

GSC OPEN FILE REPORT

ATLANTIC GEOSCIENCE CENTRE

**A 35mm MICROFILM COMPILATION OF COLLECTED ANALOG
GEOPHYSICAL DATA FOR AGC CRUISE NO. 83110
Continental Margin Southwest Grand Banks**

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.1564

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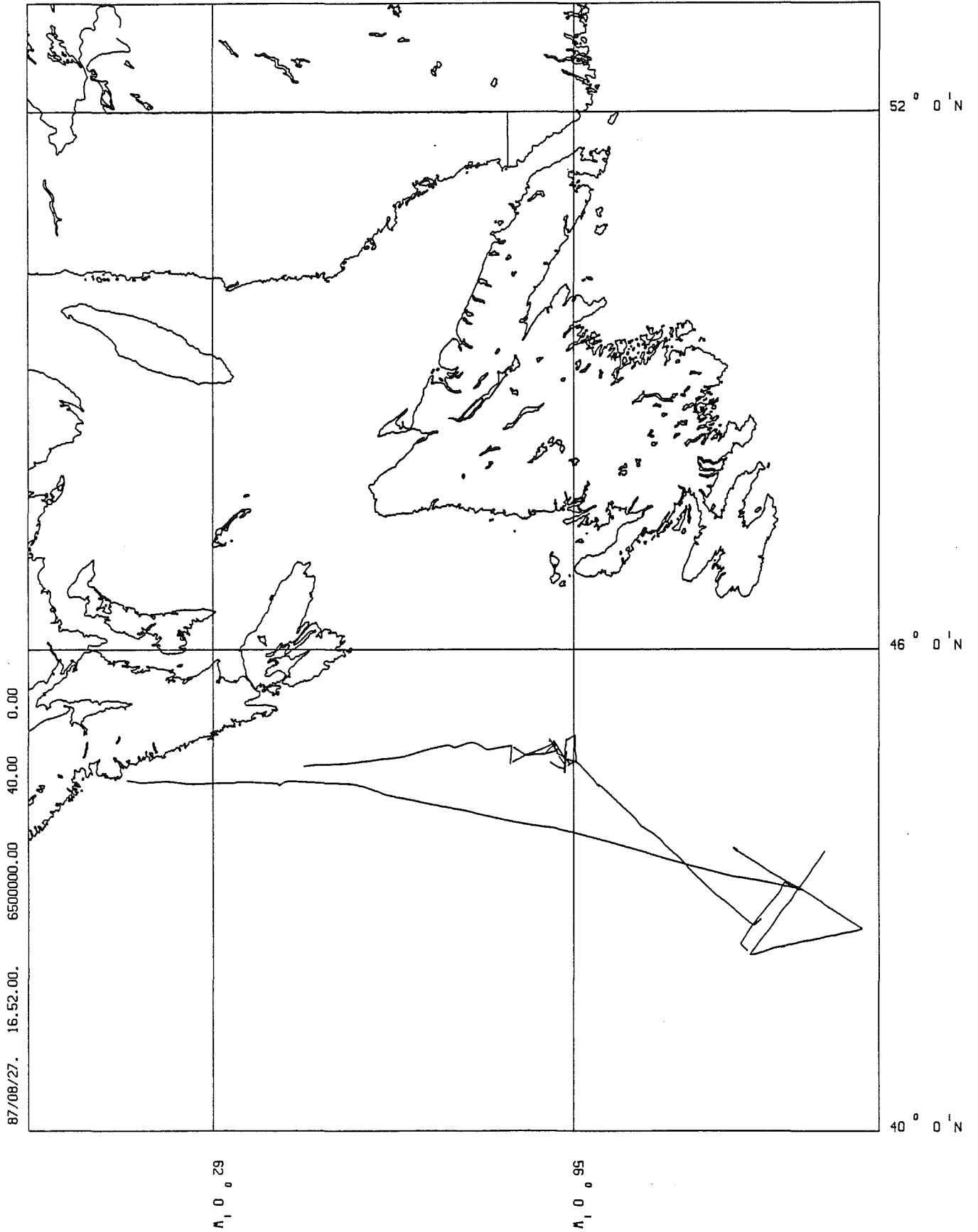
ABSTRACT

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 geophysical records collected during cruise 83110 (Figure 1).



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: CFAV Quest 83110

Senior Scientist: Dr. C.E. Keen - RR, AGC

Dates: May 25 - June 7, 1983

Areas: Continental Margin Southwest of the Grand Banks; Laurentian Channel/Fan.

Scientific Staff: Dr. C.E. Keen Atlantic Geoscience Centre

J. Adams Earth Physics Branch - Ottawa

M. Bone Pacific Geoscience Centre, B.C.

B. Chapman Atlantic Geoscience Centre

G. Fenn Atlantic Geoscience Centre

D. Heffler Atlantic Geoscience Centre

G. Henderson Hydrography, Bedford Institute of Oceanography

L. Johnston Atlantic Geoscience Centre

W. Kay Atlantic Geoscience Centre

W. Kiley	Defence Research Establishment (Atlantic)
J. Neilsen	Atlantic Geoscience Centre
B. Nichols	Atlantic Geoscience Centre
I. Reid	Atlantic Geoscience Centre
S. Spencer	Atlantic Oceanographic Laboratory
D. Weichert	Pacific Geoscience Centre, B.C.

CRUISE OBJECTIVES

The main objectives of the quest 83110 cruise were: (1) to establish a network of Ocean Bottom Seismometers (OBS) in the Laurentian Channel/Laurentian Fan regions for later comparison to other regions of the Atlantic margin; this is also the region where the "1929 Grand Banks" earthquake occurred (magnitude 7.2 on the Richter scale); (2) to obtain additional seismic data on the southwest margin of the Grand Banks to define the deep crustal structure as well as the sedimentary stratigraphy and basement configuration; (3) to assess the improvement in signal to noise ratios noted when OBS's are deployed in a linear array; and (4) to assess the performance of the seismic reflection system such as the large 2000 cubic inch airguns. The data was compared to conventional multi-channel seismic lines in the same region.

RECORD INVENTORY

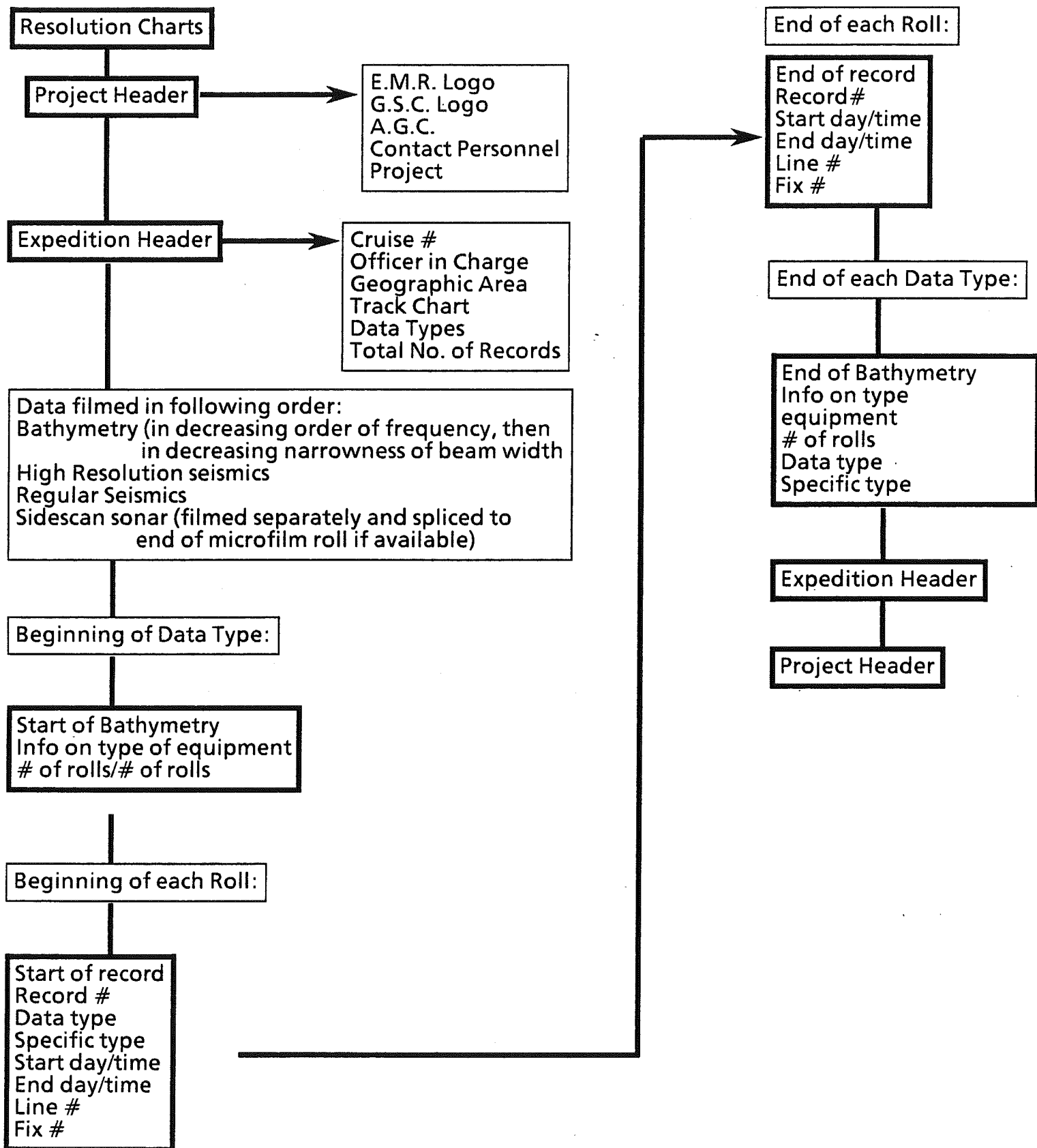
Appendix II tabulates all geophysical records acquired during this cruise. They are listed in the same sequence as they appear on the microfilm. Corresponding footages are also given in centimetres per tape. Note that no sidescan sonar shallow or deep water records were acquired.

MICROFILM REQUESTS

Requests for access to 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
QUEST 83110

BATHYMETRY

12 kHz Hull Mounted Raytheon Depth Sounder System.
O.R.E. 3.5 kHz Pinger Profiler.

SEISMICS

2000 cu. in. Airgun with 100 and 25 foot SE (Seismic Engineering) Hydrophones.

APPENDIX II (Continued)

83110

DATA TYPE	INSTRUMENT TYPE	ROLL NUMBER	START		STOP		MICROFILM FOOTAGE INDEX
			DAY	TIME	DAY	TIME	
Bathymetry - 12 kHz		001	145	1500	145	2310	160
		002	145	2315	146	2400	168
		003	146	1218	147	1640	181
		004	148	0120	148	2400	189
		005	149	0000	149	2400	195
		006	150	0005	150	1950	203
		007	151	1310	152	0325	210
		008	152	1135	152	2400	218
		009	152	0000	153	2240	223
		010	154	0845	154	2237	230
		011	154	1037	155	2400	235
		012	155	1332	156	2400	245
		013	157	0000	157	1455	253
Bathymetry - 3.5 kHz		001	155	0230	155	1115	259
		002	156	1316	156	2235	262
Seismic - Airgun	2000 cu in. 25 ft.	001	148	0938	150	1950	267
	2000 cu. in. 100 ft.	002	148	1048	150	1950	268
		003	151	1418	152	0240	271
		004	152	1300	153	1130	273
		005	153	1300	153	1722	274
		006	155	2331	156	1010	276