

GSC OPEN FILE REPORT

ATLANTIC GEOSCIENCE CENTRE

**A 35mm MICROFILM COMPILATION OF COLLECTED
BATHYMETRIC PROFILES FROM THE LASE (LARGE APERTURE
SEISMIC EXPERIMENT) CRUISE 81020**

Continental Margin of eastern United States, off New Jersey

GSC Project 303067

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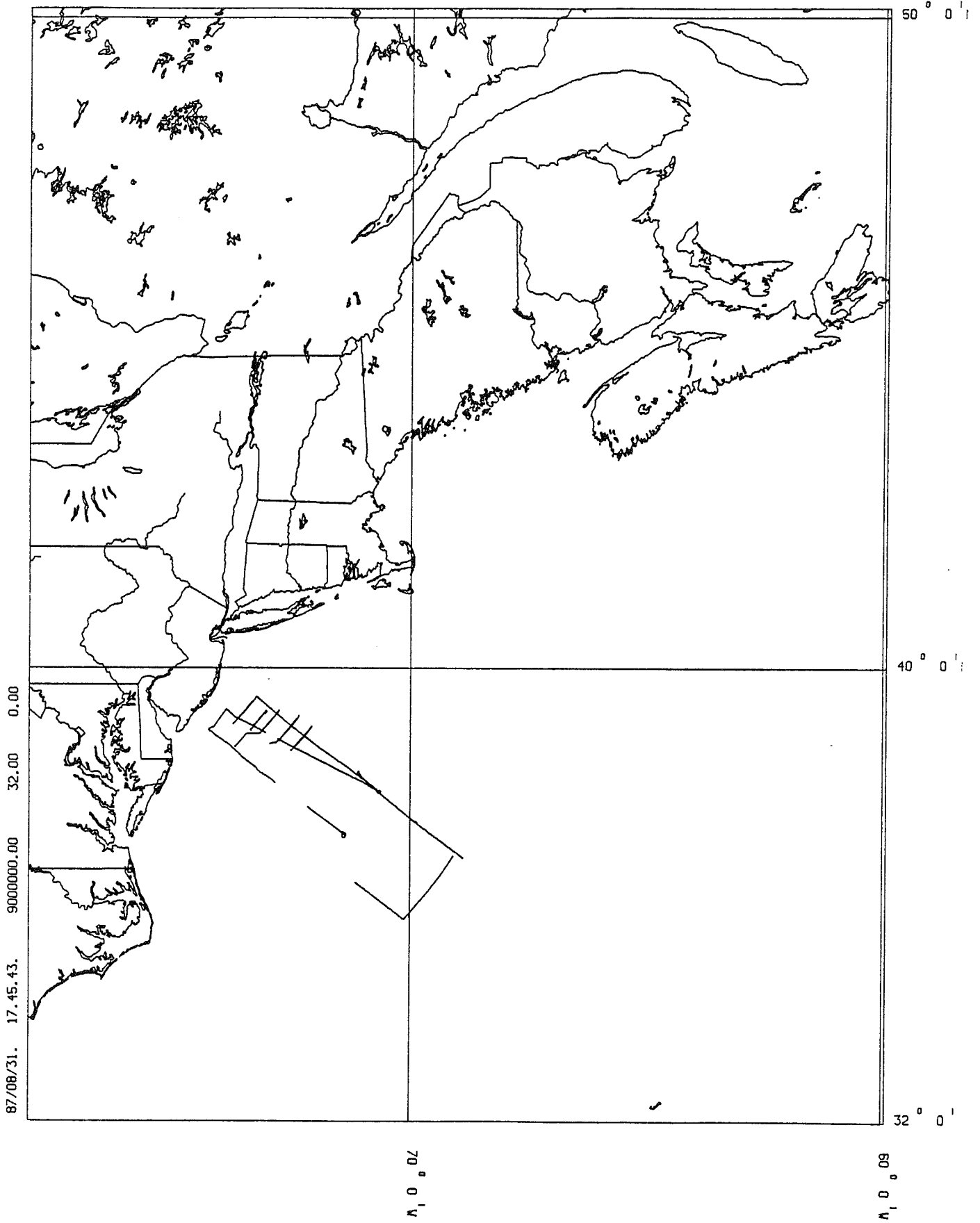
ABSTRACT

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 collected during cruise 81020 (LASE) (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 81020 (LASE)	
Senior Scientific Officer:	Dr. C.E. Keen	
Dates:	June 2 - 22, 1981	
Areas:	Along the Continental Margin of Eastern United States, off New Jersey	
Scientific Staff:	C.E. Keen	AGC
	A. Atkinson	AGC
	J. Diebold	Lamont-Doherty
	D. Eisener	AOL
	G. Fenn	AGC
	D. Heffler	AGC
	A. Jackson	AGC
	L. Johnson	AGC
	R. Macnab	AGC

J. Neilsen	AGC
B. Nichols	AGC
J. Woodside	AGC

CRUISE OBJECTIVES

To develop and use multi-ship, multi-channel seismic techniques in studies of the deep structure of continental margins. To involve AGC personnel in shipboard aspects of multi-channel data collection. To acquire expertise in using multiple air gun sources and in digital logging of seismic data.

CRUISE PLAN

The work was carried out across the continental margin of the eastern U.S., in the Baltimore Canyon Trough region. Four institutions participated: Bedford Institute of Oceanography, Lamont-Doherty Geological Observatory, University of Texas Marine Science Institute, and Woods Hole Oceanographic Institution. Three ships were involved: DAWSON, FRED H. MOORE (Texas), and OCEANUS (Woods Hole).

The basis of the experiment was to extend conventional multi-channel seismic methods by the use of three ships, to produce a larger array aperture. Two ships (MOORE, OCEANUS) towed streamers in line, giving an overall array length of 6.7 km. Two ships (MOORE, DAWSON) shot large air gun arrays (3000 cu. in.), with DAWSON leading the other two ships by one array length (6.7 km). A total aperture of about 13 km was thus obtained.

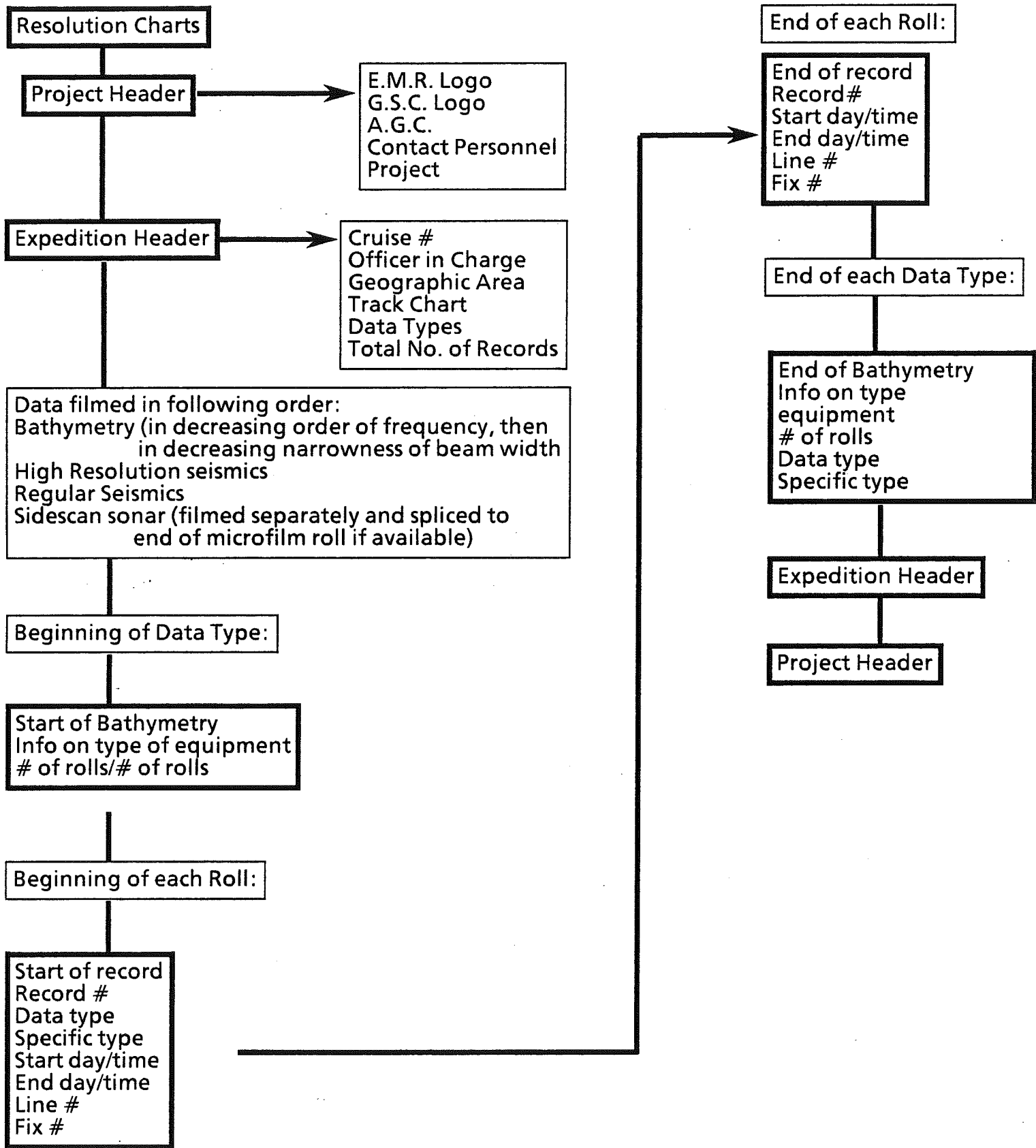
RECORD INVENTORY

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 81020

BATHYMETRY

12 kHz Raytheon Depth Sounder

APPENDIX II (Continued)

81020

DATA TYPE	INSTRUMENT TYPE	RECORD NUMBER	START		STOP		LINE #	MICROFILM FOOTAGE INDEX
			DAY	TIME	DAY	TIME		
Bathymetry	12 kHz	001	156	2058	159	1200		
		002	160	0150	161	1025	E-D	
		003	162	1355	163	1605	L-M	
		004	163	1355	164	1605	L-M	
		005	164	1905	165	1850		
		006	165	1850	167	0345	9	
		007	167	0400	170	1700	9	
		008	170	0400	171	1700		