

DESCRIPTION OF CD-ROM DIGITAL DATA: SEISMIC STRATIGRAPHIC ATLAS OF THE ROSS SEA, ANTARCTICA, AND CIRCUM-ANTARCTIC SEISMIC NAVIGATION

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The two CD-ROMs that are included with this Volume contain digital data for Antarctica, compiled by the Antarctic Offshore Acoustic Stratigraphy (ANTOSTRAT) project. For the Ross Sea, there are digital multichannel seismic reflection (MCS) data and geophysical map data that are shown on paper maps in the accompanying Atlas. For five segments of the Antarctic continental margin, there are digital navigation data for MCS tracklines. CD-ROM Disc 1 holds XYZ-point data and contour-vector data for seismic stratigraphic, gravity and bathymetry maps of the Ross Sea. CD-ROM Disc 2 holds (a) the nearly 4900 km of MCS data in SEG-Y format for the ten Atlas composite profiles across the Ross Sea; (b) the shotpoint navigation for the composite MCS profiles and for the MCS tracks compiled by the five ANTOSTRAT working groups (Ross Sea, Weddell Sea, Antarctic Peninsula, Prydz Bay, and Wilkes Land); and (c) software, and documentation, for DOS and Macintosh systems to view and plot the seismic reflection data. The CD-ROM's conform to ISO-9660 standards, and are readable on DOS, Windows, Macintosh or Unix platforms. The data provided on the accompanying CD-ROMs are intended for use in cooperative research projects, with deference to those who have collected and are currently working with the data.

INTRODUCTION

The CD-ROMs that accompany this report contain the digital data for maps and nearly 4900 km of multichannel seismic reflection (MCS) profiles that are illustrated in the Seismic Stratigraphic Atlas of the Ross Sea, Antarctica [ANTOSTRAT, this volume] (Table 1). In addition, the CD-ROMs hold digital navigation data for most MCS tracklines on the Antarctic continental margin collected through 1994. The data on these CD-ROMs were compiled by the ANTOSTRAT project from data contributed to the project by numerous research institutions world wide. The ANTOSTRAT project functions under the auspices of the Scientific Committee on Antarctic Research.

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Since 1990, the five regional working groups of the ANTOSTRAT project have compiled most existing geologic and seismic reflection data from the principal areas of the Antarctic continental margin where thick Cenozoic sedimentary bodies are known to exist. The Ross Sea Atlas [ANTOSTRAT, this volume] represents the compilation and mapping of stratigraphic horizons along one segment of the Antarctic margin. The compilations of the seismic reflection data sets were facilitated by the design and implementation in 1991 of the Antarctic Seismic Data Library System for Cooperative Research (SDLS). The SDLS, which now holds over 60,000 km of digital MCS data on CD-ROM, has library branches at 12 research institutions in 11 countries [Childs *et al.*, 1994; Cooper, 1995]. The digital MCS data on the accompanying CD-ROMs were extracted, with consent of the data collectors, from the SDLS. Display software, developed at the U.S. Geological Survey, is included on the accompanying CD-ROM to view the MCS data on IBM-compatible personal computers, and is essentially the same software as on CD-ROMs of the SDLS.

In this report, we describe the types, origins, and formats of the digital data that are on the two

TABLE 1. Data and Information Contained on the Two CD-ROMs that are included with this Volume.

Data type	XYZ point	Grid data	Vector contour	Vector mask	Trace data	Other	CD No.	Atlas Plate	Comments
RS bathymetry map	Y	-	Y	-	-	-	1	1	-
RS gravity map	Y	-	Y	-	-	-	1	1	-
RS seismic: time map	Y	-	Y	Y	-	-	1	16-19	-
RS seismic: depth maps	-	Y	Y	Y	-	-	1	16-19	-
RS seismic: isopach maps	-	-	Y	Y	-	-	1	20-22	-
RS seismic: isovelocity map	-	-	Y	Y	-	-	1	22	-
RS seismic: velocity data	Y	-	-	-	Y	-	1	-	MCS & sonobuoy data
RS seismic: MCS profiles	-	-	-	-	Y	-	2	6-15	SEG-Y format
RS seismic: MCS nav.	Y	-	-	-	-	-	2	2	Atlas profiles, UKOOA
CirAnt nav: Ross Sea	Y	-	-	-	-	-	2	-	UKOOA format
CirAnt nav: Wilkes Land	Y	-	-	-	-	-	2	-	UKOOA format
CirAnt nav: Prydz Bay	Y	-	-	-	-	-	2	-	UKOOA format
CirAnt nav: Weddell Sea	Y	-	-	-	-	-	2	-	UKOOA format
CirAnt nav: Ant. Peninsula	Y	-	-	-	-	-	2	-	UKOOA format
MCS display software	-	-	-	-	-	Y	2	-	DOS and MAC
Software documentation	-	-	-	-	-	Y	2	-	-

accompanying CD-ROMs. Individuals who wish to use the multichannel seismic reflection data are asked to follow the guidelines outlined in the next section on Data Use.

DATA USE

Data have been contributed by many countries and institutions, for use by educational institutions and by researchers interested in cooperative research projects, in accord with the philosophy of the Scientific Committee on Antarctic Research. The MCS data are not intended for commercial use, following guidelines of Antarctic Treaty Consultative Meeting Recommendation XVI-12 that specifies open access, without commerce, to Antarctic seismic reflection data via the SDLS [SCAR, 1992]. Researchers interested in using the seismic reflection data for cooperative studies are asked to defer (i.e., give first "right of refusal") to the data collector, and to acknowledge the correct source of the data. For other types of data on the CD-ROMs, a similar philosophy of cooperation with prior investigators and the ANTOSTRAT regional working groups is encouraged to foster continued progress in compiling and analyzing the massive geoscience data sets that exist around Antarctica. Table 2 lists the names and affiliations of the principal MCS data collectors who have contributed data to the Ross Sea Seismic Stratigraphic Atlas, and are among those who have

contributed other seismic data to the SDLS. Readers who wish further information may contact the senior Volume editor (AKC) or the senior author (JRC).

DATA DESCRIPTION

Several types of data and information are included on the CD-ROM (Table 1). All maps and seismic profiles shown in the Atlas have associated digital files, the number of files varying for the different data map types. In addition, the CD-ROMs hold circum-Antarctic MCS navigation data, display software and text documentation files. Table 3 lists the contributions of the many individuals involved in compiling the digital data files.

3.1. CD-ROM Disc 1

CD-ROM Disc 1 holds the digital data that have been used to produce the numerous bathymetry, gravity, and seismic stratigraphic maps shown in the Atlas. The reader is referred to *Brancolini et al.* [this volume] for a description of the maps and the procedures used to make the maps. The CD-ROM contains four general types of files, and every map will have at least one of the four files:

1. Contour file: This file holds the vector representation for each contour shown on the map. Each contour value is followed by a string of latitude and longitude values that trace out the contour.

TABLE 2. Principal Collectors of Multichannel Seismic Data shown in the Ross Sea Atlas

Dr. Giuliano Brancolini Osservatorio Geofisico Sperimentale PO Box 2011, Opicina 34016 Trieste, Italy Tel: 39-40-21401 Fax: 39-40-327307 E-mail: branco@magrav.ogs.trieste.it	Dr. Jacques Wannesson Institut Francais du Petrole Division Geologie-Geochimie 1 et 4 Avenue de Bois Preau F-92500 Rueil-Malmaison, France Tel: 33-1-47-49-0214 Fax: 33-1-47-52-7000	Dr. Karl Hinz Bundesanstalt für Geowissenschaften und Rohstoffe Postfach 510153 D-3000 Hannover 51, Germany Tel: 49-511-643-3244 Fax: 49-511-643-2304 E-mail: foerstl@gate1.bgr.d400.de
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TABLE 3. Contributions of Researchers in Compiling and Producing the Accompanying CD-ROMs

Researcher	Organizations ¹	Contribution
J. Childs	USGS	CD-ROM production coordination; MCS profiles and Wilkes Land navigation files
A. Cooper	USGS	General oversight and critical review
R. Sliter	USGS	MCS seismic display, CD-ROM production
J. Brody	USGS	CD-ROM production
G. Cochrane	USGS	Sonobuoy velocity file
G. Brancolini	OGS	General coordination, Ross Sea navigation
M. Busetti	OGS	Seismic map files
A. Marchetti	OGS	Velocity, seismic-map, and composite MCS-profile files
C. De Cillia	OGS	Composite MCS profiles
C. Zanolla	OGS	Gravity map
F. Coren	OGS	Gravity and bathymetry map files
F. Davey	INS	Gravity and bathymetry map files
A. Cunningham	BAS	Antarctic Peninsula navigation
L. Vanneste	BAS	Antarctic Peninsula navigation
P. O'Brien	AGSO	Prydz Bay navigation
W. Jokat	AWI	Weddell Sea navigation
Y. Kristoffersen	UB	Weddell Sea navigation

¹See Table 7 for list of acronyms

2. Mask file: This file holds a vector string that delineates the geographic limit of valid contours. Contours extending beyond the mask limit are not considered valid and should be "masked out".

3. XYZ point file: This file holds the raw data points from which the map grid was made and subsequent contours were derived. This file provides a Z-value for each latitude and longitude. Rectilinear X,Y coordinates for each Z value are also given. The only seismic

stratigraphic maps to have XYZ point files are reflection-time maps. (See *Brancolini et al.* [this volume] for more details).

4. Grid file: This file holds gridded data that were used to make the contour maps. The only maps for which grid files are provided are the seismic stratigraphic depth maps, from which the isopach maps were derived (see *Brancolini et al.* [this volume] for more details).

Two types of specialized information are also provided: a coastline file and subsurface velocity files. A file with coastline and ice-edge data as shown on the Atlas maps is provided because the general map files do not have coastline data. Two types of subsurface velocity information are provided, one derived from MCS-data velocity analyses and the other from sonobuoy wide-angle refraction data. These velocity files were merged to create the master velocity file that was used to convert time maps to depth maps. Locations of sonobuoy stations are provided with the velocity data.

3.2. CD-ROM Disc 2

CD-ROM Disc 2 holds three types of data (Table 1):

1. MCS data in SEG-Y format for 10 composite profiles across the Ross Sea are included in the Atlas. Two versions of the SEG-Y data are included, one for general access (4 byte floating point) and a second for rapid display (16 bit integer) using the software contained on the CD-ROM.

2. Navigation data for MCS tracklines around Antarctica, as compiled by ANTOSTRAT regional working groups. The full text and tables of the description of the Antarctic Peninsula navigation compilation [Cunningham *et al.*, this volume] is also included.

3. Software with documentation for displaying MCS data.

The data types are briefly described in the following sections.

3.2.1. MCS data. The ten composite multichannel seismic reflection profiles for the Ross Sea were constructed from data collected on five separate expeditions. Table 4 summarizes original recording and processing parameters for the data, and Figure 1 shows an example of a side-label file (*.HDR) that is included for each seismic line. The original data were sent to the U.S. Geological Survey (USGS) to be put on CD-ROMs for the SDLS. Additional trace equalization and vertical stacking was done by USGS at that time to some lines (as noted in Table 4). The profiles for the Atlas were constructed at Osservatorio Geofisico Sperimentale (Italy) by reading the desired segments of data from the SDLS CD-ROMs, converting them to SEG-Y format, decimating these data to 100 m traces and 6 second record lengths, patching the segments together, and doing a trace-balance to make all profiles compatible. Additional processing was done on the 16-bit data by the USGS in preparation for use with the software program SEGMENT to display the MCS data profiles.

3.2.2. Navigation data. Six navigation data sets for MCS tracklines are provided on the CD-ROM, one for the composite MCS profiles shown in the Atlas and five for regions of the continental margin around Antarctica (Figures 2 and 3). The compilation of the circum-Antarctic navigation for MCS data has been a massive

TABLE 4. Original Recording and Processing Parameters for MCS data in the Composite Profiles

Item	IFP 1982	USGS 1984	MAGE 1987	BGR 1980	OGS 90 : 91
Ship	Explora	S.P. Lee	Nalivkin	Explora	Explora
Source	Airgun array	5 air gun array	Airgun	24-airgun array	Airgun array
Volume	35.54 L	21.5 L	10 L	23.45 L	22.5 : 45.6 L
Shot space	50 m	50 m	50 m	50 m	25 : 50 m
Streamer	Prakla Seismos	SEI Multidyne	PSK - 6	Prakla Seismos	Prakla Seismos
Active length	2350 m	2400 m	2400 m	2350 m	2975 m
Recorder	DFS-V	GUS HDDR	PROGRESS - 2	DFS-V	SERCEL SN-358
Sample interval	4 ms	2 ms	4 ms	4 ms	2 : 4 ms
Record length	8 s	12 s	6 s	8 or 10 s	6 : 14 s
No. of channels	48	24	24	48	120
Processing	Normal 24-fold	Resample to 4 ms Normal 24-fold	Normal 24-fold	Normal 24-fold	Normal 60 : 30 fold
Equalization ¹	Full trace AGC	Full trace AGC	Full trace AGC	Full trace AGC	none ²
Vertical Stack ¹	2:1	1:1	2:1	2:1	none ²

¹Processing done by USGS in preparing the data for the SDLS

²Data not yet processed for SDLS

C 1 OWNER: OSSERVATORIO GEOFISICO SPERIMENTALE, TRIESTE
 C 2 LINE: IT910088,IT91088B AREA: ROSS SEA, ANTARCTICA
 C 3 YEAR COLLECTED: 1991 VESSEL: R/V EXPLORA
 C 4 SAMPLE INTERVAL: 200 MSEC RECORD LENGTH: 6000 MSEC
 C 5 TRACE INTERVAL: 100 METERS TOTAL TRACES: 2746
 C 6 TRCOUNT RANGE: 2826 - 5571 LINE DIRECTION: NORTHEAST
 C 7 ORIGINAL SHOT RANGE: 5721 - 9030, 72 - 2252
 C 8 SEG-Y FORMAT: 16-BIT FIXED AGC WINDOW: 6000 MSEC
 C 9 SHOTPOINT VALUES LOCATED IN TRACE HEADER BYTES 189-190
 C10
 C11
 C12 THESE DATA HAVE BEEN PUBLISHED BY THE AMERICAN GEOPHYSICAL UNION
 C13 (AGU), IN COOPERATION WITH THE SCIENTIFIC COMMITTEE ON ANTARCTIC
 C14 RESEARCH (SCAR) - ANTARCTIC OFFSHORE ACOUSTIC STRATIGRAPHY PROJECT
 C15 (ANTOSTRAT) - ANTARCTIC SEISMIC DATA LIBRARY SYSTEM FOR COOPERATIVE
 C16 RESEARCH (SDLS), WITH PERMISSION OF THE DATA OWNER. THE DATA ARE
 C17 NOT COPYRIGHTED, BUT UNDER GUIDELINES OF ANTARCTIC TREATY
 C18 CONSULTATIVE MEETING RECOMMENDATION XVI-12 AND SCAR REPORT NO. 9
 C19 (AUGUST 1992), THE DATA MAY NOT BE USED FOR COMMERCIAL PURPOSES.
 C20 THE DATA ARE PROVIDED TO FACILITATE COOPERATIVE RESEARCH PROJECTS.
 C21
 C22 RESEARCHERS WHO WISH TO USE THE DATA ARE ASKED TO:
 C23 1. CONTACT THE DATA OWNER TO DISCUSS INTEREST IN POSSIBLE
 C24 COOPERATIVE RESEARCH PROJECTS, BASED ON THE DATA AND
 C25 2. ACKNOWLEDGE THE DATA OWNER AND AGU-ARS VOLUME 68**, IF THE DATA
 C26 ARE USED FOR RESEARCH PUBLICATIONS.
 C27
 C28 **THE DATA ARE FROM: ANTOSTRAT PROJECT, SEISMIC STRATIGRAPHIC ATLAS
 C29 OF THE ROSS SEA, ANTARCTICA, IN GEOLOGY AND SEISMIC STRATIGRAPHY OF
 C30 THE ANTARCTIC MARGIN, ANTARCTIC RESEARCH SERIES, VOL. 68, EDITED BY
 C31 A.K. COOPER, P.F. BARKER, G. BRANCOLINI, AGU, WASHINGTON, DC, 1995.
 C32
 C33 SEE ATLAS AND APPENDIX TEXT FOR LOCATION OF DATA AND MORE DETAILS.
 C34 QUESTIONS REGARDING THE DATA SET, AND INQUIRIES ABOUT POSSIBLE
 C35 COOPERATIVE RESEARCH PROJECTS SHOULD BE ADDRESSED TO
 C36
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 C38 OSSERVATORIO GEOFISICO SPERIMENTALE
 C39 C.P. 2011, 34016 TRIESTE, ITALY

Fig. 1. Example of header file (*.HDR) included on CD-ROM for each segment of MCS data.

project requiring several years effort, and involving researchers from more than 14 countries (Table 5). For each working group region, one person has generally accepted the role of coordinating, compiling, and reformatting the data sets, and has provided the data for the CD-ROM. Table 6 lists the principal navigation-coordinators for each of the ANTOSTRAT regional working groups. The data are provided on the CD-ROM in UKOOA format [UKOOA-P1/90, 1991].

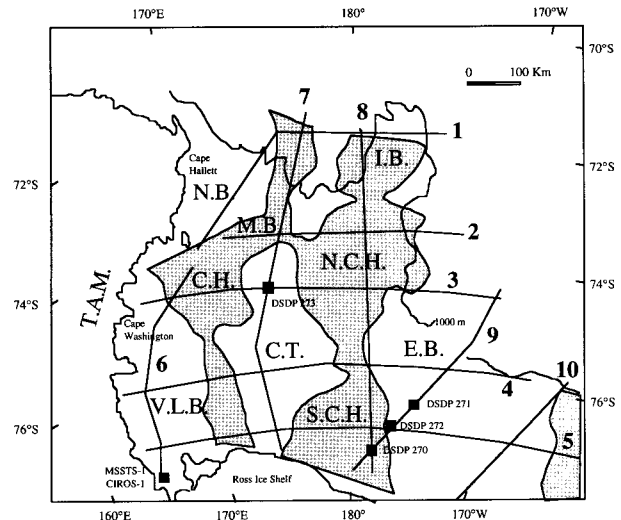


Fig. 2. Map of Ross Sea showing locations of the 10 composite MCS profiles included in paper format in the Atlas and in digital SEG-Y format on CD-ROM Disc 2. Seismic stratigraphic, bathymetry, and gravity maps for this region are provided in the Atlas and on CD-ROM Disc 1. See *Brancolini et al.* [this volume] for more details. Shading denotes areas where sedimentary rocks are less than 1000 m thick. NB = Northern basin; CH = Central high; VLB = Victoria Land basin; CT = Central trough; IB = Iselin Bank; NCH = northern Central high; SCH = southern Central high; EB = Eastern basin; MB = Mawson Bank; TAM = Transantarctic Mountains.

TABLE 5. Organizations that have Contributed MCS Navigation Data to the Current ANTOSTRAT Regional Working Group Compilations

Organizations ¹	Country	AP	RS	WL	PB	WS
AGSO	Australia	-	-	-	X	-
CNPA	Brazil	X	-	-	-	-
GMGS	China	X	-	-	-	-
IFP	France	-	X	X	-	-
AWI, BGR, IG	Germany	X	X	-	-	X
OGS	Italy	X	X	-	-	-
GSJ, JNOC	Japan	X	X	X	X	X
PRCK	Korea	X	-	-	-	-
UB	Norway	-	-	-	-	X
PAS	Poland	X	-	-	-	-
MAGE, VNIO	Russia	X	X	-	X	X
UG, IEO	Spain	X	-	-	-	-
BAS	UK	X	-	-	-	-
RU ² , USGS	USA	X	X	X	-	-

¹See Table 7 for list of acronyms

²Single channel seismic data only

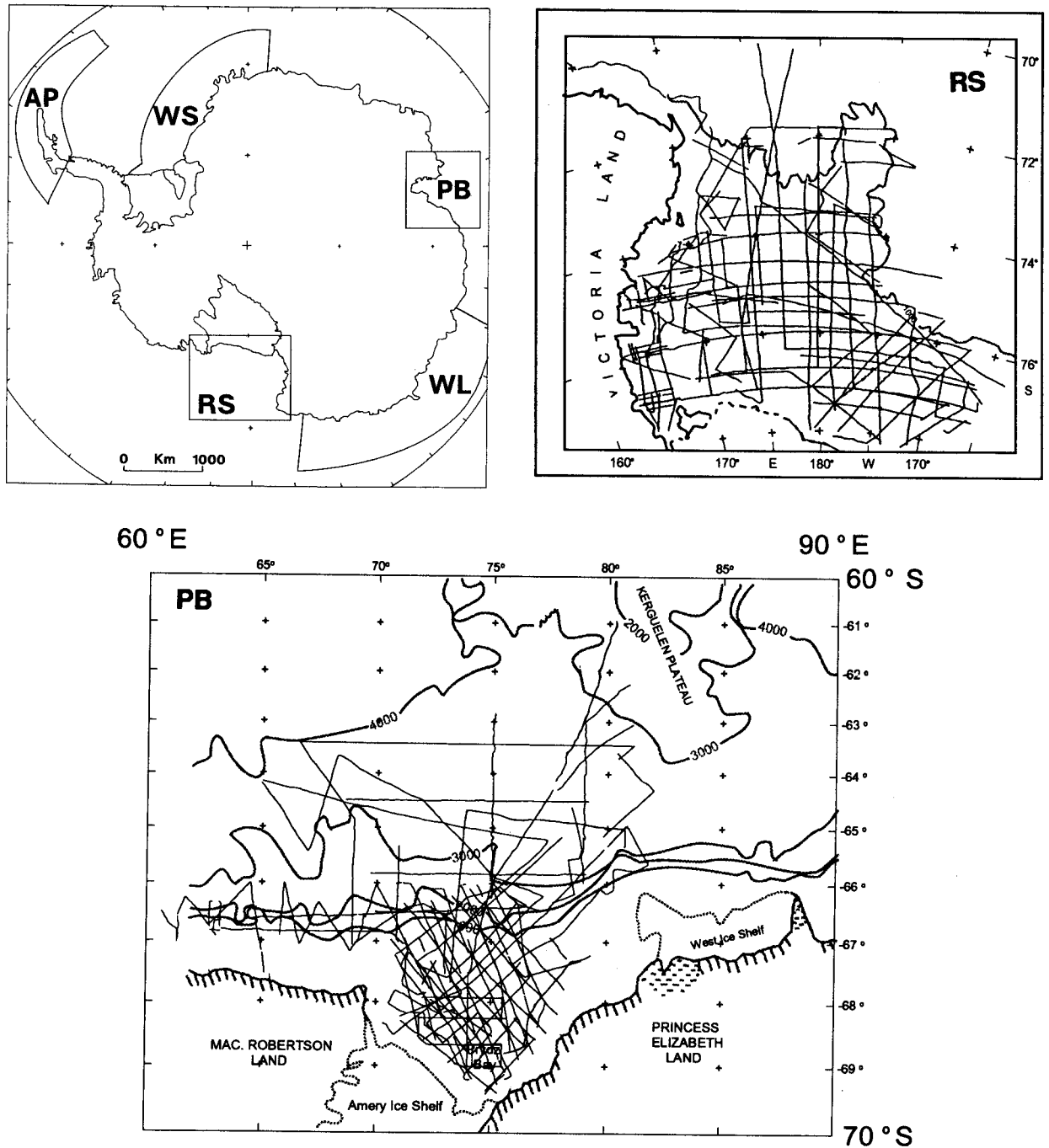


Fig. 3. Index maps for ANTOSTRAT regional working group areas showing locations of MCS tracklines for which digital navigation data are included on CD-ROM Disc 2. RS = Ross Sea. WL = Wilkes Land. PB = Prydz Bay. WS = Weddell Sea. AP = Antarctic Peninsula.

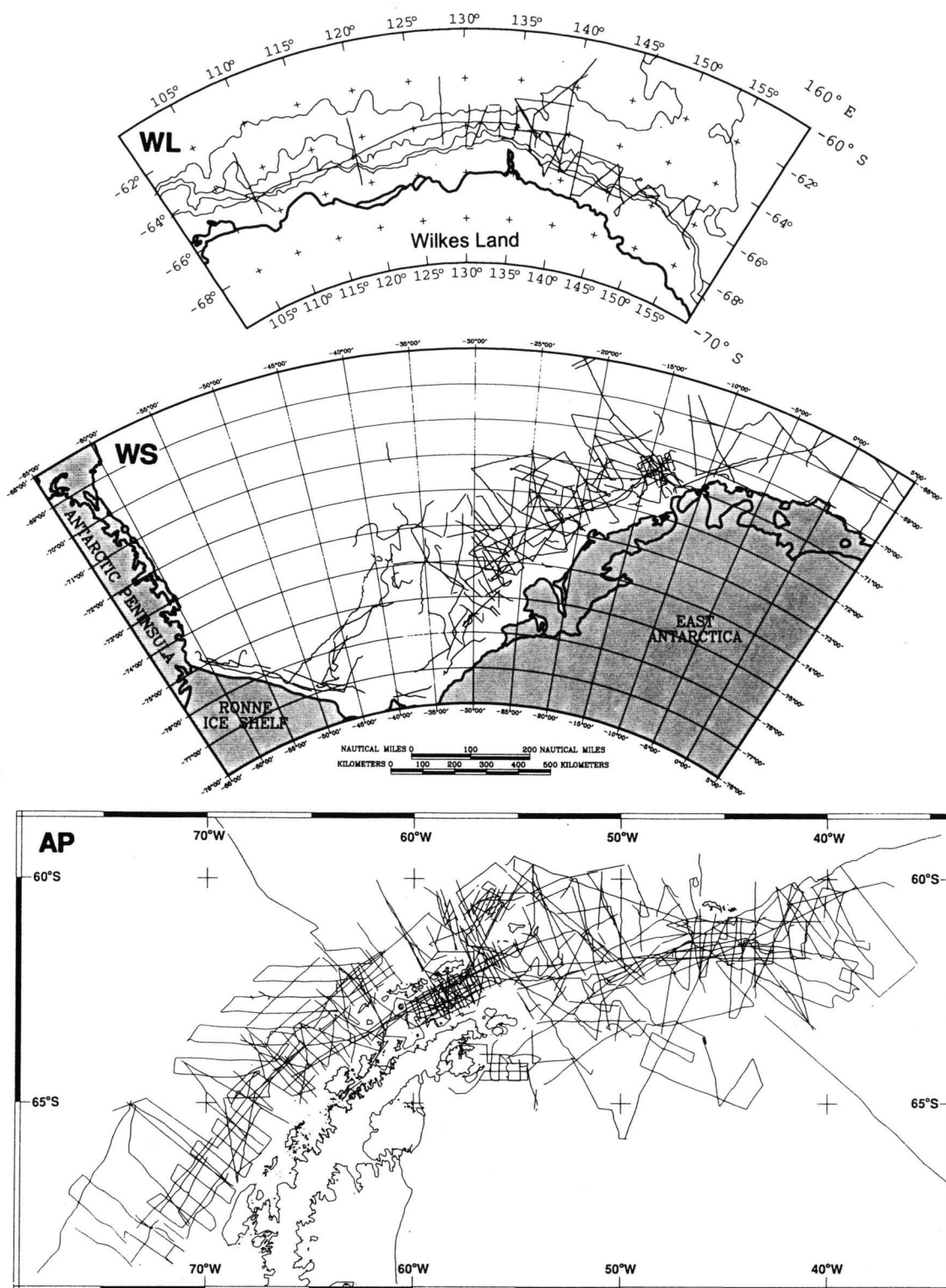


Fig. 3. Continued

TABLE 6. MCS Navigation Coordinators for ANTOSTRAT Regional Working Groups

Region	MCS Navigation Coordinator	Organization	Country
Antarctic Peninsula	Alex Cunningham	British Antarctic Survey	UK
Ross Sea	Giuliano Brancolini	Osservatorio Geofisico Sperimentale	Italy
Wilkes Land	Jon Childs	U. S. Geological Survey	USA
Prydz Bay	Phillip O'Brien	Australian Geological Survey Organization	Australia
Weddell Sea	Wilfried Jokat	Alfred Wegener-Institute für Polar-und Meeresforschung	Germany

DISC CONTENTS AND ORGANIZATION

The two CD-ROM discs were created with JVC Personal RomMaker software, release 1.01, using the ISO-9660 Level I/Apple HFS hybrid disc option. The disc therefore can be mounted in DOS, Macintosh, or UNIX environments.

The structure of the two discs in the set is similar. All text files (documentation, navigation, other non-data files) are represented as ASCII plain text, with end-of-line indicated by [CR][LF]. To facilitate reading the document files, public-domain tools are provided for Macintosh and DOS users.

4.1. Hardware Requirements

The following hardware configurations are recommended to use the CD-ROMs and included software. The CD-ROMs and software may function properly on less capable machines, but these have not been tested:

DOS users:

- IBM-compatible personal computer, 386/33 or better
- 640 Kbyte RAM
- MS-DOSTM v3.1 or later
- Microsoft MSCDEXTM v 2.1 or equivalent
- CD-ROM drive with ISO-9660 software
- VGA graphics

Macintosh users:

- MacintoshTM personal computer with floating
- floating point unit
- MacOSTM v6.0 or later
- CD-ROM drive with ISO-9660 software

UNIX users:

- SUN SparcstationTM 2 or equivalent
- BSD-based UNIXTM
- CD-ROM drive with ISO-9660 software

TABLE 7. Acronyms used in this Report

Acronym	Organization
AGSO	Australian Geological Survey Organization, Australia
ANTOSTRAT	Antarctic Offshore Acoustic Stratigraphy (Project)
AWI	Alfred Wegener-Institute für Polar-und Meeresforschung, Germany
BAS	British Antarctic Survey, UK
BGR	Bundesanstalt für Geowissenschaften und Rohstoffe, Germany
CNPA	National Committee on Antarctic Research, Brazil
GMGS	Guangzhou Marine Geological Survey, China
GSJ	Geological Survey of Japan, Japan
IEO	Instituto Espanol de Oceanografia, Spain
IFP	Institut Français du Petrole, France
IG	Institut für Geophysik, Germany
JNOC	Japan National Oil Corporation, Japan
MAGE	Joint Stock Marine Arctic Geological Expedition, Russia
OGS	Osservatorio Geofisico Sperimentale, Italy
PAS	Polish Academy of Sciences, Poland
PRCK	Polar Research Center KORDI, Korea
RU	Rice University, USA
SCAR	Scientific Committee on Antarctic Research
SDLS	Antarctic Seismic Data Library System for Cooperative Research
UB	University of Bergen, Norway
UG	Univeridad de Granada, Spain
USGS	U.S. Geological Survey, USA
VNIIO	All Russian Research Institute for Geology and Mineral Resources of the World Ocean "VNIIOkeangeologia", Russia

4.2. Installation and Startup

To get started, insert either CD-ROM and change to the directory or folder for your system: DOS, Macintosh, or UNIX. Within each will be found a 'README.1ST' file. By opening this file on Macintosh systems, or by typing the file using 'cat' or 'more' on most UNIX systems, introductory information about the disc and further instructions will be provided. On DOS systems, typing "dosmenu" will activate software to provide a menu of selections, including gaining access to the introductory information. Data directories are located beneath the root directory on both CD-ROM discs.

4.3. CD-ROM Disc 1 - Data Directories

On CD-ROM Disc 1 there is a single data directory (\PLATES) below the root directory:

The \PLATES directory has a subdirectory for each of the Atlas plates:

```
\PLATES\PLATE_1
\PLATES\PLATE_2
      :
      :
\PLATES\PLATE_22
```

Beneath many of the \PLATE_n directories, there are two or four subdirectories, one for each map on the Atlas Plate (See Tables 1 and 8 for a list of Plates):

```
\PLATES\PLATE_n\MAP_A
\PLATES\PLATE_n\MAP_B
\PLATES\PLATE_n\MAP_C
\PLATES\PLATE_n\MAP_D
```

As noted in Section 3.1. and on Table 1, each map (MAP subdirectory) may have one to four data files, depending upon the type of map.

There are two other subdirectories for \PLATES that provide coastline data and subsurface velocity information from MCS and sonobuoy data:

```
\PLATES\COASTS
\PLATES\VELOCITY
```

4.4. CD-ROM Disc 2 - Data Directories

CD-ROM Disc 2 has three data directories below the root directory (\NAV, \DATA, and \SEGY):

4.4.1. WAV directory. This contains the navigation files for the composite seismic profiles in the Atlas, and has the MCS navigation compilations done by each ANTOSTRAT regional working group. The subdirectories of \NAV are:

\NAV\VOLUME Atlas composite MCS profiles

TABLE 8. List of Atlas Plates included in digital format on CD-ROM

Plate	Type	A	B	C	D
1	M	Bathymetry	Free air gravity	-	-
2	M	MCS tracklines	-	-	-
6	S	MCS Profile-1	-	-	-
7	S	MCS Profile-2	-	-	-
8	S	MCS Profile-3	-	-	-
9	S	MCS Profile 4	-	-	-
10	S	MCS Profile 5	-	-	-
11	S	MCS Profile 6	-	-	-
12	S	MCS Profile 7	-	-	-
13	S	MCS Profile 8	-	-	-
14	S	MCS Profile 9	-	-	-
15	S	MCS Profile 10	-	-	-
16	M	Travel time: SL- RSU1	Depth: SL- RSU1	Travel time: SL- RSU2	Depth: SL- RSU2
17	M	Travel time: SL- RSU3	Depth: SL- RSU3	Travel time: SL- RSU4	Depth: SL- RSU4
18	M	Travel time: SL- RSU4a	Depth: SL- RSU4a	Travel time: SL- RSU5	Depth: SL- RSU5
19	M	Travel time: SL- RSU6	Depth: SL- RSU6	Travel time: SL- Bsmt	Depth: SL- Bsmt
20	M	Isopach: RSS-8	Isopach: RSS-7	Isopach: RSS-6	Isopach: RSS-5
21	M	Isopach: RSS-4	Isopach: RSS-3	Isopach: RSS-2	Isopach: RSS-1
22	M	Isopach: SF - RSU2	Isopach: SF - RSU6	Isoveloccity: SL - Bsmt	Isopach: SF - Bsmt

M = map; S = seismic reflection data; SL = sea level; SF = sea floor

\NAV\RSRWG Ross Sea compilation
 \NAV\PBRWG Prydz Bay compilation
 \NAV\WSRWG Weddell Sea compilation
 \NAV\APRWG Antarctic Peninsula compilation
 \NAV\WLRWG Wilkes Land compilation

4.4.2. \DATA directory. This contains the composite seismic profiles from the Atlas in 16-bit integer SEG-Y format. Each profile has been split into segments of approximately 2500 traces to allow DOS system users to view the MCS data with the SEGMENT program (see Section 4.5. below). The SEG-Y EBCDIC header information for each seismic-line segment is reproduced in ASCII format in a \HDR subdirectory, \DATA\HDR.

4.4.3. \SEGY directory. This contains the complete and continuous composite profiles from the Atlas, in 32-bit floating point SEG-Y format. SEG-Y EBCDIC header information for each seismic-line is reproduced in ASCII format in a \HDR subdirectory, \SEGY\HDR.

4.5. CD-ROM Disc 2 - Software Directories

On CD-ROM Disc 2, the \DOS and \MAC directories each contain a \SOFTWARE subdirectory, which includes software to display SEG-Y profiles on the computer screen. For Macintosh users, the software provided is TracePlot [Miller, 1993]. For DOS users, two utilities are provided. SEGMENT, a program written by Russ Ambroziak, USGS, Reston, and Jeff Brody, USGS, Menlo Park, provides the DOS user with reference seismic-images and reference navigation-maps for each seismic profile as well as the capability to pan and zoom within each seismic section. The second DOS utility is PLOTSEIS, a more conventional SEG-Y screen display utility [Zihlman, 1995]. Each \SOFTWARE directory has an \EXE subdirectory for executable images, and a \SOURCE subdirectory with source-code and documentation for the software. Source code is not provided for PLOTSEIS.

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