SITE SURVEY PANEL MINUTES

JUNE, 1985

HALIFAX, NOVA SCOTIA

Contents

SITE SURVEY PANEL

EXECUTIVE SUMMARY

JUNE 18-19, 1985

HALIFAX, NOVA SCOTIA

1. The SSP recommends that experimental data such as oblique seismic experiments and vertical seismic profiling should be placed in the Data Bank in the form of interpreted results.

2. Several points arose from the report on the ODP Data Bank Review.

   a) The SSP will regularly review restrictions placed on data in the Data Bank and strongly encourage that time limits be placed on such restrictions.

   b) The SSP considers that site survey data assessment is its responsibility. Panel members and alternates will be assigned to each leg to conduct a detailed assessment and report back to the Panel. Such formal assessments will commence with leg 110.

   c) The SSP unanimously agrees that the present level of Data Bank service should be maintained and that it cannot be maintained with the cuts for FY86 demanded by JOI. A letter detailing these objections was sent to PCOM and is attached to this summary.

3. A summary statement of site survey status by leg was prepared for Legs 105-114. See attached comments, particularly regarding Weddell Sea sites W-6,7,8. A detailed assessment of site survey data will be done by SSP members for Legs 110, 111, 112, and 114 prior to the November SSP meeting.

4. The SSP requires that proponents deposit in the Data Bank all core and dredge descriptions and heat flow data used to support site proposals.

5. The SSP notes that site surveys for the high priority Sub-Antarctic sites (SA-2, 3,5,7,8) are not well documented. The SSP strongly recommends that further site surveys are needed and these must include:

   a) Large water gun digital SCS.

   b) 3.5 kHz.

   c) Piston cores in the immediate vicinity of each proposed location.

   d) Magnetics and gravity.

6. A summary statement of the higher priority Indian Ocean proposals was prepared. See attached comments.

7. The Japanese National Oil Company is planning to release, in the near future, nearly 100 MCS regional lines around Japan. Negotiations on the terms of release are not yet complete.

8. Next meeting is tentatively planned for November 19-21, 1985 in Tokyo.

ATTACHMENT A

18 June, 1985 Halifax, N.S.

Dr. Roger Larson
Chairman
ODP Planning Committee
(hand carried by T. Mayer)

Dear Roger:

From what I understand is in the ODP Data Bank review report, it reads as a complete endorsement of the Data Bank's current level of activity, and the debate centers on how to provide more scientific overview into its operation (see comments in minutes for Panel's recommendations).

What I am very concerned about is the cuts that the Data Bank has suffered in the current FY 1986 budget. These were made by JOI without serious consultation and without an understanding of their impact. The background is as follows:

1. The original FY 1985 budget was 185K.

2. After the 7% cut, the budget for 1985 was 172K, and they are likely to meet that target according to Carl.

3. In a telephone conversation between JOI and Carl, the principle of restoring the 1985 cuts was agreed to. Carl was then told to take a 10% cut on top of this, resulting in a $166.5K budget. This is now becoming the accepted 1986 budget figure.

4. One of the prime recommendations of the Review Panel was to add low priced "gopher" help to assist with reproduction work. Carl added 10 hours/week to the original 1985 budget and submitted a budget for FY 1986 at $188K.

5. Because the service component of the budget is not large, the only way Carl could achieve an $18K cut was to eliminate 2/3 of the archivist's time. IT IS NOT POSSIBLE FOR THE DATA BANK TO MAINTAIN ITS CURRENT LEVEL OF SERVICE, LET ALONE MAKE THE IMPROVEMENTS NECESSARY TO MEET THE NEW REQUIREMENTS OF ODP, WITH THE $166K BUDGET.

...../2

As I see it, there is a strong sentiment for improving the Data Bank's services, although there is considerable room for debate as to whether or not the ODP community wishes to pay for those improvements, particularly in the current budget crunch. However, the current $166K budget figure represents a deep cut in present services, and the SITE SURVEY PANEL UNANIMOUSLY RECOMMENDS THAT THE $188K BUDGET ORIGINALLY PLANNED BE RESTORED. In absolute dollars it is a small amount, particularly when viewed relative to the entire ODP budget. We as a Site Survey Panel are willing to put in our time to provide some of the scientific input which we understand was recommended by the Review Committee, but we can't do it without a minimal level of support.

When the Data Bank review is discussed at PCOM, I ask that you use the points in this letter for discussion and take appropriate action.

Sincerely

Dr. J. W. Peirce, P. Geophys.
Chairman, Site Survey Panel

c.c. J. Clotworthy, JOI Inc.

ATTACHMENT B

Summary of Site Survey Status of Upcoming ODP Legs

June 19, 1985

105 - Baffin Bay/Labrador Sea

All SSP requirements met and data in Data Bank. Further shallow seismic, magnetics and coring will be done by HUDSON in Baffin Bay this summer.

106 - MARK I - Kane F.Z.

All SSP requirements met now that a GPS receiver will be on RESOLUTION. Recent surveys not yet in Data Bank, but must be ASAP to allow Chief Scientist packages to be assembled.

107 - Tyrrhenian Sea

Believe all SSP requirements have been met, but no recent data in Data Bank. Mauffret is working on this. Need all data by August 15 to assemble Safety Panel package for review in October. A concise summary of available data is critically needed.

108 - N.W. Africa

It is our understanding that the northern sites are well surveyed, including MCS and high resolution seismic. Little of this data resides in the Data Bank, but must be there by August 15 to allow compilation of the Safety Package for October review.

On the southern sites, data coverage is less comprehensive. Sarnthein is planning a cruise in October 85 which should meet shortcomings for these sites as far as the site survey matrix is concerned, but his data will not be available for the October Safety review.

109 - MARK II - Kane F.Z.

See Leg 106 above.

110 - N. Barbados

There are two important MCS lines which aren't in the Data Bank. The quality of the site survey data for this leg will be assessed over the next six months by the SSP.

111 - East Pacific Rise, 9° - 13°N

All site survey requirements have been met in these areas although the data are scattered among a number of institutions and investigators (LDGO/SIO/-URI/WHOI/UCSB/CNEXO). A synthesis of the data is essential; USSAC intends to issue an RFP for this in the near future.

112 - Peru Trench

Hussong's cruise report on Seamarc II/MCS/sampling cruise has just been received. Most of the OMD synthesis (not yet published) is at the Data Bank. Data Bank will work with Hussong assembling all single channel seismics in the area. Existing GLORIA data will be integrated with new Seamarc work. Extensive industry-collected MCS should be made available soon. French will do Seabeam/high resolution seismic survey in July 1986.

113 - Undesignated Leg

No comment.

114 - Weddell Sea

Norwegian (Kristofferson) and British (Barker) cruises just completed. We have received a preliminary summary from Barker and additional data (Multi-channel, 3.5kHz, refraction, piston core) will be available. German R/V POLARSTERN cruise will gain more site survey data mainly in the area W1 - W4 (MCS, SCS, 3.5 kHz, SEABEAM, geological sampling). The OMD synthesis being prepared at Lamont, which is available to the Data Bank, will give additional data.

Site W5 seems to be well documented. Sites W6,7,8 (Orkney margin) are documented by SCS, MCS and gravity coring. Slumping must be taken into consideration. Serious consideration should be given to use of sidescan and/or Seabeam on upcoming POLARSTERN cruise. Sites W9,10,11 need more site survey, but are currently lower priority sites.

ATTACHMENT C

Summary of Site Survey Status, Indian Ocean

1. North Kerguelen

Data Bank has Eltanin SCS and 5 French MCS lines related to proposal 136/C in its seismic data base. No refraction data exist in the Data Bank, and the MCS velocity scans are illegible. There is Eltanin magnetics and analog copies of magnetics and gravity along the French lines.

Panel will complete preliminary data assessment during next six months.

2. South Kerguelen

The Data Bank has the preliminary cruise report of the Australian 1985 expedition.

Seismic includes: Eltanin SCS, Australian cruise report with examples of high quality airgun (1000 cu in) SCS seismic. Still to come are final SCS and MCS sections and scattered refraction data.

Some magnetic and gravity available; unclear how much Australians have. Some dredging will be available from Australians. Only Eltanin piston cores.

Dufresne cruise planned for Jan./Feb. 1986. 4000 km MCS, magnetics, gravity. Possibility of second cruise in March for sampling.

Refraction data seems the biggest hole at the moment.

No Prydz Bay data in Data Bank.

3. Ninety East Ridge

The data base is only slightly better than when the Challenger drilled there thirteen years ago. There is a critical need for MCS data to help with problem of intercalated sediments and basalts (where is "basement"?) and up-to-date crustal refraction.

A drilling proposal with specific targets and follow-up surveys are critically needed. A long magnetic profile down the length of one side of the ridge and up the other would resolve many of the tectonic uncertainties in terms of spreading history, but this is not an absolute requirement.

4. Neogene Package

For the scientific objectives planned, Prell's proposal for site survey work seems to meet the needs of the Oman Margin and Owen Ridge except in the context of sediment slumping. Some sidescan or Seabeam data appears to be necessary. For the objectives listed, it would appear that MCS should not be required, but a final decision must await the examination of the SCS survey.

In the distal Indus Fan area, only a few reconnaissance lines exist in the Data Bank. Apparently, there are French and German cruises planned to the area in 1985/86, but few details are known. In short, there is virtually a total absence of data in the area. We need sidescan or Seabeam and coring.

The Somali slope hole proposed by Kennett is on a Vema 1980 MCS line. The Gulf of Aden hole is based on scattered SCS. Both holes need high resolution SCS to backup the scientific objectives.

A more detailed assessment is deferred until after a synthesis of the drilling proposals is available.

5. Red Sea

Working Group document summarizes available data.

6. Southeast Indian Ridge

Most of these sites are proposed across the spreading ridge (no bare rock) out to the ridge flanks where sediment depths of 600-700 m can be expected. The regional coverage is sparse. We understand that Schlich is planning a SCS transit parallel to a flow line on Dufresne in 1986.

7. Broken Ridge

There is meagre available seismic reflection information obtained during Eltanin cruise 48, Conrad 1105, and Glomar Challenger Leg 26. In order to derive maximum benefits from drilling to test models for rifting at Broken Ridge, it will be necessary to conduct high resolution SCS using water guns, MCS, together with sonobuoy refraction measurements, piston cores, and dredging along Broken Ridge scarp. The extent of the major erosional unconformity should be mapped over Broken Ridge and better seismic stratigraphy developed.

8. Argo AP and Exmouth Plateau

The Australians have a fair amount of regional data in the Argo Abyssal Plain and have scheduled a survey for January 1986. Data collection similar to that for Kerguelen.

The Exmouth Plateau is one of the most thoroughly explored passive margins in the world. A joint BMR/LDGO deep crustal study (MCS, expanding spread profiles) is planned for December 1985, followed by a second BMR leg (3000 km MCS) in 1986.

In both areas the data in the Data Bank is out of date. A synthesis is needed.

9. Central Indian Basin/Distal Bengal Fan

One of the primary objectives is a detailed study of structures related to intraplate deformation. The area is covered by scattered SCS and magnetics. Regional work, SCS, OBS refraction and heat flow are being considered by LDGO (with Brown and Dalhousie) for 1986. Based on current drilling ideas, bottom navigated heat flow may well be needed. Mature drilling proposal needed.

10. Davie Ridge

Generally well documented by a wide variety of data, including Mobil and French data. Synthesis is needed before a formal assessment can be attempted. Much of the better quality data is not in the Data Bank.

11. Southwest Indian Ridge

Minimal coverage exists. Full site survey needed. Requirements should follow matrix for spreading ridge environment.

12. Chagos-Laccadive-Mascarene

Very poorly covered area. Major survey needed. Requirements difficult to specify in absence of well developed drilling proposal.

3. Makran

British have decent regional data and White has a cruise scheduled for 1986 with MCS, 3.5 kHz, OBS data, cores and deep tow. Further examination by SSP needed. Heat flow data may be needed.

14. Agulhas Plateau

Some South African data recently received. Further consideration by SSP needed if this is a probable drilling area.

Action Items

(* - Immediate Action)

1. Kidd - Prepare report, including videotape, on Mesotech borehole sonar surveying technology for next meeting.

2. Brenner - Ask R. Anderson to distribute Logging Manual to Panel members, plus K. Louden.

3. Peirce - Contact Larson re concept of increasing U.S. representation on SSP.

4. Peirce - Write Taira requesting that Japan appoint an alternate SSP member.
   Orcutt - Get replacement for Stoffa who is currently unavailable.

5. * Peirce - Send letter to PCOM (copy to JOI) objecting to the demanded cuts in the FY86 budget for the Data Bank.
   * Mayer - To carry to Larson.

6. Peirce - Continue to arrange Panel liaison as needed. Specifically, contact Curray re advisability of continued liaison with IOP by SSP, Cochran re liaison at next meeting of Red Sea Working Group, and Brass re possibility of increased communication with NSF.

7. Brenner - Prepare report for each SSP meeting summarizing Data Bank activity, receipts and distributions. Start from January 1985.

8. Mayer - Make minor corrections to site survey matrix for JOIDES Journal.

Leg 107* Mauffret - See that Med. W. G. supplies Tyrrhenian Data to ODP Data Bank by August 15 in order to Prepare Leg 107 Safety Package.
Mayer - Inform ARP of immediate need for Tyrrhenian data.

Leg 110 Mauffret - See that Barbados North MCS line CEPM 128 gets to Data Bank.
Brenner - Obtain Barbados North MCS line Shell C2114 from Graham Westbrook if possible. Assemble assessment package for Louden.
Louden - Will assess data and send report via Peirce to next SSP meeting.

Leg 111 Brenner - Establish liaison with Purdy. Orcutt keep Brenner and Kidd informed of status of U.S. RFP.
Orcutt - Will assess data and report at next meeting. Brenner support as needed.

Leg 112 Brenner - Send preliminary package to Mauffret for assessment.
- Maintain liaison with Hussong.
* Mauffret - Complete site survey status form for inclusion in final minutes.
- Will assess data and report at next meeting.

Leg 114 Brenner - Contact Barker to thank him for preliminary data package and outline Data Bank needs regarding reproducibility, labelling, etc. Also contact J. Anderson regarding heat flow data in Bransfield St.
* Weigel - Complete site survey status form for inclusion in the final minutes.

Kidd - Will ensure TAMU follow up oceanographic data pertaining to current shear problems in this environment.
Weigel - Will contact Kiel and BGR regarding possible use of sidescan and/or Seabeam at W-6,7,8.
- Will re-assess data in late Fall and report at the next meeting.
Suyehiro - Will check to see if there is any Japanese MCS data in the Weddell Sea.

Sub-Antarctic

Weigel - Complete site survey assessment form for inclusion in the final minutes.
Brenner/Mayer - Update page 78 of JOIDES Journal (Annex B) in light of core description discussion, and update assessment package for Weigel.

Kerguelen

Peirce - Conduct preliminary assessment of North Kerguelen and report to Panel at next meeting. Conduct similar review of South Kerguelen if Australian data received in time.
Brenner - Prepare data packages for above review.
- Contact BMR re Australian data in Prydz Bay area.

Neogene Package

Peirce - Contact Haq to see if any Indian data over mid and lower Indus Fan can be made available. Also send Prell copy of minutes relating to discussion on his proposal.

Red Sea

Peirce - Contact Cochran re possible Brest meeting of Red Sea Working Group.

Southeast Indian Ridge

Mauffret - Contact Schlich regarding details of Dufresne Transect in this area.

West Pacific

Suyehiro - Coordinate with Brenner regarding transmittal of Japanese MCS data to Data Bank.

Next Meeting

Peirce - Coordinate with JOIDES Office and Suyehiro.

OCEAN DRILLING PROGRAM

SITE SURVEY PANEL MINUTES (FINAL VERSION)

BEDFORD INSTITUTE OF OCEANOGRAPHY

DARTMOUTH, NOVA SCOTIA

JUNE 18-19, 1985

Present

* John Peirce (Chairman, Canada)
* John Orcutt (U.S.A.)
* Wilfred Weigel (Germany)
  Carl Brenner (ODP Data Bank)
  Anthony Mayer (JOIDES)
  Robert Kidd (TAMU)
* Allain Mauffret (France)
* Kiyoshi Suyehiro (Japan)
  Keith Louden (Alternate, Canada)

Guests

Matt Salisbury (DMP)
Shiri Srivastava (Co-Chief, Leg 105)
George Somers (Canadian ODP Committee)

* Members, Site Survey Panel

1. Minutes of La Jolla Meeting

The Minutes of the La Jolla (November 84) meeting were adopted with attached corrections.

2. Report from PCOM (Tony Mayer)

Membership. Because of non participation of the U.K. and E.S.F., panel membership has changed. John Peirce (Petro-Canada) now chairs the Site Survey Panel, Darryl Cowan (Univ. of Washington) Tectonics Panel.

FY 1986 budget is $32.5 million for participation by 4 or 5 non-U.S.A. nations. This ceiling may raise questions about the possibility of bare rock drilling and publication.

It was noted that Japan has signed a Memorandum of Understanding for full participation in the ODP.

The suggestion has been made that the U.S.S.R. may be encouraged to join the ODP.

Planning for Indian Ocean Legs.

In previous PCOM meetings, general drilling plans had been outlined following Weddell Sea and prior to Kerguelen leg, late 1988. At the April meeting, discussion involved primarily short term planning: co-chief scientists up to Leg 112, effect of extending Galicia Bank leg on Leg 104, and 70 day duration of Leg 105 and concerns over weather window.

Reports were received by PCOM from Co-chiefs for Legs 101 and 102.

JOIDES office will act as watchdog for PCOM on development of legs. 504B being held as one of several reserve legs.

Chile Triple Junction proposal has been essentially dropped due to lack of site survey information. Scientific value of the proposal is recognized and short HPC holes for paleo-environmental objectives may be considered during transit south.

Next meeting (Hannover).
- Southern Oceans Panel will be reporting.
- Mediterranean Working Group (J. Mascle) reporting on detailed site selection after site survey work.
- Implications of budget constraints.
- Data Bank Review.

special issue of JOIDES Journal will be planned for release in September will ct as a basic handbook of information on ODP.

It was suggested that Site Survey Panel meetings should precede PCOM meetings and follow Thematic and Regional Panel meetings.

Next PCOM meetings: October 8-10 at URI; first week of February 1986 at SIO.

NSF has committed JOI to a performance evaluation (October, November) to report to EXCOM in January. Undertaking the task will be Bill Hay, Aubouin, Drake, Vail and Mayer. Details not final.

Matt Salisbury raised the question of budget constraints and their impact on engineering development and implications for choice of legs.

3. Report of Science Operator (Rob Kidd)

Most recent ship's schedule and co-chief selection presented. Most notable change August 16 departure for Leg 104B with transit to St. John's for crew change avoiding 70 day leg on 105.

Co-Chiefs: 106 - Detrick/Honnorez
107 - Kastens/J. Mascle
108 - Ruddiman/Sarnthein
109 - Bryan/Juteau
110 - Moore/A. Mascle
111 - Bougault/MacDonald

The results of Leg 103 were summarized.

Site 1 for Leg 104 was approved by Safety Panel.

Reports on Mesotech sonar borehole surveying system from Leg 102B transit Norfolk-Azores were encouraging. The tool worked well and may be useful as a survey instrument for bare rock drilling. A video tape is available to illustrate the capabilities of the tool. Contacts at TAMU are Brad Clement and Bill Merrell.

Action: Kidd will bring video tape and report details of technology to next SSP meeting.

A Magnavox GPS system is being acquired this fiscal year, and will be available for Leg 105 and later.

Problems exist for underway geophysics concerning noisy positions of transducers on the hull. Must await drydocking for repositioning or other temporary fix.

A technical report from ODP on the ship's labs has just gone to press.

Kidd will act as primary contact between TAMU and the Site Survey Panel.

Staff scientists for upcoming legs were reviewed. Several people will act on more than one leg due to budget restrictions. Mayer added that a general staffing freeze is in place at the moment.

4. Report from Down Hole Measurements Panel (M. Salisbury)

The foremost objectives of the DMP are: (1) to advise on logging equipment for the ship and to build up a comprehensive inventory of downhole information from as many regions as possible; and (2) advice on specialized logging objectives such as basement, hydrothermal systems, geotechnical properties.

Lamont is running routine downhole logging operations. Much of the instrumentation is supplied by Schlumberger. Specialty tools are also the responsibility of L-DGO, but are used only at the request of co-chief scientists.

A brief review of instruments available was presented, including recent acquisitions. The existence of L-DGO's wireline logging manual was noted. Also noted was the fact that all routine runs used in cold rock can be done in hydrothermal investigations if a tool pusher is used.

Results from Leg 102 (first specific logging leg) were reviewed.

Action: Brenner to have manual describing logging tools (from R. Anderson) distributed to panel members as well as K. Louden (alternate member).

Kidd raised the point that co-chief scientists should be informed earlier about downhole equipment and capabilities.

Salisbury replied that DMP reviews upcoming legs and recommends what downhole tools are available and how they can help achieve scientific objectives.

Mayer suggested that requests for specialty tools should be made as proposals to allow time for implementation.

The question was raised about access to data such as oblique seismic experiments and vertical seismic profiles. Downhole information has the same 12 month restriction to the shipboard science party as samples. SSP recommends that interpreted results should be lodged in the ODP Data Bank.

Peirce raised the question of coordination between SSP and DMP. After discussion consensus was that there may be a need for liaison for specific legs, but not on a regular basis.

5. ODP Data Bank Review (Mauffret, Brenner, Mayer)

The results of the Data Bank review were discussed although the report is not yet available to the Panel. JOI has undertaken the review, but in consideration of concerns over acceptability to the science community, has referred the report of the Review Panel to PCOM for comments.

Conclusions reached include:

1) The Data Bank is essential to the program for operation and future planning and post cruise studies. The Site Survey Panel was identified as the main link to the Data Bank.

2) The Data Bank serves the ODP community, but the SSP should provide scientific oversight.

3) A flow chart was developed to outline the ideal role of the Data Bank in the orderly review of proposals (see Guidelines for the Submission of Proposals, JOIDES Journal, p.76, June '85).

4) Data in the Data Bank should be accessible to the ODP community, but the Data Bank should not become an alternative to national data libraries such as NGSDC (U.S. National Geophysical Survey Data Centre).

5) The Data Bank should remain at L-DGO.

The problem of distribution of restricted data was discussed at length. Mauffret made the point that all data in the Data Bank should be available to the science operator (TAMU and co-chiefs) and the Safety and Site Survey Panels. Restricted access to others should be allowed. The Site Survey Panel will review on a regular basis any restrictions placed on data in the Data Bank and will strongly encourage a time limit on all such restrictions.

Proprietary data is not considered appropriate for the Data Bank. Restricted data must be released at the time of Part B publication.

Priority of access to data:

Class 1 - The mandate of the Data Bank requires it to give top priority to serving the Science Operator (including co-chief scientists), the Safety Panel and the Site Survey Panel. Requests related to Initial Reports preparation fall in this category if approved by the co-chiefs of the relevant leg.

Class 2 - Regional and Thematic Panels will be provided with information on data availability by request from Panel Chairmen. Special requests for full data packages will be considered on a case basis.

Class 3 - Information requested by site proponents and post cruise investigators (other than Initial Reports).

The point was made that shore based investigators involved in a leg be included with shipborne participants as science party of a leg. Requests to the Data Bank should be routed through co-chief scientists for material relating to preparation of reports.

It was noted that the onus is on a proponent to support a proposal with data or to identify available data.

It was strongly recommended that PCOM enforce regulations regarding deposition of ata with the Data Bank.

ODP Data Bank Budget/Staffing

The Review Committee recommended a very modest increase in expenditure to provide "gopher" support for photocopying, etc. The majority opinion of the Review Committee supported more senior scientist time to assess data adequacy. The minority opinion (largely based on cost) was that the SSP could do it, as was done for Chile Triple Junction.

The original budget for FY85 was $185K, later cut by edict to $172K. That cut will be met by reduced use of some part-time personnel and a reduction in LDGO computer rates. Increased activity at the same quality of service will make such cuts untenable in FY 1986. The Data Bank had planned a $188K budget for FY86 (FY85 + 25% gopher-year), but was told to submit a budget for $166.5K (FY85 original - 10%).

Discussion:

Mauffret made the point that the assessment workload is heavy for such a small Panel. He noted that the U.S. has only one voting member on SSP, and consideration should be given to increasing the U.S. membership to reflect their relative level of activity.

Action: Peirce discuss this idea with Larson.

The question was raised about further involvement of TAMU staff scientists. Kidd replied that they are already working on near site studies (including proprietary data) and could not be made available. The point was also made that the Science Operator should not be placed in a pivotal role regarding site survey assessment as this may influence drilling plans.

After further discussion, it is the unanimous feeling of the SSP that data assessment is the Panel's responsibility. The Panel members are willing to undertake this task and alternate members will be enlisted to support this task.

Action: Peirce write Taira requesting that Japan appoint an alternate SSP member. Orcutt get replacement for Stoffa , who is now unavailable.

The Panel felt that people who are proposing site surveys who wish to receive some advance comment on the content of their proposals should contact their national representatives. The SSP will consider reviewing such proposals on a case basis.

Further discussion on the staffing at the Data Bank ensued, and all agreed that the present level of services must be maintained. Brenner pointed out that the only way he could achieve a $166.5K budget was to cut the archivist's time by 2/3 (to four man-months).

Action: Letter (attached) to PCOM (copy to JOI) objecting to the demanded cuts in the FY86 budget for the Data Bank was drafted. Mayer will hand carry same to Larson.

The issue of liaison between the SSP and other panels was discussed in the context of Data Bank travel budget. All agreed that recent close liaison with IOP had been effective from SSP perspective, but future needs must be carefully assessed on a meeting by meeting basis.

Action: Peirce continue to invite liaison from other panels as needed and request representation at appropriate regional and thematic panels, subject to concurrence of JOIDES Office. Specifically, Peirce will contact Curray regarding continued IOP liaison with SSP.

The question of who uses the Data Bank was briefly discussed. During 1985 to date, on a project basis, the biggest recipients of data have been TAMU, Chief Scientists, Site Survey related, and site proponents. No single institution has been a disproportionate user.

Action: Brenner will prepare a brief synopsis of Data Bank activity, receipts and distribution for each SSP meeting, starting as of January 1985.

Peirce mentioned that during his visit to Data Bank he had raised the question of having a computerized data base showing piston core names and locations and heat flow station names and locations. Systems exist at LDGO for doing this and Brenner will be investigating the feasibility of incorporating such a feature into Data Bank data base software.

6. Status of Site Surveys for Upcoming ODP Legs

A cruise summary is attached to the Executive Summary of the minutes. These comments are in amplification.

105 - Baffin Bay/Labrador Sea

All Site Survey Panel requirements have been met and data is in the Data Bank (except for two small items which Srivastava is providing).

106 - Mark I - Kane Fracture Zone

Transponders are in place at sites which appear to be technically acceptable. Rock drill was in operation until failure of winch. Some additional SeaMarc data was collected in the Famous area. However, chirp sonar was not included in the rebuilt SeaMarc. Purdy is doing a seismic refraction experiment in the Mark area with bottom sources and bottom receivers. Much of recent data not yet to Data Bank.

107 - Tyrrhenian Sea

Mauffret reviewed recent site survey data for the Tyrrhenian Sea. The SSP expects that all French MCS data will be deposited at the Data Bank as CDP stacked sections plus all migrated data which is available by August 15/85. In addition, the SSP strongly recommends that the Mediterranean Working Group prepare a concise summary of available data which exist, and where they reside. This summary should include track charts and appropriate synthesis maps. All data used to support final site selections should be deposited in the Data Bank.

Action: Mayer to inform ARP (Med. W.G.) of need for Tyrrhenian Sea summary. Mauffret to contact J. Muscle regarding release of Tyrrhenian Sea data to Data Bank by August 15 to allow preparation of Safety Package.

108 - Northwest Africa

Although extensive data (including water gun seismic) for the northern part of the region exist, they are not in the Data Bank. Sarnthein has been contacted in this regard. Although sand is not expected as a problem, slumping may pose potential problems. The SSP noted that there are no high resolution seismic (in the south), Seabeam or sidescan data available for the area. The SSP understands that M. Sarnthein is planning a cruise in October 85 with 3.5 kHz seismic (including a water gun), Seabeam and deep towed side-scan. This work will be concentrated in the southern part of the area.

110 - North Barbados

Two important MCS lines are not in the Data Bank.

Action: Brenner will see about acquiring Shell C2114 and Mauffret will see about CEPM 128.

The Site Survey Panel agreed formal site survey assessment procedures will begin with Leg 110. Responsibility for the assessments for this leg rests with K. Louden.

Action: Brenner send Louden data package for assessment. Louden assess site survey data and report to next SSP meeting via Peirce.

It was noted that in the site survey standards, category E, the term "fore arc wedge" may not always be appropriate and it was agreed that the term "active margin" shall replace this term.

Action: Mayer to revise Site Survey Standards for the JOIDES Journal.

Reserve Leg

The SSP will attempt to assess survey data for reserve legs (Yucatan or 504B or N.W. Africa deep Mesozoic objective) before the next meeting, once PCOM decides which objective will be drilled.

111 - East Pacific Rise

Drilling proposal by Bougault, updated by Francheteau/Heikinian, 13°N. Suggestion by MacDonald/Fox to go to 90°N.

Lithosphere panel trying to synthesize data. 3 guide bases will be required. Diving geochemical and photography data plentiful for 13°N, more dredge data at 9°N.

U.S. Seabeam data is at SIO and URI (Detrick/Orcutt) as well as copies of French data in U.S. institutions. Also 1985 data available. Thorough MCS and refraction data is available. Argo-Jason trials on Melville will be conducted in the area by Ballard.

May 1986 French cruise on Charcot with Seabeam, high resolution seismic, SAR (sidescan) and geochemical sampling. Diving is planned for 1987. September 1985 Washington cruise with Seabeam and OBS refraction will be conducted in O'Gorman Fracture Zone (west of the area).

Action: Brenner will establish liaison with Purdy. Orcutt will keep Brenner and Kidd informed on the status of U.S. R.F.P. for synthesis. Orcutt will assess site survey data and report to next SSP meeting via Peirce.

112 - Peru Trench

9°N to 12°S, proposal #84/E. Objectives: (a) trench and erosion of downgoing slabs; (b) deformation seaward of trench; (c) HPC sites to study El Nino. Two MCS lines reviewed, are part of larger data set of MCS industry data available to Hussong. Key lines will be processed in fall 1985, all lines processed by early 1986.

Report on Hussong site survey cruise (see Appendix C) just received. Work included 1500 km 24-channel MCS (to be processed at U. Tulsa) in the Lima and Yaquina Basin area, rock dredge, 5 piston cores, rock cores, gravity cores and 9 heat flow stations. No heat flow anomalies encountered, trench wall and fore arc appear to be cool.

Action: Brenner will send a preliminary package to Mauffret and maintain contact with Hussong. Mauffret to prepare summary for inclusion in the final minutes, assess data on receipt of package from Brenner and report at next SSP meeting.

114 - Weddell Sea

W1, W2 - Queen Maud Rise

SSP received at the meeting a very useful preliminary summary of recent data acquired by Barker. See Appendix D. Kristofferson planned to acquire 24 channel MCS over W-1 and W-2 with some sampling and heat flow. Data is not yet in Data Bank. Additional data will be available from POLARSTERN (Dec./85 - March/86) by BGR including MCS, 3.5 kHz, high resolution SCS, and some geological sampling.

W3 - Astrid Ridge

Apparently no longer a high SOP priority. Requires high resolution/3.5 kHz seismic velocity determination and piston core data. Additional data will be available from POLARSTERN.

W4 - Explora Wedge (Dipping Reflectors)

Data available include 3.5 kHz, MCS, piston core, magnetics, gravity and dredging. Data not available are seismic velocity determinations. Additional information from POLARSTERN will be MCS, Seabeam and geological sampling.

W5 - North Central Weddell Sea

Data available include high resolution SCS, MCS, magnetics, gravity and piston cores. All site survey requirements appear to have been met once recent British data from Barker reach Data Bank.

W6, 7, 8 - S. Orkney Plateau

Slumping may well be a problem in attaining drilling objectives. Pragmatically this must be analyzed in terms of the seismic and piston core data. The Site Survey Panel notes that the POLARSTERN may have a deep towed side-scan system onboard. Serious consideration should be given to using this system and/or Seabeam at sites W-6,7,8. TAMU expresses concern over bottom shear in this environment. Other survey requirements appear to have been met once recent British data from Barker reach the Data Bank.

W-9

Not mentioned by SOP as a priority. Site surveys are not adequate.

W-10

Data existing includes airgun 3.5 kHz, MCS. Will be visited by POLARSTERN (3.5 kHz, Seabeam). Question of heat flow data requirements raised, but unresolved.

W-11

No useful data for W-11 at Data Bank. Existing SCS is not adequate.

Action: Brenner will contact Barker to thank him for preliminary data package, and outline needs of the Data Bank in terms of reproducibility, labelling, etc. Also contact J. Anderson re heat flow data in Bransfield St. area.

Kidd will ensure TAMU looks into oceanographic data on current shear problem.

Weigel will contact Kiel and BGR regarding possible use of sidescan-/Seabeam at W-6,7,8.

Suyehiro will check to see if there is any Japanese MCS data in Weddell Sea area.

Weigel will complete site survey status form for inclusion in the final minutes. Once British data available, he will update his assessment and report at the next SSP meeting.

7. Sub-Antarctic Proposals

SOP has placed SA-2,3,5,7,8 as highest priorities.

SA-1,2,3

SCS and piston core data available. Not available is 3.5 kHz or high resolution SCS. The quality/ quantity of data was not considered sufficient to meet site survey requirements.

A question was raised whether the SSP should evaluate the quality/sufficiency of piston core data with respect to achievement of scientific objectives. TAMU will advise on quality from an engineering perspective. Consensus was that Data Bank needs to build up library of core locations. Core descriptions in the area of proposed sites are needed for site survey assessment.

Motion - Mauffret/Orcutt - Unanimous

Proponents should deposit in the Data Bank all core and dredge descriptions and heat flow data to support site proposals.

SA-4

Magnetics, gravity and SCS data are available. Not available are high resolution SCS, MCS, velocity determinations. Additionally, it would be desirable to have 3.5 kHz, sidescan and piston cores. Quality and quantity of data does not fill site survey requirements.

SA-5

One low quality SCS line exists but no velocity determination. Data does not meet site survey requirements.

SA-6

SCS exist but no high resolution SCS, velocity determinations or piston cores. Data are insufficient. Seabeam and sidescan would be desirable, but not essential.

SA-7

At present no data at all is available to support this site.

SA-8 & 9

Low quality SCS data are available.

Magnetics and gravity are on scattered lines but OMD synthesis (including Seasat) includes excellent regional interpretation in this area.

Motion - Weigel/Mauffret Unanimous

The SSP notes that site surveys for the Sub Antaractic proposal are not well documented. The Panel strongly recommends that further site surveys are needed and these must include:

a) large watergun digital S.C.S.
b) 3.5 kHz
c) piston cores in the vicinity of each proposed location.
d) magnetics and gravity data.

The above motion refer to the current high priority sites SA-2, 3, 5, 7 and 8.

Action: Brenner/Mayer to update p.78 of JOIDES Journal, Annex B in light of core description discussion and update package for Weigel.

Weigel will complete site survey status form for these sites for inclusion in the final minutes.

The SSP has a copy of the LDGO site survey proposal. It appears to meet most of our concerns except at SA-4.

8. Indian Ocean Panel Report (Wednesday, PM)

A summary of site survey status for the higher priority drilling proposals is attached to the Executive Summary of these minutes. These comments are in amplification.

(1,2) N. and S. Kerguelen Plateau (Brenner)

Five SCS lines with four crossing points received from Schlich with sites proposed at crossing points. More French MCS data and piston cores exist but are not at Data Bank. Cruise report from recent Australian cruise to S. Kerguelen received. See attached summary for further comments.

Jan/Feb. '86 there will be a cruise by Dufresne to southern part of the area collecting 4000 km of MCS; gravity and magnetics. There is a possibility of a line from Broken Ridge to Kerguelen Plateau in Feb/Mar '86 with high resolution seismic. It was suggested to review N. Kerguelen Plateau for next meeting. South Kerguelen Plateau will be reviewed if Australian data is available in time.

The Data Bank has no data in Prydz Bay area, on the Antarctic margin south of the Kerguelen Plateau.

Action: Peirce conduct preliminary assessment of North Kerguelen and report at next SSP meeing. Conduct similar review of South Kerguelen if Australian data received in time.

Brenner - Prepare data packages for above review. Contact BMR regarding Australian data in Prydz Bay area.

(3) Ninety East Ridge.

No specific drilling targets have yet been identified. Curray is planning a site survey to the Broken Ridge and Southern 90°E Ridge. Up to date crustal refraction would be of value.

(4) Neogene Package

Consists of three related parts: (a) Oman Margin and Owen Ridge; (b) Somali Slope and Gulf of Aden; (c) Distal Indus Fan. Proposed penetrations range from double HPC to about 700m all for high resolution stratigraphic/paleo-environmental objectives.

(a) Oman Margin/Owen Ridge.

Proposed being submitted by Brown Univ. was discussed at length. Most site survey needs would apparently be met by this proposal except in the context of sediment slumping, a problem which was discussed at length in the proposal. Careful analysis of SCS and piston cores may resolve this problem but it is highly likely that sidescan or Seabeam data will be required to understand the ages and pattern of slumping. From the current information available MCS should not be needed if the SCS penetration and quality is good. If objectives are deepened, MCS will be needed.

(b) Somali Basin/Gulf of Aden.

As the objectives of these sites depend on high resolution stratigraphy, high resolution SCS is required.

(c) Indus Fan

The currently available data are very sparse and totally indequate for regional perspective, let alone site survey perspective. Channel patterns must be understood so sidescan and/or Seabeam and a good distribution of piston cores is needed.

There is a Dufresne cruise in Oct/Nov '85 with coring/sedimentology. A German cruise (von Rad) will be passing the area. A British Gloria survey is tentatively scheduled, but uncertain.

Note: After the meeting mention was made by Kidd of Indian data in the area.

Action: Peirce contact Haq to see if any Indian data over mid and lower Indus Fan can be made available. Also send Prell copy of minutes re his proposal.

(5) Red Sea

Three French cruises are planned for the area including one specifically for site surveys.

Red Sea Working Group. There may be a proposal for a meeting of the Red Sea Working Group in Brest in the fall/85. Mauffret will be available to attend if necessary.

Action: Peirce will contact Cochran regarding liaison at Brest meeting.

(6) South East Indian Ridge

Regional data coverage is sparse. The site survey panel understands that Schlich is planning a SCS transect parrallel to a flow line on Dufresne in 1986.

Action: Mauffret contact Schlich regarding details of above.

(7) Broken Ridge

There is sparse seismic data available. Site survey requirements will include high resolution seismic using water guns, some refraction, piston cores and dredging along the scarp. See summary comments.

(8) Argo A.P./Exmouth Plateau

See summary comments. Cruises by BMR and L-DGO planned in 1986. Synthesis of data by site proponents is critically needed. No modern data in Data Bank.

(9) Central Indian Basin - Distal Bengal Fan

This is area of apparent internal plate deformation. See summary comments.

(10) Davie Ridge

This is a reactivated fracture zone. The area is generally well documented. The Data Bank has received some S. African data and has L-DGO and WHOI data as well as one Mobil MCS line. More Mobil data with Coffin (now at BMR, Australia). Considerable French data exists, but not at Data Bank.

A synthesis of proposals (and data supporting them) by the various site proponents is needed.

(11) Other Indian Ocean Sites

Further discussion of Indian Ocean proposals was not possible in the time available.

9. Other Agenda Items

Items 11-13 and 15-17 were not discussed for lack of time.

10. Ship Movements

Ship schedules for all member countries as well as information available from Australia and the U.K. are attached as Appendices A-1 to A-7.

11. Japanese MCS Data

Suyehiro informed the Chairman that the Japanese National Oil Company plans to release nearly 100 MCS lines around Japan. On behalf of the ODP community the Chairman thanked the Japanese for their generous contribution to our data base.

Action: Suyehiro coordinate with Brenner regarding transmittal of Japanese MCS data to Data Bank.

11. Next SSP Meeting

The best timing for the next SSP meeting is mid-November to avoid conflicts with the American Geophysical Union fall meeting, Christmas, and the January EXCOM meeting, and precede the February PCOM Annual meeting.

After discussion, it was agreed that the next meeting should be in Japan in order to enhance communication between the Japanese oceanographic community and the SSP and the Data Bank. Suyehiro agreed to make arrangements to host the meeting.

Three days will be needed because of the large number of site survey assessment reports which are due.

Next meeting: tentatively 19-21 November in Tokyo.

Action: Peirce coordinate with JOIDES office and Suyehiro.

CANADIAN SHIP SCHEDULE - 1985/86

Ship	Time	Area	Investigator	Science
BAFFIN	05-07/85	St. Pierre Bank	BIO	Hydrographic Charting
	08-09/85	Baffin Island	BIO (AOL)	Hydrography
HUDSON	05/85	Kane Fracture Zone	Dalhousie (Mayer/Ryall)	ODP Site Survey Rock Drill
	06/85	Mid-Atlantic Ridge	BIO (AOL) Oakey	Physical Oceanography
	08/85	Flemish Cap	BIO (AGC) Reid	Deep reflection/ refraction seismics
	09-10/85	Hudson Strait/ Baffin Bay/BB3	BIO (AGC) MacLean	Surficial mapping coring, magnetics, shallow seismic.
	10/85	Labrador Sea	Dalhousie Louden	Heat flow and reflection seismics
PANDORA II/ PISCES IV	05-06/85	Scotian Shelf	BIO	Surficial geology and biological studies
	07/85	Grand Banks; St. Pierre	BIO	Surficial geology and biological studies
	08/85	Hamilton Bank (S. Labrador)	BIO (AGC) Josenhans	Iceberg scouring and surficial geology study
	09/85	Baffin Island	BIO (AGC) Syvitski, Levy	Fjord, oil seep, geological and chemical investigations
	10/85	Hibernia	BIO (AGC) Fader	Iceberg scouring and surficial and bedrock geology studies

Ship	Time	Area	Investigator	Science
ENDEAVOUR	05/85	Tuzo Wilson Knolls	U.B.C. Chase	Geology, dredging camera
	09-10/85	Juan de Fuca Ridge	P.G.C. Franklin	Geology, dredging camera, TV
PARIZEAU	05-06/85	West of Vanc. Is.	P.G.C. Currie	Resource charting
	07-08/85	Juan de Fuca Ridge	P.G.C. Law	EM Sounding Experiment
	09/85	Juan de Fuca Ridge	P.G.C. Bornhold	Sediments, coring, heat flow
	09-10/85	Juan de Fuca Ridge	U.B.C. Clowes	Seismic
TULLY	07-09/85	Beaufort Sea *	P.G.C.	Hydrographic

* NOTE: A similar cruise is planned for next year. N. Pacific work could be done on return transit.

GENERAL NOTE: There are some preliminary discussions about a Canadian multidisciplinary cruise to Japan in 1986 using a PGC vessel. Contact is Roy Hyndman, PGC 604-656-8438.

BIO: Bedford Institute of Oceanography (Dartmouth)
AGC: Atlantic Geoscience Centre (part of BIO)
PGC: Pacific Geoscience Centre (Victoria)
AOL: Atlantic Oceanographic Laboratory (part of BIO)
UBC: University of British Columbia
DALHOUSIE: Dalhousie University (Halifax)

F.G.R. RESEARCH VESSELS: 1985-1987

Area	Ship	Time	Project (target methods)	Investigators
N.W. Africa	POLARSTERN	10/85	Add. site survey sites for Leg 108 3.5 kHz Seabeam, probl. high resol. seismics	Kiel
Southern Morocco-West Fuerteventura	?	11/85	Continental margin; MCS, grav/magnetics	BGR
Weddell Sea	POLARSTERN	12/85-03/86	Ocean/continent transition tectonic evolution; MCS air gun, Seabeam, 3.5 kHz grav/magnetics	BGR
Southern Red Sea	SONNE	03/04 1986	Rifting; OBS-seismics, grav/magnetics	Puchert, Hamburg
Java Sea	SONNE	1986	Coring structure geol., volcanic history; refl. seismics, grav/magnetics	Hamburg
Central North Atlantic	METEOR	11/12 1987	Sea mounts, ocean crust; OBS-seismics grav/magnetics, MCS	Hamburg
Arabian Sea	SONNE	04/05 1986	Indus fan/Indian margin Oman/Somali margins (?) Seabeam; 3.5 kHz; coring	Degens, Hamburg
Carlsberg Ridge	SONNE	06/07 1986	Hydrothermal deposits; dredging; coring	Plüger, Aachen

FRANCE

SHIP SCHEDULE

(tentative)

SHIP	TIME	PROJECT	AREA	INVESTIGATORS
MARION-DUFRESNE	1985 June July	*ESOPE* Long coring Radioactive waste	Ouest Africa	CEA CFR
" "	1985 End October Beg Novemb.	*INDUSON* Coring and Sedimentology	Indus fan Somalie Basin	Museum (Leclaire)
" "	1986 January February	MCS-ODP	South Kerguelen	IPGS (Schlich)
JEAN-CHARCOT	1986 January	Seabeam High Resolution Seismic- Sar Epaular ODP Site survey	New Hebrides (Entreacasteaux FZ) Fidgi Lau basin Louisvlle Ridge (collision)	ORSTOM IFREMER
" "	1986 February March	*NIXO* (nodule)	Pacific	IFREMER
" "	1986 May	*HYDROFAST* Seabeam -High Resolution - Seismic - SAR - Geochimical sampling Natural Lab. ODP Site survey (extension in 1987 two cruise with diving	EPR 13°N	IFREMER IPGP (Francheteau Bougault)

SHIP	TIME	PROJECT	AREA	INVESTIGATIONS RS
JEAN-CHARCOT	1986 July	*SEAPERC* Seabeam High resolution ODP Site survey	Peru Trench	PIROCEAN IFREMER (Bourgois)
" "	1986 December	*RAPANUI* Seabeam High resolution Seismic	Easter plate	IPGP (Francheteau)
LE SUROIT	1986 January February	*CYAROUGE* Diving Walles of the deepes sampling of volcanic rocks and structural study	Red sea North	BRGM (Guennoc) IFREMER (Pautot)
" "	1986 March April	*MINOS* Two ship experiment	Red sea North	~~UPMC~~ (Le Pichon) IFREMER
" "	1986 April	*NORDMEROU* MCS ODP Site survey	Red sea North	BRGM (Guennoc) IFREMER IFP
" "	1986 May	*LUSITANIE* Mes post ODP	Atlantic Portugal	PIROCEAN (Boillot) IFREMER
" "	1986 September	*VICOMED* Sampling Isotope studies	Mediterr. sea	PIROCEAN (Vergnaud-Grazzini)
NADIR	1986 June	*GALINAUT* deep diving Galicia bank Sampling post ODP	Atlantic Spain	PIROCEAN (Boillot)
"	1986 August Septemb.	*VEMANAUT* deep diving in the Vema FZ	Atlantic central	IFREMER

SHIP	TIME	PROJECT	AREA	INVESTIGATIONS ORS
CORIOLIS	1986 June	*EVA 13* OBS	New Hebrides South Fidgi	PIROCEAU ORSTOM ~~HBO~~ (Pascal)
Submersible Nautile Cyana	see NADIR			
"	see SUROIT			
"	?	Diving 32°South Fast spreading	EPR	IPGP (Francheteau)
"	?	*CYAPORC* Diving - Sampling and Biological studies	Goban Spur	French - UK -
	1987 ->	Not scheduled <-		
		ODP POLYNESIE	Central Pacific	
		SEACARIB II	Carribean sea	

JAPANESE RESEARCH VESSELS MOVEMENT

R/V Hakuhomaru (ORI, Univ. of Tokyo)

1986 Jan - Mar	South Philippine Sea
Nov - Dec	Japan Trench (24 days)
1987 Apr - May	Japan Sea, Japan Trench (25 days)
Jul	North Philippine Sea (Izu-Bonin-Marianas)
1988 --	Northeast Pacific Ocean

R/V Tanseimaru (ORI, Univ. of Tokyo)

Yearly ship schedule is determined at the end of year before. Survey area limited in the vicinity of Japan.

R/V Hakureimaru (Geol. Survey of Japan)

1985 Jul 26 -Sep 3	South Bonin
Sep 10 -Oct 6	South of Japan Sea
1986 Apr - Oct	South of Japan Sea (off San'in) 70 days Bonin-Marianas 80 days
1987	Japan Sea (off Hokuriku) Bonin-Marianas
1988, 1989	Japan Sea (off Noto, Toyama Bay)

R/V Natsushima (JAMSTEC)

1986 Jan	East Sunda Trench
1987	SW Pacific

R/V Shoyo (Hydrographic Dept., MSA)

yearly	Izu Bonin

R/V Takuyo (Hydrographic Dept., MSA)

yearly	N. Philippine Sea, W. Pacific

U.S.A.

Ship schedules for 1985-1986 with possible relevance to the Ocean Drilling Program

John Orcutt
16 June 1986

ATLANTIS II

5 June 1985	Acapulco	ALVIN diving on Clipperton Fracture Zone
28 June 1985	Manzanillo	Jeff Fox
3 July 1985	Manzanillo	ALVIN diving in Guaymas Basin
14 Sep 1985	Acapulco	Ballard/Edmond/Levin/Grassle/Berg/Baross
18Sep 1985	Acapulco	ALVIN diving on Galapagos Ridge
10 Oct 1985	Panama	Malahoff
6 Jan 1986	Woods Hole	SEABEAM 10-15 mile swath of median valley
4 Feb 1986	San Juan	for 300-400 km north of Kane Fracture Zone
		Purdy/Schouten
15 Feb 1986	Panama	SEABEAM
6 Mar 1986	Panama	Langseth

ROBERT CONRAD

25 June 1985	Manzanillo	SEABEAM geoid undulations east of Easter
9 Aug 1985	Papeete	Weissel/Parsons
8 Oct 1985	Hong Kong	Multichannel/SEABEAM of China margin
16 Dec 1985	Singapore	Hayes/Buhl
~1 Jan 1986	Singapore	Multichannel survey of Exmouth Plateau
???	???	Mutter

KNORR

17 June 1985	San Juan	On-bottom refraction experiments in MARK
8 Aug 1985	Ponta Delgada	area ; μ-EQ survey north of Kane; Dredging Purdy/Langmuir
13 Aug 1985	Ponta Delgada	Equipment testing on MAR south of Azores

9 Sep 1985	Woods Hole	Ballard
16 Sep 1985	Woods Hole	Nova Scotia Rise
25 Sep 1985	Woods Hole	Hollister
16 Feb 1986	???	Geophysics; South Atlantic
17 Mar 1986	???	Von Herzen
2 Apr 1986	???	Deep Tow on Florida Coast
3 May 1986	???	Spiess
19 Aug 1986	???	Equipment tests
26 Aug 1986	???	Ballard
2 Nov 1986	???	Geophysics; South Atlantic
30 Nov 1986	???	Von Herzen
1 Dec 1986	???	Marine seismology; Antarctic
30 Dec 1986	???	Purdy

MELVILLE

23 Jul 1985	Honolulu	Geochemistry; Loihi Seamount
7 Aug 1985	Honolulu	Craig
3 Dec 1985	San Diego	ARGO/JASON trials; East Pacific Rise
23 Dec 1985	Acapulco	Ballard
18 Jan 1986	Puntarenas	Antarctic/Falkland Plateau
1 Apr 1986	Puntarenas	Sullivan/Nowlin

MOANA WAVE

24 Jul 1985	Patricia Bay	SEAMARC II survey with Pac. Geoscience Cntr
18 Aug 1985	Patricia Bay	Hussong
4 Sep 1985	Honolulu	SEAMARC II survey of Cross Seamount
15 Sep 1985	Honolulu	Malahoff
28 Oct 1985	Honolulu	Manahiki Plateau geophysics; Multichannel
20 Nov 1985	Pago Pago	Campbell
24 Nov 1985	Pago Pago	Fiji Plateau resources; Multichannel

14 Dec 1985	Port Vila	Kroenke
18 Dec 1985	Port Vila	Bismark Sea resources; Multichannel
9 Jan 1986	Rabaul	Taylor
26 Jul 1986	Honolulu	Heat flow related to Hawaiian swell
2 Sep 1986	Midway	Von Herzen
5 Sep 1986	Midway	Heat flow in old Pacific Basin
12 Oct 1986	Honolulu	Sclater
20 Nov 1986	Tahiti	Juan Fernandez SEAMARC II
28 Dec 1986	Easter Island	Larson
31 Dec 1986	Easter Island	Easter Plate SEAMARC II
29 Jan 1987	Callao	Hey

OCEANUS

21 Nov 1986	Bermuda	μ-EQ survey on active part of Kane FZ
20 Dec 1986	Woods Hole	Purdy

THOMPSON

10 Nov 1985	Guam	Dredging in northern Marianas
8 Dec 1986	Nagasaki	Stern/Bloomer
26 Jul 1986	Monterey	Subduction margin of Oregon/Washington coasts; geophysical
12 Aug 1986	Newport	Lewis/Kulm
13 Aug 86	Newport	Dredging/chemistry in Juan de Fuca Ridge
22 Aug 86	Seattle	Lewis/Delaney
29 Aug 1986	Seattle	Sediment attenuation in Cascadia Basin
19 Sep 1986	Seattle	Jacobson

WASHINGTON

17 Sep 1985	San Diego	OBS refraction/SEABEAM on O'Gorman FZ
16 Oct 1985	Manzanillo	McClain

20 Oct 1985	Manzanillo	SEABEAM survey of Mathematician Seamounts
11 Nov 1985	Pago Pago	Mammerickx
14 Nov 1985	Pago Pago	Petrology in Lau Basin
13 Dec 1985	Tongatapu	Hawkins
17 Dec 1985	Tongatapu	Geochemistry in Lau Basin
19 Jan 1986	Auckland	Craig
4 Nov 1986	Fremantle	Survey of Broken Ridge and Ninety-East Ridge
2 Dec 1986	Padang	Curray/MacKenzie

Note: A Lewis/Moore deep-towed multichannel experiment in the MAT off Guatamala and Nicaragua may be worked into the Washington schedule prior to departure for the western Pacific.

WECOMA

22 June 1986	Newport	Geophysical survey in southern Juan de Fuca
3 July 1986	Newport	Lewis/Jacobsen
29 Sep 1985	Newport	EMSLAB deployment to Juan de Fuca Ridge
18 Oct 1985	Newport	Filloux
18 Aug 1986	Newport	Cascadia Extensional Zone
6 Sep 1986	Newport	Kulm
17 April 1986	Newport	Mendocino dredging
30 April 1986	Newport	Fisk

AUSTRALIAN SHIP SCHEDULE 1985/86

SHIP	TIME (M/Y)	AREA	INVESTIGATOR (Ch. Sci.)	SCIENCE
RIG SEISMIC	02/85	Lord Howe Rise	BMR	MCS/Mag 1250 kms (Report available)
	03-04/85	Kerguelen Plateau	BMR	MCS/Mag/Grav. 5500 kms (Report available)
	06-07/85	Otway Basin	BMR	Geophys./Geol.
	09/85	Queensland Basin	BMR	Geophys./Geol.
	11/85	W. Coral Sea	BMR	Geophys./Geol.
	01/86	N.W. Australia	BMR	Heatflow
	03-04/86	Exmouth Plateau	BMR	2 Ship crustal refraction w/ CONRAD

Contact for these cruises is Dave Falvey at BMR.

Australia is also participating in Tripartite cruises using the Moana Wave (U.S.) and Tui (Japan). The contact for the Australian component of these is Keith Crook at ANU.

1.1 NERC RESEARCH CRUISE PROGRAMME 1986/87

1.1.1 RRS CHARLES DARWIN

CRUISE NO	DATES (PORTS) FROM	TO	DAYS	OPERATION AREA (SCIENCE)	INSTITUTE/UNIVERSITY (PRINCIPAL SCIENTIST)
1986					
11.	Wed 2 April (Falmouth	Sun 27 April Falmouth)	26	NE Atlantic (Geophysics)	Cambridge (Dr R White)
12.	Wed 30 April (Falmouth	Sat 15 May Falmouth)	16	English Channel/ North Sea (Biology)	MBA (Dr P Holligan)
13.	Tues 20 May (Falmouth	Tue 10 June Falmouth)	22	Celtic Sea (Biochemistry)	IMER (Dr I Joint)
14.	Tue 17 June (Falmouth	Thur 17 July Patras)	31	Ionian Sea, Mediterranean (Geophysics)	Cardiff/Swansea (Prof M Brooks/ Dr M Collins)
	Sun 20 July (Patras	Sat 2 August Seychelles)	(14)	Passage	
	Wed 6 Aug (Seychelles	Thur 28 Aug Seychelles)	23	W Indian Ocean (Geochemistry)	Cambridge/ Southampton (Dr H Elderfield/ Dr J Burton)
16.	Mon 1 Sept (Seychelles	Sun 5 Oct Muscat)	35	NW Indian Ocean (Biochemistry)	IMER (Dr R Mantoura)
17.	Wed 8 Oct (Muscat	Fri 31 Oct Muscat)	24	NW Indian Ocean (Geochemistry)	Edinburgh/Nottingham (Dr N Price/ Dr D Stow)
18.	Fri 7 Nov (Muscat	Sat 6 Dec Muscat)	30	Gulf of Oman (Geophysics)	Cambridge (Dr R White)
	Tue 9 Dec (Muscat	Fri 6 Feb Mauritius)	(60)	Available for charter	
1987					
19.	Mon 9 Feb (Mauritius	Sun 1 Mar Seychelles)	21	W Indian Ocean (Geophysics)	London Polytechnic (Dr A Baxter)
20.	Thur 5 Mar (Seychelles	Wed 1 Apr Mauritius)	28	Aldabra Islands, W Indian Ocean (Physics)	UCNW Bangor (Dr E Barton/ Prof J Simpson)

RRS CHARLES DARWIN (Contd)

CRUISE NO	DATES FROM (PORTS) TO	DAYS	OPERATION AREA (SCIENCE)	INSTITUTE/UNIVERSITY (PRINCIPAL SCIENTIST)
21.	Sat 4 Apr - Fri 1 May (Mauritius - Mauritius)	28	Central Indian Ocean (Geophysics)	IOS (Dr L Parsons/ Dr R Searle)
22.	Mon 4 May - Sun 31 May (Mauritius - Seychelles)	28	Aldabra Islands W Indian Ocean (Physics)	UCNW Bangor (Dr E Barton/ Prof J Simpson)
	Wed 3 Jun - Sun 28 Jun (Seychelles - Muscat)	(26)	Available for charter	
23.	Wed 1 Jul - Tue 4 Aug (Muscat - Muscat)	35	Indus Cone (Geophysics)	IOS (Dr R Kidd)

1.1 NERC RESEARCH CRUISE PROGRAMME 1986/87

1.1.2 RRS DISCOVERY

CRUISE NO.	DATES FROM (PORTS) TO	DAYS	OPERATION AREA (SCIENCE)	INSTITUTE/UNIVERSITY (PRINCIPAL SCIENTIST)
1986				
157.	Tue 1 Apr - Sat 12 Apr (UK Port - Falmouth)	12	NE Atlantic (Engineering Trials)	IOS (Dr S Rusby)
158.	Tue 15 Apr - Thu 15 May (Falmouth - Falmouth)	31	Porcupine Sea Bight (Biochemistry)	IOS/IMER (Dr A Rice/ Dr I Joint)
159.	Mon 19 May - Sun 29 June (Falmouth - Cape Verde)	42	Cape Verde - Mid-Atlantic Ridge (Chemistry)	IOS (Dr W Simpson)
160.	Wed 2 July - Thu 24 July (Cape Verde - Madeira)	23	Madeira Abyssal Plain (Geophysics)	IOS (Dr J Thompson)
161.	Sun 27 July - Sat 23 Aug (Madeira - Azores)	28	Azores - Mid Atlantic Ridge (Geophysics)	IOS (Dr R Searle)
162.	Mon 25 Aug - Thu 4 Sept (Azores - Gibraltar)	11	NE Atlantic (Physics)	IOS (Dr W Gould)
163.	Mon 8 Sept - Fri 10 Oct (Gibraltar - Gibraltar)	33	Iberian Plate (Geophysics)	IOS (Dr R Whitmarsh)
164.	Mon 13 Oct - Tues 11 Nov (Gibraltar - Gibraltar)	30	Madeira Abyssal Plain (Geophysics)	IOS (Dr R Searle)
	Sun 16 Nov - Sun 8 Dec (Gibraltar - Cape Town)	(23)	Passage	
165.	Thu 11 Dec - Mon 12 Jan (Cape Town - Cape Town)	33	South Atlantic (Physics)	IOS (Dr R Pollard)
1987				
166.	Thu 15 Jan - Sun 15 Feb (Capetown - Capetown)	32	Agulhas Current (Physics)	USA Charter (Dr J Luyten)
167.	Thu 19 Feb - Fri 13 Mar (Capetown - Capetown)	23	Agulhas Benguela Current (Physics)	USA Charter (Dr A Gordon)

SUMMARY CRUISE REPORT

Drilling Site Selection Surveys for Peru Ocean Margin

The drilling site selection survey cruise for the central Peru margin was completed in three legs from 27 February to 21 April 1985. The data acquisition was very successful, fulfilling all the cruise objectives and providing ample information for the site selection.

The three legs of the cruise each concentrated on acquisition of a specific set of data. This schedule permitted staffing of the ship so that appropriate scientific and technical personnel for the various experiments could all be on board and still provided space for meaningful participation by Peruvian scientists.

LEG 1: SeaMARC II SURVEYS. The first leg was devoted entirely to 15 days of SeaMARC II surveying. The purpose of the leg was to provide 100% side-scan and bathymetry coverage of the target areas I and II in Figure 1. The SeaMARC II system performed perfectly, remaining operational and in the water during the entire leg, giving us time to not only cover the original target areas, but to also cover the upper trench slope between the survey areas and to briefly survey the intersection of the Mendana fracture zone and the trench. Altogether, over 24,000 sq km of seafloor were mapped by SeaMARC II. A track chart for this leg is attached as Figure 2.

The side-scan mosaic and bathymetry for Area I (the Lima Basin Area) were processed at sea, and are presently in final form. A copy of the side-scan image is attached as Figure 3. The results are extremely revealing, clearly delineating the major morphological zones of the survey area (covering approximately 9,300 sq km). The geometry and extent of the slightly deformed trench fill turbidites, the accretionary inner trench wall, diapiric structures in the trench slope break (depth approx. 4000 m), outcrops of apparent continental metamorphic basement, and the geometry of outcropping dolomites and sediments of the Lima basin, are all easily mapped based on the SeaMARC II data (see Appendix A). The bathymetry data acquired in the Lima Basin has also been processed and contoured in final form.

As a ancillary project to the site surveys we are experimenting with computer derived textural analysis of the Lima Basin area seafloor, with very promising results (see Appendix B). Thus far we have succeeded in tracing the textural signature of dredged dolomite outcrops through portions of the side-scan image where amplitude variations are not discernible. The geometry of the computer-defined dolomite outcrops is geologically sensible; if our preliminary analysis is correct we will have taken the first steps toward quantitative analysis of the side-scan images by computer.

The processing of the Area II (the Yaquina Basin Area) was largely completed during the cruise, providing a preliminary image mosaic to be used for the subsequent legs. The final mosaic will be completed in Honolulu after the MOANA WAVE returns in mid-July. This area is considerably more

complex than the Lima Basin region to the south. Although the same general physiographic regions are there, their boundaries and geometry may be disturbed by the recent subduction of the rugged Mendana fracture zone on the Nazca plate. Final processing of this region should be complete in September, 1985.

The balance of the SeaMARC II data has only been processed far enough to determine that the digitally recorded data are of good quality. These data will be processed in late 1985.

Single channel seismic reflection data (generally using a 40 cubic inch airgun source), 3.5 kHz bathymetry, and magnetics were simultaneously collected along all the SeaMARC II tracks.

LEG 2: MULTI-CHANNEL REFLECTION SEISMIC PROFILES. The second site survey leg was thirteen days long and was devoted to collection of approx. 1550 km of 24 channel MCS data (Figure 4). The Yaquina Basin (9°S) area was surveyed first, and was traversed by four major dip lines (spaced 9 km apart) across the trench and fore-arc as well as by four strike tie lines on the middle and upper slopes. In this area four airguns (a semi-tuned array of 120, 200, 300, and 500 cubic inches) were deployed. Problems with the towing configuration of this array caused unusually high failure rate of mechanical connectors, with the result that it was difficult to keep all four guns operating simultaneously.

The Lima Basin area (near 12°S) was traversed by five major dip lines and two half lines, together with four strike tie lines (a total of approx 900 km). The earlier airgun towing system was abandoned for this survey and only the 300 and 500 cubic inch guns were used. No unusual problems were encountered with this configuration.

All data were recorded on a DSF-V system in SEGB format at a 1 millisecond rate for eight seconds per shot. A deep water delay was used. The data appear to be of good quality. A sample data set was returned to the University of Tulsa for processing; a sample of the first pass stacked profile (Line 13, a dip line through the center of the Lima Basin area) is attached as figure 5 (this figure is attached only to the original report sent to the JOIDES/ODP Data Bank at L-DGO). These data have not been subject to complete processing, and are intended to demonstrate only that data quality is good. The final profiles will have complete processing and are expected to be considerably more useful.

The complete set of MCS tapes were shipped to Tulsa from Panama about 5 weeks ago. We intend to have the key lines in this data set processed in the early Fall. All processing will be complete by early 1986.

LEG 3: GEOLOGICAL SAMPLING. The sampling phase of the site surveys encompassed 22 days at sea (Figure 6; note that a portion of this work was funded separately by the NSF), including the time to transit to Panama. A total of 25 rock dredge stations, five piston cores, eight rock cores, and three gravity cores were completed. Results were very good, and a complete spectrum of surface samples were assembled for both the Lima Basin and Yaquina Basin areas.

One dredge site in the Yaquina Basin (9°S) area recovered large ·ing clams from depths of over 3 km on the upper trench slope, suggesting ,sible methane based faunal communities similar to those found during ALVIN dives off the coast of Oregon. The clams were recovered from an area where the SeaMARC II image shows a large fracture in the fore-arc that is nearly perpendicular to the strike of the trench.

Nine heat flow stations (profiles using a University of Tokyo multiple re-entry probe) were attempted; seven of these stations provided good data. No heat flow anomalies were encountered. All reliable values showed the trench wall and fore-arc to be cool (less than 50 mW/m^2).

SUMMARY

We are confident that we now have adequate data to provide exceptionally good drill site locations, both for solving the scientific objectives in the region and for satisfying safety concerns. In addition to the dense reflection seismic coverage that we acquired and have from earlier cruises, we are assured access to commercial MCS data (collected by Seiscom Delta in the early 1970's and by Compagnie Generale de Geophysique in 1982) that are held by PETROPERU.

The abundance of outcrops visible in the SeaMARC II can be correlated with reflectors on the seismic data and have been sampled by coring and dredging. This unique data set provides the opportunity to construct an ·urate three-dimensional geologic map on the drilling target areas.

Donald M. Hussong, P.I.
13 June 1985

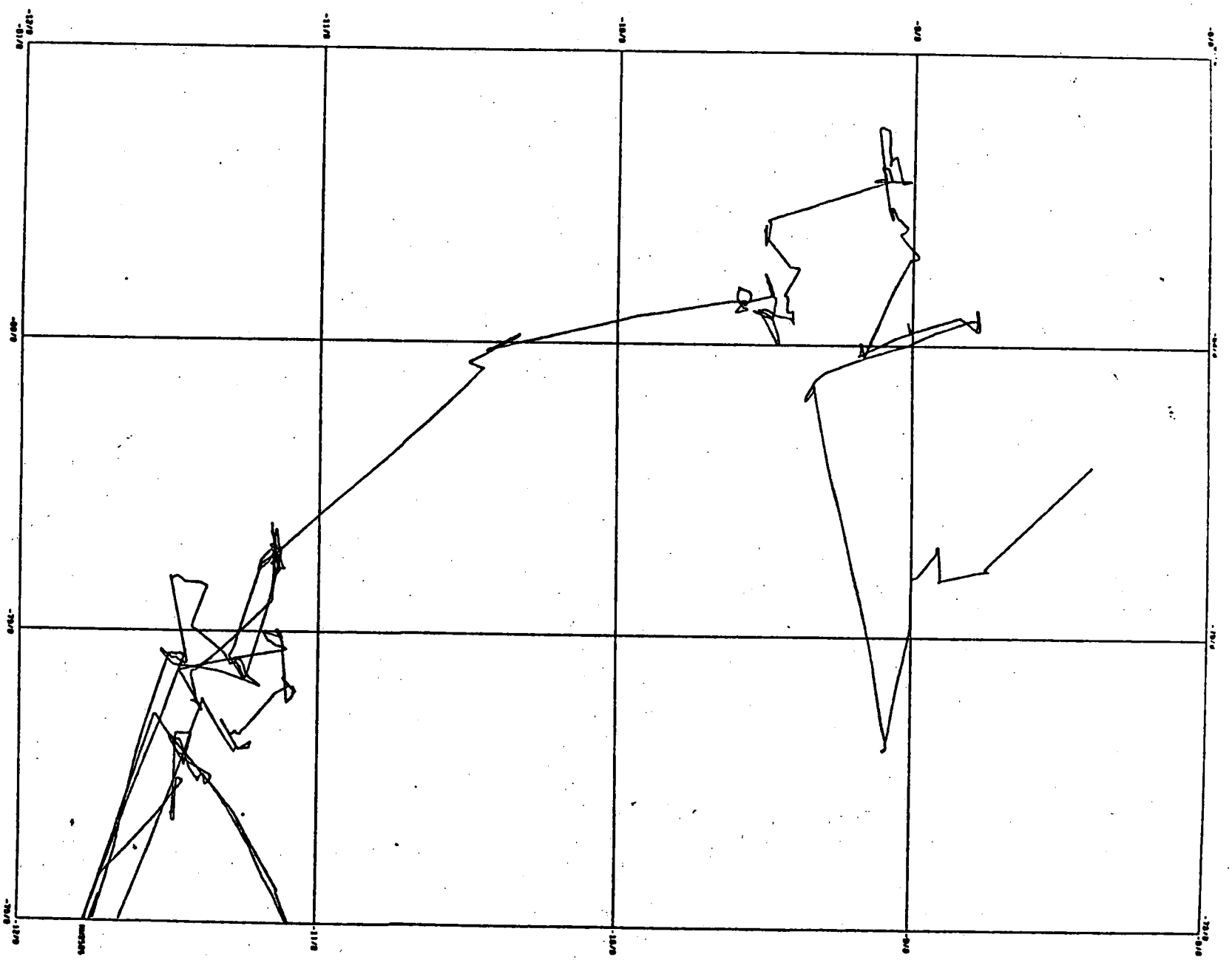

FIGURE 6 Geological sample

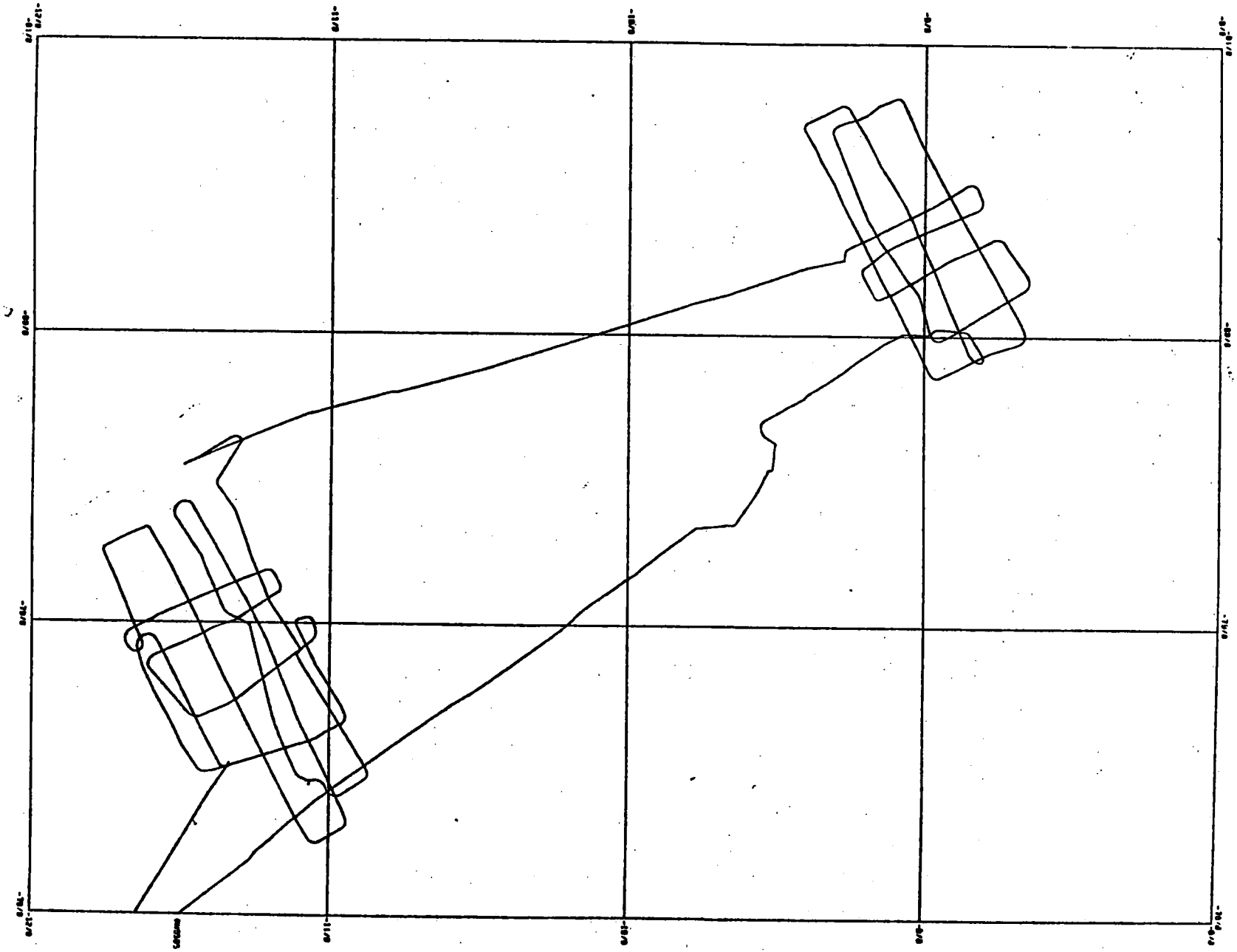

FIGURE 4 MCS coverage.

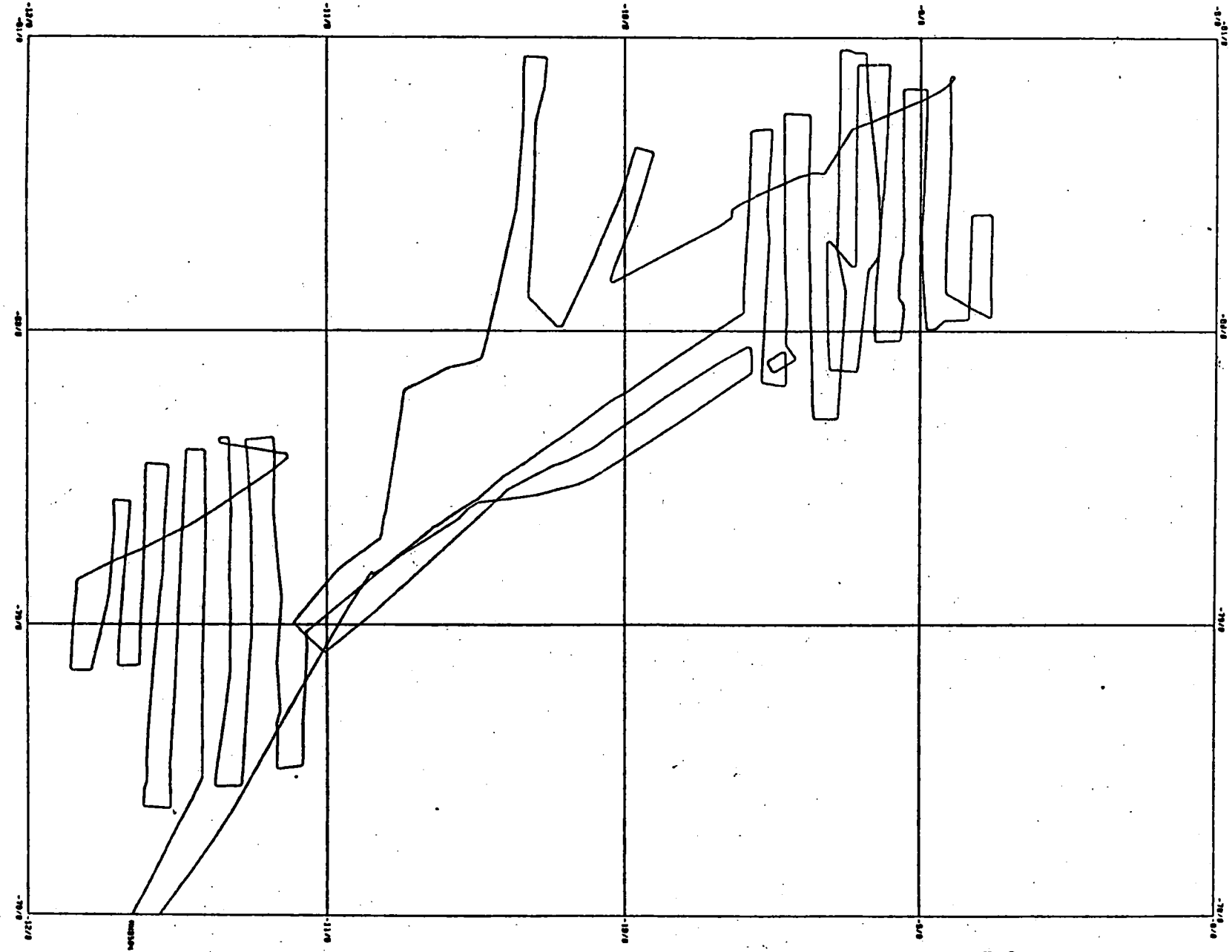

FIGURE 2 Seamar II, cruise 4

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11th June, 1985

Dr. J.W. Peirce,
c/o George Summers,
Center for Marine Geology,
Dalhousie University,
Halifax,
Nova Scotia,
B3H 2JS
Canada.

Dear John,

On Friday, I spoke firstly to John Jones then to you about what we had achieved by way of site survey for the Weddell Sea leg, during our recent cruise. I enclose now a couple of track charts and some photocopied profiles as a taster: the multichannel data are not yet processed and the piston cores, although split and described, need a lot more work. This is all I have time to do before your meeting, but it should allow your Panel to assess the need for further survey, and let it know what to expect from us eventually.

Of the 7 first-priority sites planned for the Weddell Sea leg, we surveyed 4. Sites W6 to W8 form a depth transect of the SE margin of the S. Orkney microcontinent, and W5 is in the northern part of the deep Weddell Basin.

W5 is intended to examine the early stages of development of Antarctic Bottom Water (AABW). The only criteria for location are that it should be on ocean floor older than 50 Ma, that the sediment column should be no thicker than 1000 m, and that it should not be so far south that drilling encounters more-proximal, sandy turbidites. It could have been located on Explora profile BGR 78-002 or on one of a suite of Birmingham or Isles Orcadas single channel profiles and, being an open ocean site, no additional survey was necessary for safety/pollution purposes. However, as yet there is no understanding of exactly how AABW fluctuations influence sedimentation, so the SOP welcomed our plan for a piston core transect of the northern Weddell Sea (see cruise track chart, cores 004 to 017) controlled by additional multichannel seismic (line 15) and 3.5 kHz profiles. I enclose a photocopy of the single channel monitor record of this profile, which with the preliminary core description was discussed by the SOP in April at Gainesville. We have set in motion a suite of studies on the cores, including grain size, magnetic stratigraphy and susceptibility anisotropy, XRD, XRF and micropalaeontology, which we hope will inform the drilling, and the DMCS processing has a high priority. I don't think any more site survey is needed.

W6, W7, W8. The SE margin of the S. Orkney block provides the only opportunity to attempt a "dipstick" sampling of Weddell Sea palaeo-circulation; other sites considered were either likely to be inaccessible, or more remote from the main circulation. The sites were chosen on existing Birmingham single-channel profiles (E, F, and G are enclosed, with sites marked), and the site survey requirements were cross-lines for PPSP purposes and cores to assess the likely sediment lithologies. I enclose single channel monitor records for multichannel profiles 16, 17 and 18 and a trcak chart showing these lines, the original single channel lines and core locations.

The sediments cored on the S. Orkney block (GC 019-025) are sands and muds with diatoms and planktonic foraminifera. We think the environment is pelagic (as the reflection profiles suggest) and the sand is glacial, rather than these being winnowed terrigenous sections. Early indications are that the Pleistocene is present and that the sites will provide the continuous biogenic sections we were hoping for. The two shallow sites (W7, W8) are therefore provided with adequate site survey as presently located, and a number of other cross-overs now exist to provide alternative sites.

W6 was located on the edge of Jane Basin in 3000 m of water. We collected a core there (GC 018) but did not manage a multichannel cross line. I don't think this is too serious: Jane Basin is a Paleogene oceanic back-arc basin. Also, GC 018 was barren, a consequence probably of the site being at the very foot of the slope up to the S. Orkney block, and therefore subjected to strong western boundary currents. We took 3 other cores in Jane Basin (and made a heatflow transect) and of these a central basin core GC 027 (on line E) showed much more biostratigraphic promise. The SOP at Gainesville showed signs of wanting to relocate W6 there for that reason. Again there is no multichannel cross-line but in this kind of back-arc oceanic environment it will probably not be necessary.

You asked about the other Weddell Sea sites. The Norwegians (Yngve Kristofferson) ran 3 multichannel lines across Maud Rise last season, which greatly increased our knowledge. Sites W1 and W2 are unlikely to be located precisely on the intersections of these lines and the pre-existing Islas Orcadas line, but these are again thin pelagic sections in an oceanic province and the PPSP is unlikely to be upset by lack of a cross-line. The FRG is planning to pass through the area in 1985-86 but wants only to collect a small number of piston cores to round off the survey.

The FRG (Dieter Futterer and Karl Hinz) will also complete the site survey for W4 on the Caird margin in 1985-6. At the Gainesville meeting Dieter was undecided about committing further time to the necessary site survey of the second-priority site W3 on Astrid Ridge, since considerable additional passage time would be involved. Of the other second-priority sites, W10 in Bransfield Strait will be visited by the FRG. W11 in southern Drake Passage is a deep oceanic site and probably needs no additional survey. It seems most likely that

none of the second-priority sites will be drilled, unless sea ice conditions are so abnormally bad that the first-priority sites are inaccessible.

We collected 3500 km of multichannel profiles last season. All are to be processed commercially and, while I'm not sure exactly when the site survey data will be completed, they do have a high priority. Certainly they should be available before the end of the year and probably before the end of September. Meanwhile I have to hope that the UK finds its ODP subscription, so that we can take part in the drilling.

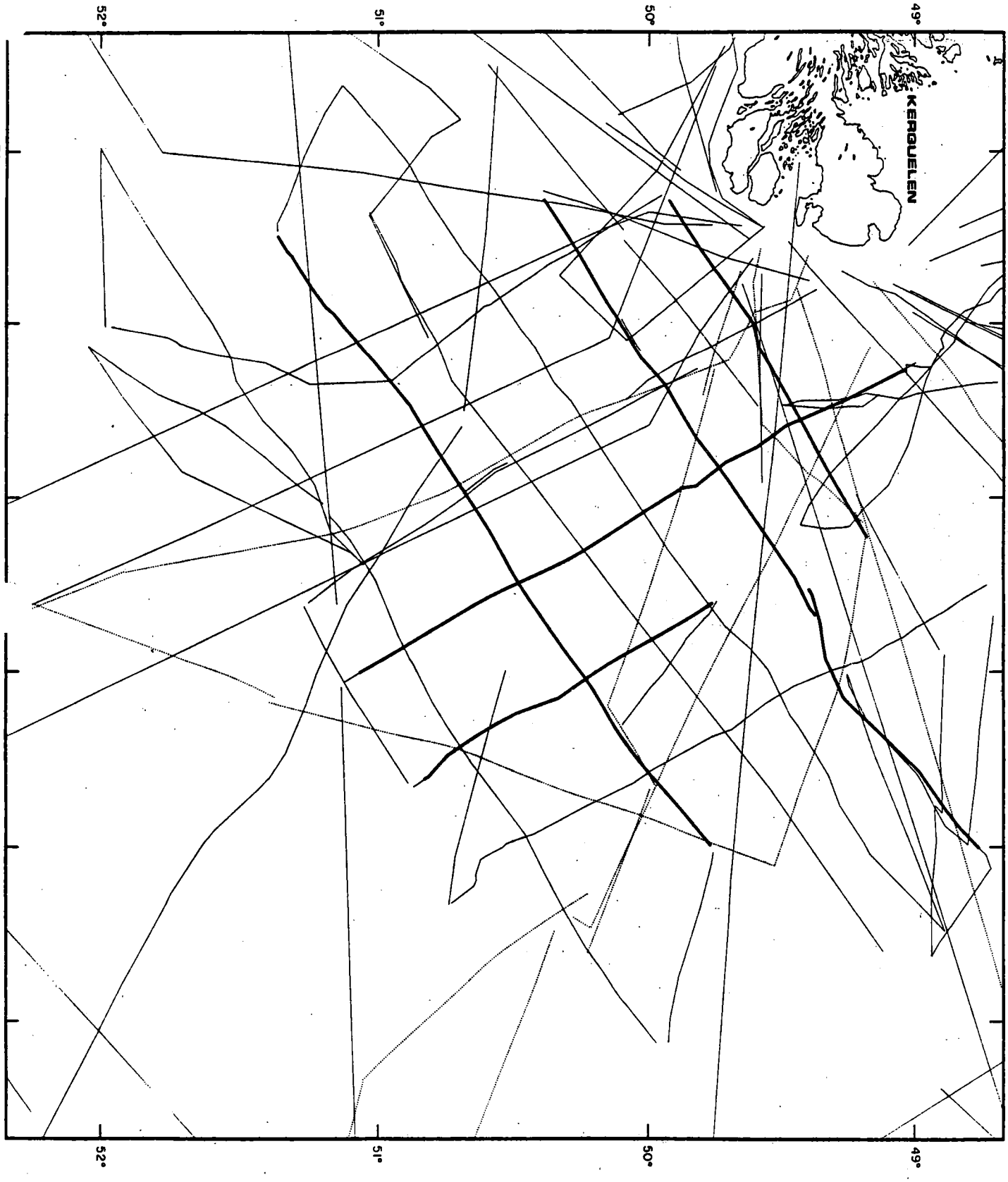
Yours sincerely,

Peter

P. F. Barker

Appendix E

French MCS at Data Bank



Appendix F

Tentative Agenda for SSP Meeting

November, 1985

Tentatively planned for 19-21 November in Tokyo, Japan

1. Minutes of Halifax meeting (Peirce)
2. Reports
   (a) PCOM (PCOM rep./Mayer)
   (b) Science Operator (Kidd)
   (c) Data Bank (Brenner)
   (d) Ship Schedules (SSP members, typed reports)
3. Briefing on Japanese ODP structure, ships, etc. (Suyehiro and others)
4. Panel membership (Peirce/Mayer/PCOM rep.)
5. Site Survey Status/Assessment Reports
   (a) Tyrrhennian Sea (Mauffret/Brenner)
   (b) N.W. Africa (Weigel/Brenner)
   (c) Barbados North (Peirce for Louden)
   (d) East Pacific Rise (Orcutt)
   (e) Peru Trench (Mauffret)
   (f) Weddell Sea (Weigel)
6. Sub-Antarctic - Update on developments since last meeting (Mayer/Brenner/Weigel)
7. Indian Ocean
   (a) IOP Meeting (Brenner/Mayer)
   (b) Kerguelen preliminary assessment (Peirce)
   (c) Review of priority areas and update site survey status summary (All)
8. Western Pacific (?)
9. Central/East Pacific (?)
10. Riser Drilling Requirements (Mayer/Peirce/Kidd)
11. Next meeting - Date/Place