GSC OPEN FILE REPORT

ATLANTIC GEOSCIENCE CENTRE

A 35mm MICROFILM COMPILATION OF COLLECTED 3.5 kHz BATHYMETRY DATA FOR AGC CRUISE NO. 85200

Ice Island

GSC Project 303067

Compiled by: A.G. Sherin, I.A. Hardy, S. Merchant, D.E. Beaver, D. Holt*, and M. Cash**

GSC Open File No.1458

* Biblio-Tech Ltd., Dartmouth, Nova Scotia
** McElhanney Services Ltd., Dartmouth, Nova Scotia

ABSTRACT

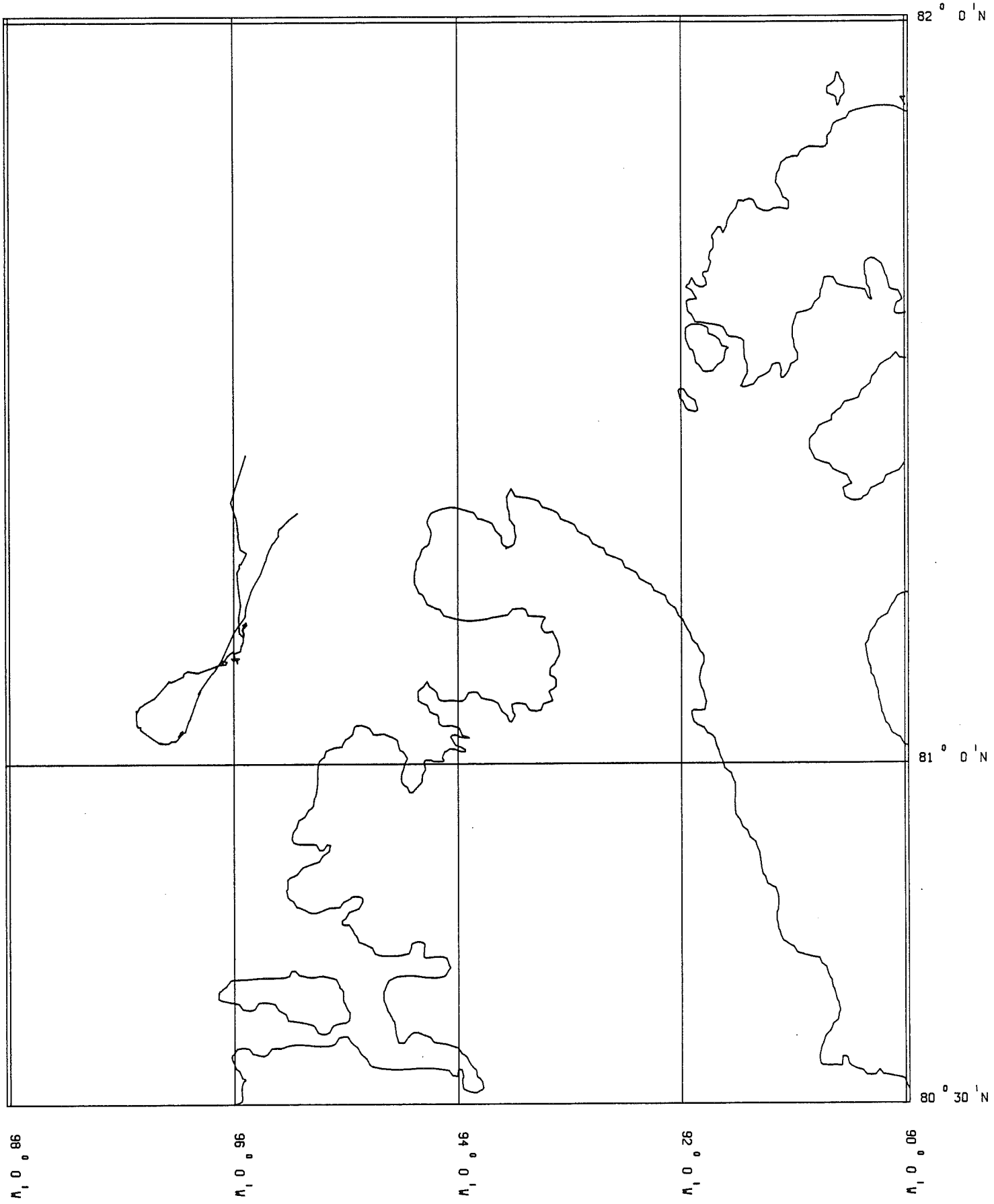
The Atlantic Geoscience Centre (AGC) at the Bedford Institute of Oceanography (BIO) has investigated several methods of releasing to the public sector its massive collection (of over 150,000 lineal metres) of underway geophysical records collected since 1963. The investigations and testing conducted by the Program Support Group, AGC, in collaboration with the Public Archives of Canada, indicated that the most cost-effective technique for distribution and for archiving such large volumes of irreplaceable data was to use microfilm. To maintain the continuous nature of these records, which can be up to 30 metres in length, special equipment was required such as the Tameran 6000 continuous flow microfilm camera manufactured by Tameran Ltd. of Chagrin Falls, Ohio. All conversion of AGC's geophysical records using this camera was contracted to Manas Media Ltd. of Ottawa, in consortium with Precision Microfilming Services of Halifax and Archimed Ltd. of Montreal. Operational filming began at the end of March 1987.

A series of AGC cruise data will be released in 35 mm microfilm and distributed as Geological Survey of Canada Open File reports. Master microfilm is curated for each AGC cruise at the National Archives, Dartmouth, Nova Scotia with duplicates available for viewing at the Data Management Section (PSS), Atlantic Geoscience Centre and at all Geological Survey of Canada libraries in Ottawa, Calgary and Vancouver.

INTRODUCTION

Data Section is a part of the Program Support Subdivision (PSS) of the Atlantic Geoscience Centre. This group provides the safe archiving and cataloguing of the Atlantic Geoscience Centre's Data Collections and Holdings. This report provides an index to all 3.5 kHz bathymetry records collected during cruise 85200 (Figure 1).

85-200 ICE ISLAND



DATA SOURCES

The information gathered together for this geophysical record microfilming project have been mainly derived from cruise reports, Department of Fisheries and Oceans cruise summary documentation and external agencies. This information has then been checked and verified against record holdings e.g. collector and vessel, geographic area, Julian day together with start and end times of collection, line number, tape number and recorder type. The Record Inventory data base utilizing micro-computer based dBase III plus software contains all record/tape/log/navigation data for all analog tapes, catalogues/indices and records obtained on more than 375 cruises obtained by or for the Atlantic Geoscience Centre since 1963. All microfilmed records have been routinely filmed according to the flow chart in Appendix I.

CRUISE PARTICULARS

Cruise:	Ice Island Sampling and Sediment Investigation Program (ISIS). Designated Cruise No. 85200	
Senior Coordinator:	Dr. Peta J. Mudie - EMG, AGC	
Dates:	May 22 - June 12, 1985	
Areas:	30 km north of the entrance to Nansen Sound.	
Scientific Staff:	Dr. Peta J. Mudie	Atlantic Geoscience Centre
	Ali E. Aksu	Memorial University of Newfoundland
	Stephen A. Macko	Memorial University of Newfoundland
	David C. Mosher	Memorial University of Newfoundland
	Mark Chin-Yee	OSS
	Peter Jones	Atlantic Oceanographic Laboratory
	Kathy Ellis	Atlantic Oceanographic Laboratory
	Frank Zemlyak	Atlantic Oceanographic Laboratory

Leif Anderson	University of Goteborg
Ruth Jackson	Atlantic Geoscience Centre
Jay Ardai	Atlantic Geoscience Centre
Mike Hughes	Atlantic Geoscience Centre

CRUISE OBJECTIVES

The objectives of the ISIS project are summarized as follows:

1. The long-term scientific objectives of ISIS are:
   a) to determine the spatial distribution of microfossils, sediment texture, mineral composition and geotechnical properties of the sediment cover on the continental margin of the Canada Basin;
   b) to map and interpret surficial lithofacies on the margin of the Arctic Ocean, where depositional conditions may be analagous to glacial stage environments of Eastern Canada;
   c) to obtain high resolution biostratigraphic and stable isotope data from high sedimentation rate areas of the Arctic Ocean for comparison with the records from the Alpha Ridge, where very slow sedimentation rates may account for anomalous oxygen isotopic records observed in CESAR cores; and
   d) to construct quantitative sediment and geochemical budgets (amino acids, delta C-13 and N-15) for the Arctic Ocean margin.

2. In the first (1985) field season, the main objectives were as follows:
   a) to assist in the establishment on the Ice Island of facilities and equipment for obtaining:
      i) shallow seismic profiles;
      ii) samples of surficial sediment, sea water, sea and glacier ice, and aerial particulate matter; and
      iii) photographs of the seabed.

b) the train technicians and scientists in the general operations required to maintain a year-round Ice Island camp, the special operations necessary for sampling from a hydrohole in ice 44 m thick, and in the maintenance of the camp during the summer melt season.

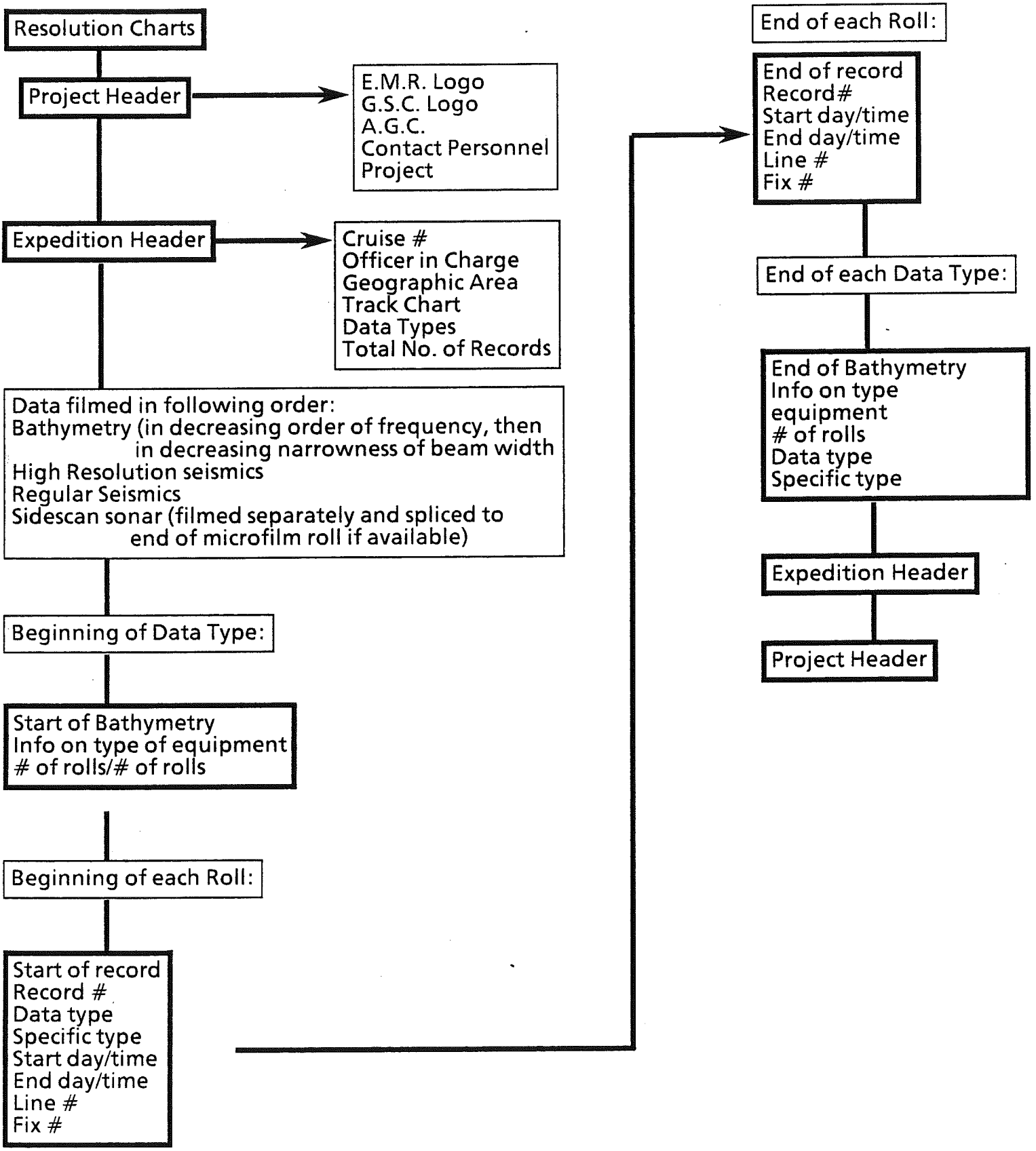
RECORD INVENTORY

Appendix II tabulates all geophysical records acquired during this cruise. They are listed in the same sequence as they appear on the microfilm. Corresponding footages are also given in centimetres. Note that no sidescan sonar shallow or deep water records were acquired.

MICROFILM REQUESTS

Requests for access to original records should be directed to both the Director, Atlantic Geoscience Centre, and to Dr. P.J. Mudie, Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, Nova Scotia, Canada, B2Y 4A2. Microfilm duplication requests must be directed to the Data Management (PSS), for authorization, Atlantic Geoscience Centre, at the above address or phone (902) 426-3410.

APPENDIX I
FLOW CHART



APPENDIX II
ICE ISLAND 85200

BATHYMETRY

ORE 3.5 kHz Sounder at 10 KW, Transducers in Tow Fish, Towed Astern.

APPENDIX II (Continued)

85200

DATA TYPE	ROLL #	START		STOP		FIX #	MICROFILM FOOTAGE INDEX
		DAY	TIME	DAY	TIME		
Bathymetry - 3.5 kHz	001	194	0130	216	1238	3-90	001
	002	216	1700	226	1407	92-165	017
	003	226	1830	236	1309	167-215	021