

SITE SURVEY PANEL
EXECUTIVE SUMMARY
NOVEMBER 19-21, 1985

OCEAN RESEARCH INSTITUTE - UNIVERSITY OF TOKYO

1. The SSP recommends that piston cores for geotechnical measurements be available at all re-entry sites. They may be required at certain sites.
2. The present level of service provided by the Data Bank cannot be maintained past January if minimal restoration of cuts in FY 1986 budget is not made. SSP, at PCOM's request, has communicated its recommendations directly to JOI.
3. The status of site surveys was reviewed for upcoming legs through the Weddell Sea.
 - a) NW Africa: Site EQ-9 may not be drillable.
 - b) Barbados N: Assessment impossible until CEPM 128 received.
 - c) EPR: Orcutt will be asked to prepare assessment.
 - d) Peru Trench: Inadequate documentation for HPC sites. Northern MCS not yet processed; migration recommended.
 - e) Weddell Sea:
 - W1/W2: Extreme erosion evident. Seabeam essential.
 - W4: Piston core recommended.
 - W5: OK.
 - W6, 7, 8: OK. Slumping not a concern.
 - W10: Heat flow strongly recommended.
4. Sub-Antarctic: SSP reiterates its June recommendations. Data must be acquired soon for site planning.
5. Indian Ocean: Status of site surveys for all drilling packages is summarized on attached Appendix.
6. Western Pacific: Tectonic overview given by Langseth and Taira. SSP will be preparing a summary of site survey status for all drilling proposals. There is a wealth of data near Japan and the adjacent arcs. Release of selected JNOC MCS data is under negotiation.
7. Next meeting is tentatively planned for April 22-24 at Pacific Geoscience Center, near Victoria, B.C.

SITE SURVEY PANEL
ACTION ITEMS ARISING FROM TOKYO MEETING

Note: Items where are marked "done" were completed by January 6, 1986.

1. Peirce and Brenner will contact Orcutt (who was SSP member assigned Leg 111) to try to pull together an assessment for EPR.
2. Langseth will provide an assessment of the relative temperature risks at EPR vs. 504B in a letter to Kidd. (Done).
3. Mayer to add asterick to item 9D of site survey matrix to reflect policy of recommending piston cores in JOIDES. Journal and proposal submission guidelines. Kidd and Glenn Foss (TAMU, Drilling Operations) will write a memo to SSP detailing the specific requirements/ desires for geotechnical measurements.
4. All panel members will write a page of amplifying comments to the Site Survey Standards matrix outlining additional requirements for proper site surveys. Mauffret will synthesize all these comments into one document and circulate a draft prior to our next meeting.
5. Brenner will retabulate to show JOIDES requests as a third major category, and revised 1985 report will be appended to minutes. (Done).
6. Peirce write JOI requesting restoration of sufficient 1986 funds to maintain current level of service and endorsing 1987 budget of Data Bank. (Done). Brenner will cut back archivist's time to 50% after February 1 unless JOI restores budget cuts. Also catalog in monthly reports all data requests not met because of inadequate staff.
7. Suyehiro ask Japanese ODP National Committee to appoint an alternate member to SSP. Langseth remind USSAC of need for two alternate members.

8. Mauffret to contact A. Mascle ASAP and attempt to resolve CEPM 128 issue. Peirce contact Larson if above effort unsuccessful, and ask him to ask A. Mascle for reproducible copies of line 128 and the reprocessed Al lines. (Data Bank has line 128, needs navigation).
9. Mauffret to prepare typed summary of his assessment of Peru Trench Site Survey. Also prepare a detailed site by site summary. (Not done). Kidd will ask von Huene to prepare a request to Shell for additional data for signature by Peirce. (Done).
10. Weigel update assessment summary of Weddell Sea and send copies to Brenner, Peirce, Mayer, Kidd and Kennett.
11. Suyehiro will ask Kaminuma to carry copies of Japanese MCS data to the next SOP meeting.
12. Weigel contact Fuetterer/Hinz to convey need for a core at W-4.
13. Brenner contact Anderson about Polar Duke program near W-10.
14. Brenner contact Barker for W-11 data.
15. Mauffret prepare detailed site by site assessment summary of Red Sea.
16. Brenner will communicate Prell's tentative site locations on distal Indus Fan to Degens and Droz. (Peirce/Prell have sent a letter to Ittekott).
17. Peirce ask IOP to coordinate opportunistic site surveys for hominid sites. (Done).
18. Peirce reply to Legett letter on Makran survey. (Done).

19. Peirce get copy of Weissel NSF proposal for intraplate information and update summary after IOP meeting. (Done).
20. Peirce contact Falvey to see if there is any possibility of Australian MCS on Broken Ridge. (There is none). Weigel talk with Hinz regarding his interest here.
21. Suyehiro investigate Japanese plans near Prydz Bay and communicate same to Peirce/Brenner.
22. Weigel contact von Rad and prepare report on Argo/Exmouth for next meeting. Peirce talk with Falvey at IOP meeting. (Williamson is now Australian contact at Falvey's request. von Rad will contact Weigel and discuss his summary proposal. Gradstein will discuss safety problems with PPSP in February).
23. Peirce contact Taylor to have Langseth invited to next WPAC meeting. (Done). Langseth to make presentation to WPAC on SSP priorities and objectives and raise issue of maintaining liaison.
24. Suyehiro will coordinate preparation of an index map of existing Japanese Geological Survey data (plus KAIKO data if French agree). Also he will prepare a summary report of available Japanese site survey data. Langseth/Suyehiro/Mauffrett will prepare a summary outline of WPAC leg proposals covering major objectives and site survey status for SSP members.
25. Peirce to ask Chase to review NORPAC/INPAC ideas at next SSP meeting. (Done).
26. Kidd insure SSP represented at workshop on riser engineering.

SSP

OCEAN DRILLING PROGRAM
SITE SURVEY PANEL MINUTES (DRAFT VERSION)
OCEAN RESEARCH INSTITUTE
UNIVERSITY OF TOKYO
TOKYO, JAPAN
19-21 NOVEMBER, 1985

PRESENT:

- * John Peirce (Chairman, Canada)
- * Marc Langseth (U.S.A.)
- * Alain Mauffret (France)
- * Wilfried Weigel (Germany)
- * Kiyoshi Suyehiro (Japan)
- Carl Brenner (ODP Data Bank)
- Rob Kidd (TAMU)
- Tony Mayer (JOIDES Office)
- Paul Robinson (PCOM Liaison)
- Asahiko Taira (PCOM)

GUESTS:

- Hajimu Kinoshita (DMP)
- Kensaku Tamaki (Geological Survey of Japan)
- Jiro Segawa (IOP)
- Shozaburo Nagumo (Earthquake Res.Inst., Univ. of Tokyo)
- Junzo Kasahara (Leg 104 on board scientist)
- Hidekazu Tokuyama (ORI)

ABSENT: Fred Duennebier (HIG)

1. Preliminary Matters

Fred Duennebier (new member of SSP) was unable to attend. Marc Langseth and Fred Duennebier are new appointments to the Panel in place of John Orcutt. Asahiko Taira welcomed the SSP to Japan and introduced the guests.

The minutes from the Halifax meeting were approved without changes.

2. Report from PCOM: June and October Meetings (Tony Mayer)

The SSP letter and the Data Bank Review Committee report were received at the June PCOM meeting. The FY 1986 budget for the Data Bank remains unchanged. The Review Committee report was accepted in principle.

Leg 111 - depends on results of 106/109. If no guidebases available, site 504B will be target. If guidebases are available, three sites are being considered on EPR (12°50'N, N. of Clipperton, S. of Clipperton). PCOM needs an assessment of site survey status by January to assist its decision, if EPR remains a possibility. MacDonald and Bougault are nominated as co-chiefs for EPR. A number of names have been suggested to the Science Operator for 504B.

Action: Peirce and Brenner will contact Orcutt (who was SSP member assigned Leg 111) to try to pull together an assessment).

TAMU needs an assessment of the relative temperature risks at EPR vs 504B.

Action: Langseth will provide same in a letter to Kidd.

Leg 113 (Weddell Sea) Hinz will be at sea in Dec. 85/March 86. Some data may be shown at SOP meeting in Bremerhaven in May.

Leg 114 (Sub-AA) LaBrecque proposal is approved, pending availability of funds. Uncertainty as to ship. Polar Duke does not have Seabeam.

Indian Ocean - Planning based around two Kerguelen legs, Red Sea, and Neogene Package. At its October meeting PCOM provisionally included SWIR and fossil ridge of the Mascarene Basin in the W. Indian Ocean program. Detailed planning deferred until January. Port stops in South Africa may not be possible politically.

W. Pacific - PCOM will need some guidance from SSP with regard to current site survey status to assist its advance planning.

Panels - New Chairmen appointed are:

Brian Taylor (HIG)	WPAC
Dave Rea (Michigan)	CEPAC
Roland Schlich (Strasbourg)	IOP
James Austin (UT Austin)	ARP

NSF Review - JOI proposal for next three years accepted by National Science Board Review Panel. Recommended need for a COSOD II to assess adherence to COSOD I objectives and need to look ahead to riser drilling.

JOI Performance Evaluation - Review completed, including Data Bank. Report now being prepared.

3. Science Operator's Report (Rob Kidd)

Brief reports were made on Legs 104 and 105 and progress on 106 to date.

Leg 110: Moore and A. Mascle are Co-Chiefs.

Leg 112: Suess and von Huene are Co-Chiefs.

There was a brief discussion on Mesotech sonar and a report was distributed.

Evaluation of Re-entry Sites - The Science Operator feels that piston cores with geotechnical measurements (vane shear strength and penetrometer) are essential to ensure that jetting in to set re-entry cone is possible. Shallow sticky clays, such as those encountered at deeper levels in Leg 105, might prevent setting a re-entry cone.

The Data Bank now has a computerized system for filing piston core information. Langseth mentioned that during DSDP there was a plan to have the site specific piston cores shipped to the DSDP repository and then sent out with the ship.

Discussion ensued regarding the Site Survey Data Standards matrix. Mauffret made the point that requiring piston cores for re-entry might necessitate a second site visit because re-entry sites are not chosen until after MCS data is processed.

Motion: (Langseth/Suyehiro, unanimously adopted).

It is desirable to have piston cores for geotechnical measurements at all re-entry sites, and they may be required by the SSP at certain sites.

Action: Mayer to add asterisk to item 9D of site survey matrix to reflect this policy in JOIDES Journal and proposal submission guidelines.

Kidd and Glenn Foss (TAMU, Drilling Operations) will write a memo to SSP detailing the specific requirements/desires for geotechnical measurements.

Further discussion ensued regarding more detailed requirements of the Site Survey Data Standards matrix.

Action: All panel members will write a page of amplifying comments to the matrix outlining additional requirements for proper site surveys.

Mauffret will synthesize all these comments into one document and circulate a draft prior to our next meeting.

Kidd outlined some of the limitations of the JOIDES Resolution for doing underway geophysics because of the noisy hull. Currently there is a TAMU policy that underway seismic is only done on site approaches and departures at speeds 5-6 knots. Seismic profiling at transit speeds is not worthwhile. TAMU is looking for a 3.5 KHz towed fish capable of being used at 14 knots.

4. Data Bank (Carl Brenner)

The report of FY 1985 activity was presented.

Action: Brenner will retabulate to show JOIDES requests as a third major category, and revised report will be appended to minutes.

Data sets for site surveys for Legs 106 and 107 were excellent. The site survey data set for Leg 108 is very poor in quality, but it was adequate for safety review because all holes are very shallow. Sarnthein has recently collected new data (see below).

The Data Bank budget for 1987 was presented. Brenner asked for guidance in meeting 1986 cutbacks imposed by JOI.

Action: Peirce write JOI as resolved by PCOM, requesting restoration of sufficient 1986 funds to maintain current level of service and endorsing 1987 budget.

Brenner will cut back archivist's time to 50% after February 1 unless JOI restores budget cuts. Also catalog in monthly reports all data requests not met because of inadequate staff.

Brenner stated that with a half time archivist he could only meet priority I requests from the Science Operator, SSP, and PPSP. All other requests would probably not be met. SSP endorsed this policy.

5. Ship Schedules (See attached Appendix A).

6. Japanese ODP structure and activity

Various scientific planning and decisions are made by the Japanese National Committee for ODP composed of personnel from universities and institutions. The funding government agency is the Monbusho (the Ministry of Education, Science and Culture). The Ocean Research Institute (ORI), Univ. of Tokyo is responsible for the scientific operation.

H. Kinoshita explained the ongoing Japanese development of off-line high temp. (300°C max. 1.5 hrs) downhole measurement device which will eventually measure magnetization, temp., current flow, pressure and tilt. Magnetometer is completed and awaits testing. This instrument is designed to be used as a logging tool on-line or as an off-line tool to be deployed in a hole for long periods of time.

7. Panel Membership

Alternates needed for Japanese and U.S. members in order to assist with site survey assessments.

Action: Suyehiro ask Japanese ODP National Committee to appoint an alternate member.

Langseth remind USSAC of need for two alternate members.

USSR is expected to join in early 1986. The UK situation is difficult to predict. The ESF situation is uncertain, but there is some reason for cautious optimism. (Note: U.K. has now officially joined).

8. Site Survey Status Reports

a) Tyrhennian Sea (Mauffret)

Seismic velocity data is limited to refraction, but more coming from current MCS processing. Otherwise site survey requirements are met and all data is either in Data Bank or will be sent.

b) N.W. Africa (Weigel)

Sarnthein's SCS data was shown and discussed. Quality is poor, but digital filtering may eliminate some noise. 3.5 KHz and Seabeam was also done on southern HPC sites.

These data, in combination with existing data, appear to be sufficient to reposition the southern sites as necessary to obtain undisturbed sections. Site EQ-9 is an exception, and it may not be drillable on the existing data.

Appendix B summarizes the detailed conclusions of the site survey work.

c) Barbados (Peirce for Louden)

Co-chiefs' meeting set for late January.

Langseth's Seabeam is GPS navigated. Pogo heat flow shows a high heat flow anomaly (by a factor of 2) over the sites. No BSR seen on SCS, but data quality is poor.

Line CEPM 128, on which the sites are placed, is not in the Data Bank. At present the SSP is unable to endorse Leg 110 drilling as site survey assessment is impossible without a complete data set. Such assessment will be undertaken immediately upon receipt of the data.

Action: Mauffret to contact A. Mascle ASAP and attempt to resolve issue. Peirce contact Larson if above effort unsuccessful, and ask him to ask A. Mascle for reproducible copies of line 128 and the reprocessed Al lines.

The Data Bank has Shell line C2114 but awaits navigation from Speed. (Note: 128 has been received; navigation for both still outstanding.)

d) Leg 111 (Orcutt)

(1) 504B

Based on the fact that a wealth of site survey data has been collected for previous drilling, the SSP approves the deepening of 504B. Recent MCS work carried out by Mutter and Brocher will probably be available for th drilling leg. The Data Bank's access to the new data set is no problem, as processing is being carried out at LDGO.

(2) East Pacific Rise

See comments above under PCOM report.

e) Leg 112 (Mauffret)

Hussong's site survey data has been deposited in Data Bank. Mauffret presented his preliminary assessment.

In the south, two MCS lines and Sea Marc data were available for assessment. No velocity analysis or core/dredge information was included. In the northern area, only Sea Marc data were available.

No clear evidence of BSR seen, but some objectives are below the presumed depth at which it occurs. Heat flow is low. There appears to be sufficient data for PPSP to assess situation.

There will be a French Seabeam survey ("Seaperc", Bourgois and Pautot) on the northern area in July, 1986. Time will be short to get final maps to the drill ship before departure. These data are necessary to resolve complexities in the area.

There is inadequate documentation for all HPC sites in the survey package. The possibility for further site specific work on these sites by the French remains open.

Kidd expressed concern that 30 m of soft sediment for spudding in may not exist in northern area. Concern here is trying to drill dolomite with very thin pelagic veneer.

The MCS data in the north are not yet processed. A letter from von Huene asked for migration of these lines. Although the SSP has not yet seen the unmigrated data, based on von Huene's success with migration of earlier data, we support his request in principle. Von Huene also asked for SSP support in obtaining Shell digital data in the northern area.

Action: Mauffret to prepare typed summary of his assessment
Also prepare a detailed site by site summary.

Kidd will ask von Huene to prepare a request to Shell for signature by Peirce.

f) Weddell Sea (Weigel)

Norwegian MCS/3.5 KHz on Maud Rise in Data Bank. Barker has sent preliminary data for sites W5-8, 11. Final MCS will be sent. Anderson also expected to send his data in support of S. Orkney sites.

Weigel presented his preliminary assessment of available data. A detailed site by site assessment summary is available.

Action: Weigel update assessment summary and send copies to Brenner, Peirce, Mayer, Kidd, and Kennett.

W1/W2: Norwegian and Japanese MCS reviewed. Extreme erosion evident. German Seabeam will be essential in evaluating these features.

Action: Suyehiro will ask Kaminuma to carry copies of Japanese MCS data to next SOP meeting.

Peirce ask Kennett to have weigel invited to next SOP meeting as liaison. Brenner update Weigel's assessment package prior to next SOP meeting.

W3: Not listed as re-entry site but appears to need re-entry to reacg 1 km. Backup site.

W4: No Islas Orcadas data at site. Japanese data not relevant to site. Closest piston core is 60 n.m. away.

Given the possible need for re-entry to allow for iceberg related disconnects, SSP recommends a piston core at the W-4 proposed site.

Action: Weigel contact Fuetterer/Hinz to convey need for a core at W-4.

W-5: Discovery data is excellent. Numerous piston cores.

W-6, 7, 8: Requirements met once Discovery data available. From SCS slumping is not a concern.

W-10: Prime alternate site. Environment B, but SSP does not consider side scan essential. Heat flow strongly recommended.

Action: Brenner contact Anderson about Polar Duke program near W-10.

W-11: Low priority site. Site survey data inadvertently not included in Discovery data set sent to Data Bank. Inadequate data exist for 850 m penetration.

Action: Brenner contact Barker for W-11 data.

g) Sub-Antarctic

The LaBreque site survey proposal has been approved, pending availability of funds, though there is some question as to what ship will be used. If CONRAD is unavailable, the POLAR DUKE will probably be employed. This would jeopardize the Seabeam portion of the survey, an unfortunate but not fatal circumstance in terms of data adequacy. The SSP re-emphasizes its recommendations from its June meeting, namely that survey data collected must include:

- (a) large watergun digital SCS
- (b) 3.5 KHz
- (c) piston cores
- (d) magnetics and gravity data.

The panel also recommends that the data be collected as soon as possible in order to facilitate pre-drilling planning.

9. Indian Ocean

All of the drilling legs still under active consideration were discussed as far as possible. Each area was assigned to a Panel member for future review/assessment if necessary.

The Indian Ocean summary of site survey status document was updated and will be updated again at the December IOP meeting (see Appendix C).

- a) SWIR: A site survey is absolutely essential.
- b) Mascarene Fossil Ridge: SSP recommends that seismic velocity determinations (e.g. sonobuoys) be included in French survey plans and notes that no data has been submitted to the Data Bank. (Note: At IOP meeting Schlich said sediment cover only 100 m. Sonobuoys are not essential in this situation.)
- c) Davie Ridge: Synthesis needed.
- d) Somali Basin: MCS is essential.
- e) Red Sea: SSP notes that no data in support of drilling ideas has been submitted to the Data Bank. It is essential that data be made available at the earliest opportunity for preliminary assessment. The SSP also notes that piston cores with accompanying geotechnical data will be essential for all re-entry sites in the Red Sea.

Action: Mauffret prepare detailed site by site assessment summary.

f) Neogene Package

For attaining the scientific objectives on the distal Indus Fan, the SSP feels that avoidance of channels must be demonstrated. Seabeam data alone may not be adequate for this purpose. Sidescan is recommended and high resolution SCS with 3.5 KHz is required.

A possible scenario would be to acquire German Seabeam in May at crossings of existing SCS and French watergun SCS in August. With luck, the combined surveys may be sufficient. The tentative Gloria survey on Darwin is too late for site planning.

Action: Brenner will communicate Prell's tentative site locations to Degens and Droz.

At the hominid sites high resolution SCS is essential.

Action: Peirce ask IOP to coordinate opportunistic site surveys for hominid sites.

- g) Makran: Heat flow considered essential by SSP. Darwin cruise is scheduled very late to be used to plan drilling.

Action: Peirce reply to Leggett letter.

h) Ninetyeast Ridge/Intraplate Deformation

Site surveys are critically needed, but exact requirements are difficult to predict in the absence of a coherent drilling proposal. The need for MCS in both areas is an open question at this point. High resolution SCS is necessary for paleo-environmental objectives. These areas will be discussed in detail at IOP meeting, which Peirce will attend.

Action: Peirce get copy of Weissel NSF proposal and update summary after IOP meeting.

- i) Broken Ridge: MCS is essential to understanding the tectonic problem. (Note: Planned site survey if Weissel has 1000 cu. airgun plus watergun. This may be adequate.)

Action: Peirce contact Falvey to see if there is any possibility of Australian MCS here.

Weigel talk with Hinz regarding his interest here.

- j) N. Kerguelen: Preliminary assessment will be done by Peirce prior to IOP. Velocity scans required. No sidescan or Seabeam, but logistically unobtainable. Need not critical if sites not positioned on major slopes.

- k) S. Kerguelen/Antarctica: Site surveys on S. Kerguelen appear to be done or planned. At Prydz Bay the Australians are rumored to have found some indications of gas at K-2 site. Some high resolution seismic appears necessary.

Action: Suyehiro investigate Japanese plans in area and communicate same to Peirce/Brenner.

- l) SEIR: No adequate data exists. Schlich may survey one site in 1986. (Note: At IOP meeting he said he would not be surveying here.)

- m) Argo/Exmouth: Synthesis critically needed.

Action: Weigel contact von Rad and prepare report for next meeting. Peirce talk with Falvey at IOP meeting.

- n) SE Australia: Data base appears to be adequate, but detailed information lacking.

11. Western Pacific

WPAC's initial list of proposals was distributed. PCOM has asked the thematic panels to consider this list and give feedback to WPAC. There are 56 official WPAC proposals and numerous other immature proposals.

Langseth emphasized the volume of drilling proposals which WPAC is considering. Liaison between WPAC and SSP will be essential to coordinate efforts to summarize size survey status.

Action: Peirce contact Taylor to have Langseth invited to next WPAC meeting.

Langseth to make presentation to WPAC on SSP priorities and objectives and raise issue of maintaining liaison.

Langseth gave an overview of the four major groupings within WPAC: NW Pacific, S. China Sea, Indonesia, and SW Pacific.

Taira gave an excellent overview of the major tectonic problems in the NW Pacific area around Japan and the adjacent arcs.

Langseth and Taira reviewed the WPAC initial list of proposals, outlining the major objectives and general status of site surveys.

Taira treated the SSP to a display/explanation of the joint French/Japanese KAIKO data. There is a large amount of Seabeam data, including 50% coverage of the Nankai Trough. In addition to the large volume of JNOC data to which ORI have access for interpretation, there is also considerable MCS from the Japanese Geological Survey. As ORI has an MCS capable ship, obtaining additional MCS data for site specific needs near Japan should be no problem. ORI is negotiating for the release of selected JNOC lines; no final decision expected for some time.

Action: Suyehiro will coordinate preparation of an index map of existing Japanese Geological Survey data (plus KAIKO data if French agree). Also he will prepare a summary report of available Japanese site survey data.

Lanseth/Suyehiro/Mauffret will prepare a summary outline of WPAC leg proposals covering major objectives and site survey status for SSP members.

11. Central and Eastern Pacific

Little said in addition to comments above on Legs 111/112.

Action: Peirce to ask Chase to review NORPAC/INPAC ideas at next SSP meeting.

12. Riser Drilling Requirements

A riser will be limited to 1800 m water depth. Four deep penetration holes per year will be maximum production.

There will be a workshop on riser engineering within the next year.

SSP needs education on engineering requirements from TAMU and direction from PCOM as to role of SSP in riser planning.

Action: Kidd ensure SSP represented at workshop.

13. Next Meeting

Tentatively planned for April 22-24, 1986 at Pacific Geoscience Center, Victoria, B.C. This will be prior to next SOP meeting, but PCOM will want further input on Indian Ocean for its May meeting.

Tentative agenda attached (Appendix D). Guests should include Bornhold (SOP) and Chase (CEPAC) because of their proximity.

Peirce will try to arrange a discussion of Lithoprobe deep seismic results across Vancouver Island and a field trip to see some of the geological units imaged by the seismics.

SSP

CANADIAN 1986 CRUISES OF INTEREST TO ODP

1. TULLY - May 12-25: Middle Valley Juan de Fuca Ridge.
Heat Flow and MOSES Geoelectric studies of active hydrothermal system in thickly sedimented ridge crest valley.
Davis and Law
2. TULLY - May 26-June 8: Explorer Ridge segment of Juan de Fuca Ridge.
Detailed geological studies of major ridge crest sulphide deposits, including Camera, TV, Bottom drill, Dredging.
Franklin
3. ENDEAVOUR - Sept. 2-15: Queen Charlotte Sound and Adjacent Offshore.
Geothermal, Seismic, Dredging.
Lewis et al
4. ENDEAVOUR - June 30-July 13: Dellwood and Explorer segments of Juan de Fuca Ridge System.
Detailed geology, Camera, Dredging, etc.
Chase, Scott
5. PARIZEAU - Axial Seamount (tentative), S. Juan de Fuca Ridge.
Physical Oceanography of Vents area, and possible personal exchange for PANDRA (PISCES submersible tender).
Thompson
6. PANDORA II/PISCES IV - Juan de Funca Ridge diving (Tentative 3 programs)
Detailed geological and geophysical studies.
7. TULLY - Annual transit from Victoria to Beaufort Sea.
Provides regular track lines in Northeast Pacific Currie.
8. HUDSON - S. Labrador Sea, East Newfoundland Basin.
OB5 geophysics
Reid

FRANCE
SHIP SCHEDULE
(tentative)

SHIP	TIME	PROJECT	AREA	INVESTIGATORS
MARION-DUFRESNE	1985 June July	ESOPE Long coring	Ouest Africa	CEA CFR IFP...
" "	1985 End October Beg. Novem.	INDUSON Coring and Sedimentology	Indus fan Somalie Basin	Museum (Leclaire)
" "	1986 January February	<u>MCS-ODP</u>	South Kerguelen	IPGS (Schlich)
" "	1986 March	Dredging Coring <u>ODP</u>	South Kerguelen	Museum, (Leclaire)
" "	1986 August	<i>Profindus</i>	Indus deep sea fan	Pirocean (Bellaiche)
JEAN-CHARCOT	1986 January	Seabeam High Resolution Seismic - Sar Epaular <u>ODP Site survey</u>	New Hebrides (Entreacasteaux FZ) Fidgi Lau basin Louisville Ridge (collision)	ORSTOM IFREMER
" "	1986 February March	NIXO (nodule)	Pacifics	IFREMER
" "	1986 Mai	HYDROFAST Seabeam - High Resolution - Seismic - SAR - Geochemical sampling Natural Lab. <u>ODP Site survey</u> (extension in 1987 two cruise with diving	EPR 13°N	IFREMER IPGP (Francheteau Bougault)
" "	1986 July	SEAPERC Seabeam High resolution <u>ODP Site survey</u>	Peru Trench	PIROCEAN IFREMER (Bourgois)

SHIP	TIME	PROJECT	AREA	INVESTIGATORS
JEAN-CHARCOT	1986 December	RAPANUI Seabeam High resolution Seismic	Easter plate	IPGP (Francheteau)
LE SUROIT	1986 January February	CYAROUGE Diving Walls of the deeps, sampling of volcanic rocks and structural study	Red sea North	BRGM (Guennoc) IFREMER (Pautot) Stoffers (Heidelberg)
"	1986 March April	MINOS Two ship experiment	Red sea North	PIROCEAN (Le Pichon) IFREMER
"	1986 April	NORDMEROU MCS ODP Site survey	Red sea North	BRGM (Guennoc) IFREMER IFP
"	1986 May	LUSITANIE MCS post ODP	Atlantic Portugal	PIROCEAN (Boillot) IFREMER
"	1986 September	VICOMED Sampling Isotopes studies	Mediterraan sea	PIROCEAN (Vergnaud- Grassini)
"	1986 October	SAME sar, sampling	Nice S of France	IFREMER (Auffret)
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
CORIOLIS	1986 June	EVA 13 OBS	New Hebrides South Fidgi	PIROCEAN ORSTOM (Pascal)
NOROIT	1986 October	Deep sea FER SAR sampling	Cap Ferret Deep sea fan	PIROCEAN (Bordeaux)

SHIP	TIME	PROJECT	AREA	INVESTIGATORS
Submersible Nautille Cyana	see NADIR			
"	1986 January March	CYAROUGE	Red sea North	IFREMER (Pautot) BRGM (Guennoc)
"	1986 July	CYAPORC Diving sampling and Biological studies	Goban spur	French UK
	1987 ->	Not scheduled <u>ODP POLYNESIE</u> SEACARIB II	<- Central Pacific Caribbean sea	

F.R.G.: Research Vessels : 1985-1987

AREA	SHIP	TIME	PROJEKT	INVESTIGATORS
1. NW Africa	POLARSTERN	10/85	Add. Site survey sites Leg 108 3,5 KHz SEABEAM probl. high. resol. seism.	Kiel (Sarnthein)
2. NW-Africa : Hayes, Atlantis, Kane FZ	PROSPEKTA	11/85	continental margin; fracture Zones MCS, grav/magnetics	BGR (Hinz)
3. Weddell Sea	POLARSTERN	12/85 - 03/86	ocean/continent transition. tectonic evolution; MCS air gun, SEABEAM, 3,5 KHz grav/magnetics	BGR (Hinz)
4. Southern Red Sea	SONNE	1986	rifting; OBS-seismics, grav/magnetics	Hamburg (Makris)
5. Arabian Sea	SONNE	04/05 1986	Indus fan/Indian margin, Oman/Somali margins (?) Seabeam 3,5 KHz coring	Hamburg (Degens)
6. Carlsberg Ridge	SONNE	06/07 1986	Hydrothermal deposits dredging, coring SEABEAM	Aachen (Plüger)
7. Java Sea	SONNE	1986	coring structure geol., volcanic history; refl. seismics grav/magnetics	Hamburg

	AREA	SHIP	TIME	PROJEKT	INVESTIGATORS
8.	Broken Ridge Maskaren Sea 90° E Ridge	?	future planing 1988?	MCS, grav/magnetics	BGR (Hinz)
9.	Southern Red Sea	METEOR	02/03 1987	rifting, seismics (refl. refr.) grav/magnetics	Hamburg (Makris)
10.	Central North Atlantic	METEOR	1988 ?	sea mounts, ocean crust; OBS-seismics, grav/magnetics MCS	Hamburg (Weigel)

JAPANESE RESEARCH VESSELS MOVEMENT

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

1986

Jan - Mar South Philippine Sea
Apr - May Japan Sea, Japan Trench ODP site survey
Nov - Dec Japan Trench ODP site survey

1987

Jul North Philippine Sea (Izu-Bonin-Marianas)
ODP site survey

1988

Northeast Pacific Ocean ODP site survey

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

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

R/V Hakureimaru (Geol. Survey of Japan)

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

R/V Natsushima (JAMSTEC, Science and Technology Agency)

1986 Jan East Sunda Trench
1987 SW Pacific

R/V Kaiyo (JAMSTEC)

*has Seabeam

R/V Shoyo (Hydrogr. Dept., MSA, Ministry of Transportation)

yearly Izu Bonin

R/V Takuyo (Hydrogr. Dept., MSA)

yearly N. Philippine Sea, W. Pacific

* has Seabeam

Charter ship (chartered by DELP <Dynamics and Evolution of the Lithosphere Project>)

1984 Okinawa Trough MCS, OBS, HF, M, G

1985 Yamato Basin (Japan Sea) MCS, OBS, HF, M, G
incl. ODP site survey

1986 NW Pacific

Section 4B

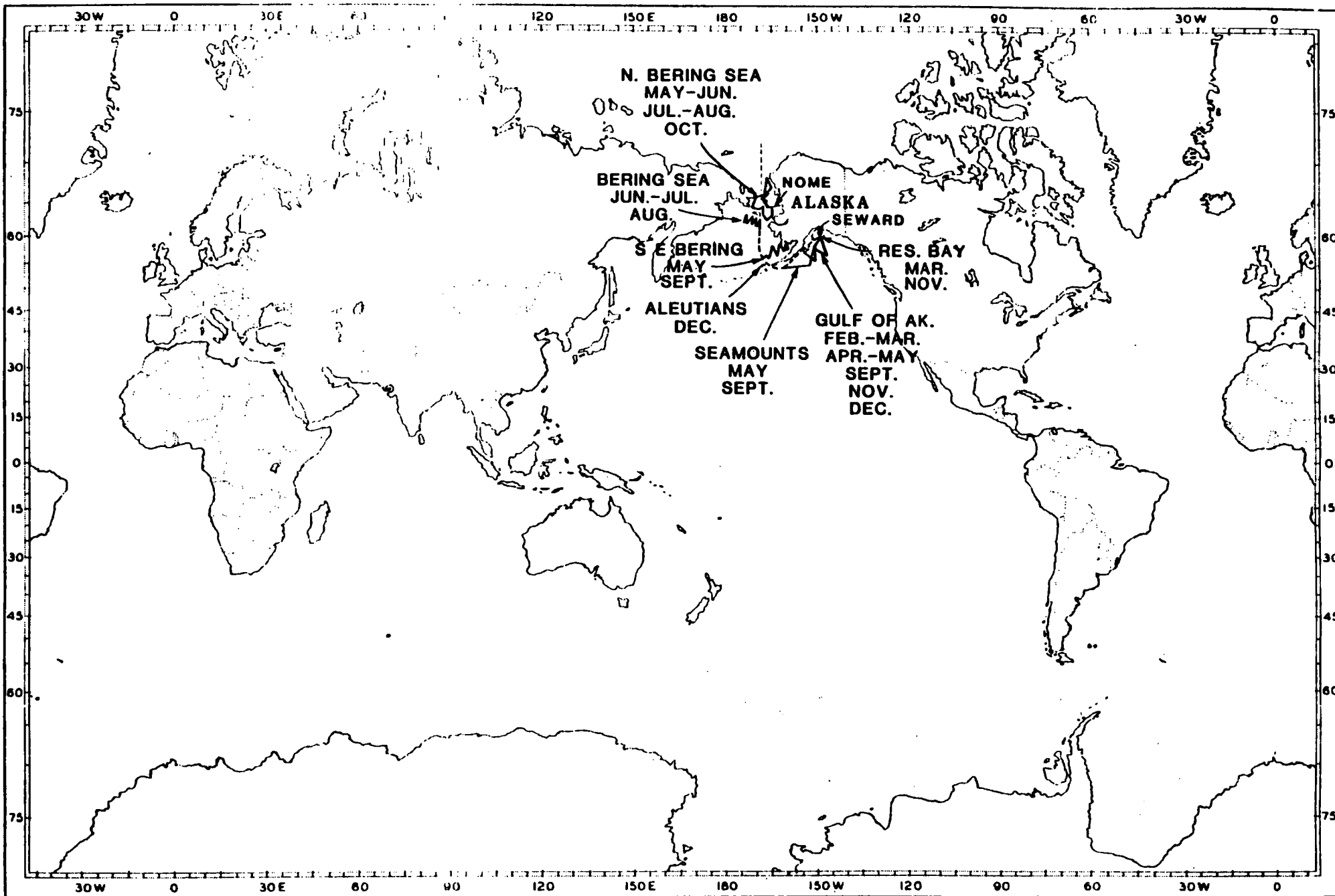
SHIP OPERATING SCHEDULE
WITH CRUISE TRACKS FOR NEXT CY 1986
R/V ALPHA HELIX

Date	Duration	Area	Chief Scientist	Agency	Ports
					Seattle
1 Jan-2 Feb	-	Shipyard			Seattle
10-15 Feb	-	Transit to Seward			Seward
24 Feb-5 Mar	10	Gulf of Alaska	Royer	NSF/OCE82-08306	Seward
27-28 Mar	2	Resurrection Bay	Royer	Alaska	Seward
28 Apr-2 May	5	Gulf of Alaska	Royer	NSF/OCE82-08306	Seward
12-17 May	6	Gulf of Alaska	Cooney	NSF/Proposed	Dutch Harbor
18-25 May	8	SE Bering Sea	Highsmith	NSF/Proposed	Dutch Harbor
26 May-15 Jun	21	North Bering Sea ISHTAR	McRoy	NSF/DPP84-05286	Nome
16 Jun-6 Jul	21	SE Bering Sea	Oliver/MLML	NSF/DPP85-12757	Nome
7 Jul-4 Aug	29	North Bering Sea ISHTAR	McRoy	NSF/DPP84-05286	Dutch Harbor
5-30 Aug	26	North Bering Sea	Hunt/UCI	NSF/DPP83-08232	Seward
9-13 Sep	5	Gulf of Alaska	Royer	NSF/OCE82-08306	Seward
17-22 Sep	6	Gulf of Alaska	Cooney	NSF/Proposed	Dutch Harbor
23-30 Sep	8	North Bering Sea	Highsmith	NSF/Proposed	Nome
1-30 Oct	30	North Bering Sea ISHTAR	McRoy	NSF/DPP84-05286	Seward
10-14 Nov	5	Gulf of Alaska	Royer	NSF/OCE82-08306	Seward
17-23 Nov	7	Resurrection Bay	Henrichs	NSF/Proposed	Seward
1-11 Dec	11	SE Bering/Aleut.	Sambrotto/LDGO	NSF/Proposed	Seward
16-20 Dec	5	Gulf of Alaska	Royer	NSF/OCE82-08306	Seward

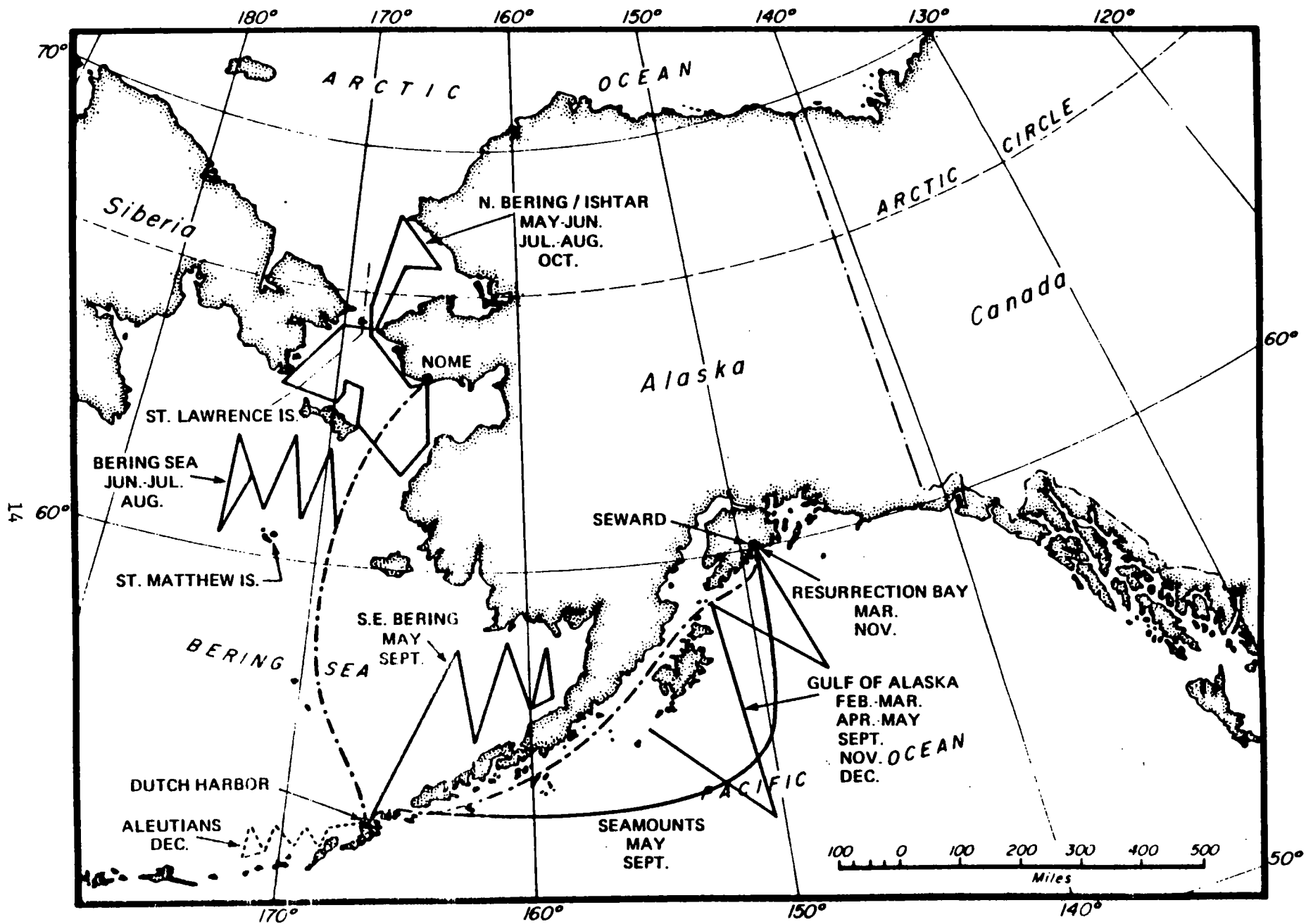
208 Total Ship Days Scheduled
2 State of Alaska
206 NSF

This schedule does not include the following requested days:
12 Highsmith, N. Bering, 2 cruises of 6 days each, July, Aug., NSF/proposed
45 Niebauer, Bering Ice Edge, May, NSF/To be proposed

Total unscheduled days = 57
Total Alpha Helix days requested for 1986 = 265



**R / V ALPHA HELIX TRACKS
CY 1986**



R / V ALPHA HELIX TRACKS

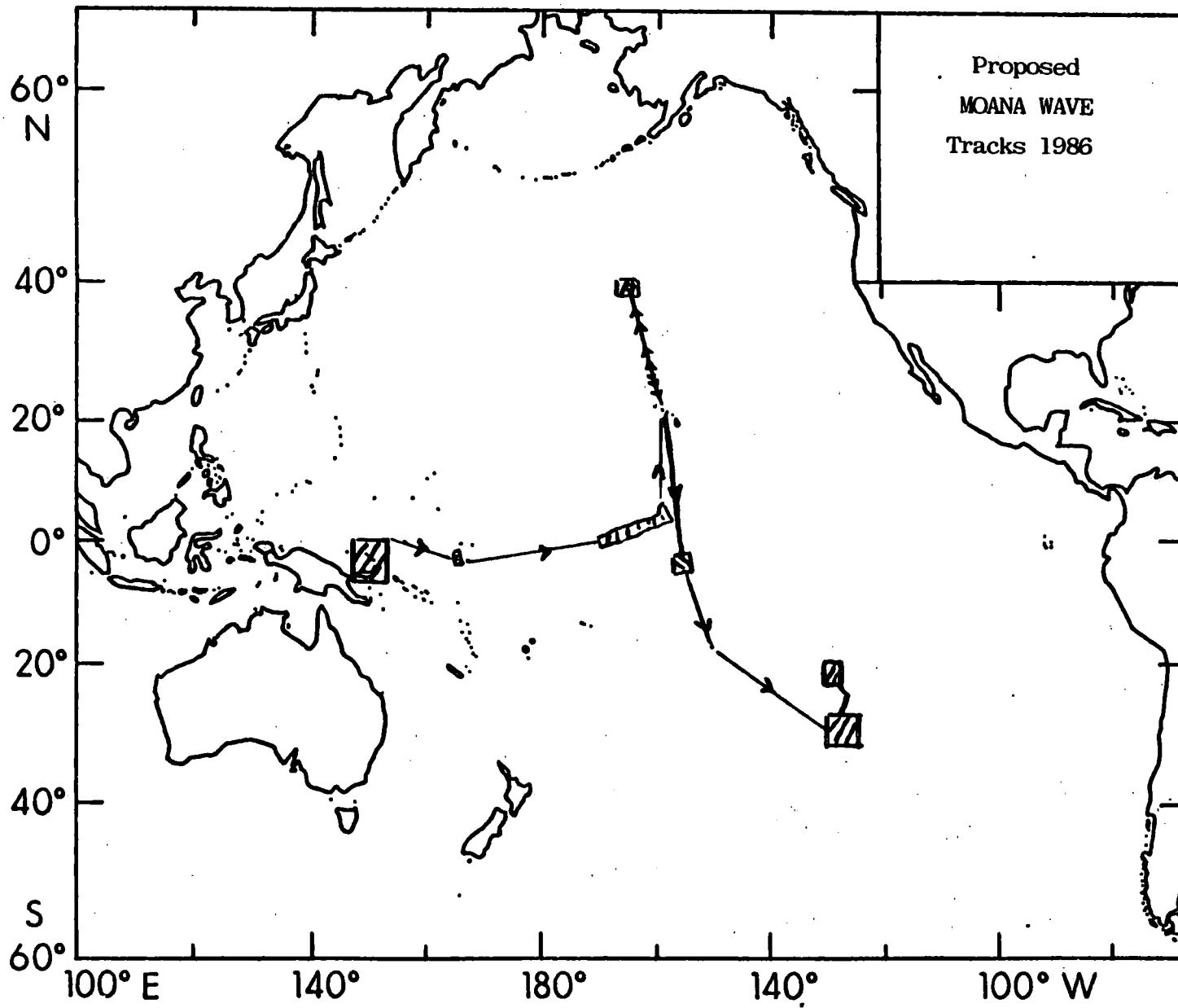
CY 1986

Section 4

SHIP OPERATING SCHEDULE
CY 1986

R/V MOANA WAVE

<u>Cruise Period</u>	<u>Area of Operation and Objectives</u>	<u>Chief Scientist</u>	<u>Days</u>	<u>Projected Funding</u>
03 JAN 86 05 FEB 86	WEPOCS-Ocean Circulation Study	Tsuchiya	.37	NSF
07 FEB 86 08 MAR 86	KIRIBATI-Resource Assessment of the Islands	Keating	30	AID
17 MAR 86 15 APR 86	ADIOS-Dust Input to Pacific Ocean Hawaiian Waters	Betzer	30	NSF
22 APR 86 26 MAY 86	SEAREX-Sea/Air Exchange Program North Central Pacific	Duce	35	NSF
02 JUN 86 06 JUL 86	SEAREX	Duce	35	NSF
08 JUL 86 03 AUG 86	HONOLULU	Drydock		
04 AUG 86 01 SEP 86	HONOLULU	Open		
08 SEP 86 22 SEP 86	ADIOS	Betzer	15	NSF
03 OCT 86 27 OCT 86	COOK ISLAND Resources	Campbell	27	AID
30 OCT 86 10 DEC 86	Geophysical Survey-Juan Fernandez Plate	Larson	41	NSF
11 DEC 86 31 DEC 86	Investigation of Easter Island Microplate	Hey	22	NSF



R/V CONRAD, 1986 OPERATING SCHEDULE 02 DECEMBER 1985
 MICHAEL RAWSON, POC (914) 359-2900 X367

OPTION A

Cruise ID	PI	Dates	Ports	Program	Days
Maintenance		1/01 - 2/19	Singapore	Maint.	49(M)
2701 Dudley		2/20 - 3/02	Sing - Pt Hedland	Transit	10(T)
2702 Mutter		3/06 - 4/11	Pt.H. - Pt Hedland	NSF/SGG	36(S)
2703 TRANSIT		4/15 - 4/20	Pt.H - Jakarta	Transit	5(T)
2704 Curray		4/22 - 5/05	Jakarta - Colombo	NSF (SB)	13(S&T)
2705 Prell		5/09 - 6/06	Colombo - Colombo	NSF (SB)	28(S)
2706 Weissel		6/10 - 7/10	Colombo - Perth	NSF/SGG	30(S)
2707 Weissel		7/14 - 8/19	Perth - Mauritius	ODP surveys	35(S)
2708 TRANSIT		8/23 - 9/02	Mauritius - C'Town	Transit	10(T)
2709 LaBrecque		9/05 - 10/17	C'town - M'video	ODP surveys	42(S)
2710 Fleming		10/21 - 12/20	M'video - Recife	NRL	60(S)
2711 Katz		12/27 - 1/16	Recife - B'town	NSF	20(S)

OPTION B

Cruise ID	PI	Dates	Ports	Program	Days
Maintenance		1/01 - 2/19	Singapore	Maint.	49(M)
2701 Dudley		2/20 - 3/02	Sing - Pt Hedland	Transit	10(T)
2702 Mutter		3/06 - 4/11	Pt.H. - Pt Hedland	NSF/SGG	36(S)
2703 TRANSIT		4/15 - 4/20	Pt.H - Jakarta	Transit	5(T)
2704 Curray		4/22 - 5/05	Jakarta - Colombo	NSF (SB)	13(S&T)
2705 Prell		5/09 - 6/06	Colombo - Colombo	NSF (SB)	28(S)
2706 Weissel		6/10 - 7/10	Col - M'tius	NSF/SGG	30(S)
2707 TRANSIT		7/14 - 7/25	M'tius - C'town	Transit	10(T)
2708 Fleming		7/29 - 9/27	Capetown - M'video	NRL	60(S)
2709 LaBrecque		10/1 - 11/10	M'video - Luanda	NSF/ODP	45(S&T)
2710 Katz		11/15 - 12/15	Luanda - Recife	NSF	30(S)

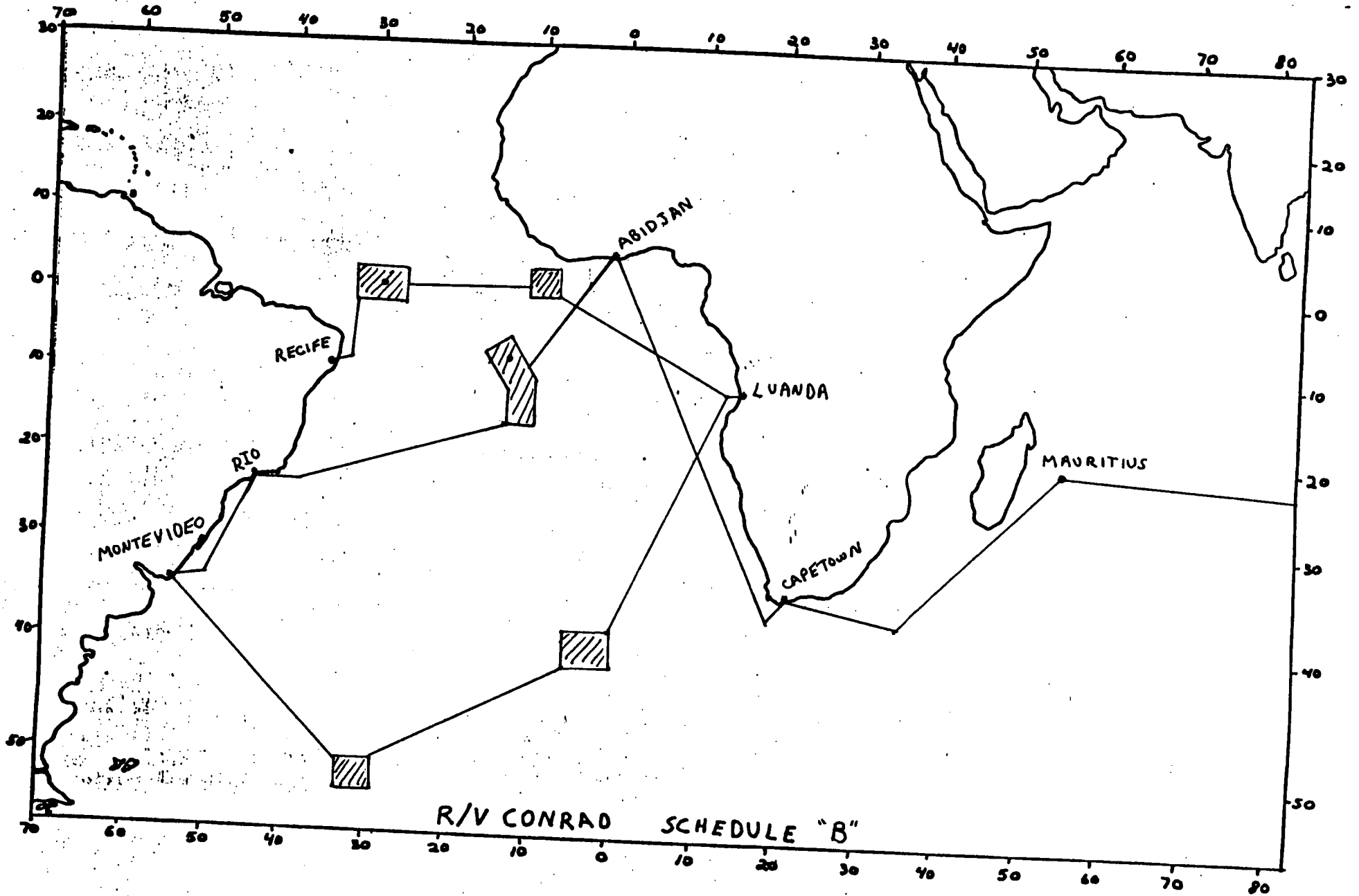
OPTION C

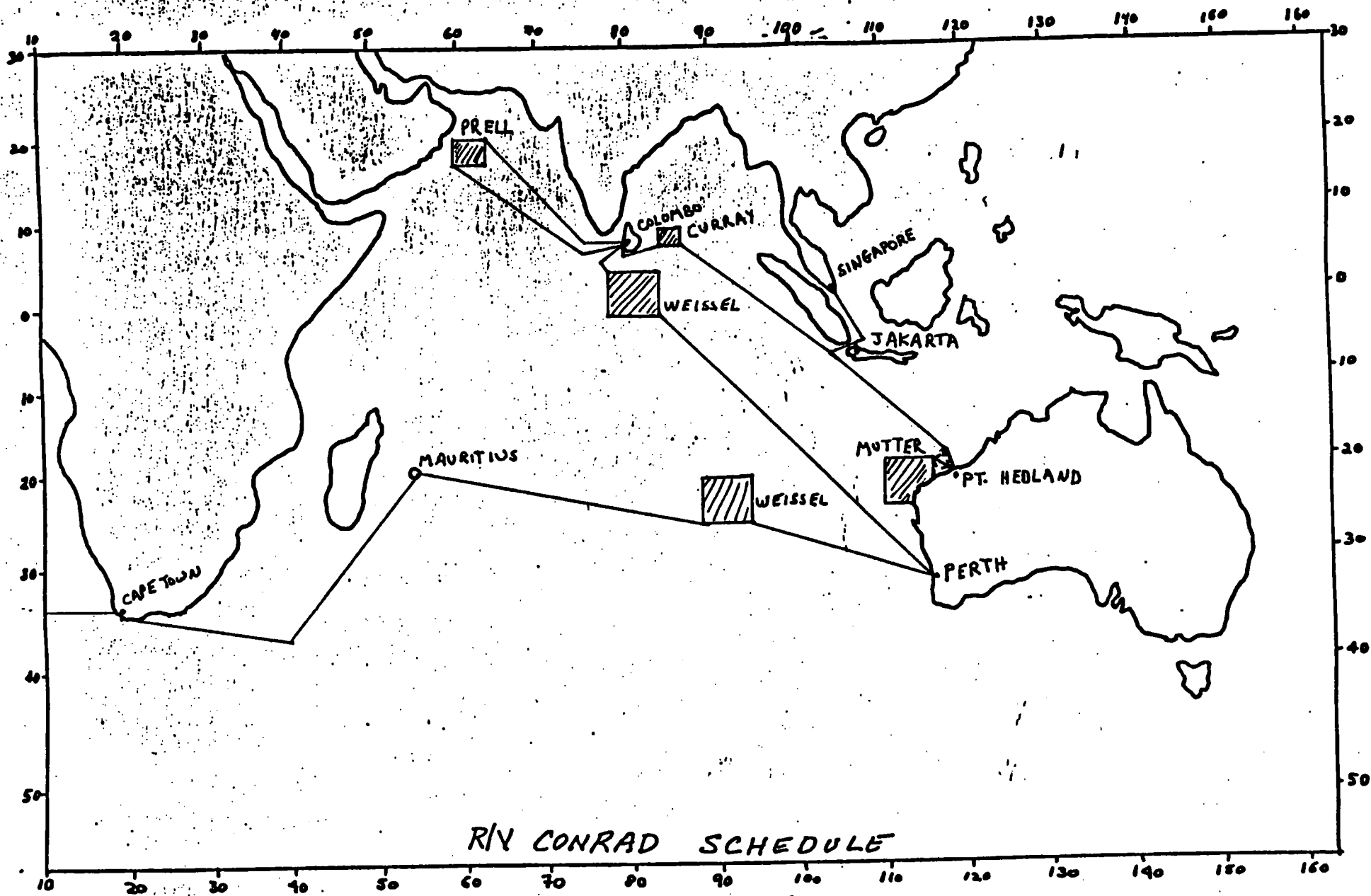
Cruise ID	PI	Dates	Ports	Program	Days
Maintenance		1/01 - 2/19	Singapore	Maint.	49(M)
2701 Dudley		2/20 - 3/02	Sing - Pt Hedland	Transit	10(T)
2702 Mutter		3/06 - 4/11	Pt.H. - Pt Hedland	NSF/SGG	36(S)
2703 TRANSIT		4/15 - 4/20	Pt.H - Jakarta	Transit	5(T)
2704 Curray		4/22 - 5/05	Jakarta - Colombo	NSF (SB)	13(S&T)
2705 Prell		5/09 - 6/06	Colombo - Colombo	NSF (SB)	28(S)
2706 Weissel		6/10 - 7/10	Col - M'tius	NSF/SGG	30(S)
2707 TRANSIT		7/14 - 7/25	M'tius - C'town	Transit	10(T)
2708 Fleming		7/29 - 9/27	Capetown - Rio	NRL	60(S)
2709 Unapac		10/01 - 10/31	Rio - Recife	ONR	30(S)
2710 Katz		11/04 - 11/24	Recife - B'town	NSF	20(S)

ALTERNATE PROGRAMS:

Bonatti, Red Sea

NSF: (Pending)





OREGON STATE UNIVERSITY

Section 4
SHIP OPERATING SCHEDULE W/CRUISE TRACKS 1986
R/V WECOMA

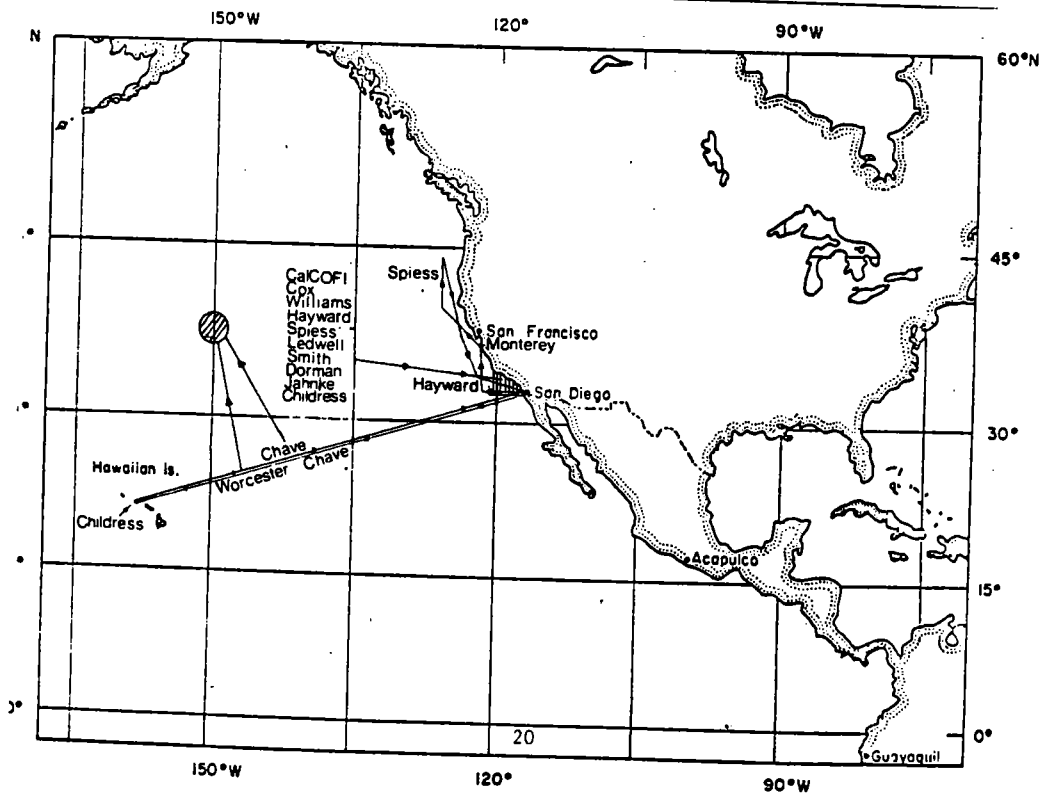
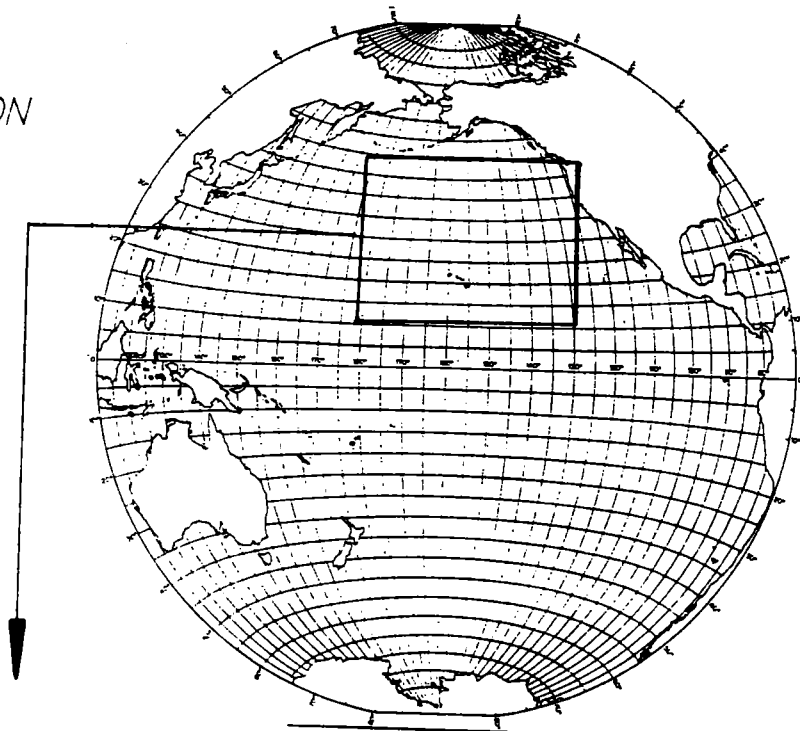
Cruise Period	Area of Operations and Objectives	Chief Scientist	Ports of Call
121185-010586	Transit Newport, OR to Valparaiso, Chile		
0109-0130	Off Chile - Biological productivity	Peterson	Valparaiso
0204-0228	Off Panama & Peru (to be assigned)		
0305-0324	Panama Basin - Heat flow work & piston coring	Langseth	Balboa
0325-0409	Guaymas Basin - Molluscan shell studies	Lutz	S. Diego
0413-0504	Maintenance Period - Newport, Oregon		
0505-0604	NE Pacific - Project Margin Plume	Rooth	Newport
0613-0615	No. Pacific - Transit Newport, OR - Monterey, CA		Newport
0616-0714	VERTEX Leg 1 Monterey - Kodiak	Martin	Kodiak
0721-0804	VERTEX Leg 2 Kodiak - Monterey		Monterey
0808-0821	VERTEX Leg 3 Monterey - Monterey		Newport
0822-0824	Transit Monterey - Newport		
0902-0921	NE Pacific - Cascadia extensional zone	Kulm	Newport
0922-1001	NE Pacific - Instrumentation	Caldwell	Newport
1007-1031	NE Pacific - Hydrothermal plume dispersal	Kadko	Newport
1107-1212	Monterey Bay, CA - Midwater biology	Robison	Monterey
Alternate: 1101-1121	NE Pacific - VERTEX seasonal	Martin & Knauer	Monterey
1213-1231	Maint. & main engine overhaul		Newport

CT 86
R/V ENDEAVOR TENTATIVE SHIP SCHEDULE

CRUISE NO.	SCIENTIST(S)	AREA	DEPART	ARRIVE	DAYS AT SEA	FUNDING SOURCE	OPERATING DAYS
EN-139	Transit	Transit	3 Jan Narragansett	6 Jan Norfolk, VA	4	NSF	4
EN-140	Atkinson (Old Dominion)	W No Atlantic	8 Jan Norfolk, VA 4 Feb Norfolk, VA	3 Feb Norfolk, VA 7 Feb St. George's, Bermuda	31	NSF	33
EN-141	Weller/ (Schmitt) (WHOI)	Sargasso	10 Feb St. George's, Bermuda	11 Mar Narragansett	30	NSF	31
EN-142	Open		15 Mar	12 Apr			
EN-143	Transit	Transit	19 Apr Narragansett 20 Apr WHOI	19 Apr WHOI 28 Apr Ponta Delgada Azores	10	NSF	11
EN-144	Price Reafer/Joyce	Azores	1 May Ponta Delgada Azores	19 May Ponta Delgada Azores	19	NSF	21
EN-145	Owens (WHOI)	Labrador	22 May Ponta Delgada Azores	9 Jun WHOI/ Narragansett	19	ONR	20
EN-146	Watts/ Levine Hitchcock	Hatteras	12 Jun Narragansett	2 Jul Narragansett	21	ONR-10 NSF- 5 MUSC-6	21
EN-147	Driscoll	W No Atlantic	7 Jul Narragansett	13 Jul Narragansett	7	NSF	7
EN-148	Glover (Bigelow)	Bermuda	17 Jul Narragansett	11 Aug Narragansett	26	NSF	26
EN-149	Stoll	W No Atlantic	15 Aug Narragansett	24 Aug Narragansett	10	ONR	10
	Maintenance (23 days)		25 Aug Narragansett	16 Sep Narragansett			
EN-150	Boyle (MIT)	Bermuda	17 Sep Narragansett	22 Sep St. George's, Bermuda	6	NSF	7
EN-151	Valdes (WHOI)	Transit	24 Sep St. George's, Bermuda	2 Oct Ponta Delgada Azores	9	NSF	9
EN-152	Valdes (WHOI)	Canary Basin	4 Oct Ponta Delgada Azores	13 Oct Funchal, Madeira	10	NSF	12
EN-153	Transit	Transit	15 Oct Funchal, Madeira	22 Oct Narragansett	10	NSF	10
EN-154	Watts	Hatteras	28 Oct Narragansett	6 Nov Narragansett	10	ONR	10
	Maintenance (55 Days)		7 Nov Narragansett	31 Dec Narragansett			

<u>R/V NEW HORIZON 1986</u>			
01/13-01/20	Benthic biology	K. Smith	San Diego NSF 8
01/23-02/01	OBS Seismology	L. Dorman	NSF 6
	Thruster trials	F. Spiess	San Diego NSF 4
02/04-02/16	Biology	J. Childress	San Diego NSF 13
02/19-02/28	California Current	T. Hayward	San Diego UC 10
03/18-04/11	OBS Seismology	L. Dorman	San Diego NSF 25
04/14-04/18	Squirts & Jets	T. Hayward	Monterey UC 5
04/20-05/05	Deep Tow	F. Spiess	San Diego NSF 17
	Blanco Fracture Zone		
05/08-05/18	Food Chain Studies	B. Hickey (UW)	San Diego DOE 11
		P. Williams	
05/23-06/11	Acoustic Tomography	P. Worcester	Honolulu NSF 11
	No. Pacific Gyre		ONR 10
06/14-07/05	Biology	J. Childress	Honolulu NSF 24
	near Oahu		
07/08-08/09	Seafloor electromagnetics		San Diego NSF 34
	No. Pacific Gyre	A. Chave	
08/13-08/19	Lander studies	R. Jahnke	San Diego NSF 7
08/22-09/11	Electromagnetics	C. Cox	San Diego NSF 21
09/14-09/29	CalCOFI survey	J. Reid	San Diego UC 16
10/02-10/08	Lander studies	R. Jahnke	San Diego NSF 7
10/11-10/17	Tracers	J. Ledwell	San Diego NSF 7
10/20-10/30	Food Chain	P. Williams	San Diego DOE 10
11/10-11/23	CalCOFI Survey	J. Reid	San Diego UC 16
11/24-12/31	BIENNIAL OVERHAUL		San Diego

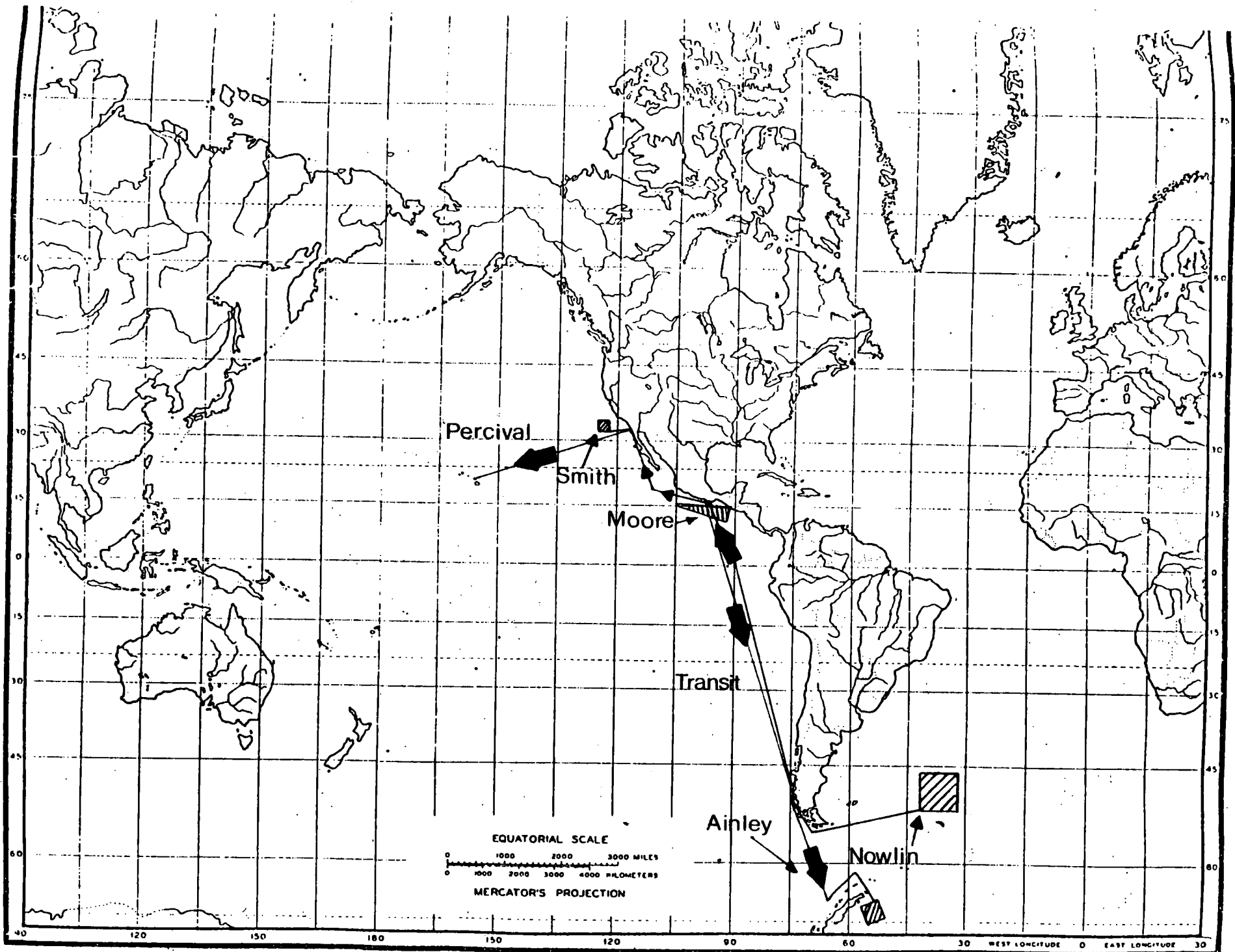
HORIZON
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Section 4

SHIP OPERATING SCHEDULE
W/CRUISE TRACKS FOR CY 1985 AND 1986

Cruise Period	Area and Objectives	R/V MELVILLE Chief Scientist	End Port	Agency Days
01/06-01/13	Lander So. Calif. Borderland	R. Jahnke	San Diego	NSF 8
01/20-02/22	Deep Tow East Pacific Rise	F. Spiess/ K. MacDonald	Punta Arenas	NSF 35
02/28-03/30	Biology; with Alvin Galapagos Spdg. Ctr	J. Childress	San Diego	NSF 35
04/16-04/28	Bottom Lander Southern California	R. Jahnke	San Diego	NSF 13
06/18-07/23	Tropic Heat Equator at 140° W	R. Knox	Honolulu	NSF 34 NOAA 4
07/26-08/10	Ocean Chemistry NW of Hawaii	H. Craig T. Hayward	Honolulu	NSF 16 UC 1
08/13-09/08	Project PRPOOS North of Hawaii	R. Eppley	Honolulu	NSF 30
09/14-10/02	Project ISHTE North of Hawaii	L. Olson (UW)	Honolulu	Sandia 22 UC 1
10/06-11/10	Benthic Biology Mid-Pacific Mtns	K. Smith/ P. Williams/C. Reimers	Honolulu	NSF 38
11/11-11/20	Transit		San Diego	NSF 10
11/21-12/02	UPKEEP		San Diego	
12/03-12/23	ARGO/JASON East Pacific Rise	R. Ballard	Acapulco	ONR 22
12/26-01/14/86	Transit		Punta Arenas, Chile	NSF 7
		1986		
12/26-01/14/86	Transit			NSF 15
01/18-02/22	Phya. Oc. Argentine Basin	W. Nowlin (TAMU)	Punta Arenas	NSF 40
02/27-04/01	Proj. AMERIEZ Weddell Sea Ice Edge	Ainley (Pt. Reyes)		NSF/DPP 38
04/05-04/29	Transit	--	Punta Arenas San Diego	NSF/DPP 26
05/06-06/09	Benthic Biology Patton Escarpment	Smith/Williams/Reimers	San Diego	NSF 35
06/13-06/16	Thruster tests San Diego Trough	Spiess	San Diego	NSF 4
06/17-09/01	BIENNIAL OVERHAUL		San Diego	
09/02-09/05	Thruster tests San Diego Trough	Spiess	San Diego	NSF 4
09/11-10/14	Project ISHTE No. Pacific Gyre	Percival (Sandia)	San Diego	Sandia 32 UC 2
10/18-11/21	Benthic Biology Patton Escarpment	Smith/Williams/Reimers	San Diego	NSF 35
11/25-12/24	Geol/Geoph Middle America Trench	G. Moore/B. Lewis	San Diego	NSF 30



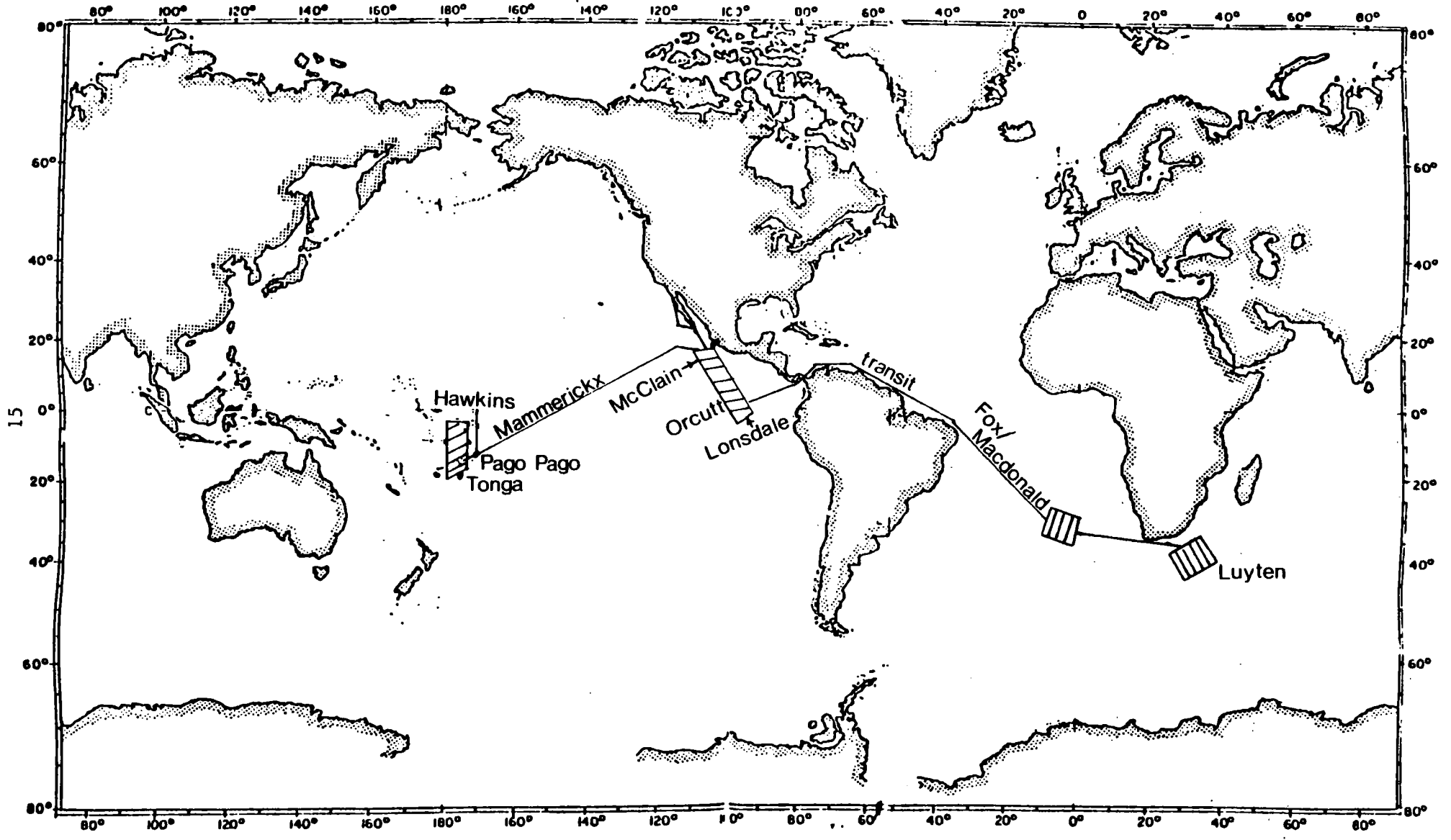
R/V THOMAS WASHINGTON 1986

Schedule A-1:				
01/03-01/21	Geochemistry Havre Trough	H. Craig	Auckland	NSF 20
01/23-02/12	Geochemistry/SeaBeam Lau Basin, Woodlark Basin; stop at Espiritu Santo	H. Craig	Rabaul	NSF 23
02/14-02/20	Transit	--	Paleu	NSF 7
02/23-03/25	Benthic Microbiology Philippine Trench, Sulu & Celebes Seas	A. Yayanos	Singapore	NSF 34
03/29-04/27	Geology & Geophysics Bengal & Ceylon Fans	J. Brune		NSF 24
05/01-05/23	Area Geoph. Survey 90-East Ridge	J. Curray	Colombo	NSF 9
05/26-06/17	Area Geoph. Survey Broken Ridge	J. Curray	Cocos/Keeling	ODP 25
06/21-07/17	SeaBeam, Hydrography Australian margin, & Transit	J. Penrose (WAIT)	Fremantle	ODP 25
07/20-08/13	Geology, Phys.Oc. Yellow Sea	J. Milliman (WHOI)	Nagasaki	Aust 10 NSF 20
			Nagasaki	NSF 27
Alternative A-1:				
08/16-08/28	Transit		Majuro	NSF 14
08/31-10/04	Geol./Geoph. Line Island	E. Winterer	Honolulu	ONR 34
10/07-10/16	Transit	--	San Diego	NSF 11
11/04-12/12	SeaBeam Eastern Equatorial Pacific	J. Mannerickx or Vanko	San Diego	NSF 38
Alternative A-2:				
08/16-09/08	Transit	--	San Diego	NSF 25
10/09-11/13	SeaBeam Mathematician Ridge	J. Mannerickx	Manzanillo	NSF 38
11/18-12/22	SeaBeam Nazca Plate	P.Vanko(Georgia)	San Diego	NSF 37
Alternative B:				
12/09/85-01/06/86	Petrology SeaBeam, Lau Basin	J. Hawkins	Tongatabu	NSF 7
01/09-01/27	Geochemistry Havre Trough	H. Craig	Auckland	NSF 20
01/29-02/18	Geochemistry/SeaBeam Lau Basin, Woodlark Basin; stop at Espiritu Santo	H. Craig	Rabaul	NSF 23
02/20-03/06	Transit	--	Singapore	NSF 16
03/10-04/08	Geology & Geophysics Bengal & Ceylon Fans	J. Brune		NSF 24
04/12-05/03	Area Geoph. Survey 90°-East Ridge	J. Curray	Colombo	NSF 9
05/06-05/28	Area Geoph. Survey Broken Ridge	J. Curray	Cocos/Keeling	ODP 25
05/29-07/10	Out of Service		Fremantle	ODP 25
07/11-08/06	SeaBeam, Hydrography Australian margin, & Transit	J. Penrose (WAIT)		Aust 10
08/09-09/02	Geology, Phys.Oc. Yellow Sea	J. Milliman (WHOI)	Nagasaki	NSF 20
09/05-09/12	Set instruments Near Okinawa	M. Wimbush (URI)	Nagasaki	NSF 27
09/15-10/15	Benthic Microbiology	A. Yayanos	Subic Bay	NSF 7
			Subic Bay	NSF 34

Philippine Trench, Sulu, Celebes Seas or Singapore				
Alternative B-1:				
10/19-11/18	Area Geophysical Survey			
	Banda Sea	E. Silver	Subic Bay	ODP 34
11/19-12/31	Out of Service		Subic Bay	
Alternative B-2				
10/16-11/21	Out of Service		Singapore	
11/22-12/08	Transit	--	Mombasa	ONR 18
12/10-01/09/87	Phys. Oc.	R. Fein (RSMAS)	Mombasa	ONR 34
	Somali Current	or B. Warren (WHOI)		

1985

1



University of Texas at Austin

Tentative 1986 cruise of possible interest to ODP

F.H. Moore

4/4 - 4/27

Costa Rica
3-D Seismic Imaging

Shipley

The following revised schedule for the R/V THOMPSON is hopefully final with the exception of possible minor changes:

Oceanographic Research	Lewis & Delaney	ONR
Dep: 31 Mar 86 Seattle		
Arr: 09 Apr 86 Newport	Oregon Coast-Geop.	10
Oceanographic Research	Jumars & Nowell	NSF
Dep: 11 Apr 86 Newport		
Arr: 25 Apr 86 San Diego	N. Calif. Coast-Geop.	17
Transit		NSF
Dep: 29 Apr 86 San Diego		
Arr: 04 May 86 Manzanillo	Transit	5
Oceanographic Research	Langseth	NSF
Dep: 05 May 86 Manzanillo		
Arr: 01 Jun 86 Puntarenas	Panama Basin-Geo.Chem.	30
Oceanographic Research	Murray	NSF
Dep: 04 Jun 86 Puntarenas		
Arr: 28 Jun 86 Puntarenas	Panama Basin-Biological	27
Oceanographic Research	Moore & Lewis	NSF
Dep: 01 Jul 86 Puntarenas		
Arr: 28 Jul 86 San Diego	W. Coast Central America	31
Transit		NSF
Dep: 31 Jul 86 San Diego		
Arr: 03 Aug 86 Newport	Transit	4
Oceanographic Research	Sanford	NSF
Dep: 05 Aug 86 Newport		
Arr: 13 Aug 86 Newport	Wash. Coast-Physical	10
Oceanographic Research	Caldwell	NSF
Dep: 15 Aug 86 Newport		
Arr: 24 Aug 86 Newport	Oregon Coast-Physical	12
Oceanographic Research	Kadko	NSF
Dep: 27 Aug 86 Newport		
Arr: 20 Sep 86 Seattle	Endeavour Ridge	26
Oceanographic Research	Gregg	ONR
Dep: 26 Sep 86 Seattle		
Arr: 26 Oct 86 Seattle	N.E. Pacific-PATCHEX	30
Out of Service		
Dep: 27 Oct 86 Seattle		
Arr: 31 Dec 86 Seattle	Drydock-Overhaul	
Total Operating Days		257

Regards,

Jeffers

Woods Hole Oceanographic Institution
Tentative 1986 Cruises of possible interest to ODP

ALVIN

3/15 - ca.4/30	Kane, F.Z./TAG Hydrothermal diving	Karson/Thompson/Bryan
6/8 - 7/25	W. N. Atlantic Argo/Jason technology	Ballard
7/30 - 8/20	S. Grand Banks Turbidites	Shor
9/29 - 10/15	Panama Basin Deep sediment traps	Honjo/Aller

KNORR

4/10 - 4/23	Hebble Area	Hollister
7/7 - 7/21	Hebble Area	Hollister
9/2 - 9/10	Hebble Area	Hollister

OCEANUS

11/19 - 12/20	Kane F.Z. Microearthquakes or with OBS's Possible dredging.	Purdy
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CRUISE REPORT:
SINGLE CHANNEL SEISMIC PROFILING ON GEOTROPEX 85

Objectives:

The primary objective of the Single Channel Seismic (SCS) profiling conducted on GEOTROPEX 85 was to collect final site survey data in support of the upcoming Ocean Drilling Program (ODP) Leg 108. Such site survey data serves to better define the geologic setting of potential drill sites as well as to provide the information necessary to evaluate potential safety hazards (e. g., gas) that may be associated with a particular drill site. ODP Leg 108 (March - April 1986; M. Sarnthein and W. Ruddiman, co-chief scientists) is scheduled to drill 11 sites in a north-south paleoenvironmental transect from 23° N to 2° S. The drill sites will traverse a number of oceanographic and atmospheric boundaries, presenting a unique opportunity to establish a detailed record of surface and deep-water paleo-circulation patterns and to compare these patterns to the record of zonal and meridional paleo-winds extracted from the core data.

Six of the eleven proposed Leg 108 sites were surveyed on GEOTROPEX 85 including four sites (EQ3 - EQ6) that were connected with a continuous seismic line. The seismic data thus permits the correlation of events between drill sites, the extrapolation of drilling related results beyond the drill site, and, can serve as the basis for understanding the lateral variability between drill sites. The seismic line from EQ3 to EQ6 also traversed a depth range of over 2000m (in less than 350 km) providing the opportunity to examine variations in acoustic stratigraphy and mass wasting processes as a function of depth. A final, ancillary objective of the seismic program on GEOTROPEX 85 is to see if a series of seismic horizons identified over a large area of the equatorial Pacific and thought to represent global paleoceanographic events (Mayer, et al., 1985) can be found in the equatorial Atlantic.

Initial (Shipboard) Results:

Despite the disappointing quality of the seismic profiles collected on GEOTROPEX 85, most of our objectives were still met. The records will clearly aid in the selection of drill sites (indeed, even our cursory shipboard evaluation of the records has led us to recommend the relocation of several of the sites), will serve to establish the relative safety of the proposed sites and, will surely prove useful in studies of regional and global seismic stratigraphy.

SLR-1:

Of the three crossings of SLR-1, the third (E-F; when the three channels of the streamer were put into series) is, by far, the most useful. While acoustic basement is not discernable on this profile, penetration of more than 1 second was achieved. The seismic section is characterized by alternating zones of relatively high amplitude, closely spaced reflectors, and, zones of relative transparency. The sediment-water interface is characterized by a double reflection. While this double reflection is consistent with one seen in many areas on the 3.5 kHz profiles, the ubiquitous nature of it on the airgun and watergun profiles implies that it is an artifact of the seismic system (probably the surface ghost as seen by a fairly deep streamer). Slightly upslope of SLR-1 is a steep sided slump scar resulting in a 40m depression. The disruption of sediment is limited to the uppermost section indicating that the slump was a fairly recent event. This interpretation is substantiated by the work of Sarnthein et al (1983) who have dated the slump to have occurred between 20,000 and 25,000 years ago. Beneath the seafloor reflection is a 175 msec thick zone of fairly transparent sediment with a hint of low amplitude, closely spaced reflectors. This unit is followed by a 125 msec thick zone of higher amplitude, closely spaced reflectors and then a large (about 300 msec thick) transparent section. The deepest discernable acoustic unit is a 400 msec thick zone of high amplitude, but more widely spaced reflectors. This change in reflector spacing is probably the result of the attenuation of higher frequencies (and the subsequent loss of resolution) deeper in the section. The spacing of the reflectors remains fairly uniform throughout the line (except for a zone between 6.0 and 6.1 seconds at 2230 - 2300 hours which may represent an older slump event) implying that sedimentation rates (laterally) have been fairly constant in this small region.

EQ3 - EQ6:

The transect of the Sierra Leone Rise from about 2700 m (EQ3) to about 4700 m (EQ6) presents an intriguing record of the influences of depth and basement topography on the sedimentation history of the equatorial Atlantic. The top of the Rise (EQ3) shows a thick sedimentary sequence that has accumulated at least 1 second worth of sediment. Basement is first visible at about 0545 (18 Oct) approximately 1 second beneath EQ3 and can be traced almost continuously to the end of the profile past EQ6. The basement topography is extremely rugged and complex with the pelagic sediments attempting to mirror basement but failing to do so as the surficial topography presents a much attenuated image of the basement relief. Despite this relief and several outcrops, or near outcrops of basement, the seismic section is fairly consistent from 0530 (near EQ3) to 1700 18 Oct (past EQ4). There is also an overall trend of a thinning section (implying a decrease in sedimentation rate) between these two points.

The acoustic section in the region between EQ3 and EQ4 is characterized by subtle, fairly closely spaced reflectors in the upper 200 msec., followed by a 100 msec. thick transparent zone, and then, a very characteristic chaotic series of reflectors (e. g. at 3.5 sec TWT at 0530 hours 18 Oct). The chaotic, hyperbolic structure of these horizons suggests a rugged surface and implies a period of intense erosion that may have formed mudwaves or other sedimentary bedforms. This chaotic surface can be traced down the Rise to a depth of about 4200 m (1700 hours 18 Oct) though it is much closer to the seafloor here, again indicating slower sedimentation rates with increasing depth. A 250 msec. thick transparent zone underlies the chaotic sequence between Sites EQ3 and EQ4 followed by a series of strong reflectors (e.g. at 4.15 sec TWT 0500 hours 18 Oct.) that can also be traced down to the 4200 m level of the Sierra Leone Rise.

Between 1700 and 1900 hours (18 Oct) a large, apparently basement, peak rises more than 500 m above the general slope of the Sierra Leone Rise. This peak terminates the fairly consistent seismic character found between sites EQ3 and EQ4 (and described above). Below (down the Rise) this large peak, the basement topography is still extremely rugged (perhaps even more rugged than higher up the Rise) but the seismic character of the sediment accumulated between basement highs is characterized by numerous closely spaced reflectors that continue for the entire thickness of the section (e. g. EQ5 and in the basin near EQ6; as presently located EQ6 sits on a basement high -- see next section). The seismic signature of the inter-high sediment accumulations is characteristic of pelagic environments that have not experienced major erosional events. It should be noted however, that the close examination of the sections near EQ5 and EQ6 reveals several subtle indications of what might be interpreted as hyperbolic reflections or other indications of sediment disruption. It is difficult to speculate on the significance of these differences at this time, but hopefully the results of the drilling combined with the processing of the seismic records will shed some light on this matter.

EQ9:

The six hour, north-south survey of EQ9 reveals an extremely complex region with basement lying 0.3 to 0.4 seconds below the seafloor. This rugged basement relief has a strong influence on the seafloor topography. Small sediment ponds between basement highs are characterized by, medium amplitude, relatively closely spaced, reflectors. The records at EQ9 are of particularly poor quality, due in part, to winch tests that were being carried out during the survey. The proposed position of EQ9 appears to be very close to a basement outcrop and should be reconsidered (see discussion below).

Implications for Future Research:

The most immediate ramification of the GEOTROPEX 85 seismic data is

Batch job 139 16458 completed on 1-NOV-1985 11:29
the role it will play in the final selection of ODP Leg 108 drill sites. While the GEOTROPEX 85 seismic lines indicate no obvious safety problems (considering the geologic environment) with the proposed sites, they do, however, suggest the relocation of several of the sites so as to better meet the drilling objectives. (SLR-1) as seen in profile E-F, is located directly beneath a large slump escarpment. While the sediments at SLR-1 do not appear to have been disturbed, it may be safer to relocate SLR-1 several kilometers upslope, above the slump, in order to avoid redeposited material. (EQ3) and (EQ4a) appear to be well located although some thought may be given to moving EQ4a slightly deeper where the section appears to be more expanded. (EQ5) seems relatively straightforward although the displacement of the site several kilometers to the NW (at about 2315 hours 18 Oct) would place it in a less disturbed part of the section. EQ6 is located above a small sedimentary basin between two basement peaks; a larger drilling target can be found several kilometers south east at about 1300 hours on 19 Oct. (EQ9) presents the most difficult problem for site selection. The area is extremely rugged and complex; where presently located EQ9 appears to very close to a basement outcrop. Perhaps a better location would be at 0650 hours, 0800 hours, or 0830 hours (28 Oct.) where at least 200 msec. of undisturbed section is clearly evident.

The seismic data collected on GEOTROPEX 85 has been recorded on analog tape and efforts will be made to digitize these tapes. If they can be generated in digital form, the records may then be processed to try to improve signal to noise ratios. The combination of processed seismic sections and detailed drill results should provide an exciting opportunity to examine the geologic significance of the seismic record in this region and to understand how the seismic record in this area fits into the evolving framework of seismically detectable global oceanographic events.

A

**SUMMARY OF SITE SURVEY STATUS
INDIAN OCEAN**

**J.W. Peirce
December 16, 1985**

NOTE: All drilling packages are discussed, from west to east. Those shown in parentheses were not on the schedule arising out of the San Francisco IOP Meeting. The names in parentheses indicate the SSP member responsible for review and assessment (if necessary)

1. SWIR (Langseth)

A site survey is absolutely essential to document enough sediment section (30 m) for spudding in.

The WHOI site survey proposed (rejected) has been reviewed and comments relayed back to Dick. It will be resubmitted with Dave Gallo (URI). A funding decision by NSF will not be shown until late March.

2. Mascarene Fossil Ridge (Langseth)

A site survey is essential for drilling.

A short survey (10 days, SCS, mag, gravity) proposed by Schlich on Marion Dufresne, but proposal not yet accepted. 50% chance of going ahead. Proposal will be sent to Peirce/Brenner. Schlich will know timing in June '86., but several windows are open in late 1986/early 1987. Sediment thickness is about 100 m.

3. (Davie Ridge) (Mauffret)

The French will be submitting a revised drilling proposal.

Synthesis still needed.

SSP will have to approach Mobil for release of data if this site is given higher priority.

4. (Somalie Basin) (Langseth)

Existing data is old SCS which does not image basement well. CGG has excellent MCS which does show deep basement, but it is unavailable.

An MCS survey is essential if this site is to be drilled.

5. Red Sea (Mauffret)

Critical need for submission of data to Data Bank because many uncertainties exist as to availability.

- a. 18°N or 17°N: Sea floor spreading initiation and possible old brines.
No bathymetry or seismic coverage.
Deep tow data (Lonsdale) exist.
- b. (Atlantis II Deep): Metalliferous hot (63°C) brines.
Seabeam (French), SCS (US), and MCS (Red Sea Comm.)
Numerous gravity cores.
Deep magnetometer data.
Deep seismic (?)
Gloria sidescan (?)
Geotechnical data, water pH critically needed if drilling here becomes a priority. May be impossible to set reentry cone in very soft bottom.
- c. Nereus Deep: Cold (30°C) brines.
Seabeam (French, Pautot) and SCS and heat flow (Bonatti)
Deep tow data (Lonsdale) exists.
Suspected sediment thickness is less than 30 m.
Piston cores and geotechnical data essential.
- d. Main Trough (24° 21'N) French Seabeam, crossing SCS, and coring. Detailed bathymetry (Baecker).
- e. Bannock Deep: Embryonic ocean crust; no hot brine.
SCS (Italian).
Seabeam, more SCS needed.
- f. Mabahiss Deep: Northern spreading center. Two sites to look at mature/age of volcanics. Existing data includes Seabeam, high resolution crossing SCS, magnetics, gravity, coring and dredging (all French).

- g. Shaban Deep: Embryonic oceanic crust with hot brine. Existing data include Seabeam, SCS, coring and dredging (all French). One Saudi MCS line, but may not be available. One MCS line may be needed.
- h. Zabargad Island: Exposed ultramafics. 500 m water depth, 200 m sediment thickness at proposed site. No data known to SSP. Bonatti has submitted an NSF proposal.
- i. Port Sudan Delta: No seismic or bathymetry except that at Red Sea Commission that includes SCS, MCS, gravity, detailed bathymetry and coring. Doubt exists regarding releasability. Seabeam may be required.

No data in support of Red Sea drilling ideas has been submitted to the Data Bank. It is essential that data be made available at the earliest opportunity for preliminary assessment.

Piston cores with accompanying geotechnical data will be required for all reentry sites as science operator needs these to set cones in these unknown environments.

SSP (Mauffret) will put together a site by site summary of site survey status by April. The onus is on the Red Sea Working Group to submit data as soon as possible to Data Bank.

6. Neogene Package (Suyehiro)

Prell's site survey proposal for the Oman margin and Owen Ridge has been modified to include Seabeam, in response to the suggestions of the SSP. The modifications have been accepted and funded by NSF.

The eastern distal Indus Fan is riddled with channels. The outer fan may be too sandy for decent recovery. Therefore, Prell is proposing to move the one Indus Fan hole to a western mud-fan location selected initially on basis of existing SCS and 3.5 KHz.

In order to meet the scientific objectives, small channels are not a problem, but large channels must be avoided, particularly at depth.

Prell will try to include some survey on his cruise. He is also coordinating with Germans (Sonne with Seabeam, 3.5 KHz) and a French high resolution SCS cruise (Bellaiche on Marion Dufresne) in the general area.

The tentative Gloria survey on Darwin will be too late for site planning.

For the hominid sites, high resolution SCS and 3.5 KHz is essential. Data support for Gulf of Aden site is very weak. The Kenyan site is located on MCS, so high resolution SCS needed.

7. (Makran) (Duennebier)

Environment E. Heat flow considered essential by SSP. Darwin cruise appears to meet all other requirements, but it is very late for site evaluation. Peirce has written to Leggett recommending that heat flow be included.

8. Mascarene Plateau (Duennebier)

Very poorly covered area. Major survey needed. Duncan will write to Alistair Baxter to try for survey of sites 1,2,3 in proposal #88B on Darwin in March/April, 1986.

Some oil company data summarized by Myerhoff (AAPG 65, 1344-1347, 1981).

9. North Kerguelen (Peirce)

Core and dredge locations are not yet in Data Bank. Schlich/Le Claire will provide. Because of chert in I2 horizon, reentry at site KHP-3 or 3A will be required.

Velocity scans on MCS at Data Bank are illegible, and only a few sonobuoys exist. Schlich will provide current velocity information plus more from current reprocessing at KHP-3/3A. Careful estimates of depth of basement should be made.

No sidescan or Seabeam exists. Although one is normally required for passive margins, either will be impossible to obtain. The SSP does not consider either critically needed as long as sites are not positioned on slopes.

There are no 3.5 KHz data in the area. This is unfortunate for paleoenvironmental objectives.

10. South Kerguelen/Prydz Bay (Suyehiro)

Australian MCS data will not be done until 2nd quarter, 1986. Howard Stagg (BMR) is contact. No high resolution data available as Australian 3.5 KHz was no good. This is unfortunate for paleoenvironmental objectives.

Marion Dufresne will be collecting MCS and sampling in early 1986. Locations are coordinated with Australians.

Detailed velocity analysis over proposed sites will be required to determine sediment thickness.

At Prydz Bay there is Australian MCS; Anderson has copies. Intermittent BSR-like reflector reported near site K-2. Japanese will be in the area in 86/87 and Anderson reported to be planning work there.

11. Intraplate Deformation (Peirce)

Weissel has Conrad cruise (Seabeam, high res. SCS, heat flow) planned for summer, 1986. This will provide regional perspective and should allow sites to be chosen on the back side of folds to date the onset of thrusting.

To drill the high angle reverse faults, bottom navigated heat flow and site specific Seabeam/seismic will be needed. Sclater/Curray will write a proposal to do same on Washington in 1987.

12. Ninetyeast Ridge (Peirce)

No data exists to support currently proposed locations. A site survey is essential for drilling.

Curray will be crossing northern site on Conrad in summer 1986 and will try to get some data.

Sclater/Curray will write a proposal to do site surveys on the Washington in 1987. Seabeam will be essential for the sites off the crest of the ridge and desirable for the sites on the ridge. Magnetics profiles down the west side of the ridge are needed to answer regional tectonic ambiguities. Some Wilkes data exist in this regard, but have not been interpreted.

13. Broken Ridge (Langseth)

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 (or perhaps large source SCS), 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.

Weissel has a site survey proposal approved by NSF, pending availability of funds. K. Mackenzie has a refraction proposal submitted for work on this cruise. High resolution SCS, 1000 cu. inch airgun, gravity, mag included.

At its Tokyo meeting, SSP considered MCS essential, but a strong case can be made for the large source SCS instead if it can be demonstrated that basement can be well imaged by such a source. Seabeam may be needed for sites designed to sample rift section. As chert can be expected in the Cretaceous section, adequate site survey data to support reentry (including cores) are needed for deeper holes.

14. (SEIR) (Duennebier)

Regional coverage is sparse. Site specific data do not exist. No further surveys planned.

KHP-5 (Neogene only) is the only surviving component of this transect.

15. Argo A.P./Exmouth Plateau (Weigel)

The Australians have a fair amount of regional data in the Argo Abyssal Plain and BMR has scheduled two surveys during the first half of 1986. Data collection similar to that done on S. Kerguelen. This site survey necessary to position site to get oldest possible sediments on unequivocal oceanic crust (M-25).

The Exmouth Plateau is one of the most thoroughly explored passive margins in the world. A joint BMR/LDGO deep crustal study (Falvey/Mutter) (MCS, expanding spread profiles) is scheduled for March/April, 1986, followed by a second BMR leg (Exon, Williamson) with 3000 Km MCS and dredging.

Falvey will tell Williamson to send a preliminary data package to Gradstein (with reproducible originals to Data Bank) for preliminary look by PPSP as safety concerns exist at sites EP-IC/ID and EP-5. Seismic inversions at EP-IC/ID may be needed.

16. Otway Basin (Duennebier)

Excellent MCS and wells exist on shelf and are on open file. Williamson is Australian contact. Digital navigation available.

Processing of 1984 MCS by BMR underway, and more optimal site choices likely to arise. Crossing seismic lines and high resolution SCS will be needed. 1987 followup cruise planned by Australians for site specific work.

TENTATIVE AGENDA FOR SSP MEETING

22-24 April, 1986

Pacific Geoscience Center
Sydney, B.C.
Canada

1. PRELIMINARY MATTERS
Introduction, schedules, minutes, etc.
2. REPORTS
 - a. PCOM (Robinson)
 - b. JOIDES Office (Mayer)
 - c. Science Operator (Kidd)
 - (1) Geotechnical measurements for re-entry.
 - d. Data Bank (Brenner)
 - e. IOP meeting (Peirce)
 - f. WPAC meeting (Langseth)
3. SITE SURVEY ASSESSMENTS
 - a. Barbados North (Louden or Peirce)
 - b. East Pacific Rise (? for Orcutt)
 - c. Peru Trench (Mauffret)
 - d. Weddell Sea (Weigel)
4. SITE SURVEY STATUS/PRELIMINARY ASSESSMENT
 - a. Sub-Antarctic (Weigel)
 - b. SWIR (Langseth)
 - c. Mascarene Fossil Ridge (Langseth)
 - d. Davie Ridge (Mauffret)
 - e. Somali Basin (Langseth)
 - f. Red Sea (Mauffret)
 - g. Neogene Package (Suyehiro)
 - h. Makran (Dunnebieir)
 - i. Mascarene Plateau (Dunnebieir)
 - j. N. Kerguelen (Peirce)
 - k. S. Kerguelen/Antarctic (Suyehiro)
 - l. Intraplate Deformation (Peirce)
 - m. Ninetyeast Ridge (Peirce)
 - n. Broken Ridge (Langseth)
 - o. SEIR (Dunnebieir)
 - p. Argo/Exmouth (Weigel)
 - q. Otway Basin (Dunnebeir)

5. WESTERN PACIFIC

Detailed agenda to be prepared by Langseth after WPAC meeting.

6. CENTRAL/EAST PACIFIC

Overview of NORPAC/INPAC (Chase)

7. RISER DRILLING REQUIREMENTS (Kidd/Robinson/Peirce)

8. NEXT MEETING

Villefranche?

October or November?

1985 ANNUAL REPORT OF SITE SURVEY PANEL

J.W. PEIRCE, CHAIRMAN

DECEMBER, 1985

During 1985 the Site Survey Panel (SSP) met in June in Halifax and in November in Tokyo.

In order to provide a consistent set of guidelines for the planning and assessment of site surveys, the SSP finalized and refined the Site Survey Data Standards matrix (p.65 in the special issue of JOIDES Journal). Further amplifications to it are being written, based on our experience from hands-on assessment of site surveys this year.

The site survey data for the Chile Triple Junction was formally reviewed in April and found to be clearly inadequate. As no additional site survey was possible, plans for drilling there have been dropped.

At the June meeting the SSP agreed to take on the responsibility of formally assessing the site survey data sets for each drilling package, beginning with Leg 110. Because of the extra work load of this responsibility, the SSP requested a second member from the U.S. (Langseth and Duennebier have now replaced Orcutt) and have asked the U.S. and Japan to fill their vacant alternate positions.

To date, preliminary assessments have been done for the Peru Trench, Weddell Sea and North Kerguelen. Shortcomings have been identified, and the SSP and the Data Bank are working with the parties involved to get these gaps filled.

Advance input on site survey plans has been given for the Sub-Antarctic, Southwest Indian Ridge, Neogene Package, and Makran areas. Detailed site by site assessment forms are compiled for mature drilling proposals which have completed site surveys with the data deposited in the Data Bank. A general summary is available for the site survey status in the Indian Ocean and a panel member has been assigned responsibility to follow each major drilling package. A similar summary is in the initial stages of preparation for the Western Pacific.

The Data Bank budgeting situation is a matter of great concern to the SSP. The cuts which were imposed in FY1986 were illogical in concept and arbitrary in administration. The result will be that the Data Bank will not be able to support the ODP community to the extent demanded, and most of the cuts will be related to requests for drilling proposals and for post-cruise science. First priority needs (SSP, PPSP and Science Operator) will not be affected directly.

The SSP considers the maintenance of a well organized, centralized data base to be essential to optimize the science of ODP. The ODP Data Bank must be funded adequately for SSP and PPSP to function properly. The SSP feels that PCOM has not supported the Data Bank as strongly as it should have in 1985. We trust that more support for the Data Bank will be forthcoming from PCOM and the ODP community now that the JOI Review Committee has submitted its positive report.



JWP/ms
SSP

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Dr. James Baker
President, JOI Inc.,
1755 Massachusetts Avenue N.W.,
Washington, D.C. 20036,
U.S.A.

December 17, 1985

Dear Dr. Baker:

In June I wrote on behalf of the Site Survey Panel (SSP) to the Planning Committee (PCOM) to object to the arbitrary cuts made by JOI in the FY 86 budget for the ODP Data Bank. Please see the attached letter. In October PCOM asked that SSP, as the JOIDES Panel with supervisory responsibility for the Data Bank, communicate directly to JOI its advice with respect to budgetary matters of the Data Bank. This letter is in direct response to that request.

The attached reports summarize the recent activity of the Data Bank and its budgets for 1985 as funded, for 1986 as funded and with several options, and for 1987 as requested. Demands on the Data Bank increased substantially in 1985 with the resumption of drilling and the increased planning being done for future legs. Further increases in demand are expected in 1986 and 1987, partially fueled by the new need to prepare site survey assessment packages for the SSP. In spite of this trend and the recommendations for moderate increases in the salary budget by the JOI Review Committee for the ODP Data Bank, the budget for FY 1986 is less than that for FY 1985.

The impact of the cuts legislated by JOI will be the loss of 50% of the archivist's time after February 1, 1986. In practical terms this means that the Data Bank will be unable to meet more than about 60% of the anticipated requests for data in 1986. This will mean that only first priority requests (Science Operator, SSP and PPSP) can be assured of being met. Most other requests (usually for planning of drilling proposals or post cruise studies) will be deferred or refused.

The Site Survey Panel considers such cuts to be very prejudicial to the quality of science produced by the Ocean Drilling Program. We recognize that ODP is in a budget crunch, but we nevertheless request immediate restoration of the \$12,000 in FY 1986 necessary to maintain the present level of service.

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The FY 1987 budget proposed by the ODP Data Bank is designed to provide the minimal level of service recommended by the JOI Review Committee plus a 5% inflation allowance. The SSP has reviewed this budget and recommends in the strongest possible terms that it be fully funded. We remind JOI that in the new approach to drilling in ODP, site surveys are far more critical for optimizing the science than they were in DSDP or IPOD. The SSP and the PPSP are critically dependent on the Data Bank to do their jobs. Failure to provide the Data Bank with sufficient funds to do its job may seriously impair the effectiveness of both these panels.

Sincerely yours,



Dr. John W. Peirce, Prof. Geophys.
Chairman, Site Survey Panel

cc: Dr. Roger Larson, Chairman PCOM
Dr. George Claypool Chairman PPSP

Encl: Data Bank 1985 Activity Report
Data Bank Budget Summary

JWP/ms
JWP#2

ODP DATA BANK BUDGETS

	<u>FY 85 Funded</u>	<u>FY 86 Funded</u>	<u>w/100% Archivist</u>	<u>w/Archivist & Other Desired Increases</u>	<u>w/Archivist, Other Increases & 25% Gopher</u>	<u>FY 87 (Includes 25% Gopher)</u>
Salaries & Wages	\$ 62,000	\$ 58,540	\$ 64,740	\$ 64,740	\$ 67,240	\$ 72,500
Fringe Benefits	16,120	15,806	17,480	17,480	18,155	19,575
Materials & Supplies	4,400	4,600	4,600	4,600	4,600	4,800
Travel - Domestic	4,000	2,500	2,500	2,500	2,500	3,000
Travel - Foreign	1,000	3,624	3,624	4,800	4,800	4,200
Computer	5,800	5,522	5,522	5,522	5,522	5,800
Communication & Shipping	8,500	7,600	7,600	8,000	8,000	8,200
Other Services	12,500	12,000	12,000	13,000	13,000	13,500
Overhead	57,846	56,308	60,332	61,648	63,270	68,409
	<u>\$ 172,166</u>	<u>\$ 166,550</u>	<u>\$ 178,398</u>	<u>\$ 182,290</u>	<u>\$ 187,087</u>	<u>\$ 199,964</u>

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.



International Phase of
Ocean Drilling

JOIDES/ODP SITE SURVEY DATA BANK

Lamont-Doherty Geological Observatory
Palisades, N.Y. 10964
Telephone: 914-359-2900



ODP DATA BANK ACTIVITY

FY 1985

OCEAN DRILLING
PROGRAM

Data Supplied (FY 85)

Recipients listed by Institution/Country

<u>U.S.</u>	<u>#</u>	<u>% of Total Requests</u>
ODP	23	20%
LDGO	16	14%
UT	6	5%
SIO	5	4%
WHOI	5	4%
RSMAS	4	3%
URI	3	3%
DSDP	2	2%
Wireline Services	2	2%
TAMU	2	2%
OSU	2	2%
HIG	0	0
UW	0	0
Other U.S.*	<u>15</u>	<u>13%</u>
Total U.S.	85	73%
<u>Non-U.S.</u>		
France	7	6%
UK	6	5%
FRG	5	4%
ESF	5	4%
Canada	3	3%
Australia	3	3%
Other *	<u>2</u>	<u>1%</u>
Total non-U.S.	31	27%
Total Requests	116	100%

Includes:

- a) requests filled for panel members or site proponents from non-JOI institutions
- b) requests filled for co-chiefs from non-JOI institutions
- c) requests filled for panels (such as PPSP)
- d) requests filled for post cruise studies by non-JOI members of a site survey team
- e) exchanges with NGSDC, US Navy and other non-JOI data sources

Data Supplied, By Project (FY 85)

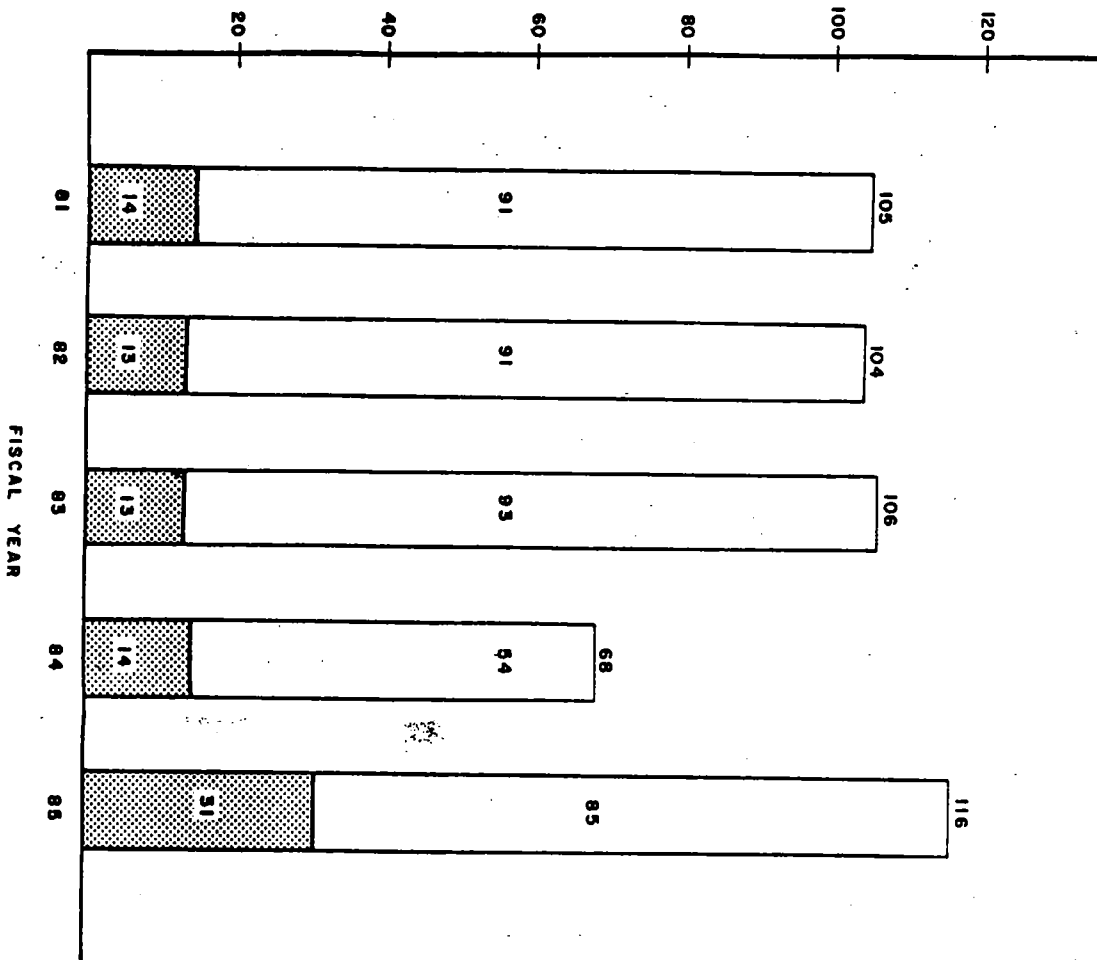
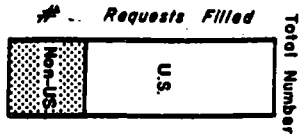
	<u>#</u>	<u>%</u>
Planning for Proposal Submission (panel or individual)	18	16%
Site Survey Planning/Evaluation	18	16%
Planning for Drilling	50	43%
Post-cruise studies	20	17%
Other *	<u>10</u>	<u>9%</u>
	116	100%

* includes:

- a) data exchanges
- b) data supplied for Initial Reports publications
- c) data supplied as service to foreign governments

Data Received, By Country (FY 85)

	<u>#</u>	<u>%</u>
US	17	46 %
Canada	8	22 %
France	4	11 %
FRG	4	11 %
UK	1	2.5%
Australia	1	2.5%
ESF	1	2.5%
Other	<u>1</u>	<u>2.5%</u>
Total	37	100 %



Requests Filled for Non-US Recipients, as Percentage of Total Requests

