

GSC OPEN FILE REPORT

ATLANTIC GEOSCIENCE CENTRE

**A 35mm MICROFILM COMPILATION OF COLLECTED
BATHYMETRIC AND SEISMIC PROFILES FROM CRUISE 80030**

Nearshore Northeast Newfoundland

GSC Project 303067

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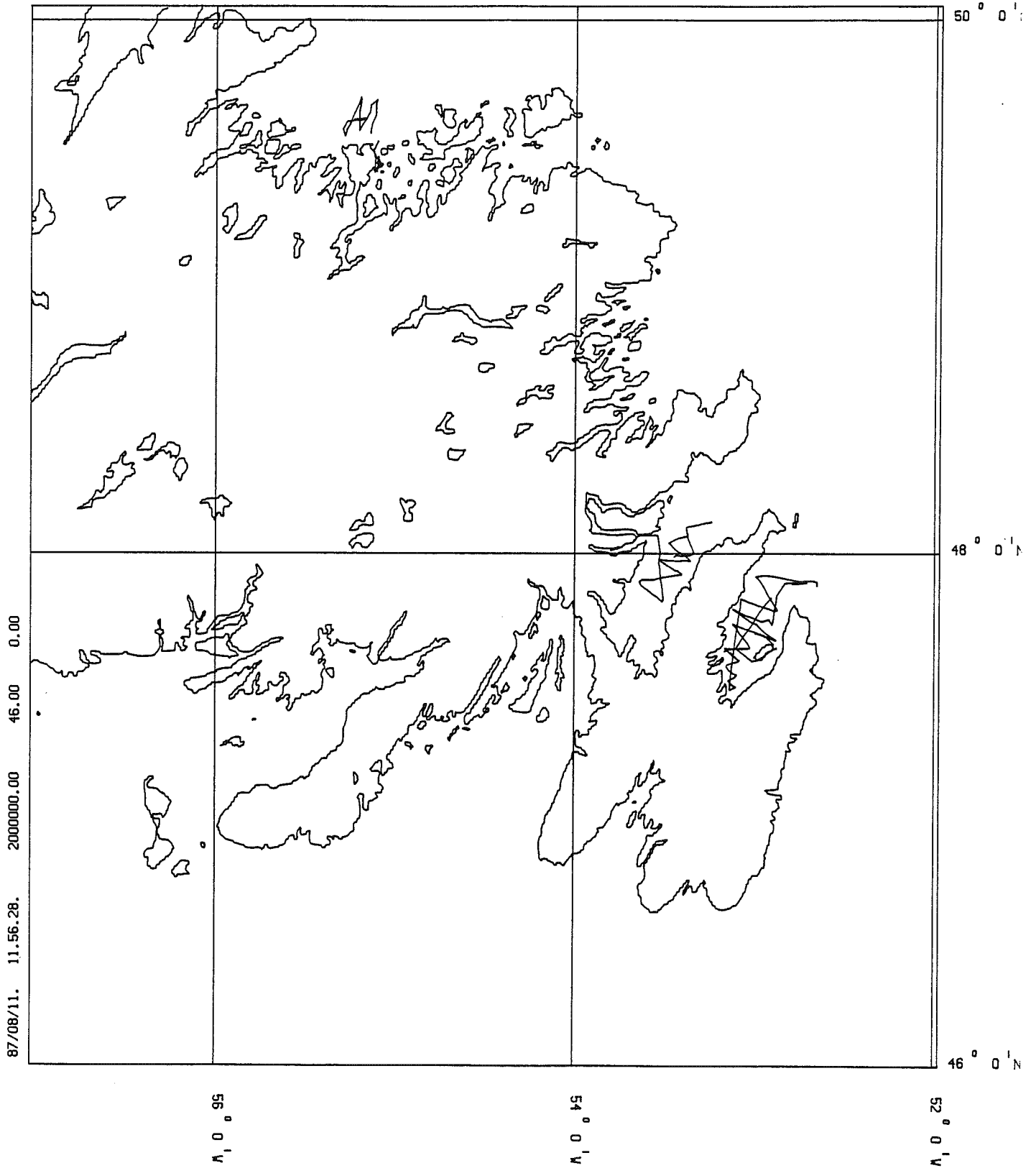
ABSTRACT

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 during 1988. 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 analog geophysical records (3.5/12 kHz bathymetry, sparker and Hunttec systems) collected during cruise 80030 (Figure 1). Magnetic and gravity data will be released at a later date.



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:	CSS Dawson 80030	
Senior AGC Scientist:	Dr. M.J. Keen	
Dates:	September 23 - October 30, 1980	
Areas:	Northeast Newfoundland (inner shelf)	
Scientific Staff:	M.J. Keen	Senior Scientist, AGC
	C.E. Keen	Second Scientist, AGC
	A. DeIure	Dalhousie University
	R. Jackson	AGC
	D. Locke	AGC
	K.S. Manchester	AGC
	P. Mudie	Dalhousie University
	F. Thomas	AGC
	A. Walsh	Memorial University of Newfoundland

CRUISE OBJECTIVES

The objectives of the cruise were: (1) to investigate the possibility of measuring heat-flow in fjords of the east coast of Canada; (2) to train staff from AGC in the use of heat-flow and ancillary equipment; (3) to obtain heat-flow measurements in the Avalon, Dunnage and Humber zones of the Appalachians of Newfoundland by measuring heat-flow in fjords; (3) this demanded observations of water temperature against depth; (4) to obtain cores which may contain three distinctive lithostratigraphic markers that represent major stages in the latest deglaciation of Newfoundland, so that the markers may be dated; (5) to sample recent sediments in the nearshore of northeast Newfoundland so that baseline data on the pollen, dinocysts, foraminifera and diatoms may be obtained in an area where no data at present; (6) to sample in eastern Conception Bay where an historical marker horizon due to mining at Wabana may allow historical changes in phytoplankton productivity to be assessed using dinocysts as the index of productivity; (7) to sample a scour-like feature so that (a) can find out how to obtain sediment cores from such small features, (b) to establish the rate at which the scour is being filled by correlation with a reference stratigraphy for undisturbed sediment near the scour site; (8) to core in a mud basin off Halifax where a continuous record of sea-level changes of the past 12,000 years may be found; (9) to train staff members and a graduate student from Dalhousie in oceanographic work; (10) to obtain material suitable for graduate student theses from fjords and coastal areas of Newfoundland.

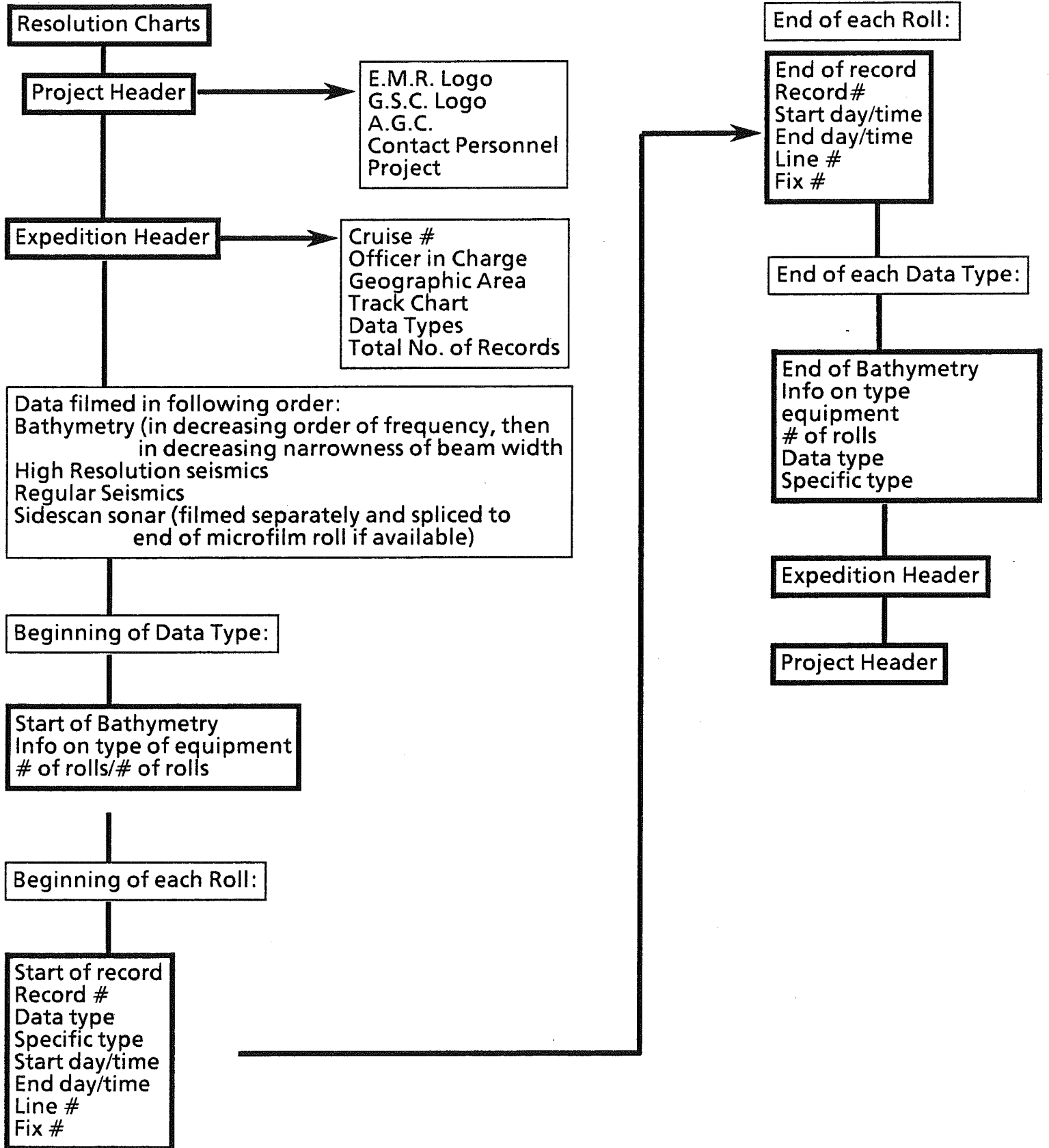
RECORD INVENTORY

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 per tape. Note that no sidescan sonar shallow or deep water records were acquired.

MICROFILM REQUESTS

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

APPENDIX I FLOW CHART



APPENDIX II
DAWSON 80030

BATHYMETRY

12 kHz Hull Mounted Raytheon Ptr.

ORE 3.5 kHz Sounder with EPC recorder, Transducers in Tow Fish, Towed Astern

SEISMICS

Edgerton Sparker use with 500 and 1000 Joules

Huntec DTS (Deep Tow Subsurface Boomer) with 5 M hydrophone

APPENDIX II (Continued)

80030

DATA TYPE	INSTRUMENT TYPE	RECORD NUMBER	START		STOP		MICROFILM FOOTAGE INDEX
			DAY	TIME	DAY	TIME	
Bathymetry	12 kHz	001	267	1845	268	0531	
		002	268	0555	269	0610	
		003	269	0630	270	0205	
		004	270	0210	270	1015	
		005	270	1030	270	1100	
		006	271	1106	272	1600	
		007	272	1620	273	1645	
		008	273	1700	274	0110	
		009	274	0615	274	1440	
		011	277	0920	277	1125	
	3.5 kHz	001	267	2040	268	1152	
		002	268	2205	269	0304	
		003	269	0345	269	1150	
		004	269	1801	270	1220	
		005	270	2130	271	0854	
Seismic (Sparker)	1000 Joules	001	273	2205	274	0110	
	500 Joules	001	267	2150	268	1000	
		002	268	2227	269	0330	
		003	270	0829	270	1220	
		004	270	2320	271	1109	
		005	272	1255	272	1505	
		006	272	2230	273	1015	
		007	273	2210	274	0100	