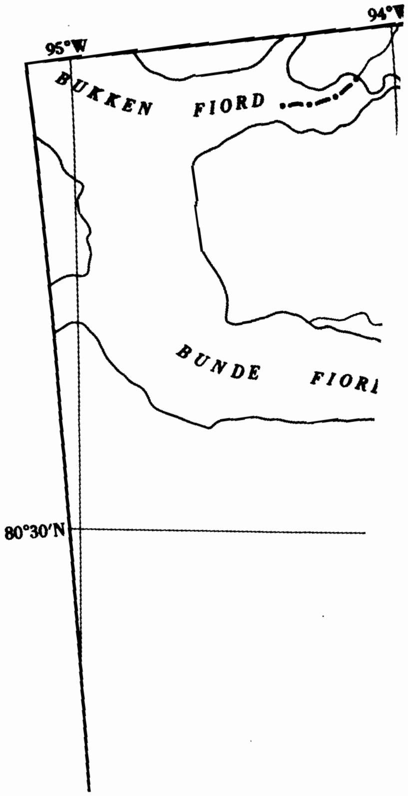

AREA 4 – McGILL ICE CAP
LEGEND
Glacier Number
Hydrological basin or area
Areas of perennial ice
Main drainage divide
Ice free area
Major divisions
Approximate Scale
10 0 10 Km.
79°30'N
78°30'N
79°N
91°W
90°W
89°W
88°W
STRAND FIORD
GLACIER FIORD
WOLF FIORD
SKAARE FIORD
SURPRISE FIORD
ISLAND
ULVINGEN
A
B
C
D
M

Figure 14.



95°W
94°W
BUKKEN FIORD
BUNDE FIORD
80°30′N

AREA 4 MCGILL ICE CAP AXEL HEIBERG ISLAND N.W.T. C.S.L.OMMANNEY MCGILL UNIVERSITY AND INLAND WATERS BRANCH 1968

BEAR STRAIT ICE FIELD

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT AC	ORIENT AB	HIGH	ELEVATIONS L.EX	L.TL	SNOW	DATE	MEAN ELEVATION ACCU	ABLA
4A	1	W 88 05.0	N 78 30.5	16XDC475687152		NE	792	457	457		29 7 59		670 3
4A	2	W 88 09.0	N 78 31.0	16XDC474487162		N	945	244	244		29 7 59		625 3
4A	3	W 88 12.0	N 78 30.5	16XDC473087152		NE	945	396	396		29 7 59		762 3
4A	4	W 88 11.0	N 78 32.5	16XDC473787184		S	1070	137	137		29 7 59		914 3
4A	5	W 88 16.0	N 78 32.5	16XDC471887190		S	914	305	305		29 7 59		747 3
4A	6	W 88 19.0	N 78 33.5	16XDC470687209		W	914	518	518		29 7 59		792 3
4A	7	W 88 19.0	N 78 34.3	16XDC470887221		W	914	366	366		29 7 59		716 3
4A	8	W 88 18.0	N 78 34.5	16XDC471287225		W	914	488	488		29 7 59		762 3
4A	9	W 88 15.0	N 78 35.5	16XDC472287244		N	838	457	457		29 7 59		640 3
4A	10	W 88 93.0	N 78 36.0	16XDC474287248		NE	975	472	472		29 7 59		686 3
4A	11	W 88 08.5	N 78 37.2	16XDC474887274		N	838	716	716		29 7 59		792 3
4A	12	W 88 06.0	N 78 35.5	16XDC475487240		NE	975	290	290		29 7 59		670 3
4A	13	W 88 05.0	N 78 34.5	16XDC476087225		NE	914	610	610		29 7 59		823 3
4A	14	W 88 03.0	N 78 34.0	16XDC476687216		NE	823	381	381		29 7 59		670 3
4A	15	W 88 01.0	N 78 33.5	16XDC477687209		NE	914	305	305		29 7 59		655 3
4A	16	W 88 05.0	N 78 32.5	16XDC475687196		S	975	701	701		29 7 59		869 3

SKAARE FIORD ICE FIELDS

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT AC	ORIENT AB	HIGH	ELEVATIONS L.EX	L.TL	SNOW	DATE	MEAN ELEVATION ACCU	ABLA
4B	1	W 88 24.0	N 78 41.0	16XDC469587350		NE	853	747	747		29 7 59		808 3
4B	2	W 88 29.0	N 78 41.5	16XDC467487360	SW	SE	1155	442	442	1128	29 7 59	1112 4	808 3
4B	3	W 88 28.0	N 78 42.3	16XDC468087371		SE	960	838	838	838	29 7 59	914 4	
4B	4	W 88 33.0	N 78 42.8	16XDC466487381	SW	NW	1155	442	442	1128	29 7 59	1112 4	792 3
4B	5	W 88 29.0	N 78 43.0	16XDC467787388	N	N	1155	701	701	914	29 7 59	1052 4	808 3
4B	6	W 88 27.0	N 78 42.6	16XDC468687380	E	E	1155	732	732	762	29 7 59	945 4	747 3
4B	7	W 88 28.0	N 78 44.3	16XDC467887409	E	E	1097	457	457	975	29 7 59	1006 4	792 3
4B	8	W 88 30.5	N 78 44.5	16XDC467387414		SE	1006	762	762		29 7 29		899 3
4B	9	W 88 38.0	N 78 43.9	16XDC464687404	E	W	1097	366	366	1036	29 7 59	1036 4	762 3
4B	10	W 88 40.0	N 78 44.5	16XDC464687417	SW	SW	1295	152	152	1128	29 7 59	1173 4	823 3
4B	11	W 88 38.0	N 78 45.5	16XDC464587429	SW	SW	1158	762	762	1128	29 7 59	1173 4	975 3
4B	12	W 88 44.0	N 78 45.8	16XDC462487440	SW	SW	1250	259	259	1128	29 7 59	1097 4	1006 3
4B	13	W 88 44.0	N 78 46.8	16XDC462387454	S	S	1234	427	427	1112	29 7 59	1158 4	975 3
4B	14	W 88 47.0	N 78 47.8	16XDC461287478	NW	NW	1234	792	792	1006	29 7 59	1128 4	1006 3
4B	15	W 88 49.0	N 78 48.5	16XDC460787492	NW	NW	1234	442	442	991	29 7 59	1082 4	853 3
4B	16	W 88 47.0	N 78 48.5	16XDC461387493	NW	NW	1082	549	549	1052	29 7 59	1067 4	869 3
4B	17	W 88 40.0	N 78 48.5	16XDC463987491	NE	NE	975	686	686	950	29 7 59	1036 4	792 3
4B	18	W 88 35.0	N 78 48.3	16XDC465687486	NE	NE	1250	335	335	1021	29 7 59	1097 4	823 3
4B	19	W 88 32.5	N 78 47.6	16XDC465687471		NW	975	914	914		29 7 59		960 3
4B	20	W 88 26.0	N 78 48.0	16XDC468487474	NE	NE	1250	213	213	1036	29 7 59	1067 4	853 3
4B	21	W 88 23.0	N 78 45.8	16XDC469287436	NE	NE	1036	716	716	853	29 7 59	945 4	792 3
4B	22	W 88 27.0	N 78 44.8	16XDC468587418	E	SE	1295	427	427	975	29 7 59	1173 4	838 3
4B	23	W 88 29.0	N 78 49.8	16XDC468087510		NW	930	899	899		29 7 59		914 3
4B	24	W 88 31.0	N 78 49.8	16XDC467587511	SE		975	914			29 7 59	945 4	
4B	25	W 88 33.0	N 78 49.5	16XDC466587506		NW	975	899	899		29 7 59		945 3
4B	26	W 88 34.0	N 78 49.8	16XDC466287513		SW	1067	914	914		29 7 59		991 3
4B	27	W 88 29.0	N 78 50.5	16XDC467887524	NE	NE	1259	518	518	1021	29 7 59	1067 4	899 3
4B	28	W 88 33.0	N 78 51.0	16XDC466687532	NE	N	1259	747	747	1021	29 7 59	1067 4	960 3
4B	29	W 88 36.0	N 78 51.0	16XDC465687534	N	N	1259	594	594	975	29 7 59	914 4	899 3
4B	30	W 88 40.0	N 78 50.5	16XDC463887528		NE	945	869	869		29 7 59		960 3
4B	31	W 88 43.0	N 78 50.3	16XDC463087525		SE	945	777	777		29 7 59		991 3

WOLF FIORD

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT AC	ORIENT AB	HIGH	ELEVATIONS L.EX	L.TL	SNOW	DATE	MEAN ELEVATION ACCU	ABLA
4C	1	W 88 52.0	N 78 49.7	16XDC459287512	SE	SE	1234	564	564	1036	29 7 59	1052 4	777 3
4C	2	W 89 06.0	N 78 49.8	16XDC455687520	S	SW	1372	213	200	914	13 8 59	1158 4	670 3
4C	3	W 89 01.0	N 78 51.5	16XDC456787548	S	SE	1158	884	884	1097	13 8 59	1173 4	1006 3
4C	4	W 89 04.0	N 78 51.7	16XDC455287551	W	W	1219	732	732	1067	13 8 59	1128 4	869 3
4C	5	W 89 06.5	N 78 51.4	16XDC454787546		SE	762	716	716		13 8 59		747 3
4C	6	W 89 08.0	N 78 51.5	16XDC454487560	SW	S	1554	290	280	1036	13 8 59	1189 4	747 3
4C	7	W 89 09.0	N 78 52.8	16XDC453787572	NW	NW	975	762	762	853	13 8 59	914 4	807 3
4C	8	W 89 12.0	N 78 52.8	16XDC452687575	SW	SW	1554	411	400	1036	13 8 59	1402 4	762 3
4C	9	W 89 17.0	N 78 53.8	16XDC451087590	SW	SW	1646	305	295	1036	13 8 59	1372 4	747 3
4C	10	W 89 26.0	N 78 55.3	16XDC448287616	SW	SW	1707	274	263	1006	18 7 59	1372 4	732 3
4C	11	W 89 17.0	N 78 57.2	16XDC451487655		SE	1219	1067	1067		28 7 59		1143 3
4C	12	W 89 22.0	N 78 56.5	16XDC449487644	SW	SW	1494	670	670	1006	28 7 59	1173 4	853 3
4C	13	W 89 23.5	N 78 57.2	16XDC448897658	S	S	1097	975	975	1036	28 7 59	1067 4	1005 3
4C	14	W 89 34.0	N 78 57.0	16XDC445087650	S	S	1646	305	295	1128	28 7 59	1463 4	792 3
4C	15	W 89 36.5	N 78 59.6	16XDC444487704	SW	SW	1600	594	594	1052	28 7 59	1250 4	884 3

AREA 4 MCGILL ICE CAP AXEL HEIBERG ISLAND N.W.T. C.S.L.OMMANNEY MCGILL UNIVERSITY AND INLAND WATERS BRANCH 1968

BEAR STRAIT ICE FIELD

IDENT	NO.	TOTAL LENGTH ABLA	EXP	TOTAL	WIDTH	SURFACE AREA EXP	TOTAL	ABLATION	AAR	DEPTH	VOLUME	TYPE
4A	1	1.5	1.5	1.5	.	.91	.91 3	.91 3	0	15	.01 3	650132
4A	2	4.8	4.8	4.8	.4	5.95	5.95 3	5.95 3	0	75	.45 3	435132
4A	3	2.1	2.1	2.1	.2	1.51	1.51 3	1.51 3	0	50	.08 3	430132
4A	4	7.0	7.0	7.0	.4	10.99	10.99 3	10.99 3	0	125	1.37 3	435132
4A	5	2.5	2.5	2.5	.2	1.81	1.81 3	1.81 3	0	50	.09 3	430132
4A	6	1.4	1.4	1.4	.2	1.11	1.11 3	1.11 3	0	50	.06 3	430132
4A	7	1.9	1.9	1.9	.2	1.01	1.01 3	1.01 3	0	50	.05 3	435132
4A	8	1.5	1.5	1.5	.	.81	.81 3	.81 3	0	50	.04 3	435132
4A	9	1.0	1.0	1.0	.	.45	.45 3	.45 3	0	15	.01 3	650132
4A	10	3.6	3.6	3.6	.	5.34	5.34 3	5.34 3	0	75	.40 3	425132
4A	11	.6	.6	.6	.	.20	.20 3	.20 3	0	15	.00 3	650132
4A	12	3.6	3.6	3.6	.4	3.63	3.63 3	3.63 3	0	35	.13 3	645132
4A	13	.6	.6	.6	.	.20	.20 3	.20 3	0	15	.00 3	650132
4A	14	.2	.2	.2	.	2.12	2.12 3	2.12 3	0	20	.04 3	640132
4A	15	2.2	2.2	2.2	.2	1.51	1.51 3	1.51 3	0	20	.03 3	640132
4A	16	3.3	3.3	3.3	.	4.94	4.94 3	4.94 3	0	25	.12 3	300132

SKAARE FIORD ICE FIELDS

IDENT	NO.	TOTAL LENGTH ABLA	EXP	TOTAL	WIDTH	SURFACE AREA EXP	TOTAL	ABLATION	AAR	DEPTH	VOLUME	TYPE
4B	1	.5	.5	.5	.	.15	.15 3	.15 3	0	15	.00 3	300132
4B	2	3.6	3.9	3.9	.4	2.47	2.52 3	2.22 3	12	50	.11 3	535112
4B	3	.	.4	.4	.	.20	.20 3	. 3	100	15	.00 3	650112
4B	4	2.4	2.6	2.6	.2	1.41	1.41 3	1.26 3	11	50	.06 3	535112
4B	5	.7	1.1	1.1	.	1.00	1.00 3	.70 3	30	20	.02 3	650112
4B	6	.1	1.1	1.1	.2	.60	.60 3	.10 3	84	15	.01 3	650112
4B	7	1.7	2.3	2.4	.2	2.22	2.27 3	1.31 3	43	35	.08 3	655112
4B	8	.6	.6	.6	.	.15	.15 3	.15 3	0	15	.00 3	650112
4B	9	2.1	2.2	2.2	.3	1.66	1.66 3	1.41 3	16	20	.03 3	650112
4B	10	3.4	3.6	3.6	.4	3.52	3.72 3	3.12 3	17	50	.16 3	520113
4B	11	1.1	1.3	1.3	.	.80	.80 3	.70 3	13	15	.01 3	650112
4B	12	3.9	3.9	4.0	.5	5.04	5.34 3	4.54 3	15	50	.27 3	420112
4B	13	2.7	2.7	2.8	.2	1.91	2.11 3	1.66 3	22	20	.04 3	650132
4B	14	.8	1.4	1.4	.	.95	.95 3	.60 3	37	50	.05 3	435112
4B	15	2.2	3.1	3.1	.4	2.37	2.37 3	1.46 3	39	50	.12 3	432113
4B	16	2.1	2.2	2.2	.	1.01	1.01 3	.91 3	10	50	.05 3	435112
4B	17	1.2	1.3	1.3	.	1.31	1.31 3	1.11 3	16	50	.05 3	403112
4B	18	4.0	4.9	5.0	.	10.58	10.73 3	8.87 3	18	125	1.34 3	430112
4B	19	.4	.4	.4	.	.20	.20 3	.20 3	0	15	.00 3	300132
4B	20	6.2	6.8	6.9	.6	12.00	12.10 3	9.88 3	19	125	1.51 3	532112
4B	21	1.0	2.1	2.1	.	3.02	3.02 3	1.61 3	47	35	.10 3	650112
4B	22	3.7	3.8	3.9	.2	3.27	3.37 3	2.82 3	17	50	.17 3	435112
4B	23	.2	.2	.2	.	.10	.10 3	.10 3	0	15	.00 3	700112
4B	24	.	.2	.2	.	.40	.40 3	.	100	15	.01 3	703112
4B	25	.6	.6	.6	.	.35	.35 3	.35 3	0	15	.00 3	650112
4B	26	.6	.6	.6	.	.20	.20 3	.20 3	0	15	.00 3	700112
4B	27	2.4	3.4	3.4	.2	2.82	2.82 3	1.81 3	36	35	.10 3	650112
4B	28	1.1	1.9	1.9	.	1.21	1.21 3	1.01 3	17	50	.05 3	430112
4B	29	1.8	2.2	2.2	.2	1.51	1.51 3	1.11 3	27	20	.02 3	650112
4B	30	1.2	1.2	1.2	.	1.01	1.11 3	1.11 3	0	20	.02 3	655112
4B	31	1.2	1.2	1.2	.	.50	.50 3	.50 3	0	15	.01 3	305132

WOLF FIORD

IDENT	NO.	TOTAL LENGTH ABLA	EXP	TOTAL	WIDTH	SURFACE AREA EXP	TOTAL	ABLATION	AAR	DEPTH	VOLUME	TYPE
4C	1	2.4	3.6	3.6	.5	3.33	3.33 3	1.81 3	46	50	.17 3	535113
4C	2	7.5	11.8	11.9	1.3	37.70	38.20 3	12.10 3	69	200	7.64 3	532112
4C	3	.6	.9	.9	.	.60	.60 3	.30 3	50	15	.01 3	650112
4C	4	1.2	1.8	1.8	.	1.16	1.16 3	.81 3	31	20	.00 3	650112
4C	5	.2	.2	.2	.	.10	.10 3	.10 3	0	15	.00 3	700112
4C	6	4.5	6.7	6.8	.5	6.86	7.11 3	3.63 3	49	125	.89 3	530112
4C	7	.4	.6	.6	.	.35	.35 3	.20 3	43	15	.00 3	650112
4C	8	3.6	7.6	7.8	.5	7.35	7.50 3	2.11 3	72	125	.94 3	530112
4C	9	5.2	9.8	10.0	.8	14.32	14.77 3	4.64 3	69	125	1.85 3	430112
4C	10	6.6	12.8	12.9	1.1	37.48	37.93 3	11.18 3	71	200	7.59 3	432112
4C	11	.6	.6	.6	.	.20	.20 3	.20 3	0	15	.00 3	650112
4C	12	1.5	2.9	2.9	.4	1.61	1.61 3	.70 3	57	20	.03 3	650112
4C	13	.6	.8	.8	.	.25	.25 3	.20 3	20	15	.00 3	600112
4C	14	10.1	17.2	17.3	1.8	64.81	65.26 3	27.46 3	58	200	13.05 3	421112
4C	15	3.1	10.2	10.2	1.1	16.94	16.94 3	7.26 3	57	125	2.12 3	422112

STRAND FIORD

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT AC	ORIENT AB	ELEVATIONS HIGH	ELEVATIONS L.EX	ELEVATIONS L.TL	SNOW	DATE	MEAN ELEVATION ACCU	MEAN ELEVATION ABLA
4D	1	W 090 15.0	N 79 23.4	15XWU556888146	SW	SW	1615	305	305	1128	28 7 59	1372 4	716 3
4D	2	W 090 14.5	N 79 20.5	15XWU557088092		N	1189	914	914		28 7 59		1052 3
4D	3	W 090 07.0	N 79 21.5	15XWU559488110		NE	914	823	823		28 7 59		868 3
4D	4	W 090 03.0	N 79 07.0	15XWU560888128	S	S	1158	1077	1077	1143	28 7 59	1151 4	1120 3
4D	5	W 090 01.0	N 79 07.0	15XWU561388126	S	S	1067	914	914	1067	28 7 59	1112 4	991 3
4D	6	W 089 57.5	N 79 07.8	16XDB439288138		NW	1448	1067	1067		28 7 59		991 3
4D	7	W 089 49.0	N 79 09.0	16XDB442088056	SE	SE	1372	678	686	1067	28 7 59	1219 4	872 3
4D	8	W 089 56.0	N 79 06.0	16XDB439688104	SW	SW	1524	229	183	884	28 7 59	1067 4	579 3
4D	9	W 089 49.0	N 79 06.0	16XDB441888104	NW	NW	1372	1112	1082	991	28 7 59	1227 4	1180 3
4D	10	W 089 50.0	N 79 20.4	16XDB441588092	N	N	1280	1128	1128	1189	28 7 59	1234 4	1143 3
4D	11	W 089 50.0	N 79 20.4	16XDB441388093	N	N	1280	1097	1097	1189	28 7 59	1234 4	1143 3
4D	12	W 089 50.1	N 79 20.5	16XDB441088094	N	N	1280	1067	1067	1219	28 7 59	1250 4	1143 3
4D	13	W 089 53.6	N 79 20.2	16XDB440288088		NW	1219	1052	1052		28 7 59		1135 3
4D	14	W 089 59.6	N 79 20.1	16XDB440188086		NW	1219	1097	1097		28 7 59		1158 3
4D	15	W 089 45.0	N 79 17.7	16XDB443088040	SE	SE	1036	975	975	1006	28 7 59	1021 4	991 3
4D	16	W 089 35.0	N 79 18.6	16XDB446488054		N	1280	808	808		28 7 59		1658 3
4D	17	W 089 35.5	N 79 16.9	16XDB446288024	SW	SW	1402	213	198	945	28 7 59	1173 4	571 3
4D	18	W 089 25.5	N 79 18.3	16XDB449888048	NW	NW	1402	742	792	1067	28 7 59	1204 4	960 3
4D	19	W 089 23.0	N 79 17.2	16XDB450488030	SW	SW	1402	686	686	1097	28 7 59	1250 4	861 3
4D	20	W 089 19.0	N 79 16.6	16XDB452088014	SW	SW	1600	428	488	1143	28 7 59	1372 4	808 3
4D	21	W 089 19.0	N 79 17.4	16XDB453688028	S	S	1295	1250	1250	1250	13 8 59	1272 4	3
4D	22	W 089 09.0	N 79 17.3	16XDB455488028	SE	SE	1402	686	686	1067	13 8 59	1234 4	876 3
4D	23	W 089 09.0	N 79 16.0	16XDB455488004	W	W	1432	396	346	975	13 8 59	1204 4	686 3
4D	24	W 088 56.0	N 79 16.0	16XDB461688000	N	W	1463	747	716	1143	29 7 59	1303 4	930 3
4D	25	W 088 56.0	N 79 15.3	16XDC449887988	N	W	1402	762	732	1097	29 7 59	1250 4	914 3
4D	26	W 089 12.0	N 79 14.8	16XDC444887984	N	N	1341	457	457	1067	13 8 59	1204 4	762 3
4D	27	W 089 16.0	N 79 14.6	16XDC452687980	N	N	975	914	914	945	13 8 59	960 4	930 3
4D	28	W 089 19.0	N 79 14.4	16XDC452687974	NW	NW	975	732	732	945	13 8 59	960 4	838 3
4D	29	W 089 23.0	N 79 14.3	16XDC450487974	NW	NW	1082	457	457	975	13 8 59	1028 4	716 3
4D	30	W 089 27.5	N 79 14.1	16XDC448887978	NW	NW	1372	335	305	914	13 8 59	1128 4	610 3
4D	31	W 089 21.0	N 79 11.5	16XDC450887922	SW	SW	1128	1067	1067	1097	27 8 59	1112 4	1082 3
4D	32	W 089 13.5	N 79 11.0	16XDC453687912	SW	SW	1219	914	914	1143	27 8 59	1181 4	983 3
4D	33	W 089 03.5	N 79 11.5	16XDC456887920	SW	SW	1524	1036	1036	1219	13 8 59	1372 4	1128 3
4D	34	W 089 17.0	N 79 08.4	16XDC452087862	NW	NW	1524	244	229	914	27 8 59	1219 4	571 3
4D	35	W 089 28.0	N 79 07.2	16XDC448087840	NE	NE	1128	701	701	945	27 8 59	1036 4	823 3
4D	36	W 089 30.5	N 79 07.3	16XDC447287842	N	N	1372	792	792	991	27 8 59	1181 4	891 3
4D	37	W 089 37.0	N 79 07.4	16XDC444687848	NW	NW	1737	457	457	914	27 8 59	1326 4	686 3
4D	38	W 089 43.0	N 79 06.4	16XDC442487828	NW	NW	1372	610	610	1036	27 8 59	1204 4	823 3
4D	39	W 089 44.0	N 79 05.6	16XDC442287814		W	1667	884	884		27 8 59		1215 3
4D	40	W 089 44.0	N 79 05.0	16XDC442087804	W	W	1554	732	732	991	27 8 59	1272 4	859 3
4D	41	W 089 43.5	N 79 04.5	16XDC442787792	W	W	1015	549	549	914	27 8 59	1265 4	732 3
4D	42	W 089 43.0	N 79 02.8	16XDC442487764	W	W	1158	457	427	1143	27 8 59	1150 4	785 3
4D	43	W 089 42.0	N 79 01.0	16XDC445687724	SW	SW	1768	579	579	1067	27 8 59	1417 4	823 3
4D	44	W 089 43.5	N 78 58.5	16XDC441987685		W	762	610	610		28 7 59		686 3
4D	45	W 089 49.0	N 78 58.4	16XDC439787688		NW	823	640	640		28 7 59		731 3
4D	46	W 089 52.0	N 79 01.5	16XDC439287740		NW	975	823	823		27 8 59		747 3
4D	47	W 089 54.5	N 79 02.0	16XDC438287748		N	762	610	610		27 8 59		686 3
4D	48	W 089 54.0	N 79 02.1	16XDC438487752		W	762	701	201		27 8 59		732 3

EXPEDITION FIORD

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT AC	ORIENT AB	ELEVATIONS HIGH	ELEVATIONS L.EX	ELEVATIONS L.TL	SNOW	DATE	MEAN ELEVATION ACCU	MEAN ELEVATION ABLA
4E	1	W 091 22.5	N 79 27.1	15XWU433388208	N	W	1250	625	625	1100	28 7 59	1175 2	900 2
4E	2	W 091 14.5	N 79 26.5	15XWU536088195	SE	SE	1110	700	700	1025	28 7 59	1175 2	900 2
4E	3	W 091 13.5	N 79 27.4	15XWU536388215		SE	1050	985	985		28 7 59		1055 2
4E	4	W 091 10.0	N 79 25.7	15XWU537788182	S	S	1700	115	115	930	28 7 59	1200 2	675 2
4E	5	W 091 01.0	N 79 27.6	15XWU540888217	SW	SW	1700	115	115	930	13 8 59	1200 2	675 2
4E	6	W 090 59.5	N 79 27.1	15XWU541088210	N	N	937	765	765	900	13 8 59	915 2	875 2
4E	7	W 091 01.5	N 79 26.6	15XWU540588200	SW	SW	1315	625	625	1075	13 8 59	1150 2	985 2
4E	8	W 090 58.0	N 79 26.4	15XWU541588194	SW	SW	1175	725	725	940	13 8 59	1125 2	1000 2
4E	9	W 090 58.0	N 79 26.8	15XWU541688204		NE	1315	775	775		13 8 59		1041 2
4E	10	W 090 57.5	N 79 27.5	15XWU541688220	S	S	1330	900	900	1125	13 8 59	1225 2	1025 2
4E	11	W 090 56.0	N 79 27.6	15XWU542288222	S		1320	935	935	935	13 8 59	1160 2	
4E	12	W 090 55.0	N 79 27.9	15XWU542588227	S		1300	1015	1015		13 8 59	1150 2	
4E	13	W 090 51.0	N 79 28.4	15XWU543688236		E	1210	1000	1000		13 8 59		1125 2
4E	14	W 090 40.0	N 79 26.7	15XWU547388206	SE	SE	1782	75	53	1010	28 7 59	1225 2	550 2
4E	15	W 090 42.0	N 79 29.0	15XWU546888250	S	S	1197	770	770	1080	28 7 59	1125 2	950 2
4E	16	W 090 37.5	N 79 30.1	15XWU547788268	E		1125	850	850	850	28 7 59	1025 2	
4E	17	W 090 37.0	N 79 30.4	15XWU548088274	SE		1140	815	815	815	28 7 59	1000 2	
4E	18	W 090 39.0	N 79 30.8	15XWU547788280	N		1050	800	800	800	28 7 59	925 2	
4E	19	W 090 46.0	N 79 32.4	15XWU545388306	N	N	1250	1040	1040	1175	28 7 59	1200 2	1140 2
4E	20	W 090 30.0	N 79 28.0	15XWU551088234	S	S	1804	50	50	1040	28 7 59	1250 2	600 2
4E	21	W 090 32.0	N 79 37.4	15XWU549688404	W		1125	800	800		28 7 59	960 2	
4E	22	W 090 29.0	N 79 33.7	15XWU551088337	W	S	1625	525	515	1100	28 7 59	1300 2	825 2
4E	23	W 090 25.0	N 79 34.7	15XWU552088354	W	S	1386	575	575	1050	28 7 59	925 2	850 2
4E	24	W 090 23.0	N 79 34.2	15XWU553088344	W	W	1386	650	650	950	28 7 59	1050 2	725 2
4E	25	W 090 23.5	N 79 32.2	15XWU552888308	SW	SW	1386	412	412	1100	28 7 59	1250 2	775 2
4E	26	W 090 19.5	N 79 32.7	15XWU554288318		W	1330	625	625		28 7 59		1000 2
4E	27	W 090 19.0	N 79 32.5	15XWU554488313		SW	1330	650	650		28 7 59		1025 2
4E	28	W 090 19.0	N 79 31.8	15XWU554488303		SW	1025	835	835		28 7 59		925 2
4E	29	W 090 18.0	N 79 32.5	15XWU554788313	SE		1380	850	850		28 7 59	1000 2	
4E	30	W 090 12.0	N 79 32.6	15XWU556788318	S	SE	1516	397	397	1075	28 7 59	1250 2	775 2
4E	31	W 090 10.2	N 79 34.0	15XWU557088343	SE		1325	1225	1225		28 7 59	1275 2	
4E	32	W 090 10.1	N 79 34.2	15XWU557288346	SE		1375	1200	1200		28 7 59	1240 2	
4E	33	W 090 10.0	N 79 34.3	15XWU557288348	SE		1380	1190	1190		28 7 59	1365 2	
4E	34	W 090 09.1	N 79 34.3	15XWU557588348	SE		1380	1200	1200		28 7 59	1365 2	
4E	35	W 090 06.5	N 79 34.4	15XWU558688350	SE	SE	1516	600	600	1050	28 7 59	1250 2	825 2
4E	36	W 090 05.0	N 79 34.7	15XWU558888355	SE	SE	1310	616	616	985	28 7 59	1125 2	775 2
4E	37	W 090 02.0	N 79 34.2	15XWU560088348	S	SW	1625	397	397	1000	28 7 59	1250 2	735 2
4E	38	W 089 54.0	N 79 33.8	16XDB441688340	NW	NW	1210	775	750	1025	28 7 59	1125 2	885 2
4E	39	W 089 57.0	N 79 33.5	16XDB440388336	N	NW	1326	650	650	1025	28 7 59	1125 2	850 2
4E	40	W 089 59.0	N 79 33.5	16XDB469488354	NW	NW	1378	575	575	1075	28 7 59	1200 2	850 2
4E	41	W 090 02.0	N 79 32.6	15XWU559988317	NW	NW	1250	975	975	1200	28 7 59	1220 2	1135 2
4E	42	W 090 04.5	N 79 32.0	15XWU559488308	W	W	1378	850	850	1090	28 7 59	1230 2	990 2
4E	43	W 090 07.5	N 79 31.1	15XWU558488290	W	W	1378	415	415	1000	28 7 59	1200 2	760 2
4E	44	W 090 12.1	N 79 29.4	15XWU557088260	W	W	1620	347	347	875	28 7 59	1225 2	625 2
4E	45	W 090 15.1	N 79 27.8	15XWU556088230	W	W	1638	250	250	980	28 7 59	1300 2	650 2
4E	46	W 090 14.0	N 79 26.8	15XWU556788210	N		1233	1100	1100		28 7 59	1175 2	2
4E	47	W 090 14.5	N 79 26.4	15XWU555088202		NW	1110	325	325		28 7 59		775 2
4E	48	W 090 20.0	N 79 24.8	15XWU554788173	SW	SW	1200	700	700	1025	28 7 59	1085 2	900 2
4E	49	W 090 22.0	N 79 24.5	15XWU554088165		NW	951	830	830		28 7 59		900 2

STRAND FIORD

IDENT	NO.	TOTAL LENGTH ABLA	EXP	TOTAL	WIDTH	SURFACE AREA EXP	TOTAL	ABLATION	AAR	DEPTH	VOLUME		TYPE
4D	1	8.6	8.6	11.5	.	21.13	21.25 3	3.65 3	82	200	4.25	3	430114
4D	2	2.0	2.0	2.0	.	1.23	1.23 3	1.23 3	0	25	.03	3	300112
4D	3	.8	.8	.8	.	.36	.36 3	.36 3	0	15	.01	3	700112
4D	4	.3	.3	.4	.	.53	.53 3	.13 3	77	50	.02	3	450112
4D	5	.7	.7	.7	.	.33	.33 3	.33 3	0	50	.04	3	450112
4D	6	.4	.4	.4	.	.11	.11 3	.11 3	0	15	.00	3	700112
4D	7	1.1	1.1	2.9	.	3.58	3.63 3	1.01 3	72	50	.15	3	535112
4D	8	14.4	14.1	25.3	1.6	169.75	171.20 3	55.00 3	66	400	68.48	3	410113
4D	9	6.5	6.7	8.0	.4	6.90	6.90 3	3.43 3	50	125	1.00	3	435112
4D	10	.2	.2	.2	.	3.16	.16 3	.16 3	0	15	.00	3	650112
4D	11	.2	.2	.4	.	.14	.14 3	.14 3	0	15	.00	3	650112
4D	12	.5	.1	.1	.	.22	.22 3	.22 3	0	15	.00	3	650112
4D	13	.4	.4	.4	.	.19	.19 3	.19 3	0	15	.00	3	650112
4D	14	.2	.2	.2	.	.11	.11 3	.11 3	0	15	.00	3	650112
4D	15	.6	.6	.6	.	.63	.63 3	.13 3	79	50	.03	3	403112
4D	16	2.	2.	2.	.	.71	.71 3	.71 3	0	15	.01	3	750112
4D	17	9.3	9.2	20.0	2.1	84.40	84.40 3	19.90 3	76	200	16.88	3	422112
4D	18	1.4	1.4	2.5	.	1.61	1.61 3	.61 3	62	50	.13	3	435112
4D	19	2.3	2.3	4.8	.	7.85	7.85 3	2.21 3	72	125	.98	3	430112
4D	20	2.6	2.6	5.8	.8	4.84	4.84 3	1.11 3	77	50	.24	3	430112
4D	21	.8	.8	.8	.	.50	.50 3	.50 3	0	50	.02	3	403112
4D	22	2.3	2.1	4.7	.	6.67	6.67 3	1.93 3	71	125	.83	3	435112
4D	23	9.1	9.1	16.4	.	59.17	60.50 3	40.70 3	33	200	13.82	3	421116
4D	24	3.1	3.1	10.4	.	36.07	36.60 3	10.20 3	72	200	7.33	3	434112
4D	25	2.2	2.2	4.4	.	6.83	7.17 3	2.23 3	69	125	.90	3	435112
4D	26	2.1	2.1	3.9	.	6.44	6.44 3	2.11 3	67	125	.81	3	435312
4D	27	.4	.4	.7	.	1.51	1.51 3	1.21 3	20	50	.08	3	453112
4D	28	1.4	1.4	2.3	.	1.81	1.81 3	1.01 3	44	50	.09	3	453112
4D	29	2.6	2.6	3.8	.	5.75	5.75 3	3.33 3	42	125	.72	3	453112
4D	30	4.7	4.7	10.6	.	27.46	27.46 3	6.76 3	75	200	5.50	3	430112
4D	31	.5	.5	1.0	.	3.14	3.14 3	1.83 3	42	25	.07	3	300112
4D	32	1.1	1.2	1.2	.	2.34	2.34 3	.71 3	70	50	.12	3	453112
4D	33	.6	.6	1.8	.	1.41	1.41 3	.40 3	72	50	.07	3	453112
4D	34	7.1	7.0	14.7	3.2	170.26	171.10 3	60.60 3	72	400	28.50	3	421114
4D	35	1.3	1.3	2.5	.	1.41	1.41 3	.81 3	42	50	.07	3	530412
4D	36	.6	.6	2.3	.	2.84	2.84 3	1.11 3	60	50	.14	3	542112
4D	37	4.4	4.4	8.5	.	15.61	15.83 3	3.83 3	31	125	1.95	3	432112
4D	38	2.0	2.0	3.3	.	4.44	4.44 3	1.41 3	68	50	.22	3	530112
4D	39	.7	.7	.7	.	.81	.81 3	.81 3	0	15	.01	3	700012
4D	40	1.8	1.8	3.5	.	1.82	1.82 3	.81 3	55	50	.09	3	533112
4D	41	2.6	2.6	2.6	.	6.35	6.35 3	2.52 3	60	125	.79	3	430112
4D	42	4.4	4.1	7.4	.	18.22	19.05 3	6.85 3	64	125	2.39	3	422112
4D	43	2.1	2.1	6.7	.	12.20	12.20 3	4.24 3	65	125	1.53	3	432412
4D	44	1.3	1.3	1.3	.	1.11	1.11	1.11 3	0	20	.02	3	300112
4D	45	1.6	1.6	1.6	.	.22	.22 3	.23 3	0	15	.00	3	650112
4D	46	1.3	1.3	1.3	.	.69	.69 3	.69 3	0	15	.01	3	300114
4D	47	.5	.5	.5	.	.13	.13 3	.13 3	0	15	.00	3	700112
4D	48	.3	.3	.3	.	.03	.03 3	.03 3	0	15	.00	3	700112

EXPEDITION FIORD

IDENT	NO.	TOTAL LENGTH ABLA	EXP	TOTAL	WIDTH	SURFACE AREA EXP	TOTAL	ABLATION	AAR	DEPTH	VOLUME		TYPE
4E	1	4.0	6.1	6.1	1.1	5.89	5.89 3	3.89 2	34	125	.74	3	430112
4E	2	1.4	1.9	1.9	.5	1.08	1.08 3	.74 2	32	50	.05	3	530112
4E	3	.5	.5	.5	.3	.26	.26 3	.26 2	0	50	.01	3	535112
4E	4	9.1	13.5	13.5	1.5	43.52	43.52 3	19.00 2	57	200	8.70	3	512112
4E	5	1.6	2.3	2.3	.6	1.22	1.22 3	.82 2	33	50	.06	3	534112
4E	6	1.0	1.6	1.6	.4	.71	.71 3	.47 2	34	15	.01	3	670112
4E	7	1.6	2.4	3.4	.5	.92	.92 3	.60 2	35	15	.01	3	650112
4E	8	1.3	1.6	1.6	.7	.68	.68 3	.60 2	12	15	.01	3	640112
4E	9	2.3	2.3	2.3	.	1.21	1.21 3	1.21 2	0	20	.00	3	770112
4E	10	.6	1.6	1.6	.3	.41	.41 3	.15 2	64	50	.02	3	653112
4E	11	.	1.4	1.4	.4	.88	.88 3		100		.04	3	453112
4E	12	.	.8	.8	.2	.55	.55 3		100	50	.03	3	653112
4E	13	.	1.2	1.2	.4	.55	.55 3		100	50	.03	3	650112
4E	14	9.7	15.1	15.3	1.1	37.95	38.00 3	12.64 2	67	200	7.60	3	515112
4E	15	1.4	2.5	2.5	.5	.75	.75 3	.57 2	24	50	.04	3	650112
4E	16	.	.5	.5	.3	.27	.27 3		100	50	.01	3	653112
4E	17	.	1.6	1.6	.7	1.10	1.10 3		100	50	.06	3	653112
4E	18	.	1.1	1.1	.3	.66	.66 3		100	50	.03	3	653112
4E	19	.3	.4	.4	.3	.13	.13 3	.10 2	24	50	.01	3	653112
4E	20	26.6	35.5	35.5	3.0	230.31	230.31 3	105.23 2	55	500	115.16	3	410114
4E	21	.	.9	.9	.4	.20	.20 3	.	100	15	.00	3	650112
4E	22	6.2	9.6	9.6	1.0	13.87	13.87 3	6.32 2	55	50	.69	3	645112
4E	23	3.0	3.9	3.9	.4	1.97	1.97 3	1.15 2	42	20	.04	3	645112
4E	24	1.3	1.7	1.7	.5	.77	.77 3	.50 2	36	15	.04	3	650112
4E	25	4.2	5.5	5.5	.6	4.28	4.28 3	3.15 2	27	35	.15	3	544112
4E	26	1.8	1.8	1.8	.3	.58	.58 3	.58 2	0	15	.01	3	655112
4E	27	1.5	1.5	1.5	.4	.40	.40 3	.40 2	0	15	.01	3	650112
4E	28	.6	.6	.6	.1	.07	.07 3	.07 2	0	15	.00	3	650112
4E	29	.	.4	.4	.2	.05	.05 3		100	15	.00	3	603112
4E	30	4.9	7.3	7.3	.8	11.35	11.35 3	4.51 2	61	125	1.42	3	532112
4E	31	.	.2	.2	.1	.02	.02 3	.	100	15	.00	3	703112
4E	32	.	.	.3	.2	.03	.03 3	.	100	15	.00	3	703112
4E	33	.	.4	.4	.1	.03	.03 3	.	100	15	.00	3	703112
4E	34	.	.3	.3	.1	.48	.48 3	.	100	15	.00	3	703112
4E	35	1.5	2.5	2.5	1.7	2.07	2.07 3	.79 2	62	35	.16	3	535112
4E	36	.9	2.1	2.1	.7	1.18	1.18 3	.26 2	78	50	.03	3	430112
4E	37	3.9	6.5	6.5	1.6	45.28	45.28 3	18.25 2	60	200	9.06	3	434112
4E	38	1.1	2.9	2.9	.6	.35	.35 3	.19 2	46	50	.02	3	435112
4E	39	3.2	4.8	4.8	.8	3.03	3.03 3	1.58 2	48	50	.15	3	435112
4E	40	3.9	5.5	5.5	.9	4.25	4.25 3	2.08 2	52	50	.21	3	435112
4E	41	.5	.6	.6	.7	.27	.27 3	.23 2	15	15	.00	3	653112
4E	42	1.0	2.1	2.1	1.1	1.93	1.93 3	.57 2	71	20	.04	3	650112
4E	43	3.5	6.4	6.4	1.0	5.07	5.07 3	3.77 2	26	125	.63	3	430112
4E	44	6.7	13.5	13.5	1.3	28.14	28.14 3	19.18 2	32	200	5.63	3	435112
4E	45	9.9	18.4	18.4	1.7	18.4	18.61 3	14.61 2	22	125	2.33	3	425112
4E	46	.	.5	.5	.2	.08	.08 3		100	15	.00	3	770112
4E	47	.	3.5	3.5	.6	3.41	3.41 3	3.41 2	100	50	.17	3	430112
4E	48	3.0	5.2	5.2	1.6	6.51	6.51 3	3.65 2	44	125	.81	3	433112
4E	49	.	.5	.5	.3	.19	.19 3	.19 2	100	15	.00	3	770112

ICEBERG BAY

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT		ELEVATIONS				DATE	MEAN ELEVATION	
					AC	AB	HIGH	L.EX	L.TL	SNOW		ACCU	ABLA
4F	1	W 093 06.0	N 79 32.5	15XVU498088300	SE	SE	792	305	305	732	28 7 59	762 4	518 3
4F	2	W 093 10.0	N 79 34.1	15XVU496888332	NW	SW	792	305	305	732	28 7 59	762 4	518 3
4F	3	W 093 01.5	N 79 34.2	15XVU499588334		SE	792	335	335		28 7 59		563 3
4F	4	W 093 08.0	N 79 34.7	15XVU597488342		NW	823	427	427		28 7 59		625 3
4F	5	W 092 59.5	N 79 35.0	15XWU500288348		NE	792	396	396		28 7 59		546 3
4F	6	W 093 13.0	N 79 34.0	15XVU498888350		NE	914	152	152		28 7 59		553 3
4F	7	W 093 05.0	N 79 35.2	15XVU498488352		W	945	549	549		28 7 59		747 3
4F	8	W 093 07.0	N 79 35.8	15XVU497688364		W	914	488	488		28 7 59		666 3
4F	9	W 093 09.2	N 79 36.4	15XVU497088372		W	914	335	335		28 7 59		624 3
4F	10	W 093 10.5	N 79 36.7	15XVU496688379		W	914	335	335		28 7 59		624 3
4F	11	W 093 14.0	N 79 35.6	15XVU495688380		SW	427	305	305		28 7 59		366 3
4F	12	W 093 18.2	N 79 37.2	15XVU493888388	S	S	1097	274	274	853	28 7 59	975 3	513 3
4F	13	W 092 57.5	N 79 36.6	15XWU501088400		E	1219	732	732		28 7 59		975 3
4F	14	W 093 05.0	N 79 37.0	15XVU499888384	S	SE	1402	122	122	808	28 7 59	1102 4	462 3
4F	15	W 092 15.0	N 79 34.5	15XWU503088360		SW	1006	183	183		13 8 59		594 3
4F	16	W 092 47.5	N 79 33.0	15XWU504088332		NW	823	427	427		13 8 59		625 3
4F	17	W 092 46.5	N 79 33.5	15XWU504688320		SW	762	152	152		28 7 59		457 3
4F	18	W 092 42.0	N 79 32.0	15XWU506088292	W	W	1128	274	274	884	28 7 59	1006 4	579 3
4F	19	W 092 55.0	N 79 31.0	15XWU501688270		N	640	620	620		28 7 59		630 3
4F	20	W 092 58.8	N 79 30.7	15XWU500488268		NW	914	610	610		28 7 59		155 3
4F	21	W 092 58.0	N 79 30.2	15XWU500588260		NW	945	640	640		28 7 59		264 3
4F	22	W 092 42.5	N 79 30.9	15XWU508088270		SW	823	427	427		28 7 59		625 3
4F	23	W 092 36.5	N 79 30.5	15XWU508088262		SW	823	579	579		28 7 59		701 3
4F	24	W 092 34.0	N 79 29.8	15XWU508888258		SW	945	884	884		28 7 59		914 3
4F	25	W 092 32.0	N 79 31.8	15XWU509388290		SW	945	610	610		28 7 59		418 3
4F	26	W 092 30.0	N 79 31.4	15XWU510088285		SW	975	701	701		28 7 59		838 3
4F	27	W 092 23.5	N 79 31.0	15XWU512288274		SW	945	792	792		28 7 59		868 3
4F	28	W 092 27.0	N 79 31.6	15XWU512288274	N	E	853	183	183	792	28 7 59	822 4	487 3
4F	29	W 092 23.0	N 79 31.4	15XWU512388283		N	823	488	488	792	28 7 59	807 3	640 3
4F	30	W 092 21.5	N 79 31.4	15XWU518088280		N	792	427	427		28 7 59		609 3
4F	31	W 092 29.7	N 79 31.4	15XWU513488280		N	792	701	701		28 7 59		747 3
4F	32	W 092 27.5	N 79 32.4	15XWU511088300		E	1036	457	457		28 7 59		746 3
4F	33	W 092 29.0	N 79 32.7	15XWU510488308	NE	SE	1006	366	366	914	28 7 59	955 4	640 3
4F	34	W 092 30.0	N 79 33.5	15XWU510088318		E	1311	1067	1067		28 7 59		1189 3
4F	35	W 092 25.0	N 79 33.6	15XWU511788324		E	792	541	541		28 7 59		251 3
4F	36	W 092 30.5	N 79 34.0	15XWU510088330		NE	1250	213	213		28 7 59		731 3
4F	37	W 092 29.0	N 79 35.7	15XWU510288342		NE	762	610	610		28 7 59		686 3
4F	38	W 092 34.0	N 79 35.1	15XWU508588352	E	E	1128	213	213	1067	28 7 59	1097 4	640 3
4F	39	W 092 31.0	N 79 36.0	15XWU509688368		E	914	488	488		28 7 59		701 3
4F	40	W 092 33.5	N 79 36.2	15XWU509088372		NE	1067	457	457		28 7 59		762 3
4F	41	W 092 35.0	N 79 36.4	15XWU508288376	E	E	1219	305	305	1158	28 7 59	1188 4	731 3
4F	42	W 092 34.0	N 79 37.3	15XWU509088390		E	762	244	244		28 7 59		503 3
4F	43	W 092 36.0	N 79 38.4	15XWU508088412	W		1250	762	762		13 8 59	1140 4	
4F	44	W 092 35.5	N 79 38.6	15XWU508288416	NE	NE	1372	396	396	1250	13 8 59	1361 4	823 3
4F	45	W 092 22.5	N 79 45.7	15XWU512388550	S		1372	975	975		28 7 59	1173 4	
4F	46	W 092 23.5	N 79 45.4	15XWU512388544	SW		975	640	640		28 7 59	807 4	
4F	47	W 092 22.0	N 79 44.7	15XWU512688532		SW	732	670	670		28 7 59		701 3
4F	48	W 092 14.0	N 79 43.5	15XWU515388510	NW	NW	1372	701	701	823	28 7 59	1047 4	762 3
4F	49	W 092 12.5	N 79 43.0	15XWU515588500	SW	SW	1544	640	640	792	28 7 59	1168 4	716 3
4F	50	W 092 04.5	N 79 50.5	15XWU518888548	N	NW	1184	488	488	1097	28 7 59	1130 4	792 3
4F	51	W 092 22.0	N 79 43.5	15XWU512688418	SW	SW	1844	0	0	762	28 7 59	1303 4	381 3
4F	52	W 091 55.5	N 79 37.9	15XWU521588408	SW	SW	1250	549	549	975	28 7 59	1112	762 3
4F	53	W 091 34.5	N 79 35.1	15XWU528888356	S	S	1219	701	701	1036	28 7 59	1127 4	868 3
4F	54	W 091 43.5	N 79 35.3	15XWU525888354	SW	SW	1128	274	274	975	28 7 59	1026 4	624 3
4F	55	W 091 48.0	N 79 33.6	15XWU524488324		SW	945	183	183		28 7 59		564 3
4F	56	W 091 48.0	N 79 32.0	15XWU524388312		SW	1128	274	274		28 7 59		696 3
4F	57	W 091 27.5	N 79 32.5	15XWU531388320		NW	1097	548	548		28 7 59		820 3
4F	58	W 091 44.0	N 79 21.4	15XWU525988283	SW	SW	1890	91	91	610	28 7 59	1250 4	350 3
4F	59	W 091 31.5	N 79 30.5	15XWU520088268	SW	SW	1859	91	91	732	28 7 59	1127 4	641 3
4F	60	W 091 54.5	N 79 29.6	15XWU522388253		SE	823	792	792		28 7 59		813 3
4F	61	W 091 30.5	N 79 29.3	15XWU530288250		NW	945	579	579		28 7 59		732 3
4F	62	W 091 25.0	N 79 28.7	15XWU532288238		SW	914	488	488		28 7 59		601 2
4F	63	W 091 26.0	N 79 27.8	15XWU532088220		SE	914	732	732		28 7 59		823 2
4F	64	W 091 23.0	N 79 28.2	15XWU533088228		SE	853	762	762		28 7 59		807 2

MIDDLE FIORD

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT		ELEVATIONS				DATE	MEAN ELEVATION	
					AC	AB	HIGH	L.EX	L.TL	SNOW		ACCU	ABLA
4G	1	W 094 13.0	N 79 54.8	15XVU476088720	E	E	1128	427	427	792	22 7 58	960 4	609 3
4G	2	W 094 12.0	N 79 53.3	15XVU476688690	E	S	1143	244	244	732	22 7 58	937 4	488 3
4G	3	W 094 05.0	N 79 51.3	15XVU478688650	S	W	1128	122	122	792	22 7 58	955 4	457 3
4G	4	W 094 06.0	N 79 50.1	15XVU478488632	W	NW	914	244	244	732	22 7 58	823 4	488 3
4G	5	W 094 01.0	N 79 49.4	15XVU479788661	E		640	549	549		22 7 58	594 4	
4G	6	W 093 57.0	N 79 49.9	15XVU481488662	SE		792	701	701		22 7 58	745 4	
4G	7	W 093 52.0	N 79 50.3	15XVU483088633	S	S	1097	240	240	823	22 7 58	960 4	556 3
4G	8	W 093 33.0	N 79 49.8	15XVU489388626		N	1783	122	114	792	28 7 59	1287 4	453 3
4G	9	W 093 14.0	N 79 52.1	15XVU495688668	SE		1097	762	762		28 7 59	929 4	
4G	10	W 093 10.0	N 79 48.2	15XVU496688598	NW	NW	1006	549	549	823	28 7 59	914 4	736 3
4G	11	W 093 12.5	N 79 48.2	15XVU495888594	NW	NW	1250	518	518	579	28 7 59	914 4	548 3
4G	12	W 093 12.0	N 79 47.5	15XVU496088582	NW	NW	1280	701	701	945	28 7 59	1007 4	823 3
4G	13	W 093 13.5	N 79 42.3	15XVU495788576	NW		1128	579	579		28 7 59	853 4	
4G	14	W 093 18.0	N 79 43.4	15XVU494288596	NW	NW	1006	518	518	762	28 7 59	884 4	640 3
4G	15	W 093 40.0	N 79 47.0	15XVU486888574	N	N	1067	122	122	747	28 7 59	907 4	434 3
4G	16	W 093 45.0	N 79 44.9	15XVU485388558	NW	NW	1067	213	213	670	28 7 59	868 4	441 3
4G	17	W 093 39.5	N 79 44.7	15XVU487088545	E		945	762	762	762	28 7 59	853 4	
4G	18	W 093 38.5	N 79 44.0	15XVU487088540	E		945	762	762	762	28 7 59	853 4	
4G	19	W 093 37.5	N 79 45.0	15XVU487688536	E		945	762	762	945	28 7 59		853 3
4G	20	W 093 27.5	N 79 44.4	15XVU491088545	S	S	1097	274	274	762	28 7 59	924 4	518 3
4G	21	W 093 18.0	N 79 43.8	15XVU494388536	SW	W	1280	305	305	762	28 7 59	1021 4	533 3
4G	22	W 093 19.0	N 79 43.3	15XVU493888524		S	732	640	640		28 7 59		686 3
4G	23	W 093 16.5	N 79 43.3	15XVU494688526		S	701	640	640		28 7 59		670 3
4G	24	W 093 10.5	N 79 43.4	15XVU496688526	W	W	975	610	610	945	28 7 59	960 4	772 3
4G	25	W 093 09.5	N 79 42.4	15XVU496888508	W	W	1554	457	457	792	28 7 59	1173 4	619 3
4G	26	W 093 10.0	N 79 41.5	15XVU496888490	W	W	1554	274	274	1064	28 7 59	1309 4	619 3
4G	27	W 093 07.5	N 79 40.6	15XVU497688474	NW	NW	1067	427	427	1006	28 7 59	1036 4	716 3
4G	28	W 093 07.5	N 79 39.8	15XVU497688462	W	W	1097	457	459	914	28 7 59	1005 4	686 3
4G	29	W 093 07.0	N 79 39.3	15XVU497688450	W	N	1097	457	457	945	28 7 59	1021 4	701 3
4G	30	W 093 12.0	N 79 39.6	15XVU496088456	W	N	1524	213	213	670	28 7 59	1097 4	441 3
4G	31	W 093 19.0	N 79 39.5	15XVU493688454		N	914	579	579		28 7 59		747 3
4G	32	W 093 20.0	N 79 39.5	15XVU493288454		N	884	544	544		28 7 59		714 3
4G	33	W 093 21.0	N 79 39.2	15XVU493088448		S	1219	1067	1067		28 7 59		1143 3
4G	34	W 093 24.0	N 79 39.1	15XVU492088445		E	1006	670	670		28 7 59		838 3
4G	35	W 093 19.5	N 79 38.6	15XVU493788437		E	1219	722	722		28 7 59		970 3
4G	36	W 093 23.0	N 79 37.8	15XVU491388422	W	W	1234	305	335	1006	28 7 59	1120 4	668 3

ICEBERG BAY

IDENT	NO.	TOTAL LENGTH ABLA	EXP	TOTAL	WIDTH	SURFACE AREA EXP	TOTAL		ABLATION		AAR	DEPTH	VOLUME		TYPE
4F	1	2.4	2.4	3.0	.8	2.81	2.81	3	2.30	3	88	35	.10	3	650112
4F	2	1.6	1.8	2.4	.	3.20	3.32	3	3.02	3	90	35	.12	3	650112
4F	3	1.5	1.5	1.5	.4	.80	.96	3	.96	3	0	15	.01	3	650112
4F	4	3.4	3.4	3.4	.	4.05	4.05	3	4.05	3	0	35	.14	3	650112
4F	5	1.3	1.3	1.3	.3	.70	.79	3	.70	3	0	15	.01	3	640112
4F	6	1.5	1.5	1.5	.	.17	.17	3	.17	3	0	15	.00	3	700112
4F	7	2.5	2.5	2.5	.5	1.80	1.80	3	1.80	3	0	20	.04	3	640112
4F	8	2.4	2.4	2.6	.4	1.60	1.83	3	1.83	3	0	20	.04	3	640112
4F	9	2.6	2.5	2.6	.5	1.60	1.76	3	1.76	3	0	20	.04	3	640112
4F	10	2.5	2.4	2.5	.5	1.80	1.90	3	1.90	3	0	20	.04	3	640112
4F	11	.5	.5	.5	.	.19	.19	3	.19	3	0	15	.00	3	790112
4F	12	4.8	4.8	4.8	.9	11.56	11.56	3	8.46	3	87	125	1.45	3	522112
4F	13	1.3	1.3	1.3	.	.41	.41	3	.41	3	0	15	.01	3	650112
4F	14	11.3	11.3	14.6	2.3	44.30	44.42	3	22.00	3	80	200	8.88	3	410112
4F	15	2.1	2.0	2.1	.4	.01	.01	3	.01	3	0	15	.00	3	650112
4F	16	.9	.9	.9	.	1.62	1.62	3	1.62	3	0	20	.03	3	700112
4F	17	3.7	3.7	3.7	.5	3.10	3.16	3	3.16	3	0	125	.40	3	435112
4F	18	6.0	6.0	7.6	1.1	15.60	15.60	3	10.50	3	85	200	3.12	3	432112
4F	19	3.4	3.4	3.4	.	.07	.07	3	.07	3	0	15	.00	3	750112
4F	20	.9	.9	.9	.	.33	.33	3	.33	3	0	15	.00	3	750112
4F	21	.4	.4	.4	.	.09	.09	3	.09	3	0	15	.00	3	750112
4F	22	1.8	1.8	1.8	.	.70	.70	3	.70	3	0	15	.01	3	750112
4F	23	2.0	2.0	2.0	.	1.70	1.70	3	1.70	3	0	20	.04	3	750112
4F	24	.5	.5	.5	.	.09	.09	3	.09	3	0	15	.00	3	750112
4F	25	.8	.8	.8	.	.31	.31	3	.31	3	0	15	.00	3	653112
4F	26	.6	.6	.6	.	.31	.31	3	.31	3	0	15	.00	3	653112
4F	27	.4	.4	.4	.	.18	.18	3	.18	3	0	15	.00	3	653112
4F	28	2.6	2.6	4.3	.8	7.46	7.46	3	4.64	3	84	50	.37	3	642112
4F	29	1.4	1.4	1.6	.	.90	.90	3	.80	3	89	15	.01	3	645112
4F	30	1.1	1.1	1.1	.	.31	.31	3	.31	3	0	15	.00	3	750112
4F	31	.5	.5	.5	.	.11	.11	3	.11	3	0	15	.00	3	750112
4F	32	1.6	1.6	1.6	.5	.06	.06	3	.06	3	0	15	.00	3	640112
4F	33	2.3	2.3	3.0	.8	1.81	1.81	3	1.30	3	86	20	.04	3	640112
4F	34	1.3	1.3	1.3	.5	.70	.70	3	.70	3	0		.01	3	650112
4F	35	.8	.8	.8	.	.22	.22	3	.22	3	0	15	.00	3	750112
4F	36	4.6	4.6	4.6	.8	2.80	2.80	3	2.80	3	0	15	.04	3	642112
4F	37	.4	.4	.4	.	.08	.08	3	.08	3	0	15	.00	3	650112
4F	38	5.4	5.4	5.4	.8	10.60	10.60	3	7.80	3	87	50	.53	3	642112
4F	39	.4	.4	.4	.	.12	.12	3	.12	3	0	15	.00	3	650112
4F	40	.8	.8	.8	.	.23	.23	3	.23	3	0	15	.00	3	650112
4F	41	4.4	4.3	4.6	.5	3.80	3.85	3	3.43	3	90	35	.13	3	640412
4F	42	2.4	2.1	2.4	.4	1.10	1.10	3	1.10	3	0	20	.02	3	640112
4F	43	.	.4	.4	.	.04	.04	4	.		100	15	.00	3	653112
4F	44	2.5	2.5	3.0	.3	2.00	2.00	3	1.60	3	88	20	.04	3	640112
4F	45	.	.5	.5	.	.17	.17	3	.		100	15	.00	3	650112
4F	46	.	.6	.6	.	.23	.23	3	.		100	15	.00	3	703112
4F	47	3.8	3.8	3.8	.	.12	.12	3	.12	3	0	15	.00	3	770112
4F	48	.5	.6	2.0	.	1.00	1.00	3	.20	3	50	15	.02	3	640112
4F	49	1.3	1.3	2.3	.	3.50	3.50	3	.80	3	56	35	.12	3	640112
4F	50	1.1	1.1	2.3	.	3.20	3.20	3	.9	3	65	25	.08	3	300112
4F	51	37.5	37.5	55.7	4.3	757.00	776.80	3	252.00	3	65	500	388.40	3	414112
4F	52	1.4	1.4	3.0	.4	2.10	2.10		0.40	3	48	35	.07	3	653112
4F	53	2.4	2.4	3.2	.	2.80	2.80	3	1.70	3	84	35	.10	3	653112
4F	54	4.3	4.3	7.1	.	9.85	9.85	3	5.65	3	83	50	.49	3	640112
4F	55	4.9	4.9	4.9	.8	3.30	3.30	3	3.30	3	0	35	.12	3	640112
4F	56	2.4	2.4	2.4	.	5.15	5.15	3	5.15	3	0	50	.26	3	750112
4F	57	1.6	1.6	1.6	.	1.10	1.10	3	1.10	3	0	15	.02	3	650112
4F	58	16.3	16.3	37.1	2.6	119.80	124.90	3	39.08	3	69	250	43.71	3	520112
4F	59	11.2	10.0	19.2	2.1	54.60	58.10	3	17.50	3	69	200	11.62	3	530114
4F	60	.5	.5	.5	.	.09	.09	3	.09	3	0	15	.00	3	700112
4F	61	1.3	1.3	1.3	.	.70	.70	3	.70	3	0	15	.01	3	700112
4F	62	2.1	2.1	2.1	.	.40	.40	2	.40	2	0	15	.01	3	430112
4F	63	.6	.6	.6	.4	.17	.17	2	.17	2	0	15	.00	3	770112
4F	64	1.0	1.0	1.0	.	.24	.24	2	.24	2	0	15	.00	3	770112

MIDDLE FIORD

IDENT	NO.	TOTAL LENGTH ABLA	EXP	TOTAL	WIDTH	SURFACE AREA EXP	TOTAL		ABLATION		AAR	DEPTH	VOLUME		TYPE
4G	1	1.6	2.4	2.4	.	4.15	4.15	3	1.83	3	88	50	.20	3	430112
4G	2	4.6	7.5	7.5	.	25.20	25.20	3	15.60	3	84	200	5.05	3	430112
4G	3	7.0	9.0	9.0	.	21.95	21.95	3	11.35	3	81	200	4.40	3	532112
4G	4	2.4	5.3	5.3	1.5	7.77	7.77	3	4.34	3	82	125	.96	3	435112
4G	5	.4	.4	.4	.	.01	.01	3	.01	3	0	15	.00	3	790112
4G	6	.6	.6	.6	.	.22	.22	3	.22	3	0	15	.00	3	653112
4G	7	2.6	2.4	4.0	.8	4.14	4.14	3	1.42	3	71	35	.12	3	640412
4G	8	21.5	41.2	41.3	4.1	528.00	529.22	3	131.22	3	60	500	264.61	3	510114
4G	9	.5	.5	.5	.	.19	.19	3	.19	3	0	15	.00	3	700112
4G	10	1.1	1.6	1.6	.	.52	.52	3	.30	3	83	15	.00	3	640112
4G	11	2.3	2.4	2.4	.	2.44	2.44	3	1.63	3	74	35	.09	3	645112
4G	12	.8	1.8	1.8	.	.50	.50	3	.40	3	88	15	.01	3	655112
4G	13	.	4.0	4.0	.	5.14	5.14	3	.		100	50	.28	3	640112
4G	14	1.9	2.6	2.6	.	2.34	2.56	3	1.63	3	9	35	.09	3	645112
4G	15	2.1	4.0	4.0	.6	2.64	2.64	3	1.01	3	75	35	.09	3	645112
4G	16	1.5	3.3	3.3	1.3	3.56	3.56	3	1.83	3	81	35	.12	3	653112
4G	17	.4	.4	.4	.	.01	.01	3	.01	3	0	15	.00	3	653112
4G	18	3.8	3.8	3.8	.	.17	.17	3	.17	3	0	15	.00	3	653112
4G	19	.	.4	.4	.	.06	.06	3	.		100	15	.00	3	653112
4G	20	4.0	7.5	7.5	1.9	24.00	24.00	3	9.50	3	75	200	4.80	3	430112
4G	21	2.6	7.0	7.0	.	24.53	24.53	3	3.63	3	31	200	4.90	3	420112
4G	22	.9	.9	.9	.	.38	.38	3	.38	3	0	15	.00	3	770112
4G	23	1.0	1.0	1.0	.	.33	.33	3	.33	3	0	15	.00	3	770112
4G	24	1.0	1.8	1.8	.	.91	.91	3	.51	3	82	15	.01	3	653112
4G	25	3.3	7.5	7.5	1.4	13.21	13.21	3	4.85	3	72	125	1.65	3	435112
4G	26	7.3	10.3	10.3	1.5	35.20	35.20	3	14.90	3	77	200	7.10	3	435112
4G	27	2.3	2.6	2.6	.5	.40	.40	3	.40	3	0	15	.00	3	645112
4G	28	1.5	3.5	3.5	.3	.30	.30	3	.30	3	0	15	.00	3	645112
4G	29	2.4	3.1	3.1	.5	1.50	1.74	3	1.10	3	84	15	.03	3	645112
4G	30	4.5	12.5	12.5	2.4	19.45	19.45	3	7.25	3	73	125	2.43	3	535112
4G	31	.9	.9	.9	.	.16	.16	3	.16	3	0	15	.00	3	650112
4G	32	.9	.9	.9	.	.16	.16	3	.16	3	0	15	.00	3	650112
4G	33	1.1	1.1	1.1	.4	.50	.50	3	.50	3	0	15	.01	3	770112
4G	34	.6	.6	.6	.	.05	.05	3	.05	3	0	15	.00	3	770112
4G	35	1.1	1.1	1.1	.	.60	.60	3	.60	3	0	15	.01	3	770112
4G	36	3.5	3.6	4.3	.8	6.29	6.63	3	4.25	3	86	125	.79	3	422112

LI FIORD

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT AC	ORIENT AB	ELEVATIONS HIGH	L.EX	L.TL	SNOW	DATE	MEAN ELEVATION ACCU	ABLA
4H	1	W 094 31.0	N 88 05.1	15XWT470888912		NE	853	792	792		22 07 58		823 3
4H	2	W 094 31.5	N 88 05.1	15XWT470688912		SW	853	792	792		22 07 58		823 3
4H	3	W 094 32.5	N 88 06.2	15XWT470288932		NW	823	732	732		22 07 58		777 3
4H	4	W 094 29.0	N 88 07.0	15XWT471488948		SW	792	732	732		22 07 58		762 3
4H	5	W 094 26.5	N 88 07.2	15XWT472288950		NE	853	457	457		22 07 58		655 3
4H	6	W 094 28.5	N 88 07.5	15XWT471688956		E	853	792	792		22 07 58		823 3
4H	7	W 094 30.0	N 88 07.6	15XWT471288960		NW	792	457	457		22 07 58		625 3
4H	8	W 094 28.0	N 88 07.7	15XWT472088962		E	792	610	610		22 07 58		701 3
4H	9	W 094 20.0	N 88 07.5	15XWT474688956		W	853	152	152		22 07 58		503 3
4H	10	W 094 22.1	N 88 06.5	15XWT473688937		SW	853	518	518		22 07 58		686 3
4H	11	W 094 17.8	N 88 06.5	15XWT475088938		N	792	457	457		22 07 58		625 3
4H	12	W 094 13.8	N 88 06.4	15XWT476488936		N	762	701	701		22 07 58		732 3
4H	13	W 094 15.0	N 88 05.8	15XWT476088924		SW	945	396	396		22 07 58		670 3
4H	14	W 094 19.5	N 88 05.3	15XWT474588916		NE	792	762	762		22 07 58		777 3
4H	15	W 094 20.5	N 88 05.2	15XWT474088913		SW	762	61	61		22 07 58		411 3
4H	16	W 094 10.0	N 88 06.6	15XWT477688938		NW	914	457	457		22 07 58		686 3
4H	17	W 094 10.0	N 88 05.3	15XWT477688916		E	732	640	640		22 07 58		686 3
4H	18	W 094 06.3	N 88 05.7	15XWT478688924		E	762	732	732		22 07 58		747 3
4H	19	W 094 07.8	N 88 06.1	15XWT478688935		N	762	457	457		22 07 58		610 3
4H	20	W 094 05.5	N 88 06.2	15XWT479088932		E	762	701	701		22 07 58		732 3
4H	21	W 094 04.5	N 88 06.6	15XWT479288942		SE	975	457	457		22 07 58		716 3
4H	22	W 094 05.0	N 88 06.0	15XWT479088927		SE	823	792	792		22 07 58		808 3
4H	23	W 090 01.0	N 88 07.1	15XWT480488947		SW	975	549	549		22 07 58		762 3
4H	24	W 093 58.0	N 88 07.6	15XWT481588956		SE	975	823	823		22 07 58		899 3
4H	25	W 093 57.0	N 88 08.0	15XWT481888964		NE	823	792	792		22 07 58		808 3
4H	26	W 094 09.2	N 88 07.8	15XWT477888976		SE	1036	792	792		22 07 58		914 3
4H	27	W 094 08.0	N 88 08.2	15XWT478288970		W	1036	305	305		22 07 58		670 3
4H	28	W 093 59.5	N 88 08.5	15XWT471088997		N	1036	274	274		22 07 58		625 3
4H	29	W 094 04.5	N 88 09.0	15XWT479488984		N	823	579	579		22 07 58		701 3
4H	30	W 094 04.8	N 88 19.5	15XVV479789126		N	975	549	549		28 07 59		762 3
4H	31	W 094 06.0	N 88 18.4	15XVV479389158		NW	975	213	213		28 07 59		594 3
4H	32	W 094 04.0	N 88 17.2	15XVV479889135		NW	914	244	244		28 07 59		579 3
4H	33	W 094 01.0	N 88 16.4	15XVV480889123		SW	1006	183	183		28 07 59		594 3
4H	34	W 093 54.0	N 88 16.5	15XVV483089120		W	975	579	579		28 07 59		777 3
4H	35	W 093 50.5	N 88 16.3	15XVV474089116		N	762	670	670		28 07 59		716 3
4H	36	W 093 54.2	N 88 15.0	15XVV483089096	W	W	1250	122	122	792	28 07 59	1021 4	457 3
4H	37	W 093 44.5	N 88 13.3	15XVV486089064		S	792	549	549		28 07 59		670 3
4H	38	W 093 22.5	N 88 12.7	15XVV492589032	SW		1219	762	762	762	28 07 59	991 4	
4H	39	W 093 20.0	N 88 12.5	15XVV493689045		SW	1280	732	732		28 07 59		1006 3
4H	40	W 093 17.0	N 88 12.5	15XVV494689046	SW		1311	884	884	884	28 07 59	1097 4	
4H	41	W 093 12.0	N 88 11.8	15XVV496089032	SW		1219	670	670	670	28 07 59	945 4	
4H	42	W 093 33.0	N 88 11.4	15XVV489489022	SW	S	1402	122	122	823	5 18 59	1112 4	472 3
4H	43	W 093 12.0	N 88 10.0	15XVV496289000	NW	NW	1097	579	579	823	05 18 59	960 4	701 3
4H	44	W 093 09.0	N 88 10.2	15XVV497289022	S		1341	1219	1219		05 18 59	1280 4	
4H	45	W 093 19.0	N 88 08.6	15XVU493888973	NW	NW	1585	213	213	732	05 18 59	1158 4	472 3
4H	46	W 093 06.0	N 88 08.5	15XVU498088970	SW	SW	1402	518	518	975	05 18 59	1189 4	747 3
4H	47	W 092 56.0	N 88 08.5	15XWU501288972	N	W	1280	762	762	1036	5 18 59	1158 4	399 3
4H	48	W 092 53.0	N 88 08.1	15XWU502288965	N		1539	762	762	762	5 18 59	1150 4	
4H	49	W 092 59.7	N 88 07.7	15XWU500088956	NW	SW	1524	579	579	1067	05 18 59	1295 4	823 3
4H	50	W 092 58.5	N 88 07.2	15XWU500588956	S		1463	1128	1128		05 18 59	1295 4	
4H	51	W 092 56.0	N 88 07.3	15XWU651488904	S		1585	1280	1280		5 18 59	1432 4	
4H	52	W 093 06.0	N 88 05.3	15XVU498288912	NE		1402	762	762	762	05 18 59	1082 4	
4H	53	W 093 08.0	N 88 06.0	15XVU497588922	N		1280	732	732	732	05 18 59	1006 4	
4H	54	W 093 11.0	N 88 06.3	15XVU496588927	N		1250	610	610	610	05 18 59	930 4	
4H	55	W 093 14.5	N 88 07.0	15XVU495488940	N	N	1372	549	549	701	05 18 59	1036 4	640 3
4H	56	W 093 17.0	N 88 07.4	15XVU495688946	N	N	1250	457	457	640	05 18 59	945 4	549 3
4H	57	W 093 14.5	N 88 07.3	15XVU493888957	N	N	1250	457	457	640	05 18 59	945 4	549 3
4H	58	W 093 22.5	N 88 07.8	15XVU492888958	N	NE	1250	396	396	610	05 18 59	930 4	503 3
4H	59	W 093 25.0	N 88 07.5	15XVU492088950	N	NE	1250	488	488	549	05 18 59	899 4	518 3
4H	60	W 093 26.0	N 88 07.1	15XVU491688945	N	N	1097	610	610	945	05 18 59	1021 4	777 3
4H	61	W 093 28.0	N 88 07.3	15XVU491088948		N	823	792	792		05 18 59		808 3
4H	62	W 093 29.0	N 88 07.3	15XVU490688950		N	792	732	732		05 18 59		762 3
4H	63	W 093 43.0	N 88 09.0	15XVU486388982	NW	NW	1372	122	122	823	28 07 59	1097 4	472 3
4H	64	W 093 38.0	N 88 05.0	15XVU488088920	N	W	1097	457	457	823	28 07 59	960 4	640 3
4H	65	W 093 37.0	N 88 04.9	15XVU488088904		NW	945	884	884		28 07 59		914 3
4H	66	W 093 37.0	N 88 04.7	15XVU488288900		NW	1067	823	823		28 07 59		945 3
4H	67	W 093 34.0	N 88 04.5	15XVU489088974		S	1219	1128	1128		28 07 59		1178 3
4H	68	W 093 38.0	N 88 04.1	15XVU487888992		NW	792	701	701		28 07 59		747 3
4H	69	W 093 33.0	N 88 03.9	15XVU489388882	W	W	1372	732	732	1128	28 07 59	1250 4	930 3
4H	70	W 093 29.5	N 88 03.5	15XVU490588876	W	W	1432	701	701	1280	28 07 59	1356 4	991 3
4H	71	W 093 26.0	N 88 02.5	15XUV495688858	SW	SW	1463	610	610	1097	28 07 59	1280 4	853 3
4H	72	W 093 23.0	N 88 02.0	15XVU492488848	SW	SW	1402	488	488	1036	28 07 59	1219 4	762 3
4H	73	W 093 33.5	N 79 59.9	15XVU489288812	SW	W	1524	274	274	792	28 07 59	1178 4	533 3
4H	74	W 093 35.0	N 79 58.8	15XVU486788792	N	N	1006	427	427	823	28 07 59	914 4	625 3
4H	75	W 093 28.5	N 79 59.1	15XVU490888798	N	W	914	549	549	792	28 07 59	869 4	670 3
4H	76	W 093 31.5	N 79 59.0	15XVU489888796	N	W	1372	244	244	732	28 07 59	1052 4	488 3
4H	77	W 093 37.5	N 79 58.4	15XVU488788786		N	1036	945	945		28 07 59		991 3
4H	78	W 093 39.0	N 79 58.5	15XVU487488786		N	1097	601	601		28 07 59		853 3
4H	79	W 093 38.0	N 79 58.3	15XVU487888784		S	1097	1036	1036		28 07 59		1067 3
4H	80	W 093 42.0	N 79 58.2	15XVU484488784		N	945	732	732		28 07 59		838 3
4H	81	W 093 44.0	N 79 57.5	15XVU485888770	SW	NW	1402	396	396	1097	28 07 59	1250 4	747 3
4H	82	W 093 51.0	N 79 57.8	15XUV483688776	N	N	1097	122	122	701	28 07 59	899 4	411 3
4H	83	W 093 55.0	N 79 55.8	15XVU483088740	E		1067	853	853	853	22 07 58	960 4	
4H	84	W 094 01.0	N 79 57.8	15XVU480388777	N	E	1128	274	274	914	22 07 58	1021 4	594 3
4H	85	W 094 02.0	N 79 59.0	15XVU480088798		N	152	91	91		22 07 58		122 3
4H	86	W 094 04.0	N 79 59.0	15XVU479288798		N	152	61	61		22 07 58		107 3
4H	87	W 094 06.0	N 79 58.5	15XVU478788787		N	762	457	457		22 07 58		610 3
4H	88	W 094 04.5	N 79 58.1	15XVU479088782		N	1097	732	732		22 07 58		914 3
4H	89	W 094 15.5	N 79 56.2	15XVU475488744	NW	NW	1128	427	427	823	22 07 58	975 4	625 3
4H	90	W 094 14.1	N 79 56.9	15XVU476088760	W	W	975	701	701	823	22 07 58	899 4	762 3
4H	91	W 094 09.0	N 79 57.2	15XVU477788764	NW	NW	1158	150	150	792	22 07 58	975 4	402 3
4H	92	W 094 17.5	N 79 52.0	15XVU474888780		N	610	183	183		22 07 58		396 3
4H	93	W 094 25.0	N 79 58.8	15XVU472488794		N	305	0	0		22 07 58		152 3
4H	94	W 094 27.0	N 79 59.0	15XUV471788797		N	152	0	0		22 07 58		76 3
4H	95	W 094 05.5	N 79 59.7	15XVU478888810		S	183	0	0		22 07 58		183 3
4H	96	W 093 51.0	N 88 00.2	15XVU483288818	S	S	1402	122	122	762	22 07 58	1082 4	442 3
4H	97	W 093 42.0	N 88 01.5	15XVU486288842	S		1280	914	914	914	22 07 58	1097 4	
4H	98	W 093 55.5	N 88 01.0	15XVU482088833	SW	NW	1372	732	732	991	22 07 58	1143 4	816 3
4H	99	W 093 39.5	N 88 02.0	15XVU487288850	NE	NE	1341	610	610	1219	28 07 59	1280 4	914 3
4H	100	W 094 06.0	N 88 01.0	15XVU478688846		S	1128	1097	1097		22 07 58		1112 3
4H	101	W 094 04.0	N 88 01.7	15XVU479288846		E	975	762	762		22 07 58		853 3
4H	102	W 094 08.0	N 88 01.8	15XVU477888848		W	1036	701	701		22 07 58		853 3
4H	103	W 094 05.0	N 88 02.5	15XVU478888862		W	914	579	579		22 07 58		747 3
4H	104	W 094 09.0	N 88 02.7	15XVU477688864		N	945	488	488		22 07 58		716 3
4H	105	W 094 08.0	N 88 02.8	15XVU478088865		NE	945	442	442		22 07 58		693 3
4H	106	W 093 56.5	N 88 02.0	15XVU481688852		N	945	762	762		22 07 58		853 3
4H	107	W 093 58.0	N 88 03.0	15XVU481288870	NW	NW	1341	107	107	853	22 07 58	1097 4	480 3
4H	108	W 093 40.5	N 88 02.6	15XVU486888862		NE	1097	732	732	1067	28 07 59	1082 4	399 3
4H	109	W 093 41.5	N 88 03.5	15XVU486588878	E	N	1219	579	579	1006	28 07 59	1112 4	792 3
4H	110	W 093 45.5	N 88 04.0	15XVU485388887	NE	NE	1067	579	579	1006	28 07 59	1037 4	792 3
4H	111	W 094 00.0	N 88 04.2	15XVU480688893		NW	762	457	457		28 07 59		610 3
4H	112	W 093 48.0	N 88 04.5	15XUV484688898		SE	1280	1219	1219		28 07 59		1250 3
4H	113	W 093 56.0	N 88 05.1	15XVU481088910		NW	1204	274	274		28 07 59		740 3
4H	114	W 093 46.5	N 88 05.1	15XVU485088810		E	1128	1067	1067		28 07 59		1097 3
4H	115	W 093 51.0	N 88 06.1	15XVU483688928		N	1280	457	457		28 07 59		869 3
4H	116	W 093 48.0	N 88 06.3	15XVU484788932		NW	914	290	290		28 07 59		602 3
4H	117	W 093 56.0	N 88 12.1	15XVU482289042		NE	945	701	701		28 07 59		823 3

LI FIORD

IDENT	NO.	TOTAL LENGTH ABLA	EXP	TOTAL	WIDTH	SURFACE AREA EXP	TOTAL	ABLATION	AAR	DEPTH	VOLUME	TYPE
4H	1	.5	.5	.5	.	1.40	1.40 3	1.40 3	0	20	.00 3	700112
4H.	2	.5	.5	.5	.	1.40	1.40 3	1.40 3	0	20	.00 3	700112
4H	3	1.8	1.8	1.8	.	2.02	2.02 3	2.02 3	0	25	.00 3	370112
4H	4	.8	.8	.8	.	.20	.20 3	.20 3	0	15	.00 3	390112
4H	5	2.1	2.1	2.1	.	1.31	1.31 3	1.31 3	0	25	.00 3	390112
4H	6	.8	.8	.8	.	.30	.30 3	.30 3	0	15	.00 3	390112
4H	7	1.1	1.1	1.1	.	.50	.50 3	.50 3	0	15	.00 3	390112
4H	8	.6	.6	.6	.3	.30	.30 3	.30 3	0	15	.00 3	390112
4H	9	2.8	2.8	2.8	.	3.33	3.33 3	3.33 3	0	35	.11 3	650112
4H	10	1.5	1.5	1.5	.	.60	.60 3	.60 3	0	15	.00 3	390112
4H	11	2.0	2.0	2.0	.	1.31	1.31 3	1.31 3	0	20	.00 3	650112
4H	12	.4	.4	.4	.	1.25	1.25 3	1.25 3	0	20	.00 3	650112
4H	13	3.1	3.1	3.1	.	1.41	1.41 3	1.41 3	0	20	.00 3	653112
4H	14	.8	.8	.8	.	.13	.13 3	.13 3	0	15	.00 3	700112
4H	15	1.1	1.1	1.1	.	2.18	2.18 3	2.18 3	0	35	.00 3	700112
4H	16	2.0	2.0	2.0	.	1.31	1.31 3	1.31 3	0	20	.00 3	650112
4H	17	1.3	1.3	1.3	.	4.99	4.99 3	4.99 3	0	35	.17 3	603112
4H	18	1.0	1.0	1.0	.	2.96	2.96 3	2.96 3	0	35	.10 3	603112
4H	19	1.4	1.4	1.4	.	.50	.50 3	.50 3	0	15	.00 3	750112
4H	20	.4	.4	.4	.	1.56	1.56 3	1.56 3	0	20	.00 3	700112
4H	21	1.5	1.5	1.5	.	.91	.91 3	.91 3	0	50	.00 3	430112
4H	22	.3	.3	.3	.	.62	.62 3	.62 3	0	15	.00 3	700112
4H	23	1.8	1.8	1.8	.	2.32	2.32 3	2.32 3	0	50	.11 3	430112
4H	24	1.1	1.1	1.1	.	.20	.20 3	.20 3	0	15	.00 3	653112
4H	25	.9	.9	.9	.	.20	.20 3	.20 3	0	15	.00 3	653112
4H	26	.9	.9	.9	.	.91	.91 3	.91 3	0	50	.00 3	430112
4H	27	3.9	3.9	3.9	.	4.33	4.33 3	4.33 3	0	50	.21 3	430112
4H	28	2.8	2.8	2.8	.	3.33	3.33 3	3.33 3	0	50	.16 3	430112
4H	29	.6	.6	.6	.	.30	.30 3	.30 3	0	15	.00 3	650112
4H	30	1.7	1.7	1.7	.	3.43	3.43 3	3.43 3	0	50	.17 3	430112
4H	31	4.6	4.6	4.6	.	6.55	6.55 3	6.55 3	0	125	.81 3	422412
4H	32	3.2	3.2	3.2	.	2.92	2.92 3	2.92 3	0	50	.14 3	430112
4H	33	6.9	6.9	6.9	.	10.79	10.79 3	10.79 3	0	125	1.35 3	532112
4H	34	2.3	2.3	2.3	.	2.02	2.02 3	2.02 3	0	50	.10 3	430112
4H	35	.3	.3	.3	.	.78	.78 3	.78 3	0	15	.00 3	390112
4H	36	8.5	8.5	8.5	.	54.03	54.03 3	10.75 3	80	200	10.08 3	512112
4H	37	.5	.5	.5	.	.19	.19 3	.19 3	0	15	.00 3	700112
4H	38	.	2.2	2.2	.3	1.11	1.11 3	.	0	15	.00 3	653112
4H	39	1.6	1.6	1.6	.	1.11	1.11 3	1.11 3	0	20	.00 3	653112
4H	40	.	1.3	1.3	.	.81	.81 3	.	100	15	.00 3	653112
4H	41	3.3	3.3	3.3	.	1.61	1.61 3	.	0	50	.08 3	435112
4H	42	10.1	16.6	16.6	.	93.14	93.14 3	19.35 3	79	200	18.70 3	532112
4H	43	2.5	2.5	2.5	.	.91	.91 3	.30 3	67	15	.00 3	650112
4H	44	.	1.3	1.3	.	1.40	1.40 3	.	100	20	.00 3	653112
4H	45	9.3	24.3	24.3	.	166.54	166.54 3	15.02 3	9	250	40.15 3	522112
4H	46	6.3	6.1	12.1	.	31.55	31.55 3	7.16 3	78	200	6.30 3	425112
4H	47	.8	1.5	1.5	.	.90	.90 3	.50 3	45	50	.00 3	435112
4H	48	.	2.5	2.5	.	1.92	1.92 3	.	87	50	.00 3	435112
4H	49	1.6	3.6	3.6	.	3.63	3.63 3	1.31 3	64	50	.18 3	435112
4H	50	.	1.4	1.4	.	.50	.50 3	.	100	15	.00 3	653112
4H	51	.	1.4	1.4	.	.30	.30 3	.	100	15	.00 3	653112
4H	52	.	2.8	2.8	.	1.41	1.41 3	.	100	50	.07 3	435512
4H	53	.	2.5	2.5	.	1.81	1.81 3	.	100	50	.00 3	435512
4H	54	.	2.6	2.6	.	2.22	2.22 3	.	100	50	.11 3	435512
4H	55	.9	2.5	2.5	.	1.81	1.81 3	.60 3	67	50	.09 3	435512
4H	56	.8	2.1	2.1	.	1.10	1.10 3	.40 3	65	50	.00 3	435512
4H	57	.8	2.8	2.8	.	1.91	1.91 3	.50 3	74	50	.09 3	435512
4H	58	1.0	2.9	2.9	.	1.80	1.80 3	.70 3	61	50	.09 3	435512
4H	59	.9	2.3	2.3	.	1.41	1.41 3	.50 3	65	50	.07 3	435512
4H	60	.5	1.4	1.4	.	.60	.60 3	.40 3	85	15	.00 3	650112
4H	61	.5	.5	.5	.	.20	.20 3	.20 3	0	15	.00 3	770117
4H	62	.4	.4	.4	.	.20	.20 3	.20 3	00	15	.00 3	770112
4H	63	10.6	15.6	15.6	.	40.42	40.42 3	18.04 3	76	200	8.90 3	532112
4H	64	2.0	4.3	4.3	.	6.85	6.85 3	4.03 3	83	125	.86 3	432112
4H	65	.3	.3	.3	.	.62	.62 3	.62 3	0	15	.00 3	700112
4H	66	.4	.4	.4	.	.62	.62 3	.62 3	0	15	.00 3	700112
4H	67	.4	.4	.4	.	.94	.94 3	.94 3	0	15	.00 3	700112
4H	68	.8	.8	.8	.	2.65	2.65 3	2.65 3	0	35	.09 3	770112
4H	69	2.1	3.1	3.1	.	2.26	2.26 3	1.71 3	87	50	.11 3	430112
4H	70	2.1	2.8	2.8	.	2.32	2.32 3	1.41 3	84	50	.22 3	430112
4H	71	1.8	2.6	2.6	.	1.40	1.40 3	.70 3	80	50	.07 3	435112
4H	72	3.9	6.3	6.3	.	9.27	9.27 3	5.14 3	82	125	1.15 3	432112
4H	73	7.3	15.3	15.3	.	78.12	78.12 3	17.44 3	55	200	15.60 3	510112
4H	74	2.1	2.5	2.5	.	1.10	1.10 3	.70 3	84	20	.00 3	635112
4H	75	1.6	2.8	2.8	.	1.00	1.00 3	.70 3	30	50	.05 3	435112
4H	76	2.5	5.3	5.3	.	4.23	4.23 3	1.21 3	71	125	.36 3	435112
4H	77	.3	.3	.3	.	.20	.20 3	.20 3	0	15	.00 3	650112
4H	78	1.3	1.3	1.3	.	.50	.50 3	.50 3	0	15	.00 3	650112
4H	79	.3	.3	.3	.	.20	.20 3	.20 3	0	15	.00 3	650112
4H	80	.6	.6	.6	.	1.09	1.09 3	1.09 3	0	20	.00 3	650112
4H	81	3.0	4.5	4.5	.	6.65	6.65 3	3.63 3	45	125	.83 3	420112
4H	82	5.6	8.3	8.3	.	40.82	40.82 3	15.02 3	69	200	8.20 3	412112
4H	83	.	.6	.6	.	.50	.50 3	.	100	15	.00 3	655112
4H	84	3.0	3.3	3.3	.	3.23	3.23 3	1.21 3	63	50	.16 3	430112
4H	85	.3	.3	.3	.	1.56	1.56 3	1.56 3	0	20	.00 3	900120
4H	86	.6	.6	.6	.	2.03	2.03 3	2.03 3	0	20	.00 3	900120
4H	87	.3	.3	.3	.	1.40	1.40 3	1.40 3	0	20	.00 3	770112
4H	88	.9	.9	.9	.	.60	.60 3	.60 3	0	15	.00 3	650112
4H	89	2.5	4.5	4.5	.	4.34	4.34 3	1.92 3	56	125	.54 3	432112
4H	90	.6	1.2	1.2	.	1.71	1.71 3	1.01 3	86	20	.00 3	653112
4H	91	5.4	8.4	8.4	.	10.28	10.28 3	1.11 3	99	200	2.26 3	522414
4H	92	.9	.9	.9	.	2.03	2.03 3	2.03 3	0	35	.07 3	700112
4H	93	.5	.5	.5	.	2.34	2.34 3	2.34 3	0	20	.00 3	900120
4H	94	.8	.8	.8	.	2.18	2.18 3	2.18 3	0	20	.00 3	900120
4H	95	2.1	2.1	2.1	.	.40	.40 3	.40 3	0	20	.01 3	900120
4H	96	2.8	5.0	5.0	.4	3.40	3.40 3	2.80 3	18	50	.17 3	430112
4H	97	.	.8	.8	.	2.18	2.18 3	.	100	35	.08 3	700112
4H	98	2.8	3.4	3.4	.	4.94	4.94 3	3.43 3	30	125	.61 3	430112
4H	99	1.6	2.1	2.1	.	2.01	2.01 3	1.61 3	20	20	.04 3	650412
4H	100	.5	.5	.5	.	.30	.30 3	.30 3	0	15	.00 3	653112
4H	101	1.5	1.5	1.5	.	.30	.30 3	.30 3	0	15	.00 3	653112
4H	102	2.3	2.3	2.3	.	2.82	2.82 3	2.82 3	0	20	.06 3	650112
4H	103	1.3	1.3	1.3	.	.30	.30 3	.30 3	0	15	.00 3	770112
4H	104	2.1	2.1	2.1	.	.50	.50 3	.50 3	0	50	.03 3	430112
4H	105	1.5	1.5	1.5	.	.30	.30 3	.30 3	0	15	.00 3	653112
4H	106	.4	.4	.4	.	1.40	1.40 3	1.40 3	0	20	.00 3	700112
4H	107	6.3	10.5	10.5	.	27.12	27.12 3	12.16 3	55	200	5.40 3	430112
4H	108	1.1	1.2	1.2	.	.80	.80 3	.60 3	25	15	.00 3	650112
4H	109	2.9	2.9	2.9	.	2.72	2.72 3	1.81 3	33	50	.15 3	430412
4H	110	1.5	2.3	2.3	.	1.81	1.81 3	1.31 3	28	50	.09 3	430412
4H	111	1.0	1.0	1.0	.	3.28	3.28 3	3.28 3	0	35	.12 3	700112
4H	112	.8	.8	.8	.	1.09	1.09 3	1.09 3	0	20	.00 3	654112
4H	113	2.9	2.9	2.9	.	2.52	2.52 3	2.52 3	0	50	.13 3	430112
4H	114	1.8	1.8	1.8	.	2.65	2.65 3	2.65 3	0	35	.09 3	654112
4H	115	4.9	4.9	4.9	.	5.54	5.54 3	5.54 3	0	125	.70 3	430112
4H	116	2.1	2.1	2.1	.	1.41	1.41 3	1.41 3	0	50	.07 3	430112
4H	117	2.1	2.1	2.1	.	1.60	1.60 3	1.60 3	0	25	.00 3	390112

BUNDE FIORD

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT AC	ORIENT AB	ELEVATIONS HIGH	L.EX	L.TL	SNOW	DATE	MEAN ELEVATION ACCU	ABLA
4J	1	W 093 49.0	N 80 17.4	15XVV484689156	NE	NE	1036	518	518	853	28 7 59	945 4	686 3
4J	2	W 093 46.5	N 80 17.6	15XVV485589166	W	00	945	701	701	853	28 7 59	945 4	777 3
4J	3	W 093 48.0	N 80 18.5	15XVV485089180	NW	00	975	762	762	853	28 7 59	960 4	808 3
4J	4	W 094 00.5	N 80 19.4	15XVV481089196		E	853	762	762		28 7 59		807 3
4J	5	W 094 05.0	N 80 19.8	15XVV479789206		NE	914	457	457		28 7 59		685 3
4J	6	W 094 03.0	N 80 20.4	15XVV480289216		NE	853	396	396		28 7 59		624 3
4J	7	W 094 06.0	N 80 20.9	15XVV479489224		NE	579	427	427		28 7 59		503 3
4J	8	W 094 05.0	N 80 20.8	15XVV479889224		NE	610	396	396		28 7 59		503 3
4J	9	W 093 55.0	N 80 19.6	15XVV482689202	N	N	1006	274	274	701	28 7 59	853 4	488 3
4J	10	W 093 49.0	N 80 20.0	15XVV484889206	N	N	1006	427	427	792	28 7 59	899 4	610 3
4J	11	W 093 41.5	N 80 19.9	15XVV487089104	N	N	1006	274	244	792	28 7 59	899 4	518 3
4J	12	W 093 37.0	N 80 19.4	15XVV488489190		NE	975	427	427		28 7 59		641 3
4J	13	W 093 33.5	N 80 18.6	15XVV489589180	N	N	853	152	152	762	28 7 59	808 4	457 3
4J	14	W 093 27.5	N 80 18.1	15XVV481389174		NW	1006	732	732		28 7 59		864 3
4J	15	W 093 21.0	N 80 18.2	15XVV481689180		N	792	549	549		28 7 59		670 3
4J	16	W 093 21.0	N 80 19.3	15XVV493489172	NW	NW	1128	427	427	732	28 7 59	930 4	579 3
4J	17	W 093 14.0	N 80 19.1	15XVV495489176	N	NW	1554	457	457	701	28 7 59	1128 4	579 3
4J	18	W 093 40.5	N 80 19.4	15XVV496589174	NW	NW	1554	549	549	975	28 7 59	1265 4	762 3

NORTHERN ICE CAP

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT AC	ORIENT AB	ELEVATIONS HIGH	L.EX	L.TL	SNOW	DATE	MEAN ELEVATION ACCU	ABLA
4K	1	W 93 04.5	N 80 21.2	15XVV498689208	SW	W	1676	244	244	945	13 8 59	1219 4	594 3
4K	2	W 93 16.5	N 80 21.8	15XVV494989218	W	SW	975	290	290	869	13 8 59	937 4	732 3
4K	3	W 93 17.5	N 80 22.6	15XVV494689234	S		1015	884	884		13 8 59	945 4	
4K	4	W 93 23.0	N 80 22.7	15XVV492889236	SW	SW	1250	152	152	853	13 8 59	1006 4	670 3
4K	5	W 93 33.5	N 80 25.0	15XVV489589281	W	W	1372	107	107	823	5 8 59	1067 4	579 3
4K	6	W 93 30.5	N 80 26.4	15XVV490589305	W	W	1402	244	244	792	5 8 59	1158 4	655 3
4K	7	W 93 26.0	N 80 27.3	15XVV492089324		W	975	808	808		13 8 59		945 3
4K	8	W 93 28.2	N 80 28.0	15XVV491289337		N	975	488	488		5 8 59		732 3
4K	9	W 93 21.5	N 80 28.9	15XVV493389345	NW	NW	1280	610	610	823	13 8 59	1082 4	762 3
4K	10	W 93 29.0	N 80 29.2	15XVV491089359		W	762	716	716		13 8 59		747 3
4K	11	W 93 24.5	N 80 29.8	15XVV492489370	W	W	1233	290	290	777	13 8 59	1021 4	594 3
4K	12	W 93 13.0	N 80 30.8	15XVV496089387	SW	SW	1295	899	899	991	13 8 59	1219 4	930 3
4K	13	W 93 26.0	N 80 31.4	15XVV492089398	SW	SW	1219	602	602		13 8 59		762 3
4K	14	W 93 31.0	N 80 32.1	15XVV490589410	N	N	899	594	594	732	13 8 59	747 4	686 3
4K	15	W 93 35.0	N 80 32.3	15XVV489289416		N	610	457	457		5 8 59		533 3
4K	16	W 93 31.5	N 80 33.3	15XVV490389435	W	W	945	594	594	823	5 8 59	869 4	762 3
4K	17	W 93 32.0	N 80 33.8	15XVV490089443		W	823	732	732		5 8 59		777 3
4K	18	W 93 38.0	N 80 33.8	15XVV488489444		SW	640	579	579		5 8 59		610 3
4K	19	W 93 32.5	N 80 34.3	15XVV490089452	NW	NW	1050	610	610	853	5 8 59	899 4	762 3
4K	20	W 93 29.5	N 80 34.6	15XVV491089458		W	884	823	823		5 8 59		853 3
4K	21	W 93 30.8	N 80 35.1	15XVV490689468		W	930	510	510		5 8 59		823 3
4K	22	W 93 34.0	N 80 35.9	15XVV489789481		W	732	549	549		5 8 59		610 3
4K	23	W 93 42.5	N 80 36.7	15XVV487189496		NW	762	450	450		5 8 59		610 3
4K	24	W 93 39.0	N 80 37.3	15XVV488389509		N	792	305	305		28 7 59		549 3
4K	25	W 93 33.5	N 80 36.9	15XVV489889499		N	610	549	549		5 8 59		579 3
4K	26	W 93 28.5	N 80 36.1	15XVV491389487		N	945	305	305		13 8 59		670 3
4K	27	W 93 27.0	N 80 35.5	15XVV491789476		NE	945	457	457		13 8 59		701 3
4K	28	W 93 27.0	N 80 35.0	15XVV491789467		E	975	610	610		13 8 59		792 3
4K	29	W 93 26.0	N 80 34.6	15XVV492089460		NE	975	457	457		13 8 59		732 3
4K	30	W 93 21.5	N 80 34.0	15XVV493489448	NE	N	960	427	427	792	13 8 59	869 4	610 3
4K	31	W 93 16.5	N 80 33.5	15XVV495089436	N	N	1340	564	564	853	13 8 59	1036 4	777 3
4K	32	W 93 09.0	N 80 33.3	15XVV497389434	N	NW	1311	670	670	914	13 8 59	1036 4	823 3
4K	33	W 93 19.6	N 80 38.7	15XVV494089535		N	701	564	564		13 8 59		655 3
4K	34	W 93 06.5	N 80 34.8	15XWV498089462		N	945	594	594		17 8 59		762 3
4K	35	W 93 02.5	N 80 34.3	15XWV499289452		NE	975	610	610		17 8 59		1128 3
4K	36	W 93 01.0	N 80 33.9	15XWV499889444		NE	1006	594	594		17 8 59		823 3
4K	37	W 92 58.5	N 80 33.2	15XWV500689434		NE	1021	701	701		17 8 59		853 3
4K	38	W 92 49.5	N 80 32.8	15XWV503289426	N	N	1006	732	732	975	17 8 59	991 4	869 3
4K	39	W 92 57.0	N 80 32.5	15XWV501089402	NE	NE	1340	732	732	960	17 8 59	1204 4	884 3
4K	40	W 92 50.0	N 80 34.8	15XWV403089461	NE	NE	1158	823	823	1097	17 8 59	1112 4	960 3
4K	41	W 92 50.0	N 80 35.8	15XWV503089479		NW	1128	762	762		17 8 59		991 3
4K	42	W 92 46.5	N 80 36.5	15XWV504289492	N	N	1128	610	610	1067	17 8 59	1097 4	853 3
4K	43	W 92 41.0	N 80 36.2	15XWV505789486		E	1067	838	838		17 8 59		914 3
4K	44	W 92 45.5	N 80 35.5	15XWV504489474	SE	SE	1128	853	853	1097	17 8 59	1112 4	991 3
4K	45	W 92 44.0	N 80 32.5	15XWV505089418		NE	1112	1036	1036		28 7 59		1067 3
4K	46	W 92 41.0	N 80 32.2	15XWV505789413		E	1237	792	792		28 7 59		1067 3
4K	47	W 92 39.0	N 80 31.8	15XWV506489405		NE	1112	762	762		28 7 59		945 3
4K	48	W 92 45.0	N 80 30.3	15XWV504689378		N	1006	884	884		17 8 59		960 3
4K	49	W 92 43.0	N 80 30.2	15XWV505389377		NE	991	823	823		17 8 59		884 3
4K	50	W 92 37.0	N 80 29.5	15XWV507189364	NE	NE	1554	457	457	1067	28 7 59	1189 4	914 3
4K	51	W 92 10.0	N 80 35.6	15XWV515389482		N	747	701	701		28 7 59		724 3
4K	52	W 92 08.0	N 80 36.0	15XWV516089486		NW	747	701	701		28 7 59		724 3
4K	53	W 92 26.0	N 80 29.0	15XWV510589355		N	1128	1052	1052		28 7 59		1112 3
4K	54	W 92 19.0	N 80 28.0	15XWV012689339	E	E	1128	594	594	1112	28 7 59	1128 4	914 3
4K	55	W 92 12.0	N 80 27.2	15XWV515089321	NE	NE	1280	579	579	1112	28 7 59	1189 4	975 3
4K	56	W 92 12.0	N 80 26.8	15XWV515089306		NE	1128	853	853		28 7 59		1006 3
4K	57	W 92 08.0	N 80 26.4	15XWV516389308		NE	914	792	792		28 7 59		884 3
4K	58	W 92 02.0	N 80 24.8	15XWV517989277	NE	NE	1676	396	396	1189	28 7 59	1372 4	914 3
4K	59	W 91 59.0	N 80 21.8	15XWV519189220	E	E	1600	594	594	1128	28 7 59	1250 4	975 3
4K	60	W 92 01.0	N 80 20.0	15XWV518789187	E	E	1432	914	914	1189	28 7 59	1280 4	1036 3
4K	61	W 91 52.5	N 80 20.2	15XWV521189192		E	1120	914	914		13 8 59		1021 3
4K	62	W 92 00.5	N 80 19.5	15XWV518689178		NE	1128	914	914		28 7 59		777 3
4K	63	W 91 55.5	N 80 19.4	15XWV520289177		E	1097	853	853		13 8 59		1006 3
4K	64	W 92 03.5	N 80 17.8	15XWV517889147	SE	SE	1600	518	518	1067	28 7 59	1280 4	792 3
4K	65	W 91 48.5	N 80 17.0	15XWV522589133		NW	1189	899	899		13 8 59		1067 3
4K	66	W 91 39.0	N 80 17.9	15XWV522589151		NE	1006	610	610		13 8 59		1036 3
4K	67	W 91 43.0	N 80 17.3	15XWV524389138	E	E	1245	549	549	1143	13 8 59	1173 4	1036 3
4K	68	W 91 38.0	N 80 16.5	15XWV525989123		NE	1036	792	792		13 8 59		945 3
4K	69	W 92 10.0	N 80 15.8	15XWV515889109	SE	SE	1189	899	899	1067	28 7 59	1112 4	991 3
4K	70	W 92 13.0	N 80 15.0	15XWV514889095	SE	SE	1250	853	853	1112	28 7 59	1143 4	1006 3
4K	71	W 92 15.0	N 80 14.6	15XWV514189087	SE	SE	1250	1158	1158	1219	28 7 59	1234 4	1112 3
4K	72	W 92 21.0	N 80 14.6	15XWV512389088	NW	NW	1250	899	899	1158	28 7 59	1219 4	1082 3
4K	73	W 92 20.5	N 80 16.1	15XWV512489114	W	SW	1189	884	884	1128	28 7 59	1173 4	1006 3
4K	74	W 92 26.5	N 80 16.7	15XWV510589105		W	1006	945	945		28 7 59		960 3
4K	75	W 92 28.5	N 80 16.2	15XWV510089116	W	W	1158	975	975	1082	28 7 59	1112 4	1036 3
4K	76	W 92 28.0	N 80 16.7	15XWV510189125	W	NW	1158	930	930	1097	28 7 59	1128 4	1067 3
4K	77	W 92 27.5	N 80 16.8	15XWV510289128	W	W	1158	762	762	1112	28 7 59	1143 4	1036 3
4K	78	W 92 38.0	N 80 17.3	15XWV506989137		NW	991	732	732		17 8 59		884 3
4K	79	W 92 37.5	N 80 16.5	15XWV507089121		N	1219	762	762		17 8 59		1036 3
4K	80	W 92 37.0	N 80 16.2	15XWV506989113		E	1219	762	762		17 8 59		1036 3
4K	81	W 92 42.0	N 80 16.0	15XWV505789113	NW		1067	884	884		17 8 59		838 3
4K	82	W 92 41.0	N 80 17.3	15XWV505789136		N	1280	716	716		17 8 59		884 3
4K	83	W 92 48.0	N 80 15.8	15XWV503989107		NE	1082	914	914		17 8 59		991 3
4K	84	W 92 47.5	N 80 16.4	15XWV504089118	SE	SE	1128	945	945	1067	17 8 59	1082 4	1036 3
4K	85	W 92 53.0	N 80 17.4	15XWV502289136	NW	NW	1128	457	457	1082	17 8 59	1097 4	1128 3
4K	86	W 92 50.0	N 80 17.5	15XWV503189137		NW	1082	716	716		17 8 59		914 3
4K	87	W 92 47.5	N 80 17.6	15XWV503989141		N	1082	716	716		17 8 59		884 3
4K	88	W 92 40.0	N 80 17.0	15XWV504589130		SE	1082	1006	1006		17 8 59		1036 3
4K	89	W 92 47.0	N 80 16.8	15XWV504289124	SE	SE	1082	899	899	1036	17 8 59	1052 4	975 3
4K	90	W 92 39.0	N 80 18.0	15XWV506589152	SW	W	1524	579	579	1219	25 7 59	1341 4	853 3
4K	91	W 92 46.0	N 80 19.3	15XWV504589174	SW	SW	1265	579	579	1169	17 8 59	1311 4	975 3
4K	92	W 92 52.5	N 80 19.9	15XWV502389186	SW	SW	1280	579	579	1204	17 8 59	1326 4	853 3
4K	93	W 92 56.0	N 80 20.8	15XWV501389199		S	1372	914	914		17 8 59		1200 3

BUNDE FIORD

IDENT	NO.	TOTAL LENGTH			WIDTH	SURFACE AREA					AAR	DEPTH	VOLUME		TYPE
		ABLA	EXP	TOTAL		EXP	TOTAL		ABLATION						
4J	1	1.6	1.6	3.1	.	7.46	7.46	3	3.23	3	57	30	.22	3	204112
4J	2	1.3	1.3	1.8	.	2.02	2.02	3	.91	3	55	20	.04	3	200112
4J	3	.9	.9	1.3	.	.90	.90	3	.40	3	55	20	.01	3	200112
4J	4	.0	.0	.0	.	.30	.30	3	.30	3	0	15	.00	3	653112
4J	5	3.6	3.6	3.6	.	4.94	4.94	3	4.94	3	0	50	.25	3	530112
4J	6	.8	.8	.8	.	.60	.60	3	.60	3	0	20	.01	3	770112
4J	7	1.8	1.8	1.8	.	1.87	1.87	3	1.87	3	0	15	.03	3	700112
4J	8	.9	.9	.9	.	.11	.11	3	.11	3	0	15	.00	3	700112
4J	9	3.1	6.3	6.3	.	10.38	10.38	3	2.72	3	26	50	.52	3	430112
4J	10	2.3	3.8	3.8	.	1.91	2.21	3	1.31	3	14	50	.11	3	430112
4J	11	2.3	2.3	3.8	.	1.81	2.21	3	.91	3	41	50	.11	3	650112
4J	12	2.4	3.1	3.1	.	.91	.91	3	.91	3	0	15	.01	3	650112
4J	13	2.0	2.0	2.0	.	20.96	24.39	3	9.17	3	62	50	1.22	3	432112
4J	14	5.4	6.8	6.8	1.3	.80	.80	3	.80	3	0	15	.01	3	650112
4J	15	.8	.8	.8	.	6.45	6.45	3	1.41	3	78	50	.32	3	700112
4J	16	1.6	1.6	4.1	.6	4.41	4.41	3	1.71	3	61	50	.22	3	535112
4J	17	5.0	5.0	11.9	1.3	25.35	26.44	3	6.25	3	76	200	5.30	3	535112
4J	18	8.1	8.1	13.1	.	47.78	47.78	3	22.98	3	52	200	9.56	3	524112

NORTHERN ICE CAP

IDENT	NO.	TOTAL LENGTH			WIDTH	SURFACE AREA					AAR	DEPTH	VOLUME		TYPE
		ABLA	EXP	TOTAL		EXP	TOTAL		ABLATION						
4K	1	9.9	15.[illegible]	15.9	1.5	77.31	77.31	3	21.47	3	71	200	15.46	3	415114
4K	2	3.0	4.2	4.2	.4	3.93	3.93	3	1.41	3	64	50	.20	3	535112
4K	3	.2	.2	.2	.	.12	.12	3	.12	3	100	50	.01	3	403112
4K	4	4.2	8.0	8.0	.6	12.30	12.30	3	3.53	3	71	125	1.54	3	423112
4K	5	6.2	12.0	12.0	.9	24.80	24.80	3	8.77	3	69	200	4.96	3	433112
4K	6	4.4	10.8	10.8	.8	23.09	23.09	3	5.95	3	74	200	4.62	3	433112
4K	7	.	.	.	.	.19	.19	3	.19	3	0	15	.00	3	780112
4K	8	1.9	1.9	1.9	.	1.20	1.25	3	1.20	3	4	20	.03	3	205112
4K	9	1.0	5.1	5.1	.	8.77	8.81	3	1.81	3	79	125	1.10	3	435112
4K	10	.8	.8	.8	.	.11	.11	3	.11	3	0	15	.00	3	670112
4K	11	3.9	9.2	9.2	1.1	20.97	20.97	3	4.44	3	79	200	4.19	3	430114
4K	12	.5	2.1	2.1	.	1.09	1.09	3	.26	3	76	20	.02	3	655112
4K	13	2.5	2.5	2.5	.	1.01	1.01	3	1.01	3	0	20	.02	3	650112
4K	14	1.0	1.8	1.8	.	3.93	3.93	3	3.02	3	23	25	.10	3	320112
4K	15	.6	.6	.6	.	.11	.11	3	.11	3	0	15	.00	3	700112
4K	16	1.5	2.2	2.2	.	1.40	1.40	3	.70	3	50	20	.03	3	650112
4K	17	.6	.6	.6	.	.14	.14	3	.14	3	0	15	.00	3	670112
4K	18	1.1	1.1	1.1	.	.47	.47	3	.47	3	0	15	.01	3	700112
4K	19	2.1	3.0	3.0	.	2.72	2.72	3	1.71	3	37	35	.10	3	650112
4K	20	.2	.2	.2	.	.05	.05	3	.05	3	0	15	.00	3	700112
4K	21	1.4	1.4	1.4	.	.59	.59	3	.59	3	0	15	.01	3	650112
4K	22	1.4	1.4	1.4	.	.25	.25	3	.25	3	0	15	.00	3	700112
4K	23	1.1	1.1	1.1	.	.56	.56	3	.56	3	0	15	.01	3	650112
4K	24	1.8	1.8	1.8	.	.39	.39	3	.39	3	0	15	.01	3	700112
4K	25	.2	.2	.2	.	.14	.14	3	.14	3	0	15	.00	3	670112
4K	26	2.5	2.5	2.5	.	1.11	1.11	3	1.11	3	0	20	.02	3	620412
4K	27	1.8	1.8	1.8	.	.47	.47	3	.47	3	0	15	.01	3	650112
4K	28	.8	.8	.8	.	.26	.26	3	.26	3	0	15	.00	3	650112
4K	29	-	.	.	.	.53	.53	3	.53	3	0	15	.01	3	780112
4K	30	2.0	3.2	3.2	.	3.73	3.73	3	1.81	3	51	35	.13	3	650112
4K	31	2.9	5.6	5.6	.	14.92	14.92	3	5.95	3	60	125	1.87	3	525112
4K	32	2.5	5.0	5.0	.	6.04	6.04	3	3.12	3	48	125	.76	3	535112
4K	33	.6	.6	.6	.	1.51	1.51	3	1.51	3	0	20	.03	3	670112
4K	34	1.8	1.8	1.8	.	1.21	1.21	3	1.21	3	0	20	.02	3	650112
4K	35	1.6	1.6	1.6	.	.70	.70	3	.70	3	0	15	.01	3	650112
4K	36	2.1	2.1	2.1	.	1.41	1.41	3	1.41	3	0	20	.03	3	650112
4K	37	2.4	2.4	2.4	.	2.62	2.62	3	2.62	3	0	35	.09	3	700112
4K	38	1.4	1.6	1.6	.	1.91	1.91	3	1.81	3	5	20	.04	3	640112
4K	39	1.6	6.6	6.6	.	27.82	27.82	3	7.46	3	73	200	5.56	3	433112
4K	40	.6	.9	.9	.	.42	.42	3	.30	3	29	15	.01	3	650112
4K	41	.6	.6	.6	.	.11	.11	3	.11	3	0	15	.00	3	700112
4K	42	1.9	2.6	2.6	.	1.81	1.81	3	1.21	3	33	20	.04	3	650112
4K	43	1.0	1.0	1.0	.	.55	.55	3	.55	3	0	15	.01	3	700112
4K	44	.9	1.1	1.1	.	.36	.36	3	.25	3	81	15	.01	3	650112
4K	45	.3	.3	.3	.	.12	.12	3	.12	3	0	15	.00	3	650112
4K	46	.9	.9	.9	.	.22	.22	3	.22	3	0	15	.00	3	650112
4K	47	1.0	1.0	1.0	.	.47	.47	3	.47	3	0	15	.01	3	650112
4K	48	.6	.6	.6	.	.12	.12	3	.12	3	0	15	.00	3	650112
4K	49	.8	.8	.8	.	.44	.44	3	.44	3	0	15	.01	3	650112
4K	50	8.8	18.1	18.1	3.1	130.63	130.63	3	39.31	3	70	300	39.19	3	422114
4K	51	.5	.5	.5	.	.08	.08	3	.08	3	0	15	.00	3	700112
4K	52	.4	.4	.4	.	.05	.05	3	.05	3	0	15	.00	3	700112
4K	53	.9	.9	.9	.	.28	.28	3	.28	3	0	15	.00	3	700112
4K	54	3.8	4.4	4.4	.	7.86	7.86	3	6.85	3	63	50	.39	3	640112
4K	55	5.2	8.0	8.0	.	17.13	17.30	3	8.06	3	53	125	2.16	3	432113
4K	56	1.1	1.1	1.1	.	.98	.98	3	.98	3	0	15	.01	3	700112
4K	57	.5	.5	.5	.	.11	.11	3	.11	3	0	15	.00	3	650112
4K	58	9.4	17.6	17.6	.	115.02	115.02	3	61.29	3	47	300	34.50	3	421114
4K	59	3.9	8.9	8.9	.	25.09	25.09	3	9.37	3	63	200	5.02	3	430113
4K	60	1.0	1.4	1.4	.	1.64	1.64	3	.75	3	54	20	.03	3	650112
4K	61	.8	.8	.8	.	1.04	1.04	3	1.04	3	0	20	.02	3	700112
4K	62	1.2	1.2	1.2	.	.19	.19	3	.19	3	0	15	.00	3	650112
4K	63	.9	.9	.9	.	.28	.28	3	.28	3	0	15	.00	3	650112
4K	64	6.2	11.0	11.0	.	50.00	50.00	3	18.75	3	63	200	10.00	3	422113
4K	65	.8	.8	.8	.	.22	.22	3	.22	3	0	15	.00	3	650112
4K	66	1.5	1.5	1.5	.	.26	.26	3	.26	3	0	15	.00	3	650112
4K	67	2.9	3.5	3.5	.	4.83	4.83	3	4.23	3	12	35	.17	3	650112
4K	68	2.0	2.0	2.0	.	.62	.62	3	.62	3	0	15	.01	3	650112
4K	69	1.4	2.6	2.6	.	4.43	4.43	3	1.61	3	64	20	.09	3	200112
4K	70	1.4	2.1	2.1	.	2.72	2.72	3	1.81	3	34	20	.05	3	200112
4K	71	.8	1.0	1.0	.	.42	.42	3	.34	3	19	15	.01	3	650112
4K	72	1.6	1.9	1.9	.	2.72	2.72	3	2.32	3	15	20	.05	3	200112
4K	73	2.5	3.5	3.5	.	7.97	7.97	3	5.85	3	27	30	.24	3	220112
4K	74	.8	.8	.8	.	.14	.14	3	.14	3	0	15	.00	3	300112
4K	75	.6	.8	.8	.	.50	.50	3	.36	6	28	15	.01	3	650112
4K	76	.5	.8	.8	.	.20	.20	3	.14	3	30	15	.00	3	650112
4K	77	.9	1.1	1.1	.	.26	.26	3	.23	3	12	15	.00	3	650112
4K	78	1.1	1.1	1.1	.	.17	.17	3	.17	3	0	15	.00	3	650112
4K	79	1.0	1.0	1.0	.	.22	.22	3	.22	3	0	15	.00	3	650112
4K	80	1.4	1.4	1.4	.	.56	.56	3	.56	3	0	15	.01	3	650112
4K	81	.8	.8	.8	.	.16	.16	3	.16	3	0	15	.00	3	650112
4K	82	2.0	2.0	2.0	.	2.22	2.22	3	2.22	3	0	35	.08	3	650112
4K	83	1.1	1.1	1.1	.	.81	.81	3	.81	3	0	15	.01	3	650212
4K	84	.6	.8	.8	.	.42	.42	3	.34	3	19	15	.01	3	650112
4K	85	3.0	3.2	3.2	.	2.57	2.57	3	2.32	3	10	35	.09	3	650112
4K	86	1.6	1.6	1.6	.	.59	.59	3	.59	3	0	15	.01	3	650112
4K	87	1.4	1.4	1.4	.	.61	.61	3	.61	3	0	15	.01	3	650112
4K	88	1.2	1.2	1.2	.3	.37	.37	3	.37	3	0	15	.01	3	650112
4K	89	1.1	1.2	1.2	.	.67	.67	3	.62	3	8	15	.01	3	650112
4K	90	7.5	10.5	10.5	.	41.73	41.73	3	23.28	3	44	200	12.35	3	524112
4K	91	4.1	5.9	5.9	.	9.38	9.38	3	4.84	3	48	125	1.17	3	523112
4K	92	3.0	5.0	5.0	.	4.23	4.23	3	1.81	3	57	50	.21	3	530112
4K	93	1.2	1.2	1.2	.	.25	.25	3	.25	3	0	15	.00	3	650112

EASTERN - SCHEI PENINSULA

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT AC	ORIENT AB	ELEVATIONS HIGH	ELEVATIONS L.EX	ELEVATIONS L.TL	SNOW	DATE	MEAN ELEVATION ACCU	MEAN ELEVATION ABLA
4L	1	W 092 44.0	N 80 15.2	15XWV505089096	NE	NE	1158	1067	1067	1082	17 8 59	1112 4	1075 3
4L	2	W 092 36.8	N 80 14.0	15XWV507289066	NE	NE	1402	731	731	1006	27 7 58	1204 4	869 3
4L	3	W 092 28.0	N 80 10.4	15XWU510288998	NE	NE	1341	823	823		28 7 59	1082 4	
4L	4	W 092 12.5	N 80 14.1	15XWV515089068		N	1124	884	884		28 7 59		1004 3
4L	5	W 092 06.5	N 80 10.6	15XWV516789004	N	N	1432	731	731	1097	28 7 59	1265 4	864 3
4L	6	W 091 56.5	N 80 11.6	15XWV520289022	SW	SW	1280	1128	1128	1219	28 7 59	1250 4	914 3
4L	7	W 091 58.8	N 80 12.8	15XWV519489046	N	N	1463	1463	884	1189	28 7 59	1329 4	1030 3
4L	8	W 092 82.0	N 80 14.3	15XWV516489082		N	1128	1036	1036		28 7 59		1082 3
4L	9	W 091 58.7	N 80 14.1	15XWV519489080	N	N	1463	732	732	1097	28 7 59	1282 4	914 3
4L	10	W 091 47.5	N 80 14.8	15XWV522889092	N	NE	1463	579	579	792	28 7 59	1128 4	686 3
4L	11	W 091 43.5	N 80 14.4	15XWV524289085		N	945	777	777		28 7 59	4	861 3
4L	12	W 091 38.0	N 80 13.5	15XWV526089070	NE	NE	1280	579	579	1067	28 7 59	1173 4	823 3
4L	13	W 091 31.8	N 80 12.7	15XWV527889053		SW	1006	914	914		13 8 59		960 3
4L	14	W 091 34.0	N 80 12.5	15XWU527089050		SW	975	945	945		13 8 59		960 3
4L	15	W 091 36.5	N 80 12.2	15XWU526589045	SE	SE	1143	1006	1006	1036	13 8 59	1082 4	1021 3
4L	16	W 091 38.5	N 80 11.6	15XWV526089030	SE	SE	1280	884	884	1067	13 8 59	1158 4	975 3
4L	17	W 091 43.8	N 80 10.7	15XWV524389015	NE	NE	1128	823	823	1097	13 8 59	1112 4	990 3
4L	18	W 091 44.5	N 80 09.9	15XWV524089000		NE	1158	1128	1128		13 8 59		1128 3
4L	19	W 091 36.5	N 80 10.5	15XWU526589012		N	1097	853	853		13 8 59		975 3
4L	20	W 091 26.5	N 80 10.9	15XWV529689020		NW	1036	975	975		13 8 59		1005 3
4L	21	W 091 11.8	N 80 11.2	15XWV534189026	NE	NE	1219	427	427	1112	13 8 59	1158 4	762 3
4L	22	W 090 52.0	N 80 07.4	15XWV541088956		NE	945	884	884		29 7 59		914 3
4L	23	W 091 08.0	N 80 06.0	15XWV536088930	NE	NE	1341	823	823	1128	28 7 59	1234 4	975 3
4L	24	W 090 57.7	N 80 03.7	15XWU539388888	NE	NE	1219	701	701	1158	28 7 59	1189 4	930 3
4L	25	W 091 50.0	N 80 03.5	15XWU541788885		NE	1128	975	975		28 7 59		1052 3
4L	26	W 090 52.2	N 80 00.4	15XWU541388826	NE	NE	1280	1006	1006	1128	28 7 59	1204 4	1064 3
4L	27	W 090 27.0	N 79 57.7	15XWU549688786	NE	NE	1280	549	549	1036	28 7 59	1158 4	792 3
4L	28	W 090 03.8	N 79 54.0	15XWU557588716	NE	E	1341	274	274	1128	28 7 59	1234 4	701 3
4L	29	W 090 59.0	N 54 00.0	15XWU539588710	NW		1768	1280	1280		13 8 59	1524 4	
4L	30	W 090 07.5	N 79 51.6	15XWU557088665	N	SE	1311	732	732	1067	28 7 59	1189 4	399 3
4L	31	W 090 03.5	N 79 49.8	15XWU558088636	NE	NE	1250	579	579	1097	28 7 59	1173 4	838 3
4L	32	W 090 02.0	N 79 47.1	15XWU558788590	NE	NE	1341	701	701	1097	28 7 59	1219 4	399 3
4L	33	W 089 35.0	N 79 46.9	16XDB448888580	NE	NE	1189	427	427	823	13 8 59	1006 4	625 3
4L	34	W 089 34.7	N 79 45.3	16XDB448888552	E	E	975	701	701	853	13 8 59	914 4	777 3
4L	35	W 089 36.0	N 79 43.5	16XDB448688520	E	E	1128	975	975		13 8 59	1052 4	
4L	36	W 089 37.0	N 79 42.2	16XDB447888496	E	E	1128	701	701	1067	13 8 59	1097 4	884 3
4L	37	W 089 37.0	N 79 41.2	16XDB447888477	E	E	1128	732	732	1056	13 8 59	1082 4	884 3
4L	38	W 089 34.0	N 79 40.2	16XDB448788458	E	E	1097	762	762	914	13 8 59	1006 4	838 3
4L	39	W 089 40.0	N 79 39.7	16XDB446888450	E	SE	1158	732	732	975	13 8 59	1067 4	853 3
4L	40	W 089 46.0	N 79 38.7	16XDB444688430	SE	SE	1128	701	701	792	28 7 59	960 4	747 3
4L	41	W 089 53.0	N 79 37.5	16XDB442088410	SE	SE	1189	732	732	823	28 7 59	1006 4	777 3
4L	42	W 089 46.0	N 79 35.0	16XDB446288342	E	E	1280	853	853	975	28 7 59	1128 4	914 3
4L	43	W 089 48.7	N 79 34.5	16XDB443288454	E	E	1250	975	975	1006	28 7 59	1128 4	991 3
4L	44	W 089 48.2	N 79 34.1	16XDB443288446	E	E	1189	884	884	1128	28 7 59	1158 4	1006 3
4L	45	W 089 52.5	N 79 33.4	16XDB441888332	SE		1067	975	975		29 7 59	1021 4	
4L	46	W 089 51.0	N 79 32.6	16XDB442288318	NE	NE	1219	853	853	1067	28 7 59	1143 4	960 3
4L	47	W 089 37.0	N 79 32.6	16XDB447688316	N	N	1585	732	732	975	13 8 59	1280 4	853 3
4L	48	W 089 12.5	N 79 32.5	16XDB455388310	NE	NE	1554	579	579	914	13 8 59	1234 4	747 3
4L	49	W 088 56.5	N 79 27.1	16XDB460488208	E	E	1554	701	701	975	29 7 59	1265 4	835 3
4L	50	W 088 50.0	N 79 23.0	16XDB462088133	E	E	1554	549	549	823	29 7 59	1189 4	686 3
4L	51	W 088 41.0	N 79 21.6	16XDD465288105	SE	SE	1097	884	884		29 7 59	991 4	
4L	52	W 088 52.5	N 79 20.7	16XDB461488088	E	E	1280	1036	1036	1128	29 7 59	1204 4	1082 3
4L	53	W 088 42.0	N 79 20.7	16XDB465088088	E	E	1128	792	792	1036	29 7 59	1082 4	914 3
4L	54	W 088 37.5	N 79 19.5	16XDB466688066	NE	NE	1280	823	823	1097	27 9 59	1184 4	960 3
4L	55	W 088 53.1	N 79 19.7	16XDB461088070	N	E	1250	1097	1097	1158	29 7 59	1204 4	1128 3
4L	56	W 088 49.1	N 79 19.2	16XDB462288060	N	N	1250	1067	1067	1128	29 7 59	1184 4	1112 3
4L	57	W 088 10.0	N 79 35.5	16XDB476488360		NW	762	701	701		29 7 59		731 3
4L	58	W 088 09.0	N 79 35.8	16XDB476888366		NW	701	579	579		29 7 59		640 3
4L	59	W 088 08.1	N 79 35.6	16XDB477088362		NW	732	518	518		29 7 59		625 3
4L	60	W 088 03.9	N 79 34.7	16XDB478488345		NW	1097	884	884		29 7 59		990 3
4L	61	W 088 01.0	N 79 32.8	16XDB479688310		W	945	853	853		29 7 59		890 3

SKAARE FIORD

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT AC	ORIENT AB	ELEVATIONS HIGH	ELEVATIONS L.EX	ELEVATIONS L.TL	SNOW	DATE	MEAN ELEVATION ACCU	MEAN ELEVATION ABLA
4M	1	W 088 42.8	N 78 51.3	16XDC463087538	S	S	1387	579	579	1112	29 7 59	1299 4	847 3
4M	2	W 088 41.5	N 78 52.1	16XDC463587554		SE	1219	899	899	899	29 7 59		1059 3
4M	3	W 088 40.8	N 78 53.0	16XDC463787574	SE	SE	1387	594	594	1097	29 7 59	1242 4	845 3
4M	4	W 088 41.2	N 78 52.7	16XDC465387556	SE	SE	1250	975	975	1128	29 7 59	1189 4	1061 3
4M	5	W 088 33.2	N 78 53.2	16XDC466587575	SE	SE	1250	594	594	1128	27 7 59	861 4	861 3
4M	6	W 088 33.0	N 78 53.8	16XDC466787586	SE	SE	1189	884	884	1128	29 7 59	1153 4	1056 3
4M	7	W 088 30.2	N 78 54.2	16XDC467787593		NW	884	884	732		29 7 59		808 3
4M	8	W 088 28.0	N 78 54.8	16XDC468587693		E	1128	1052	1052		29 7 59		1090 3
4M	9	W 088 31.0	N 78 54.8	16XDC467487606		NE	1082	762	762		29 7 59		922 3
4M	10	W 088 40.0	N 78 55.3	16XDC464387615	N		1128	1067	1067		29 7 59	1097 4	
4M	11	W 088 29.5	N 78 56.0	16XDC467687628	E	E	1585	107	107	1128	29 7 59	1356 4	617 3
4M	12	W 088 39.0	N 78 57.0	16XDC464887646	E	SE	1219	777	777	1128	29 7 59	1173 4	952 3
4M	13	W 088 31.7	N 78 57.4	16XDC467287655		N	1143	914	914		29 7 59		1098 3
4M	14	W 088 35.0	N 78 57.7	16XDC466287662	S		1311	747	747		29 7 59	1029 4	
4M	15	W 088 26.0	N 78 58.2	16XDC469487670	E	SE	1707	137	137	1128	29 7 59	1011 4	632 3
4M	16	W 088 23.5	N 78 58.8	16XDC470487682	SE	SE	1402	152	152	1036	29 7 59	1219 4	594 3
4M	17	W 088 31.4	N 79 02.0	16XDC467687736	E	E	1402	122	122	1006	29 7 59	1204 4	614 3
4M	18	W 088 40.0	N 79 04.4	16XDC464887780	SE	SE	1432	244	244	945	13 8 59	1188 4	594 3
4M	19	W 088 21.0	N 79 06.0	16XDC471487810		SE	884	792	792		13 8 59		838 3
4M	20	W 088 25.8	N 79 06.4	16XDC469887815		W	884	792	792		13 8 59		838 3
4M	21	W 088 35.0	N 79 06.5	16XDC466587818		NW	1158	914	914		13 8 59		1036 3
4M	22	W 088 38.4	N 79 06.6	16XDC465487822		NW	1097	914	914		13 8 59		1005 3
4M	23	W 088 21.1	N 79 07.2	16XDC471487832		SE	1097	553	553		13 8 59		825 3
4M	24	W 088 19.5	N 79 07.7	16XDC472087843		SE	975	762	762		13 8 59		868 3
4M	25	W 088 23.0	N 79 08.0	16XDC470887848		N	1250	828	828		13 8 59		1039 3
4M	26	W 088 49.7	N 79 07.9	16XDC464887848	SE	SE	1311	792	792	1067	29 7 59	1189 4	929 3
4M	27	W 088 47.0	N 79 07.9	16XDC462687846	S	S	1402	1189	1189	1311	29 7 59	1356 4	1250 3
4M	28	W 088 45.0	N 79 07.8	16XDC463287846		S	1432	1250	1250		29 7 59		1341 3
4M	29	W 088 42.0	N 79 07.2	16XDC464287832	S	S	1219	91	91	1067	29 7 59	1143 4	579 3
4M	30	W 088 40.1	N 79 07.6	16XDC464887840	SE	SE	1280	884	884	975	29 7 59	1127 4	929 3
4M	31	W 088 40.5	N 79 08.0	16XDC464687850	SE	SE	1432	1036	1036	1097	29 7 59	1264 4	1066 3
4M	32	W 088 39.0	N 79 08.8	16XDC465487865	SE	SE	1463	914	914	975	29 7 59	1219 4	944 3
4M	33	W 088 32.5	N 79 10.4	16XDC467787892	SE	SE	1478	732	732	1067	29 7 59	1272 4	899 3
4M	34	W 088 24.5	N 79 14.3	16XDC470688068	NE	NE	1494	762	762	853	29 7 59	1173 4	807 3
4M	35	W 088 40.0	N 79 17.4	16XDB465588026	SE	SE	1219	914	914	1067	29 7 59	1143 4	991 3
4M	36	W 088 34.7	N 79 18.3	16XDB467288042		E	1219	792	792		29 7 59		1005 3

EASTERN - SCHEI PENINSULA

IDENT	NO.	TOTAL LENGTH ABLA	EXP	TOTAL	WIDTH	SURFACE AREA EXP	TOTAL	ABLATION	AAR	DEPTH	VOLUME		TYPE
4L	1	.1	.1	1.0	.	1.60	1.61 3	.60 3	59	25	.04	3	303112
4L	2	1.1	1.1	7.3	.	26.91	26.91 3	8.06 3	70	150	4.02	3	303112
4L	3	1.9	1.9	5.1	.	46.68	46.68 3	12.60 3	73	150	7.00	3	303112
4L	4	1.4	1.4	1.4	.	1.01	1.01 3	1.01 3	0	25	.02	3	390112
4L	5	4.0	4.0	13.4	.	88.80	88.80 3	22.68 3	75	200	17.70	3	403112
4L	6	.8	.8	1.0	.	0.50	.50 3	.30 3	40	50	.02	3	403112
4L	7	3.3	3.3	4.4	.	6.35	6.35 3	6.35 3	0	125	.79	3	403112
4L	8	.6	.6	.6	.	.19	.19 3	.19 3	0	15	.00	3	700112
4L	9	1.6	1.6	2.5	.	1.31	1.31 3	1.31 3	0	50	.06	3	403112
4L	10	1.5.	1.5	5.0	.	6.75	6.75 3	1.81 3	83	125	.84	3	403112
4L	11	.9	.9	.9	.	.28	.28 3	.28 3	0	15	.00	3	700112
4L	12	3.9	3.9	8.4	.	22.08	22.08 3	10.99 3	50	150	3.30	3	393112
4L	13	1.3	1.3	1.3	.	.52	.52 3	.52 3	0	15	.01	3	700112
4L	14	.4	.4	.4	.	.06	.06 3	.06 3	0	15	.00	3	700112
4L	15	.8	.8	1.3	.	1.41	1.41 3	.60 3	58	50	.07	3	403112
4L	16	.9	.9	1.8	.	2.21	2.21 3	.40 3	82	50	.11	3	403112
4L	17	2.6	2.6	5.1	.	4.84	4.84 3	1.69 3	65	50	.25	3	403112
4L	18	1.4	1.4	1.4	.	1.11	1.11 3	1.11 3	0	50	.06	3	403121
4L	19	2.7	2.7	2.8	.	6.65	6.65 3	.30 3	55	125	.83	3	403112
4L	20	1.8	1.8	1.8	.	6.45	6.45 3	5.95 3	8	125	.81	3	403112
4L	21	12.5	15.5	17.5	2.7	117.44	117.44 3	81.45 3	31	300	35.20	3	403112
4L	22	.6	.6	.6	.	.50	.50 3	.50 3	0	15	.01	3	700112
4L	23	3.1	3.1	7.8	.	29.74	29.74 3	21.37 3	28	200	6.00	3	403112
4L	24	5.0	5.0	6.5	.	28.63	28.63 3	22.38 3	22	200	5.80	3	403112
4L	25	2.4	2.4	2.4	.	1.41	1.41 3	1.41 3	0	15	.02	3	390112
4L	26	3.5	3.5	5.0	.	14.92	14.92 3	8.87 3	39	125	1.87	3	403112
4L	27	7.5	7.5	12.7	.	98.38	98.38 3	57.05 3	41	200	19.60	3	403112
4L	28	17.0	17.0	26.9	10.0	230.53	230.53 3	140.92 3	35	300	69.00	3	403112
4L	29	.	64.5	64.5	15.0	994.60	994.60 3	.	100	500	496.00	3	303112
4L	30	2.9	2.9	6.3	.	30.04	30.04 3	7.46 3	76	200	6.00	3	403112
4L	31	3.6	3.6	4.1	.	6.65	6.65 3	5.74 3	14	125	.83	3	403112
4L	32	1.8	1.8	6.1	.	41.12	41.12 3	6.85 3	84	200	8.22	3	403112
4L	33	6.3	6.3	16.6	.	102.11	102.11 3	22.78 3	88	250	25.40	3	403112
4L	34	1.8	1.8	31.3	.	6.25	6.25 3	3.33 3	47	125	.78	3	403112
4L	35	.	2.5	2.5	.	6.75	6.75 3	.	100	125	.89	3	403112
4L	36	3.1	3.1	4.9	.	5.85	2.42 3	2.42 3	59	125	.73	3	403112
4L	37	2.1	2.1	4.4	.	5.24	5.24 3	1.41 3	73	125	.66	3	403112
4L	38	.9	.9	2.1	.	1.92	1.92 3	.91 3	53	50	.10	3	403112
4L	39	1.1	1.1	6.1	.	14.31	14.31 3	1.71 3	88	125	1.78	3	403112
4L	40	1.1	1.1	6.1	.	14.31	14.31 3	1.71 3	88	125	1.79	3	403112
4L	41	.8	.8	6.3	.	18.54	18.54 3	1.81 3	20	125	2.32	3	403112
4L	42	1.5	1.5	3.0	.	2.92	2.92 3	1.61 3	45	50	.15	3	493112
4L	43	.5	.5	1.5	.	1.21	1.21 3	.30 3	75	50	.30	3	493112
4L	44	1.1	1.1	2.0	.	1.41	1.41 3	.81 3	44	50	.35	3	493112
4L	45	.	.8	.8	.	.60	.60 3	.	100	50	.03	3	493112
4L	46	1.6	1.6	4.1	.	7.77	7.77 3	1.92 3	75	125	.97	3	493112
4L	47	1.8	1.8	9.0	.	54.03	54.03 3	12.70 3	77	200	10.80	3	403112
4L	48	5.6	5.6	14.6	.	90.21	90.21 3	25.80 3	72	200	18.04	3	403112
4L	49	3.6	3.6	15.5	.	102.01	102.01 3	28.93 3	72	250	25.10	3	403112
4L	50	2.4	2.4	15.6	.	75.30	75.30 3	15.02 3	80	200	15.00	3	403112
4L	51	1.0	1.0	1.0	.	.81	.81 3	.81 3	0	50	.04	3	403112
4L	52	.8	.8	2.4	.	1.41	1.41 3	.30 3	79	50	.35	3	403112
4L	53	1.9	1.9	5.9	.	9.57	9.57 3	3.83 3	60	125	1.19	3	403112
4L	54	2.3	2.3	5.5	.	7.56	7.56 3	4.03 3	47	125	.94	3	403112
4L	55	.6	.6	2.3	.	3.22	3.22 3	.60 3	80	50	.16	3	403112
4L	56	.5	.5	1.4	.	.90	.90 3	.40 3	55	50	.04	3	403112
4L	57	.6	.6	.6	.	.94	.94 3	.94 3	0	15	.00	3	700112
4L	58	.4	.4	.4	.	.09	.09 3	.09 3	0	15	.00	3	700112
4L	59	.5	.5	.5	.	.14	.14 3	1.14 3	0	20	.00	3	700112
4L	60	1.4	1.4	1.4	.	.76	.76 3	.76 3	0	15	.01	3	390112
4L	61	3.8	3.8	3.8	.	.14	.14 3	.14 3	0	15	.00	3	700112

SKAARE FIORD

IDENT	NO.	TOTAL LENGTH ABLA	EXP	TOTAL	WIDTH	SURFACE AREA EXP	TOTAL	ABLATION	AAR	DEPTH	VOLUME		TYPE
4M	1	3.8	7.7	7.7	2.6	17.04	17.04 3	13.00 3	24	125	2.13	3	530114
4M	2	1.3	1.3	1.3	00.7	.60	.60 3	.60 3	0	15	.01	3	650132
4M	3	2.7	5.3	5.3	1.5	5.49	5.49 3	2.32 3	58	125	.69	3	530112
4M	4	.4	1.4	1.4	.5	.71	.71 3	.20 3	72	15	.01	3	650112
4M	5	2.5	3.6	3.6	1.4	3.81	3.81 3	.61 3	84	50	.19	3	530112
4M	6	.8	1.2	1.2	0.6	.60	.60 3	.40 3	33	15	.01	3	650112
4M	7	1.3	1.3	1.3	1.2	.50	.50 3	.50 3	0	15	.01	3	650112
4M	8	0.7	0.7	0.7	0.6	.30	.30 3	.30 3	0	15	.00	3	390112
4M	9	.9	.9	.9	.9	1.01	1.01 3	1.01 3	0	20	.02	3	700112
4M	10	.	8.8	8.8	.2	.20	.20 3	.	100	15	.00	3	300112
4M	11	11.8	16.3	16.3	1.1	51.60	51.60 3	26.40 3	49	200	10.32	3	425114
4M	12	1.4	1.7	1.7	.1	1.20	1.20 3	1.00 3	18	20	.02	3	653112
4M	13	.8	.8	.8	.4	1.42	1.42 3	1.42 3	0	20	.03	3	653112
4M	14	.	1.6	1.6	1.4	.30	.30 3	.	100	15	.00	3	700412
4M	15	8.8	15.0	15.0	.8	18.03	18.03 3	12.80 3	29	125	2.25	3	435114
4M	16	6.9	14.4	14.4	.	64.50	64.50 3	20.00 3	69	200	12.90	3	435112
4M	17	7.5	11.8	11.8	1.4	20.25	20.25 3	7.85 3	61	200	4.10	3	430112
4M	18	5.6	13.7	13.7	1.3	62.90	62.90 3	34.80 3	45	200	12.55	3	430112
4M	19	2.1	2.1	2.1	1.2	1.61	1.61 3	1.61 3	0	25	.04	3	390112
4M	20	.8	.8	.8	.7	.50	.50 3	.50 3	0	15	.01	3	390112
4M	21	1.4	1.4	1.4	.8	.91	.91 3	.91 3	0	15	.01	3	390112
4M	22	1.0	1.0	1.0	.4	.31	.31 3	.31 3	0	15	.00	3	390112
4M	23	2.0	2.0	2.0	.6	1.21	1.21 3	1.21 3	0	25	.03	3	390112
4M	24	.8	.8	.8	.4	.30	.30 3	.30 3	0	15	.00	3	390112
4M	25	1.9	1.9	1.9	1.7	2.21	2.21 3	2.21 3	0	25	.05	3	390112
4M	26	1.3	2.9	2.9	.4	2.81	2.81 3	.60 3	79	20	.06	3	653112
4M	27	.4	.6	.6	.3	.40	.40 3	.40 3	0	15	.01	3	653112
4M	28	.3	.3	.3	.3	.30	.30 3	.30 3	0	15	.00	3	653112
4M	29	1.0	1.4	1.4	.5	.70	.70 3	.40 3	44	50	.04	3	433112
4M	30	1.1	2.9	2.9	.4	2.42	2.42 3	.50 3	80	50	.12	3	430112
4M	31	.4	.9	.9	.4	.50	.50 3	.50 3	0	15	.01	3	653112
4M	32	.5	2.0	2.0	2.0	4.13	4.13 3	1.41 3	66	50	.20	3	433112
4M	33	4.9	7.5	7.5	.	31.10	31.10 3	16.20 3	48	200	6.20	3	430112
4M	34	1.3	11.8	11.8	.	66.20	66.20 3	21.70 3	67	200	13.20	3	430112
4M	35	1.5	2.5	2.5	.6	1.30	1.30 3	.80 3	39	20	.12	3	653112
4M	36	4.8	4.8	4.8	1.1	3.42	3.42 3	3.12 3	9	35	.03	3	650112

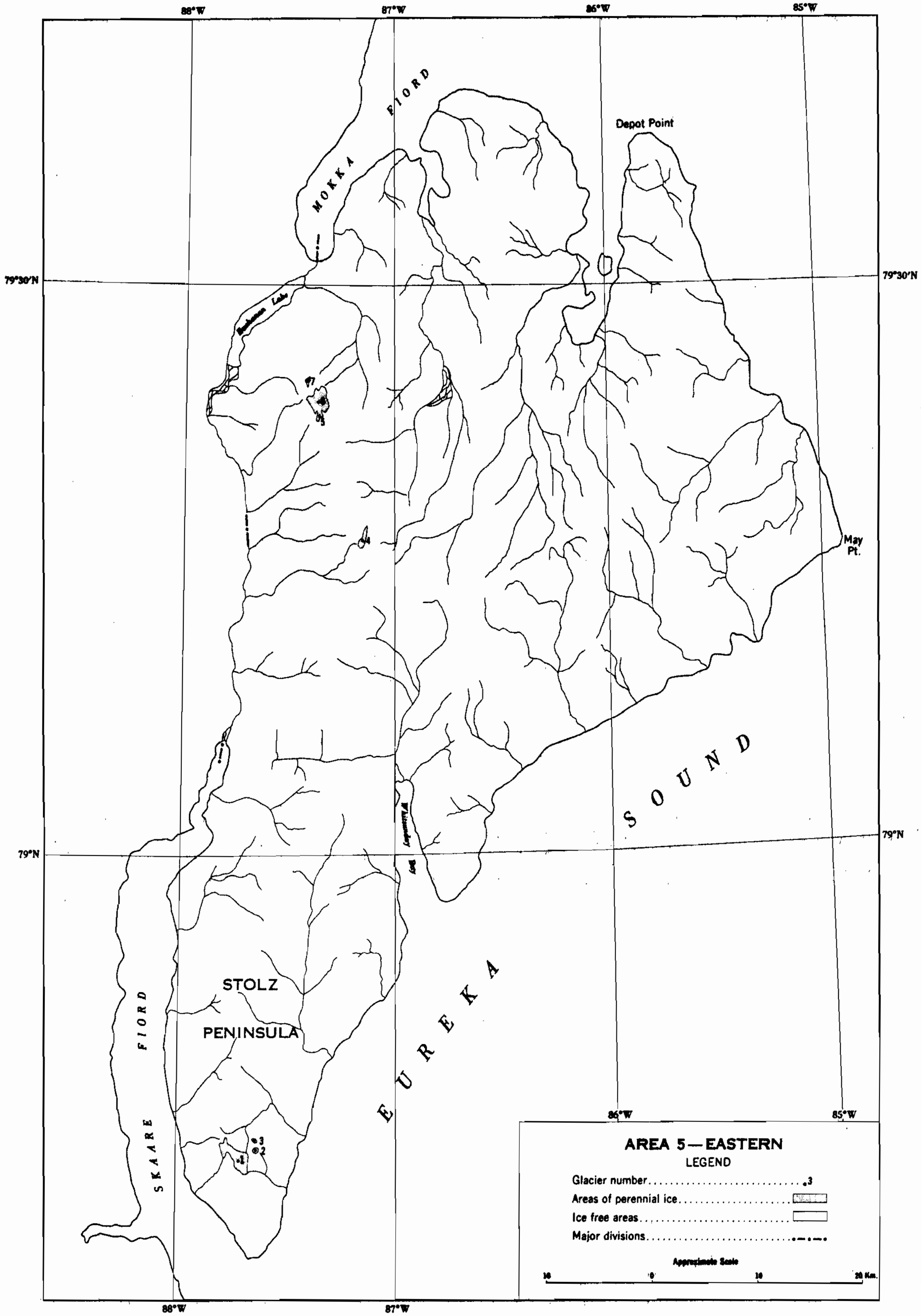

88°W
87°W
86°W
85°W
79°30'N
79°N
MOKKA FIORD
Depot Point
May Pt.
EUREKA SOUND
SKAARE FIORD
STOLZ
PENINSULA
AREA 5—EASTERN
LEGEND
Glacier number
Areas of perennial ice
Ice free areas
Major divisions
Approximate Scale

Figure 16.

AREA 5 EASTERN AXEL HEIBERG ISLAND N.W.T. C.S.L OMMANNEY MCGILL UNIVERSITY AND INLAND WATERS BRANCH 1967

SKAARE AND MOKKA FIORDS

IDENT	NO.	LONGITUDE	LATITUDE	U.T.M.	ORIENT AC	ORIENT AB	ELEVATIONS HIGH	ELEVATIONS L.EX	ELEVATIONS L.TL	SNOW	DATE	MEAN ELEVATION ACCU	MEAN ELEVATION ABLA
5	1	W 87 41.0	N 78 43.4	16XDC485287391		NE	876	625	625		16 8 59		808 3
5	2	W 87 36.5	N 78 44.0	16XDC486787403		SW	716	670	670		16 8 59		701 3
5	3	W 87 37.0	N 78 44.5	16XDC486587411		W	640	594	594		16 8 59		610 3
5	4	W 87 07.5	N 79 16.1	16XDC497487996		SW	1021	914	914		28 7 59		975 3
5	5	W 87 19.0	N 79 22.6	16XDD493388118	SW	SW	1250	914	914	1234	28 7 59	1242 4	1067 3
5	6	W 87 20.0	N 79 23.5	16XDD493288134	SW	SW	1295	884	884	1143	28 7 59	1158 4	1112 3
5	7	W 87 23.0	N 79 24.1	16XDD492088145		NW	1173	1067	1067		28 7 59		1112 3

AREA 5 EASTERN AXEL HEIBERG ISLAND N.W.T. C.S.L OMMANNEY MCGILL UNIVERSITY AND INLAND WATERS BRANCH 1967

SKAARE AND MOKKA FIORDS

IDENT	NO.	TOTAL LENGTH ABLA	TOTAL LENGTH EXP	TOTAL LENGTH TOTAL	WIDTH	SURFACE AREA EXP	SURFACE AREA TOTAL	SURFACE AREA ABLATION	AAR	DEPTH	VOLUME	TYPE
5	1	3.5	3.5	3.5	.	4.13	4.13 3	4.13 3	0	20	.08 3	200112
5	2	.7	.7	.7	.	.20	.20 3	.20 3	0	15	.00 3	650112
5	3	.6	.6	.6	.	.20	.20 3	.20 3	0	15	.00 3	650112
5	4	1.9	1.9	1.9	.	.70	.70 3	.70 3	0	15	.01 3	700212
5	5	1.3	1.5	1.5	.4	.80	.80 3	.70 3	12	15	.01 3	650112
5	6	.6	2.5	2.5	.	2.49	2.49 3	1.08 3	57	25	.06 3	303112
5	7	.5	.5	.5	.	.30	.30 3	.30 3	0	15	.00 3	300102