

D R A F T
(August 16, 1992)

JOIDES SITE SURVEY PANEL MINUTES AUGUST 4-6, 1992

**Lamont Doherty Geological Observatory
Palisades, New York**

Members: Kidd, Rob (UWCC, Cardiff, UK) - Chairman
Camerlenghi, Angelo (Observ. Geofisico Sperimentale, Trieste, Italy)
Farre, John (EXXON, Houston, USA)
Kastens, Kim (LDGO, Palisades, USA)
Moore, Greg (HIG, Honolulu, USA)
Mountain, Greg (LDGO, Palisades, USA)
Tréhu, Ann (OSU, Corvallis, USA)

Liaisons: Allan, Jamie (Texas A & M, USA)
Ball, Mahlon (PPSP, USGS, Boulder, USA)
Blum, Peter (JOIDES Office, UTIG, Austin, USA)
Brenner, Carl (Site Survey Data Bank: LDGO, USA)
Watkins, Joel (PCOM, TAMU, College Station, USA)

Observers: Larsen, Birger (Danish Geol. Survey, Copenhagen, Denmark)
Malfait, Bruce (NSF, Washington)

Apologies: Loudon, Keith (Dalhousie Univ., Halifax, Canada)
Pautot, Guy (IFREMER, Brest, France)
Hinz, Karl (BGR, Hannover, Germany)
Hirata, Naoshi (Chiba University, Chiba, Japan)
von Herzen, Dick (WHOI, Woods Hole, USA)

Not available: Zverev, Sergey (IEP, Moscow, USSR)

EXECUTIVE SUMMARY

The charge for the August '92 Site Survey Panel Meeting was to provide PCOM with survey package assessments of 22 proposals that had been highly ranked and considered "drillable" by Thematic Panels and were on the FY'94 general ship track defined by PCOM in Spring 1993. SSP was to update its assessments following an August 1st deadline set by PCOM for data submission. PCOM required the updates to aid in selecting around 10 proposals from the 22 for a FY '94 prospectus.

Response by proponents to the August 1st deadline varied from poor to impressive and NO data package can be considered completely deposited in the Data Bank at this time. On the other hand, for 11 proposals the required data either exists or will be collected in the next few months (Table 1).

SSP assessments categorized 2 proposals (Costa Rica Accretionary Wedge and Madeira Abyssal Plain) as "in the Data Bank but minor items still to be deposited"; a major group of 7 proposals (Alboran Basin, East Equatorial Atlantic Transform, TAG Hydrothermal System, MARK Lithosphere, Mediterranean Spropels, North Barbados Ridge and Newfoundland Basin (Non-Volcanic Rifted Margins) as "required data exists but major items of existing data still to be deposited in the Data Bank"; and 2 proposals (Ceara Rise and Amazon Fan) as dependent on a cruise in August/September 1992 for completion of their data packages (Table 1).

SSP considers that the eleven proposals above could complete their data packages by end of 1992 for scheduling of the FY '94 program. Other proposals under consideration are dependent on further survey work and processing which would not allow for assessment until the end of 1993.

CONSENSUS ITEMS

SSP Consensus 1: Members generally agreed that the lead-time from data deadline to PCOM meeting had been set too short to ensure full compilation in the Data Bank and no time was available after SSP assessment for watchdogs to clarify specific items with proponents. A revision of this schedule is required for the next cycle (for FY '95 drilling).

SSP Consensus 2: There are no serious data deficiencies for Leg 149 (Iberia Abyssal Plain). A processed display of Lusigal 15 and possibly migrated Sonne profiles will complete this as a well documented package. SSP urges the proponents to compile all relevant track lines onto a single chart with locations of primary and alternate drill sites.

SSP Consensus 3: From the viewpoint of satisfying scientific objectives, the Leg 150 (New Jersey margin) data package is complete. However, the possibility of shallow gas pockets remains a safety concern for the sites in very shallow water. The proponents are urged to continue their pursuit of sparker and/or boomer data in the vicinity of their proposed shelf sites, to deposit copies of such data in the Data Bank, and to continue their ongoing dialog with PPSP about what characteristics in such data would indicate shallow gas. In addition, the proponents should examine any existing single channel seismic data around their proposed shelf sites, to evaluate the possibility of gas pockets in the depth window between 50-200 msec subbottom.

SSP Consensus 4: Much of the required data for the first NAAG Leg 151 drilling, including alternate sites, is now in the Data Bank. These minutes record where proponents are still being asked to submit minor items of site specific data. NAAG proponents should look for alternate sites at or near Yermak Plateau. Polarstern data for YERM-2, YERM-3 and FRAM-1A and 1B sites should be processed to clarify whether BSR's exist. The proponents of the GREEN sites are urged to select

drilling sites and to provide specific data packages.

SSP Consensus 5: Regarding Leg 152 (Volcanic Rifted Margins, East Greenland at 63°), high resolution MCS seismics and 12 kHz data collected next month should be adequate to complete the site survey package for this cruise, and the proponents are urged to submit those data to the Data Bank as soon as possible. They are also urged to collect 3.5 kHz data and cores, if possible. Although some current information will be acquired in the upcoming cruise, SSP urges proponents to assemble additional information on expected maximum currents on the shelf from existing physical oceanographic data to facilitate planning by the operations group.

SSP Consensus 6: From a data-availability point-of-view, Alboran Basin (323-Rev2) drilling could be scheduled for FY'94. The region contains a wealth of data of all types, and the proponents have made a serious effort to deposit a large quantity of good- to excellent-quality data in the Data Bank. Specific deficiencies should be remedied before drilling can potentially be scheduled (end of November 92). These include: (a) sites AL-3 and AL-4 are apparently not on crossing MCS lines, (b) seismic velocities have not been provided for sites AL-3 and AL-4, (c) the likelihood of encountering Messinian evaporites has not been addressed for sites AL-3 and AL-4, (d) the proposed re-entry site AL-1 needs data on geotechnical properties of the surficial sediments from a nearby core.

SSP Consensus 7: The Site Survey data package for Mediterranean Ridge (Phase I) (330-Rev) drilling, as submitted to the Data Bank, is not sufficient to satisfy SSP requirements. Some of the deficiencies can presumably be satisfied through access to existing data. Other deficiencies should be addressed in cruises planned for 1993. Collection, interpretation and submittal of these data to ODP will in the best case be completed by the end of 1993. SSP strongly recommends that the proponents carefully examine Target A requirements, as some sites, even after planned '93 field programs, will not meet SSP requirements. From the data status point of view, SSP does not recommend scheduling of this program for FY'94.

SSP Consensus 8: Revision 3 of the Eastern Equatorial Atlantic Transform drilling proposal (346-Rev3) includes a detailed section on data recently collected and processed. Nevertheless, the only data presently available at the Data Bank are the old versions of the MCS lines. The proponents are urged to submit the full data package which includes the 3.5 kHz, high-resolution seismics, multibeam bathymetry, gravimetry and magnetics as well as the recently collected MCS, refraction, and sampling data. Required site survey data exist, but definitive evaluation of the site survey data by the Panel can be made only after examination of the full package. Scheduling for FY'94 drilling is recommended only if these major items of existing data are deposited in the Data Bank (not later than SSP's new deadline 1 November 1992, to allow for assessment).

SSP Consensus 9: No data package has been received by the Data Bank in support of Benguela Current (354-Rev/354-Add) drilling, therefore SSP cannot evaluate the adequacy of existing data. Additional necessary site survey data are planned to be collected in April-June 1993. To meet drilling objectives, abundant high-resolution SCS and 3.5 kHz or Parasound profiles will be required to select sites unaffected by Neogene erosion and mass wasting. Collection, interpretation and submittal of this data to ODP may at best be completed by the end of 1993. This proposal is therefore not recommended for scheduling in FY'94.

SSP Consensus 10: SSP urges the proponents to complete the data package for TAG Hydrothermal System (361-Rev2) drilling and send it to the Data Bank. An attempt should be made to obtain 3.5 kHz data over the TAG area. Scheduling for FY'94 is only recommended if the requested items are deposited in the Data Bank (not later than SSP's new deadline 1 November 1992, to allow for assessment).

SSP Consensus 11: Although most of the necessary data for assembling a MARK (369-Rev2) site survey package appear to exist at present, these data have not yet been assembled into a complete

package. Data required are 1) data from the recent side-scan survey; 2) Alvin dive data in support of MK1; 3) videotapes and/or photographs of Nautila data for MK2; 4) copies of relevant existing MCS, SCS, and 3.5 kHz data; 5) annotated gravity and magnetic maps showing site locations. The package should be updated as additional data are collected. Scheduling of this program for FY'94 can be recommended if the required package is completed and deposited in the Data Bank (not later than SSP's new deadline 1 November 1992, to allow for assessment).

SSP Consensus 12: For the Vema F.Z. proposal (376-Rev2), VE-3 could be ready for drilling with data that are expected to be in hand within the coming month; however, critical sites VE-1 and VE-2 are dependent on data that will not be collected until 1993. SSP therefore does not recommend scheduling of this program for FY'94 drilling.

SSP Consensus 13: The combined site survey data package for VICAP-MAP (380-Rev3), as submitted to the Data Bank, is not sufficient to satisfy SSP requirements. For VICAP, the data package is far from complete. Four separate site survey cruises are planned for 1993 to address these deficiencies. SSP concerns remain regarding selecting sites not affected by mass wasting and about adequately depicting basement geometry and structure. Collection, interpretation, and submittal of this data to ODP may at best be completed by the end of 1993, and scheduling for FY'94 drilling is therefore not recommended. For MAP sites, addition of existing 3.5 kHz profiles across the proposed sites to the Data Bank will satisfy SSP requirements. MAP sites could therefore be recommended for drilling in FY'94 if the required 3.5 kHz items are deposited in the Data Bank (not later than SSP's new deadline 1 November 1992, to allow for assessment).

SSP Consensus 14: The Californian Margin proposal (386 Rev2) is incomplete at present. No original data were submitted. Completion of the required data package depends on a future, not-yet funded survey. It is therefore not recommended to schedule this program for FY'94 drilling.

SSP Consensus 15: A data set in support of the Ceara Rise proposal (388/388-Add) awaits data collection on the Curry-Mountain cruise in Aug./Sept. Assuming the cruise to be successful, a sufficient data package should be available in time to be assessed by SSP in November, and satisfy the requirements for potential scheduling for FY'94 drilling.

SSP Consensus 16: SSP reiterates its contention that suitable sites can be found from existing data to support all locations in the Mediterranean Sapropeis drilling transect (391-Rev), but the proponents still have considerable work to do to complete this data package. The August deadline for data submission was not met. Since no new surveys are envisaged for completion of the data package, the proposal is categorized with those for which "required data exist but major items are still to be deposited in the Data Bank", although presently it is the weakest proposal in this category in survey data terms. Scheduling for FY'94 drilling can only be recommended if the required items are submitted to the Data Bank no later than SSP's new 1 November 1992 deadline, which will allow for assessment and recommendation to PCOM.

SSP Consensus 17: The Costa Rica Accretionary Wedge (400/400-Add) data set is satisfactory for the current structural objectives and would be drillable in FY'94. If fluid objectives are included, a detailed heat flow survey will be required.

SSP Consensus 18: There are serious data deficiencies with each of the separate KT-boundary drilling proposals (403-Rev2 and 415-Rev, resp.), the most outstanding of which is a network of high resolution seismic profiles that image the stratigraphic level of the KT-boundary. This situation is not expected to change during 1993, and scheduling for FY'94 drilling cannot be recommended.

SSP Consensus 19: While the proponents have identified several data sets that may be adequate for the objectives of Western North Atlantic Drifts (404), no compilation has been sent to the Data Bank. A proposed coring and 3.5 kHz profiling cruise to the Blake-Bahamas Outer Ridge may be completed by Keigwin and Flood in 1993, and if it is successful, the drilling proponents will be

encouraged to integrate these data as fully as possible with existing 3.5, SCS, MCS, and side-scan imagery. SSP urges that Keigwin and Flood attempt to core sub/outcrops of known pre-latest Neogene strata, because these samples could help to evaluate the feasibility of extending the bottom-water objectives farther back in time. Completion of a data package depends on further data collection, possibly in 1993, and scheduling for FY'94 is therefore not recommended.

SSP Consensus 20: Almost all of the available high quality data set in support of the Amazon Fan proposal (405-Rev) has been submitted to the Data Bank. Minor items of existing data have been requested (3.5 kHz and final processing). A cruise in Aug.-Sept. will, if successful, complete this data package with the crossing SCS and 3.5 kHz lines requested by SSP before the December PCOM scheduling of FY'94. Concerns about potential gas at two sites have been passed on to PPSP and collection of the crossing lines here is strongly recommended for the survey cruise.

SSP Consensus 21: No data package has been received in the Data Bank in support of the North Atlantic Climatic Variability proposal (406). Proponents plan surveys in 1993 which will refine locations and should provide the necessary high-resolution seismics, 3.5 kHz and coring data. SSP categorizes this proposal as one in which most items of its data package are still to be collected and it is not recommended for scheduling for FY'94 drilling.

SSP Consensus 22: For the North Barbados Ridge drilling proposal (414-Rev), much of the required survey information is in the Data Bank file for leg 110. Additional data collected in February, 1992, and June, 1992, are awaited to complete the data package for the proposed project. Those data should be sufficient to complete the data package. This program is recommended for scheduling if the required items are deposited in the Data Bank by SSP's new 1 November 1992 deadline, to allow for SSP assessment prior to the PCOM Annual Meeting '92.

SSP Consensus 23: For the Newfoundland Basin sites of the Non-Volcanic Rifted Margins program (NARM-DPG), quality of the commercial MCS data and the recent Hudson profiles surpasses that of earlier data, and SSP encourages the proponents to consider relocating their sites on these lines. All pertinent data relating to new site locations should be submitted to the Data Bank as soon as possible. Minor deficiencies remain as follows: 1) Seabeam and 3.5 kHz data have been collected, but neither have been deposited with the Data Bank; 2) piston core information and surficial sediment characterization is too generalized to be useful for operations at NB-1; and 3) the velocity - travel time plot recently submitted would be more valuable if measured at each site individually, because velocities in the syn-rift section at NB-1, for example, may be substantially different from those at equivalent travel times below seafloor at NB-7A. There are a number of ways of deriving reliable velocity profiles at each of the proposed sites (extrapolation from nearby industry wells, MCS stacking velocities, sonobuoys, and recently acquired OBS data), and the proponents are encouraged to continue their efforts in this regard. This program is recommended for scheduling if the required items are deposited in the Data Bank by SSP's new 1 November 1992 deadline, to allow for SSP assessment prior to the PCOM Annual Meeting '92.

SSP Consensus 24: Regarding the Vøring margin sites of the Volcanic Rifted Margins program, most of the data are presently in the Data Bank. Several site-specific items, however, are still needed: MCS line C-167; crossing MCS lines for VM-5 and VM-6. SSP is not aware of existing MCS profiles that would satisfy the requirement for crossing lines, nor are we aware of plans to collect such data. This program is therefore not recommended for FY'94 drilling, unless the proponents deposit the required data in the Data Bank before SSP's new 1 November 1992 deadline, allowing for SSP assessment prior to the PCOM Annual Meeting '92.

SSP Consensus 25: The NAAG II leg is not considered for 1994 drilling according to OHP. However, many of these sites are alternates on Leg 151 (see SSP Consensus 5).

SSP Consensus 26: Hess Deep II is a "generic concept" program which cannot be scheduled for

FY'94 drilling because no proposal exists.

SSP Consensus 27: Sedimented Ridges II is a "generic concept" program which cannot be scheduled for FY'94 drilling because no proposal exists.

SSP Consensus 28: Once PCOM has finalized the content of the FY '94 Prospectus, SSP requests that it make proponents aware that a November 1st deadline has been set for submission of available data and schedule for completion of data packages in the Data Bank and that decisions on FY '94 scheduling will be based on their compliance with this data submission.

ACTION ITEMS

Action Item 1: SSP agreed that watchdogs (as assigned at this meeting) should wait for an E-mail message from Blum on the proposals chosen by PCOM for the FY'94 prospectus and then copy to those proponents the detailed assessments from this meeting. These proponents of potential FY'94 proposals must have complete data packages actually in the Data Bank by November 1st and this should be stressed to them. Any matrices prepared at this meeting should also be sent to proponents. This is the most urgent business for watchdogs. Proponents of proposals remaining outside the prospectus should also be contacted by watchdogs clarifying SSP's view of the status of their data packages.

Action Item 2: Kastens to now finalize SSP guidelines on requirements for "Tectonic Windows" drilling and to prepare a short discussion for submission with the table to the *JOIDES Journal*.

Action Item 3: Camerlenghi and Kastens to finalize date and location of the next SSP meeting (provisionally second week of April 1993 in Trieste, Italy). Once confirmed, Kidd to write to PCOM Chair requesting the meeting.

Site Survey Data Assessment, SSP, Lamont, Aug. 4-6, 1992

Highly ranked programs considered "drillable" in FY1994 by thematic panels, and which are along the general shiptrack defined by PCOM for FY 1994

Required Data Exist		Some Required Data Do Not Exist			No Proposal
1 A	1 B	2 A	2 B	2 C	3
In DB 1 Aug. 92 (minor items required)	Major items required in DB by 1 Nov 1992	Surveys to be completed before PCOM Ann. Mtg.	Surveys/process. could be compl. by end of 1993	No survey in place to be compl. by the end of 1993	No evaluation
400----/-Add Costa Rica Acc. Wedge	323-Rev2 Alboran Basin	388----/-Add Ceara Rise	330-Rev Med. Ridge (Phase I)	403-Rev2 KT-bound., G/Mex.	Hess Deep II
	346-Rev3 E eq. Atl. Transform	405-Rev Amazon Fan	354-Rev/-Add Benguela Current	415-Rev Caribbean KT/paleo.	Sed. Ridges II
	361-Rev2 TAG Hydro. System		376-Rev2 Vema F.Z.	NARM-DPG Vøring/SE. Greenland	
380-Rev3 *(VICAP-) MAP	369-Rev2 MARK Lithosphere		380-Rev3 *VICAP (-MAP)		
	391-Rev Med. Sapropels		386-Rev2 California Margin		
	414-Rev N Barbados Ridge		404---- NW Atl. Sed. Drifts		
	NARM-DPG Newfoundland Basin		406---- N Atl. Climatic Var.		
			NAAG-DPG N Atl.-Arctic gateways		

* Note that site survey assessments for VICAP-part and MAP-part of VICAP-MAP proposal differ

JOIDES SSP MEETING : LDGO, PALISADES

4-6 August, 1992

AGENDA

DAY ONE (AM)

1. PRELIMINARY MATTERS

Introductions (Kidd)
Logistics (Brenner)
April LDGO Meeting: Minutes changes and Matters Arising
Actions Items (Kidd)
PCOM/JOIDES + charge for this meeting (Blum/Kidd)
General Status of Submitted Data (Brenner)
New Watchdog Assignments

2. UPDATES ON SCHEDULED LEGS - FY'93

Leg 146 re: Santa Barbara Basin (Kidd)
Leg 147 re: Hess Deep Surveys (Kastens)
Leg 149 re: Iberian Abyssal Plain Deep Hole (Mountain)
Leg 150 re: New Jersey Margin Shallow Surveys (Kastens)
Leg 151 re: Atlantic-Arctic gateway (Larsen)
Leg 152 re: East Greenland Margin

3. BREAK FOR 'WATCHDOGS' TO EXAMINE SUBMITTED DATA

DAY TWO (PM) TO DAY THREE (PM)

4. POTENTIAL 1994 DRILLING:

1. Alboran Basin (323-Rev2) - Kastens
2. Mediterranean Ridge (330-Rev) - Farre
3. E. Equatorial Atlantic transform (346-Rev3) - Camerlenghi
4. Benguela Current (354-Rev/354-Add) - Farre
5. TAG hydrothermal system (361-Rev2) - Moore
6. MARK lithosphere (369-Rev2) - Tréhu
7. Vema Fracture Zone (376-Rev2) - Kastens
8. VICAP-MAP (380-Rev3) - Farre
9. California margin (386-Rev2) - Kidd
10. Ceara Rise (388/388-Add) - Kidd
11. Mediterranean sapropels (391-Rev) - Kidd
12. Costa Rica acc. wedge (400/400-Add) - Moore

13. KT-bound., Gulf of Mexico/Caribbean (403-Rev2/415-Rev) - Mountain
14. NW Atlantic drifts (404) - Mountain
15. Amazon Fan (405-Rev) - Kidd
16. N. Atlantic climatic variability (406) - Kidd
17. N. Barbados Ridge (414-Rev) - Tréhu
18. Non-volcanic margins II (NARM/Newfoundland Basin) - Mountain
19. Volcanic margins II (NARM/Vøring/E. Greenland) - Tréhu
20. North Atlantic Arctic Gateways II (NAAG-DPG) - Larsen
21. Sedimented Ridges II (SR-DPG) - Watkins
22. Hess Deep II - Kastens

SUMMARY OF POTENTIAL 1994 PROGRAMS

5. OTHER BUSINESS

Report to August PCOM (Kidd)
 Feedback to Proponents (Blum)
 Updates to SSP Guidelines (Kastens, Kidd)
 Panel Chairmanship/Membership (Kidd)
 Report to December PANCHM/PCOM
 Next meeting

1. PRELIMINARY MATTERS

Introductions (Kidd)

Kidd opened the meeting AT 0930, 4th August by welcoming new ESF representative Angelo Camerlenghi and noted that Birger Larsen, who was visiting WHOI would attend as "observer" particularly for discussion of NAAG assessments. Jamie Allan was attending as liaison for TAMU and Bruce Malfait (NSF liaison), would be present for Day 2 and 3 discussions. The timing of the August meeting was known to present difficulties for some members and apologies had been received from Loudon, Pautot, Hinz, Hirata and von Herzen. There was again no news of Zverev. This left a bare quorum of 7 members with the difficult task of picking up additional assessments for which they were not the assigned "watchdogs". There was a great deal of work to accomplish in the 3 days and Kidd was keen to keep business other than the FY '94 assessments to a minimum.

Logistics (Brenner)

Arrangements for viewing submitted data and meals were outlined.

April LDGO Meeting (Kidd)

Chairman asked for revisions to the draft minutes for the April SSP meeting other than those submitted by mail after initial distribution of the Draft Minutes to members. None were noted and the annotated version held by Kidd is taken as final. Action items from that meeting were reviewed, Kidd

reported PCOM's agreement to extend Kastens' term to the full 4 years and that she is Chairman designate to succeed Kidd when he moves to PCOM as from Jan. 1, 1993. All 16 action items had been completed and some are referred to in the updates of FY '94 assessments.

PCOM/JOIDES Office + Charge for this Meeting (Blum/Kidd)

Blum reported on JOIDES Office's work in synthesizing material on FY'94 programs for PCOM consideration so that a prospectus for FY'94 can be decided at the PCOM Meeting in Corner Brook next week. SSP's April '92 assessments are contained for each proposal: updated assessments will be copied from these August '92 minutes. The charge is for SSP to classify each proposal as to data availability so that the current list of 22 highly ranked proposals might be reduced towards the 10 or so planned for the Prospectus.

Blum reported receipt of proposal revisions and on thematic panel plans to combine some proposals. SSP decided to keep assessments compatible with April meeting reviews.

General Status of Submitted Data (Brenner)

Site Survey Data Bank personnel reported on the arrival of data for the August 1st deadline. Most had been received in the last two weeks, some was hand carried by meeting attendees and some input were still being received.

SSP Consensus 1: Members generally agreed that the lead-time from data deadline to PCOM meeting had been set too short to ensure full compilation in the Data Bank and no time was available after SSP assessment for watchdogs to clarify specific items with proponents. A revision of this schedule is required for the next cycle (for FY '95 drilling).

New Watchdog Assignments (Kidd)

Chairman assigned proposal packages to members present to cover for absences in the SSP membership and these are now reflected in the agenda listing.

2. UPDATES ON SCHEDULED LEGS

Kidd called for brief updates on scheduled legs where site survey data needs were still a concern.

Leg 146 Re Santa Barbara Basin

PCOM inserted a single site at the end of Leg 146 for APC coring in Santa Barbara Basin. Kidd reported on mail reviews by he and PPSP Chairman Ball of a proposal for the detailed site surveys around the proposed site. Brenner reported that a full site survey package was now in the Data Bank as a result of that cruise. Ball said that PPSP after its own mail review had no further safety concerns over the shallow penetration site.

Leg 147 Re Hess Deep Surveys (Kastens)

Brenner reported that he had spoken with Leg 147 co-chief Kathy Gillis on the day before the meeting. She stated that she had received videotapes from the recent *Nautille* dive, although they were in a European format incompatible with the VCRs presently on the *JOIDES Resolution*. Negotiations are presently underway with JOI for the purchase of a compatible machine for shipboard use. (Copying the tapes into the American format would result in some degradation of the data.)

The Dorman/Hildebrand survey was recently completed, and during the SSP meeting the Data Bank received a provisional SeaBeam map derived from data collected aboard this cruise. In addition, SIO has recently received the digital SeaBeam data from previous *Sonne* work in the Hess Deep area, and will digitally merge this data set with all of the SIO SeaBeam data collected in the area. A copy of the resulting map will be submitted to the Data Bank when it is completed. Gillis reported that she and co-chief Catherine Mevel would be meeting with the SIO site survey group immediately prior to Leg 147 to synthesize the French and American data sets and discuss final site selection.

Leg 149 Re Iberia Abyssal Plain Deep Hole - NARM 1 (Mountain)

A letter from Whitmarsh identified that two data deficiencies noted in the last SSP minutes were incorrect: 1) while 3.5 kHz data are not in the Data Bank, the 7 kHz down-looking TOBI profiles have been submitted and provide similar information; SSP agrees that these latter data, close to or exactly across each of the proposed IAP drill sites, are entirely adequate. (A fax relayed from Pautot presently at sea on "Atalante", informed SSP that 3.5 kHz records and multibeam bathymetry are currently being collected over all IAP sites). 2) Velocity information from sonobuoys are published and a reprint is in the Data Bank. To this same letter Whitmarsh appended descriptions and analyses of piston cores a few tens of kilometers west of the proposed drilling area. A large-scale magnetic anomaly map has been deposited, and while navigation charts of adequate size are available for all of the data, SSP reiterates its request that the proponents compile all relevant track lines onto a single chart with locations of proposed drill sites. A processed display of MCS profile Lusigal 15 across IAP-4 has still not been received by the Data Bank; there is a *Sonne* 75 profile at this location, however. Processed *Sonne* lines, seen only as monitor records at the last SSP meeting, were hand carried to this meeting and are of good to excellent quality; Whitmarsh advises these are not "final quality products". He is attempting to get NERC funds to migrate selected portions of these data. Crossings with other *Sonne* lines, proposed site locations, and interpreted reflector tracings were marked on each profile. A table of site locations included with this latest package shows that many of the sites have been moved slightly (2 miles or less), and that an alternate to IAP-1 has been added, namely IAP-6. The JOIDES office was unaware of these modifications. SSP cautions the proponents that confusion can arise easily if all relevant groups are not informed of such revisions.

SSP Consensus 2: There are no serious data deficiencies for Leg 149 (Iberia Abyssal Plain). A processed display of Lusigal 15 and possibly migrated *Sonne* profiles will complete this as a well documented package. SSP urges the proponents to compile all relevant track lines onto a single chart with locations of primary and alternate drill sites.

Leg 150 Re New Jersey Margin Shallow Surveys (Kastens)

At our April meeting we urged the proponents: (a) to submit 3.5 kHz data across each of their sites, (b) to submit seismic velocity data across their sites to use in planning drilling depths and times, and (c) to examine any existing sparker or boomer data around their shallow water shelf sites to evaluate the possibility that small shallow gas pockets could pose a safety problem. 3.5 kHz data have

been deposited in the Data Bank. We still await seismic velocity data.

The proponents have tracked down three data sets relevant to the shallow gas pocket question. The first data set is a grid of Huntec boomer data that covers the general area of mid-shelf sites 4, 5, 6 and 7. The proponents have examined this data set, but have not yet deposited any of this data type in the Data Bank. The other two known data sets are located along strike from sites 8 and 9a, one data set to the northeast and one data set to the southwest from the proposed sites. The latter two data sets are in the public domain, but the proponents have not yet succeeded in physically putting their hands on the data. They expect to be able to do so before the PPSP review in October 1992. There is no known boomer or sparker data covering the shallowest proposed sites 1, 2 and 3. According to the proponents, the data set covering sites 4, 5, 6 and 7 does not suggest a significant shallow gas problem, as might be indicated by bright spots or "turbid zones" in the shallow subbottom. The proponents point out that the Huntec data only penetrate about 50 msec subbottom, while the Ewing MCS data collected on the site survey cruise do not show any detail in the uppermost 200 msec. Thus there is an unexamined zone between 50 and 200 msec below seafloor. SSP directs the proponents to locate and examine any existing high-resolution single channel seismic data around their shelf sites to evaluate the possibility of small gas pockets in the 50-200 msec depth window.

SSP Consensus 3: From the viewpoint of satisfying scientific objectives, the Leg 150 (New Jersey margin) data package is complete. However, the possibility of shallow gas pockets remains a safety concern for the sites in very shallow water. The proponents are urged to continue their pursuit of sparker and/or boomer data in the vicinity of their proposed shelf sites, to deposit copies of such data in the Data Bank, and to continue their ongoing dialog with PPSP about what characteristics in such data would indicate shallow gas. In addition, the proponents should examine any existing single channel seismic data around their proposed shelf sites, to evaluate the possibility of gas pockets in the depth window between 50-200 msec subbottom.

Leg 151 Re NAAG Gateways (Larsen)

In order to keep the program flexible enough to respond to changing ice conditions, it is important to ensure that both the prime drilling sites mentioned in the DPG report as well as an ample selection of alternates meet the SSP requirements. As in April SSP notes, the bulk of the required data is now in the Data Bank. These notes update our April '92 minutes.

1) Northernmost site ARC2A (alternate to YERM 5). A seismic line shot from icefloe FRAM IV and sparse sediment data (X-ray pictures) are in the Data Bank. The basement is deep and poorly imaged. Migration of the section was considered by SSP to be desirable, but according to Kristoffersen not possible. The data are sufficient for the drilling of the sediments. Kristoffersen suggests two alternate sites on the northern Yermak Plateau - but only core data are provided. SSP reiterates that the proponents should look for further alternates.

2) YERM 1. No change. Data sufficient.

3) YERM 2. Polarstern data should be processed in order to clarify presence of BSR. Data sufficient.

4) YERM 3, 4, 5. Data sufficient but again the possibility of a BSR should be clarified by processing of Polarstern data.

5) FRAM 1A, 1B, 2 (NAAG II program). The possibility of a BSR should be clarified. Data seem sufficient for drilling - but some data requested in April are still not in the Data Bank.

6) GREEN 1. Position of this site has not been selected. Requested Vema 2802 SCM line and

magnetic anomaly map still not in Data Bank.

7) GREEN 2. Position not fixed. Parasound data and core data in Data Bank from Polarstern.

NEW GREEN SITES

SCM data provided by Y. Kristoffersen is outside the areas designated for GREEN 1 and 2 in the proposal and the DPG report. The data is probably sufficient for selection of sites meeting the objectives of Green 1 and Green 2. No 3.5 kHz or core data is in the Data Bank. The proponents are urged to select sites and provide a proper data package for the new Green sites

8) EGM1. MCS lines and track map, Parasound and core station (with no recovery) in Data Bank. Hydrosweep data not provided. Data seem sufficient for drilling but no change: data sufficient but high resolution 3.5 kHz or equivalent along the slope is desirable in order to understand the contourites.

9) EGM2. Requested MCS lines from Hinz now in Data Bank. MCS Line NGT 41 may be needed for PPSP is not in the Data Bank. Probably enough data for drilling.

10) EGM3. MCS line NGT46 was provided by Karl Hinz. 3.5 kHz or equivalent and core data still needed.

11) EGM4. MCS data in Data Bank. No core or high resolution data. Core data still required.

12) ICEP-4. SCS Data in Data Bank.

The possibility of BSR and hydrocarbon potential should be evaluated by PPSP for all the sites.

SSP Consensus 4: Much of the required data for the first NAAG Leg 151 drilling, including alternate sites, is now in the Data Bank. These minutes record where proponents are still being asked to submit minor items of site specific data. NAAG proponents should look for alternate sites at or near Yermak Plateau. Polarstern data for YERM-2, YERM-3 and FRAM-1A and 1B sites should be processed to clarify whether BSR's exist. The proponents of the GREEN sites are urged to select drilling sites and to provide specific data packages.

Leg 152 - SE Greenland margin, transect at 63° (Tréhu)

In April, SSP determined that the data set for this cruise was essentially complete, with a few deficiencies: 3.5 kHz, piston/gravity core, and information on currents. No new data have been submitted in support of this cruise since the April meeting with the exception of a proposed track chart for a high resolution MCS cruise that will be conducted by Birger Larsen in late August/September, 1992. The planned cruise includes both a regional grid and detailed grids around the proposed drill sites, and is consistent with suggestions made by SSP in April. Penetration to volcanic basement is expected. The high resolution grids around the proposed drill sites should permit identification of optimum drilling sites; this is particularly important for site EG63-1, which is in shallow water on the shelf, where glacial deposits may outcrop at the surface and spudding in and setting a reentry cone may be difficult. Current measurements will also be made, and 3.5 kHz data and cores may be taken during this cruise. A deep crustal seismic experiment in this region led by R. White, originally planned for summer 1992, has been postponed until 1993, but may provide additional site information prior to drilling.

SSP Consensus 5: Regarding Leg 152 (Volcanic Rifted Margins, East Greenland at 63°), high resolution MCS seismics and 12 kHz data collected next month should be adequate to complete the site survey package for this cruise, and the proponents are urged to submit those data to the Data Bank as soon as possible. They are also urged to collect 3.5 kHz data and cores, if possible. Although some

current information will be acquired in the upcoming cruise, SSP urges proponents to assemble additional information on expected maximum currents on the shelf from existing physical oceanographic data to facilitate planning by the operations group.

3. BREAK FOR 'WATCHDOGS' TO EXAMINE SUBMITTED DATA

4. POTENTIAL FY'94 DRILLING:

Alboran Basin (323-Rev2)

Since the last SSP meeting, a revised proposal (323-Rev2) and a large quantity of excellent data have been received. The revised proposal is a combined effort by the proponents of two previous proposals 323 and 399, and is well-focused on four sites (with alternates) in the Alboran Sea (none in the Gulf of Cadiz). The newly received data includes MCS data covering all sites in the new proposal, selected SCS data, a GLORIA mosaic covering all sites, 18 kHz "BPS" seismic data covering all sites, and gravity and magnetic data around sites AL-3 and AL-4.

At our last meeting, SSP requested 3.5 kHz data, and seismic velocity determinations for drilling time estimates, which are "vital" data types under the site survey guidelines for passive margin sites. Good-to-excellent quality 18 kHz "BPS" data covers all sites and provides comparable information to 3.5 kHz data, so we consider the requirement for 3.5 kHz data to be fulfilled. The proposal includes seismic velocity data for sites AL-1, AL-1a, AL-2 and AL-2a. We still need seismic velocity data for AL-3, AL-3a, AL-4 and AL-4a. With respect to SSP's requirement of a "grid of intersecting seismic data": Sites AL-1, AL-1a, AL-2 and AL-2a are each near the intersection of 3 or 4 MCS lines of adequate to excellent quality, and primary sites AL-1 and AL-2 are exactly on the intersection of two crossing lines. Sites AL-3 and AL-4 are each located on a single MCS line; there is apparently no cross profile for either of these two sites, although some single channel lines run nearby. It was not clear from the provided information whether or not AL-3a and AL-4a are on crossing lines. In such a structurally complex region such as this, crossing MCS lines at each site are absolutely required. We note that the MCS data set in this basin is very extensive and we suspect that sites meeting this requirement can be found without further data acquisition.

Of the newly proposed sites, one (AL-1) is a re-entry site. For re-entry sites, SSP requires a nearby core, analyzed for geotechnical properties, for use in evaluating any operational constraints on setting the reentry cone. No piston or gravity core data is included in the present data package.

In our earlier meetings, SSP expressed concern about the possibility of encountering Messinian (uppermost Miocene) evaporites, which could pose a safety problem. The new proposal includes a map of basement depth contours, and extent of Messinian evaporites, in the area of primary sites AL-1 and AL-2 and alternate sites AL-1a and AL-2a. This map is based on a dense network of seismic data, ground truthed at nearby DSDP site 121 (which encountered a hiatus across the upper Miocene). On this map, sites AL-1, AL-2, and AL-2a are on a basement high where Messinian sediments are mapped as absent. Site AL-1a is within the region where Messinian evaporites are mapped as present, but they are expected to be very thin based on seismic character. The question of Messinian evaporites at AL-3 and AL-4 has not been addressed by the proponents.

At the August meeting, an SSP member inquired whether there could be potential hydrocarbon source rocks in the "basement". The proponents are requested to provide any data that may be available

on the "basement" lithologies near the proposed sites, for example analyses of dredges from outcrops on nearby bathymetric highs.

SSP Consensus 6: From a data-availability point-of-view, Alboran Basin (323-Rev2) drilling could be scheduled for FY'94. The region contains a wealth of data of all types, and the proponents have made a serious effort to deposit a large quantity of good- to excellent-quality data in the Data Bank. Specific deficiencies should be remedied before drilling can potentially be scheduled (end of November 92). These include: (a) sites AL-3 and AL-4 are apparently not on crossing MCS lines, (b) seismic velocities have not been provided for sites AL-3 and AL-4, (c) the likelihood of encountering Messinian evaporites has not been addressed for sites AL-3 and AL-4, (d) the proposed re-entry site AL-1 needs data on geotechnical properties of the surficial sediments from a nearby core.

Mediterranean Ridge (Phase I) (330-Rev)

This revised proposal describes the first of a two-phase strategy to address fundamental processes associated with accretion at incipient continental collision on a salt-bearing accretionary prism, the Mediterranean Ridge (MR). Phase I addresses shallow drilling objectives, generally post Messinian. Following successful completion of Phase I, a second proposal will address deeper objectives.

Five transects across the MR are planned (3-4 sites each), with one additional site on the Napoli mud volcano. These seventeen sites, with double APC/XCB, average 250 m penetration. An additional 5 RCB holes will be necessary for performing standard/geophysical tools and geochemical logging.

The Site Survey data package, as submitted to the Data Bank is not sufficient to satisfy SSP requirements for paleoenvironmental sites. Some of the deficiencies (e.g., lack of 3.5 kHz profiles through the sites; descriptions from nearby cores) can presumably be eliminated by accessing available data. However, there is a general lack of high-resolution seismic profiles across the sites (e.g., MR 1-3, 7-9, 10-12 [ESM 1-4 may be crossed by SCS, but profiles are not in data package]). There is a general concern that surface-collected high-resolution seismic data (3.5 kHz and SCS), in areas of rough topography on the deformation front, will not be helpful in depicting the surficial stratigraphy. Deep-towed 3.5 kHz data should be of value in this regard, and should be collected on the planned '93 field programs.

Many of the deficiencies in the data package are planned to be addressed in funded and proposed site surveys in spring/summer 1993. Should these cruises be successful, the bulk of SSP requirements should be met. SSP strongly recommends, however, that the proponents carefully examine Target A requirements, as some sites (e.g., MR 10-12) do not have high-resolution SCS data presently, nor is a data collection effort planned. Also, for MR 10-12, PPSP may require migrated, intersecting high-resolution seismic profiles to assess a hydrocarbon pollution safety issue.

SSP Consensus 7: The Site Survey data package for Mediterranean Ridge (Phase I) (330-Rev) drilling, as submitted to the Data Bank, is not sufficient to satisfy SSP requirements. Some of the deficiencies can presumably be satisfied through access to existing data. Other deficiencies should be addressed in cruises planned for 1993. Collection, interpretation and submittal of these data to ODP will in the best case be completed by the end of 1993. SSP strongly recommends that the proponents carefully examine Target A requirements, as some sites, even after planned '93 field programs, will not meet SSP requirements. From the data status point of view, SSP does not recommend scheduling of this program for FY'94.

East Equatorial Atlantic Transform (346-Rev3)

The new version of proposal 346 summarizes the previous proposal in light of recent data collected and processed.

The number of first priority sites proposed is reduced from 7 to 5, divided into two transects of 4 and 2 holes each (one site in common). Location of selected sites has not changed.

No update of the site survey package has been received. At present only MCS and SCS lines with track and site location maps have been submitted to the Data Bank.

Status of site survey data according to proponents:

MCS: Processing of lines collected in 1990 has been completed on parts of lines crossing all first priority sites (IG2bis, IG3, IG4, IG5, and IG6bis) and on selected lines of regional interest. The processing sequence performed on 96 traces includes migration. Processing of all lines will be completed by the end of 1993. No processed lines are yet submitted to the Data Bank.

Seismic refraction: Processing of refraction data collected in 1990 has been completed on two lines located on the oceanic crust domain and on one line located on continental crust domain. Processing is still in progress. Velocity structure nearby the proposed sites has been identified down to crust/mantle transition on oceanic crust. A preliminary velocity structure is available on continental crust.

Submersible dives: Cruise EQUANAUTE performed 14 dives of the Nautille along 70 km of the southern slope of the Ivory Coast-Ghana transform margin in June '92. 150 rock samples have been collected.

SSP Consensus 8: Revision 3 of the Eastern Equatorial Atlantic Transform drilling proposal (346-Rev3) includes a detailed section on data recently collected and processed. Nevertheless, the only data presently available at the Data Bank are the old versions of the MCS lines. The proponents are urged to submit the full data package which includes the 3.5 kHz, high-resolution seismics, multibeam bathymetry, gravimetry and magnetics as well as the recently collected MCS, refraction, and sampling data. Required site survey data exist, but definitive evaluation of the site survey data by the Panel can be made only after examination of the full package. Scheduling for FY'94 drilling is recommended only if these major items of existing data are deposited in the Data Bank (not later than SSP's new deadline 1 November 1992, to allow for assessment).

Benguela Current (354-Rev/354-Add)

Neogene history of the Benguela Current and coastal upwelling off Angola-Namibia West Africa are the subjects of this recently updated proposal. The Addendum scales down the scope of the previous proposal to a more realistic 11 sites with an average penetration of 500 m, drillable during one leg.

No data have been received by the Data Bank. The proponents argue that site surveys conducted in 1988 and 1992 are adequate for 6 of the sites. SSP cannot presently evaluate the validity of this claim. The proponents note that siting of the remaining sites await data collection in April-June 1993. SSP repeats its concern as expressed at the 1992 meeting that for all sites, abundant high-resolution SCS profiles, and 3.5 kHz or Parasound data will be required to select sites unaffected by erosion and mass wasting.

SSP Consensus 9: No data package has been received by the Data Bank in support of Benguela Current (354-Rev/354-Add) drilling, therefore SSP cannot

evaluate the adequacy of existing data. Additional necessary site survey data are planned to be collected in April-June 1993. To meet drilling objectives, abundant high-resolution SCS and 3.5 kHz or Parasound profiles will be required to select sites unaffected by Neogene erosion and mass wasting. Collection, interpretation and submittal of this data to ODP may at best be completed by the end of 1993. This proposal is therefore not recommended for scheduling in FY'94.

TAG hydrothermal system (361-Rev2)

A regional SeaBeam map, various geologic/structural maps, listings of Alvin dive videos and sample locations, and various reprints have been deposited in the Data Bank. Magnetics and gravity data exist, but are not available in the Data Bank. Some heat flow and 12 kHz data and cores have been collected and additional heat flow work has been proposed. No seismic reflection/refraction, 3.5 kHz, or regional sidescan data exist. At the present time, a data package for the Safety Panel cannot be assembled from data in the Data Bank. An effort should be made to collect 3.5 kHz data on the 1993 Alvin cruise (if funded). The proponents should obtain and add the TOBI side-scan and profiler data to their data package.

SSP Consensus 10: SSP urges the proponents to complete the data package for TAG Hydrothermal System (361-Rev2) drilling and send it to the Data Bank. An attempt should be made to obtain 3.5 kHz data over the TAG area. Scheduling for FY'94 is only recommended if the requested items are deposited in the Data Bank (not later than SSP's new deadline 1 November 1992, to allow for assessment).

MARK lithosphere (369-Rev2)

This proposal has evolved since April. The text of the proposal has been significantly expanded and revised to include a detailed discussion of various possible tectonic scenarios and their expected signature in the proposed drill holes. Several items have been submitted to the Data Bank. These include 1) a cruise report from the HYDROSLAKE diving cruise that includes the dive along which MK2 has been sited and a cover letter saying that videotapes of the dive can be made available; 2) a summary of existing references in the MARK area with references to publications and a statement that most of the data should be available in the Data Bank from legs 106/109; 3) a Xeroxed map of the track line of a recent side-scan survey conducted by Karson and Delaney that contains site MK1. In addition, the proposal contains a description of rock samples available and the geochemical, petrographic and structural work that has been completed.

The existing data base from Leg 106/109 has been checked and contains SeaBeam, SeaMarc, gravity, and magnetic data (gravity and magnetics on tape only). The SeaBeam, gravity and magnetic data adequately cover the proposed sites; the SeaMarc data only cover MK2. The recent side-scan survey has addressed this deficiency, but data have yet to be deposited in the Data Bank. No documentation of the relevant Alvin dives (i.e. the dive along which MK1 is sited) was found.

Additional survey work planned includes: 1) Nautilite dives in the region in November, 1992, with several dives devoted to final site selection; 2) ALVIN diving to the south that will improve regional knowledge; 3) an off-axis surface cruise (dredging?), also improving regional knowledge; and 4) Nautilite cruise to collect on bottom gravity over site MK2.

SSP Consensus 11: Although most of the necessary data for assembling a MARK (369-Rev2) site survey package appear to exist at present, these data have not yet been assembled into a complete package. Data required are 1) data from the recent side-scan survey; 2) Alvin dive data in support of MK1; 3) videotapes and/or photographs of Nautilite data for MK2; 4) copies of relevant existing MCS, SCS, and

3.5 kHz data; 5) annotated gravity and magnetic maps showing site locations. The package should be updated as additional data are collected. Scheduling of this program for FY'94 can be recommended if the required package is completed and deposited in the Data Bank (not later than SSP's new deadline 1 November 1992, to allow for assessment).

Vema Fracture Zone (376-Rev2)

Since our last meeting a data package and a revised proposal have been received. The data package comprises a thick book of reprints, four map sheets of unpublished 20-m contour interval SeaBeam bathymetry, and transcripts of Nautilite dives.

Sites VE-1 and VE-2 of the revised proposal 376-Rev2 are located on the northern flank of the southern transverse ridge, where a cross-section through the oceanic crust and upper lithosphere has allegedly been exposed by vertical tectonics. These sites were evaluated according to the "Draft site survey guidelines for tectonic windows" as prepared during SSP's April '92 meeting (Appendix I). These were the first examples of sites evaluated under these guidelines, and during the discussion of Vema it was decided to modify the guidelines as follows: 3.5 kHz data is to be recommended rather than required; and near-bottom towed side-looking sonar data is to be required rather than recommended. Following the guideline revision, required data types for VE-1 and VE-2 are: swath bathymetry, near-bottom-towed side-looking sonar, visual observations (photography/video), and rock samples analyzed for geochemical/petrological and structural characteristics. Swath bathymetry (SeaBeam) is in the Data Bank. Visual data (photography/video) across the sites are available from Nautilite dives. Transcripts of the dives are currently in the Data Bank; eventually, the actual films or tapes of visual data across the sites will be required to evaluate the setting for guidebase emplacement. Rock samples include a wide network of dredged samples, plus a closely-spaced, precisely-positioned suite of samples from the Nautilite dives. The dredged samples have been exhaustively analyzed in papers lodged in the Data Bank; analysis of the Nautilite samples is still underway. Near-bottom towed side-looking sonar is scheduled and funded to be collected from the Ewing in early- to mid-1993.

Site VE-3 is located at the shallowest point on the transverse ridge, where dredging has yielded shallow water limestones. The proposed hole would penetrate the limestone cap, to examine paleodepth versus time, and thus constrain the uplift/subsidence history of the transverse ridge. This site has been evaluated according to the site survey guidelines for target type "G," "topographically elevated feature". "Vital" data types are 3.5 kHz echo sounder data, and high resolution SCS. Proponent Bonatti is at sea at this moment aboard the Explora collecting seismic data intended to define the thickness of the limestone cap and its internal structure. 3.5 kHz data exist near the site, but are not in the Data Bank. The guidelines list a large number of data types as "desirable but may be required in some cases." SSP explicitly discussed each of these data types with respect to VE-3, and determined that most are not required for this site. However, with respect to the "grid of seismic lines" data type, SSP will require at least two crossing high-resolution SCS lines to select the site; SSP would like to see a grid of seismic lines mapping the extent of the limestone cap to aid in interpreting the subsidence history of the transverse ridge. With respect to core and rock samples, SSP considers that the existing samples and sample descriptions are sufficient to provide geological context for the proposed borehole samples. However, from an operational standpoint, SSP requires the proponents to document the physical properties of the top of the limestone cap using core and/or dredge samples as evidence; the motivation for this requirement is to be able to evaluate whether it will be possible to spud in without a guidebase and what kind of drill bit might be required.

SSP Consensus 12: For the Vema F.Z. proposal (376-Rev2), VE-3 could be ready for drilling with data that are expected to be in hand within the coming month; however, critical sites VE-1 and VE-2 are dependent on data that will not be

collected until 1993. SSP therefore does not recommend scheduling of this program for FY'94 drilling.

VICAP-MAP (380-Rev3)

This revised proposal combines previously separate Volcanic Island Apron Project (VICAP, 380) and Madeira Abyssal Plan (MAP, 059) proposals into a single effort aimed at studying the development of the Canary Basin in terms of: the history of volcanic activity in the Canary Hotspot; the evolution of the large volcanic islands; and the filling of the Madeira Abyssal Plain.

Five sites are proposed on the flanks of Gran Canaria Island (VICAP 1-5). Penetration at each site ranges from 1.3 to 1.8 km, for a total penetration of ~ 8.2 km.

Four sites are proposed within the Madeira Abyssal Plain (MAP 1-4). Penetration at each site ranges from 300 to 500 m, for a total penetration of 1600 m.

The total Site Survey data package as submitted to the Data Bank is not sufficient to satisfy SSP requirements for "Elevated Features" for VICAP and for "Paleoenvironmental Sites" for MAP.

For VICAP, some deficiencies should be eliminated as recently-collected data are further processed. Other data collection, including seismic, core, and G/M data are planned for 1993. It should be noted that the proponents are counting on the yet-to-be-collected data to finalize positions for the drill sites. SSP concerns, expressed at the October '91 meeting regarding avoiding sections affected by mass sediment removal, as well as adequate depiction of basement and lithospheric deformation remain. Based on drill depths to 1800 m, rotary coring will be required, and piston core data will be required to aid re-entry cone placement. In view of deep penetration, careful velocity analysis will be required to ensure proper depth to target estimates.

For MAP sites, while the data set submitted to the Data Bank is not complete, SSP sees no problem in assembling a complete package from existing data. Sample 3.5 kHz profiles across the proposed sites should be submitted. Otherwise, the assembled MAP data set satisfies SSP's requirements.

SSP Consensus 13: The combined site survey data package for VICAP-MAP (380-Rev3), as submitted to the Data Bank, is not sufficient to satisfy SSP requirements. For VICAP, the data package is far from complete. Four separate site survey cruises are planned for 1993 to address these deficiencies. SSP concerns remain regarding selecting sites not affected by mass wasting and about adequately depicting basement geometry and structure. Collection, interpretation, and submittal of this data to ODP may at best be completed by the end of 1993, and scheduling for FY'94 drilling is therefore not recommended. For MAP sites, addition of existing 3.5 kHz profiles across the proposed sites to the Data Bank will satisfy SSP requirements. MAP sites could therefore be recommended for drilling in FY'94 if the required 3.5 kHz items are deposited in the Data Bank (not later than SSP's new deadline 1 November 1992, to allow for assessment).

California margin (386-Rev2)

No original data has been submitted to the Data Bank in support of this proposal by the August 1 deadline. Proponents point out that most of the sites are based on seismics and sidescan data published in the USGS EEZSCAN West Coast Atlas. The proponents have not revised their proposal but M. Lyle has submitted a "Report to Site Survey Panel" detailing the site survey data availability at each of the sites and refers to a proposal for a cruise to collect further data that has been prepared for funding consideration.

The new surveys are planned to provide required crossing SCS lines for sites CA-4, CA-7, CA-8, CA-11 and for the transect of sites and alternates at CA-12 and CA-13. We note that sites CA-9 and CA-3 are also not on crossings in the EEZSCAN data. CA-6 is not within the sidescan coverage and the core quoted for site CA-8 is of limited length. Both of the latter items are desirable for this particular setting. Sites CA-6 and CA-14 are re-occupations of DSDP Sites 36 and 470 respectively and for the objectives posed are unlikely to require further data. Clearly the data set is incomplete for this proposal being dependent upon an as-yet un-funded cruise for its completion.

SSP Consensus 14: The Californian Margin proposal (386 Rev2) is incomplete at present. No original data were submitted. Completion of the required data package depends on a future, not-yet funded survey. It is therefore not recommended to schedule this program for FY'94 drilling.

Ceara Rise (388/388-Add).

There is no change in the status of the Ceara Rise proposal. No data has been received in the Data Bank since a complete data package is expected as a result of new data collection on an Aug./Sept. (Curry-Mountain) cruise which will collect high resolution SCS, multibeam bathymetry and 3.5 kHz seismics and cores. SSP has arranged for a subgroup of the Panel to view these data in November to allow an SSP assessment to be available for the PCOM Annual meeting 1992.

SSP Consensus 15: A data set in support of the Ceara Rise proposal (388/388-Add) awaits data collection on the Curry-Mountain cruise in Aug./Sept. Assuming the cruise to be successful, a sufficient data package should be available in time to be assessed by SSP in November, and satisfy the requirements for potential scheduling for FY'94 drilling.

Mediterranean Sapropels (391-Rev)

A revised proposal has been received detailing availability of survey data for a series of triple APC sites from east to west in the Mediterranean. The text of this revised proposal is much refined and focused and for the first time there are detailed site locations. On the other hand no original data has been submitted and this assessment is made on page size Xerox copies of seismics and track charts.

Six primary sites and three alternates are proposed. Two of the proposed sites rely on data around previously drilled sites at which it is proposed to triple APC previously rotary-cored sequences. These are Medsap 5 at ODP Site 652 in the Tyrrhenian Sea and alternate Medsap 6B at DSDP Site 372 on the Menorca Rise. We see no further data requirements for these two locations but note that the second is considered an alternate by the proponents: primary site Medsap 6A, in common with all of the other sites, currently lacks 3.5 kHz data and site specific core data which are required for target A settings.

Minimum "Required" items for APC paleoenvironment sites are an SCS line with a crossing line, unless the sequence is known to be flat-lying; a 3.5 kHz profile to image the shallower parts of the section and a piston core at the site. Most APC-only sites are proposed to extend existing cored sequences. Medsap 5 is an extension of a 27m long piston cored sequence and the two drill site reoccupations can be considered in this category. Elsewhere the proponents refer to "good regional core coverage" around most of their other sites but this is not documented with maps to show how far cores are from the proposed drill sites. We note that the Mediterranean Ridge and Calabrian Ridge settings are so topographically complex that location of the cores with respect to drill sites is crucial.

No 3.5 kHz profiles are offered for any of the sites. This is not a problem for the drill site reoccupations; Medsap 3 on Pisano Plateau is known by SSP members to be in a dense net of 3.5 kHz

and deep-towed 4 kHz data; and the high-resolution sparker records used to locate Medsap 1A and B may prove sufficient imaging of the upper sequence when submitted. But this data category is not covered for the other sites and 3.5 kHz or equivalent is considered essential for the potentially more complex Mediterranean Ridge locations.

An SCS profile exists for all sites except for Medsap 4A, 4B and 2 which are instead located on MCS lines which we consider less satisfactory. Sites 1A, 1B, 2 and 2B have no crossing lines. The latter two are on the topographically complex Mediterranean Ridge and the crossings are indeed required.

The compiled site survey information submitted by the proponents for the August deadline shows that the minimum data requirements can potentially be fulfilled by the primary or alternate sites at locations 1, 3, 5, 6 and 7. Crossing high-resolution SCS and 3.5 kHz lines will be required for the more complex Mediterranean Ridge settings and other existing data should be sought for the Medsap 2 location.

SSP Consensus 16: SSP reiterates its contention that suitable sites can be found from existing data to support all locations in the Mediterranean Sapropeis drilling transect (391-Rev), but the proponents still have considerable work to do to complete this data package. The August deadline for data submission was not met. Since no new surveys are envisaged for completion of the data package, the proposal is categorized with those for which "required data exist but major items are still to be deposited in the Data Bank", although presently it is the weakest proposal in this category in survey data terms. Scheduling for FY'94 drilling can only be recommended if the required items are submitted to the Data Bank no later than SSP's new 1 November 1992 deadline, which will allow for assessment and recommendation to PCOM.

Costa Rica accretionary wedge (400/400-Add)

A nearly complete data package has been submitted to the Data Bank, including bathymetry and seismic reflection lines. A 3-D seismic reflection survey is available, as is information from a DSDP site. Several cores and a few heat flow measurements have been taken. This data set is one of the best for any continental margin and is sufficient for the current structural objectives. However, if the proponents address thematic panel concerns and include a fluid component, detailed heat flow measurements will be required.

SSP Consensus 17: The Costa Rica Accretionary Wedge (400/400-Add) data set is satisfactory for the current structural objectives and would be drillable in FY'94. If fluid objectives are included, a detailed heat flow survey will be required.

KT-boundary, Gulf of Mexico (403-Rev2) & Caribbean (415-Rev)

A letter in late April to the proponents of the two Chicxulub impact proposals elicited a response from each. Sigurdsson stressed the very different approaches of the two efforts regarding the K/T boundary: Alvarez et al. (403-Rev2) strive to examine proximal impact features, while Sigurdsson et al. (415-Rev) wish to examine gradients along proximal to distal dispersal paths. Both drilling proposals contain additional objectives relating to climatic and biotic changes accompanying the possible bolide impact; 415-Rev also addresses the issue of basement origin/composition in the Caribbean. SSP stands corrected that knowledge of prevailing wind patterns at the K/T boundary is critical; ejecta from an impact the size of Chicxulub are large enough that neither wind nor current directions are especially important in controlling dispersal patterns. Both groups of proponents acknowledged a willingness to work together, but because of difficulties of coordination in the time

available each chose to remain independent. Both submitted field programs to NSF seeking funds to collect necessary survey data; both were declined. The Sigurdsson group proposed a water gun or air gun SCS grid across 6 Caribbean sites that would be on or near existing MCS lines. Representing the Alvarez group, Buffler and Fulthorpe proposed to collect MCS profiles across the Campeche platform and bank, and with stratigraphic control provided by swath topography, coring and dredging they had planned to locate drilling targets into the ejecta blanket and mass flow deposits along the Bank and into the Gulf of Mexico north and east of the impact crater. Lacking the data that these surveys would have provided, serious deficiencies remain with both drilling proposals.

SSP Consensus 18: There are serious data deficiencies with each of the separate KT-boundary drilling proposals (403-Rev2 and 415-Rev, resp.), the most outstanding of which is a network of high resolution seismic profiles that image the stratigraphic level of the KT-boundary. This situation is not expected to change during 1993, and scheduling for FY'94 drilling cannot be recommended.

NW Atlantic Drifts (404)

A package has not been deposited in the Data Bank pertaining to data adequacy for Western North Atlantic Drifts (proposal 404). SSP reiterates its statement of April '92 that a considerable volume of data (SCS, some MCS, 3.5 kHz, side-scan imagery, piston cores) has been collected in this area. The proponents should compile and deliver these data to the Data Bank for SSP review.

Proponent Keigwin wrote to SSP Chairman Kidd on June 5, 1992 summarizing efforts regarding proposal 404. Preliminary work by Keigwin on existing piston cores from the Blake-Bahamas Outer Ridge (BBOR) revealed that while the Quaternary cover was largely intact and deposited under sufficiently high accumulation rates, the most useful core collection at Duke had been so extensively sampled that it is not possible to evaluate benthic foram assemblages as indicators of bottom water history. Hence he submitted a request for NSF support of a coring cruise that now appears likely to be funded for operations in 1993. Roughly 30 large diameter cores will be collected down the axis of the BBOR from 2000 m to 4800 m water depths. These will be located on existing MCS and SCS lines or tied to them with 3.5 kHz data that will be acquired along with the cores. If integrated with existing GLORIA data collected across the BBOR, it appears that a survey package adequate for the drilling objectives of BBOR-1 to -3 could be assembled. The shallower sites BBOR-4 to -8 do not yet have either side-scan or swath bathymetry, and at least one of these data types are highly desirable for the objectives of this proposed drilling. No discussion of additional surveying across BR-1 on the Bermuda Rise was mentioned by Keigwin.

SSP Consensus 19: While the proponents have identified several data sets that may be adequate for the objectives of Western North Atlantic Drifts (404), no compilation has been sent to the Data Bank. A proposed coring and 3.5 kHz profiling cruise to the Blake-Bahamas Outer Ridge may be completed by Keigwin and Flood in 1993, and if it is successful, the drilling proponents will be encouraged to integrate these data as fully as possible with existing 3.5, SCS, MCS, and side-scan imagery. SSP urges that Keigwin and Flood attempt to core sub/outcrops of known pre-latest Neogene strata, because these samples could help to evaluate the feasibility of extending the bottom-water objectives farther back in time. Completion of a data package depends on further data collection, possibly in 1993, and scheduling for FY'94 is therefore not recommended.

Amazon Fan (405-Rev)

The proponents of Amazon Fan drilling have submitted copies of replayed and filtered SCS

profiles of high quality for all sites in their original proposal along with charts showing tracks of all other available SCS data. They are currently continuing with further processing of data through the sites. Copies of GLORIA and SEABEAM data over the entire survey area are submitted along with charts showing all available 3.5 kHz and PDR coverage and locations of available cores. Since 3.5 kHz profiles and copies of core data are required items in this setting, the proponents are asked to submit these. SSP's request that the proponents pursue obtaining crossing SCS and 3.5 kHz lines through a number of the proposed sites will be met by a planned 2-day survey in August-September as part of the Curry-Mountain cruise to the Ceara Rise. The proponents note that they will cross AF sites 18, 10, 9, 11, 19, 8, 4 and "perhaps 5". Assuming that this planned work is successful, most of SSP's requirements noted in April will have been met by the December 1992 PCOM Annual Meeting to schedule FY'94 drilling. Exceptions are that shallow alternate sites AF-13, 14 and 17, which will not have crossings but penetration is so limited here (30m, 50m, 50m respectively) that we do not see this as a problem. The pre-review of possibly gas-rich sites AF-4 and 5 recommended by SSP to PPSP will not take place until their October meeting, but discussions with PPSP's Ball at this meeting result in the recommendation that a crossing track be collected on the Aug.-Sept. cruise if the proponents want to retain both sites in their program.

SSP Consensus 20: Almost all of the available high quality data set in support of the Amazon Fan proposal (405-Rev) has been submitted to the Data Bank. Minor items of existing data have been requested (3.5 kHz and final processing). A cruise in Aug.-Sept. will, if successful, complete this data package with the crossing SCS and 3.5 kHz lines requested by SSP before the December PCOM scheduling of FY'94. Concerns about potential gas at two sites have been passed on to PPSP and collection of the crossing lines here is strongly recommended for the survey cruise.

N. Atlantic Climate variability (406)

No original data has been submitted to the Data Bank for the August 1st deadline in support of this proposal. Kidd reported that proponents had contacted him on the availability of data for its Feni Drift locations. He had directed them to DSDP Volume 94 chapters containing survey data but had informed them erroneously that the U.K. seismic data was in the Data Bank. Data certainly exists for this part of the proposed transect and is held by both him and IOSDL in the U.K. Kidd has since been informed of a proposal for a cruise to visit this and other locations on the transect. The proponents aim to focus this proposal and complete outstanding survey needs.

SSP Consensus 21: No data package has been received in the Data Bank in support of the North Atlantic Climatic Variability proposal (406). Proponents plan surveys in 1993 which will refine locations and should provide the necessary high-resolution seismics, 3.5 kHz and coring data. SSP categorizes this proposal as one in which most items of its data package are still to be collected and it is not recommended for scheduling for FY'94 drilling.

N. Barbados Ridge (414-Rev)

Two of the three holes considered in April, 1992, are redrillings of sites drilled during leg 110, with objectives that have expanded to include definition of fluid flow and will require the use of borehole seals. The third proposed hole is within the region already covered by extensive seismic and other data, as are two additional holes that were added in the most recent revision of the proposal. The SSP concluded at the April meeting that regional site survey information in currently in the data package for leg 110 was adequate for sites NBR1 and NBR2, and additional documentation of the basis for depth estimates to the decollement for hole NB3 was requested. The revised proposal

explains that these estimates were based on the average velocity observed in leg 110 drill holes, and the argument is made that the absence of observable velocity pullup on the decollement or oceanic basement argues against any large increase in velocity at depth.

A comprehensive 3-D seismic survey was conducted in June, 1992. Examples of preliminary 2-D seismic sections from the 1992 cruise have been submitted to the Data Bank. The quality of the data is excellent, and will provide a solid basis for planning and interpreting the proposed holes. OBS's were also deployed during this cruise and will provide important constraints on velocity in the accretionary prism. A French cruise in February, 1992, collected submersible, deep-towed side-scan, and heat flow data in the area of the proposed drilling. These data are also important for defining the tectonic setting in enough detail to fulfill drilling objectives.

SSP Consensus 22: For the North Barbados Ridge drilling proposal (414-Rev), much of the required survey information is in the Data Bank file for leg 110. Additional data collected in February, 1992, and June, 1992, are awaited to complete the data package for the proposed project. Those data should be sufficient to complete the data package. This program is recommended for scheduling if the required items are deposited in the Data Bank by SSP's new 1 November 1992 deadline, to allow for SSP assessment prior to the PCOM Annual Meeting '92.

Non-volcanic rifted margins II (Newfoundland Basin)

SSP examined the status of the Newfoundland Basin drilling program at proposed sites NB-1, -4A, and -7A, and the data package is very nearly complete. The proponents are commended for their cooperation in meeting deficiencies noted at the last meeting of SSP. Material deposited in the Data Bank since April '92 include:

- 1) 15 commercial MCS profiles and track chart in the vicinity of NB-1;
- 2) map of surficial sediments and discussion prepared by D. Piper, though SSP notes that the study is south of the New England Seamounts, well away from the drilling targets;
- 3) collection of reprints describing the surface and deep currents in the vicinity of proposed drill sites;
- 4) plot of velocity vs. travel time derived from stacking velocities of the C2510 MCS profiles;
- 5) listing of WHOI and LDGO piston cores from the general area of proposed drilling., and while these cores provide further characterization of the seafloor, SSP notes that none are particularly representative of the environment near NB-1;
- 6) Farnella cruise 381 SCS profiles;
- 7) BIO MCS line 85-4 and 85-4A across site NB-7A;
- 8) aeromagnetic survey with identified anomalies; and
- 9) cruise report submitted by Sibuet and Srivastava of their recently completed survey aboard the Hudson. Processing up through 24-fold stacking and migration for selected portions of these data provide excellent images across the proposed sites. The authors propose moving Site NB-1 slightly, though a final location has not been chosen. Similarly, they plan to propose new sites NB-4B and -4C, based in part on interpretation of OBS data that they collected but have not interpreted fully. Lastly, they suggest relocating Site NB-7A to take advantage of the shallowest point of the basement high that is the target at this site.

SSP Consensus 23: For the Newfoundland Basin sites of the Non-Volcanic Rifted Margins program (NARM-DPG), quality of the commercial MCS data and the recent Hudson profiles surpasses that of earlier data, and SSP encourages the

proponents to consider relocating their sites on these lines. All pertinent data relating to new site locations should be submitted to the Data Bank as soon as possible. Minor deficiencies remain as follows: 1) Seabeam and 3.5 kHz data have been collected, but neither have been deposited with the Data Bank; 2) piston core information and surficial sediment characterization is too generalized to be useful for operations at NB-1; and 3) the velocity - travel time plot recently submitted would be more valuable if measured at each site individually, because velocities in the syn-rift section at NB-1, for example, may be substantially different from those at equivalent travel times below seafloor at NB-7A. There are a number of ways of deriving reliable velocity profiles at each of the proposed sites (extrapolation from nearby industry wells, MCS stacking velocities, sonobuoys, and recently acquired OBS data), and the proponents are encouraged to continue their efforts in this regard. This program is recommended for scheduling if the required items are deposited in the Data Bank by SSP's new 1 November 1992 deadline, to allow for SSP assessment prior to the PCOM Annual Meeting '92.

Volcanic Rifted Margins (NARM-DPG): Vøring Margin/SE. Greenland at 66°,

No new data have been submitted for the Volcanic Rifted Margins program. In a letter dated July 29, H. C. Larsen says that a data package for holes EG66-1 and EG66-2 will be prepared for 1995 consideration and that a site survey cruise similar to that for leg 152 is being proposed for 1993. Although most of the regional data for the Vøring margin sites is currently in the Data Bank file for leg 104, a few required additional items were not in the Data Bank on August 1: Conrad MCS line C-167, along which VM-5 is located; crossing lines for sites VM-5 and VM-6. Crossing lines are generally required in this type of complicated structural environment. Track line maps in the leg 104 data base indicate that suitable crossing lines do not currently exist.

SSP Consensus 24: Regarding the Vøring margin sites of the Volcanic Rifted Margins program, most of the data are presently in the Data Bank. Several site-specific items, however, are still needed: MCS line C-167; crossing MCS lines for VM-5 and VM-6. SSP is not aware of existing MCS profiles that would satisfy the requirement for crossing lines, nor are we aware of plans to collect such data. This program is therefore not recommended for FY'94 drilling, unless the proponents deposit the required data in the Data Bank before SSP's new 1 November 1992 deadline, allowing for SSP assessment prior to the PCOM Annual Meeting '92.

NAAG II Update AUG. 1992 (Larsen)

Many of the sites in NAAG II proposed by the NAAG DPG (JOIDES Journal XVII No 2, 38-50) are included in NAAG I as alternate sites, in order to keep the program flexible in response to the ice conditions.

FRAM 2, GREEN 1 and 2 and "New GREEN SITES", EGM 1, 2, 3, ICEP 4: these are all discussed under Leg 151. MCS or SCS data are in general available but high resolution seismics and coring data are missing for most of the sites. Sites have not been chosen for the GREEN Sites.

ICEP 1, 2 and 3: SCS data available in Data Bank, but no high frequency data. Probably enough data for drilling of these drift or pelagic sediments.

NIFR1 and SIFR 1: MCS lines in Data Bank, no high frequency or coring data in the Data Bank, but coring on NIFR is planned for 1992 Meteor cruise.

The sedimentary sequence at the indicated site SIFR is about 1400 m thick, which exceeds the

500m indicated in the proposal. Probably enough data for drilling if core data is provided.

Denmark Strait Sites: No MCS data seem to exist for selection of sites. Data may be collected by a Danish cruise in 1993.

SSP Consensus 25: The NAAG II leg is not considered for 1994 drilling according to OHP. However, many of these sites are alternates on Leg 151 (see SSP Consensus 5).

Hess Deep II

No proposal exists at present for a second leg of Hess Deep drilling. The LITHP Chair has informed SSP and the JOIDES Office that a return to Hess Deep is not considered until completion of Leg 147.

SSP Consensus 26: Hess Deep II is a "generic concept" program which cannot be scheduled for FY'94 drilling because no proposal exists.

Sedimented Ridges II (DPG)

No new data have been received at the Data Bank since the last SSP meeting. No proposal exists at present for a second leg of Sedimented Ridges drilling. The JOIDES Office has been informed by the LITHP Chair that Sedimented Ridges II is not considered for FY'94 drilling.

SSP Consensus 27: Sedimented Ridges II is a "generic concept" program which cannot be scheduled for FY'94 drilling because no proposal exists.

5. OTHER BUSINESS

Report to PCOM (Kidd)

Discussion of SSP's stance to PCOM ensued in the light of the response (in some cases a poor response), to the August 1 deadline for data submission. Chairman called for discussion of mechanisms to ensure that all data was submitted and checked before PCOM's Annual Meeting.

It was agreed that the 11 proposals in categories 1A, 1B and 2A can comfortably be placed in a FY '94 Prospectus as far as site survey data availability is concerned. The bulk of these, however, still require major data submission of existing or soon-to-be collected data. Members considered that PCOM should be urged to make it clear to proponents of these programs that they are still competing for the FY '94 schedule and that their complying with data submission requirements will be a major consideration in the final decision. After discussion, SSP agreed to set a November 1st deadline for these proponents to submit the items required of them after the assessments at this meeting. This will allow a subgroup of the SSP to check with Brenner the arrival in the Data Bank and quality of the specific items requested. Kidd left open the issue of whether he would need to attend this LDGO subgroup meeting.

SSP Consensus 28: Once PCOM has finalized the content of the FY '94 Prospectus, SSP requests that it make proponents aware that a November 1st deadline has been set for submission of available data and schedule for completion of data packages in the Data Bank and that decisions on FY '94 scheduling will be based on their compliance with this data submission.

Feedback to Proponents

Action Item 1: SSP agreed that watchdogs (as assigned at this meeting) should wait for an E-mail message from Blum on the proposals chosen by PCOM for the FY'94 prospectus and then copy to those proponents the detailed assessments from this meeting. These proponents of potential FY'94 proposals must have complete data packages actually in the Data Bank by November 1st and this should be stressed to them. Any matrices prepared at this meeting should also be sent to proponents. This is the most urgent business for watchdogs. Proponents of proposals remaining outside the prospectus should also be contacted by watchdogs clarifying SSP's view of the status of their data packages.

Updates to SSP Guidelines (Kastens/Kidd)

Draft SSP guidelines for Tectonic Windows drilling prepared by Kastens (Appendix 1) were used, and extensively discussed in assessment of the Vema FZ proposal. It became clear the deep-towed sidescan category should be listed as "required" not simply recommended and other slight modifications were discussed.

Action Item 2: Kastens to now finalize SSP guidelines on requirements for "Tectonic Windows" drilling and to prepare a short discussion for submission with the table to the *JOIDES Journal*.

Panel Chairmanship/Membership Changes

Kidd retires as SSP Chair after the December 1992 PCOM annual meeting and hands over to Kastens from January 1st, 1992. His U.K replacement is Martin Sinha. Loudon (Canada/Australia) and Pautot (France) will also be replaced following discussion in their own communities. It was agreed that no recommendations will be made to PCOM for specific expertise requirements since Camerlenghi fills SSP's one potential expertise gap (high-resolution seismics) as discussed in April and Sinha covers the other (deep-towed seismics).

Report to December PANCHM/PCOM Meeting (Kidd).

Kidd called for items for his list of SSP's "causes for concern" a regular feature of his presentations at PANCHM/PCOM. Only one was immediately identified: the need for more lead-time for data submission and assessment before PCOM's August (Prospectus) meeting. SSP members were asked to communicate to Kidd any further items before November.

Next Meeting

After discussion, it was agreed that SSP should plan for a meeting in Europe following Thematic Panel Global Rankings in Spring '93. Provisionally this is set during the second week in April and hosted by Camerlenghi in Trieste, Italy.

Action Item 3: Camerlenghi and Kastens to finalize date and location of the next SSP meeting (provisionally second week of April 1993 in Trieste, Italy). Once confirmed, Kidd to write to PCOM Chair requesting the meeting.

Kidd officially closed the meeting at 16:30 on 6th August.