

JOIDES SITE SURVEY PANEL MEETING

April 1 - 4, 1997
Ocean Research Institute,
University of Tokyo, Tokyo, Japan

Members: Srivastava, Shiri (GSC Atlantic, Canada) -- Chair
Casey, Jack (U. Houston, USA)
Christeson, Gail (U. Texas, Austin, USA)
Diebold, John (L-DEO, USA)
Enachescu, Michael (Husky, Canada)
Hinz, Karl (BGR, Germany)
Lykke-Andersen, Holger (U. Aarhus, Denmark)
Paull, Charles (U. North Carolina, USA)
Peterson, Larry (RSMAS, USA)
Sibuet, Jean-Claude (IFREMER, France)
Tokuyama, Hidekazu (ORI, Japan) ----- Host

Liaison: Klaus, Adam (ODP/TAMU)
Ellins, Kathy (JOIDES Office)
Quoidbach, Daniel (ODP Data Bank)

Apology: Ball, Mahlon (PPSP)
Flood, Roger (SUNY, USA)
Jones, John (U. College London, UK)
Malfait, Bruce (NSF)

Guest : Suyehiro, Kiyoshi (Ori, Japan)
Yamazaki, T (, Japan)

AGENDA

**JOIDES Site Survey Panel Meeting
April 1 - 4, 1997
Ocean Research Institute
University of Tokyo, Tokyo, Japan**

1. PRELIMINARY MATTERS (Srivastava)

- 1.1 Introduction of members, liaison, guests and meeting logistics.
- 1.2 Charge and procedures for the meeting
- 1.3 Watchdog assignments
- 1.4 Feedback to proponents
- 1.5 Action items from November 1996 LDEO meeting

2. REPORTS

- 2.1 SCICOM (Ellins)
- 2.2 PANCH (Srivastava)
- 2.3 PPSP (Quoidbach)
- 2.4 Data Bank (Quoidbach)
- 2.5 TAMU (Klaus)
- 2.6 JOIDES (Ellins)

3. SITE SURVEY IMPLICATIONS OF RECENTLY DRILLED LEGS

- 3.1 Leg 170: Costa Rica Margin (Tokuyama/Klaus)
- 3.2 Leg 171A & B: Barbados & Blake Nose (Lykke-And./Klaus)

4. SITE SURVEY STATUS OF UPCOMING SCHEDULED LEGS FOR 97 & 98

- 4.1 Leg 174A: New Jersey II; 348 (Srivastava)
- 4.2 Leg 176: Return to 735B; 300 (Casey)
- 4.3 Leg 177: Southern Ocean Paleooceanography 464 (Srivastava)
- 4.4 Leg 178: W. Antarctic Pen. 452 & 502 (Lykke-Andersen) PPSP
- 4.5 Leg 179: NERO & Hammer Drilling, 508 (Christeson)
- 4.6 Leg 180: Woodlark Basin 447 (Enachescu)
- 4.7 Leg 181: SW Pacific Gateway 441 (Peterson)
- 4.8 Leg 182: Aus. Bight Carbonate 367 (Enachescu)
- 4.9 Leg 183: Kerguelen 457 (Tokuyama)

5. POTENTIAL FUTURE DRILLING: SSEP (Earth Int.)

- 5.1 355: Peruvian Margin Gas-Hydrate (Hinz) PPSP
- 5.2 426 Australia-Antarctica Discordance (Sibuet)
- 5.3 431: Western Pacific Seismic Network (Christeson) + (Suyehiro)
- 5.4 442: Marian Back Arc Basin (Tokuyama) + (Yamazaki)
- 5.5 445: Nankai Trough Accretionary Prism (Paull)
- 5.6 448: Ontong Java Plateau Origin (Tokuyama)
- 5.7 450: Taiwan arc-continent collision (Sibuet) PPSP
- 5.8 451: Tonga Forearc (Diebold)
- 5.9 463: Plume Impact at Shatsky Rise, New (Diebold)
- 5.10 472: Mass Balance: Izu Mariana (Diebold)
- 5.11 496: VRMS and Oceanic Plateaus, New (Enachescu)

5.12 499: ION Equatorial, New (Christeson)

7. POTENTIAL FUTURE DRILLING: SSEP (Earth Env.)

6.1 455: Laurentide Ice Sheets, New (Lykke-Andersen)

6.2 465: SE Pacific Paleoceanography (Peterson)

6.3 467: Sea Level Changes in the W. Med., New (Paull) PPSP

6.4 484: East Asian Monsoon History (Peterson)

6.5 485: Southern Gateway Aus.-antarctic (Casey) PPSP

6.6 486: Paleogene Equatorial Pacific APC transect, New (Peterson)

6.7 489: Ross Sea, Antarctica: Paleoceanography (Casey)

6.8 490: Pyrdz Bay Glacial History (Sibuet)

6.9 503: Weddell Sea: Evolution and Paleocirculation (Hinz) PPSP

6.10 511: Sea Level models- Canterbury Basin, New (Paull) PPSP

10. OTHER BUSINESS

10.1 SSP in new JOIDES structure (Srivastava, Ellins)

10.2 Report of SSP subcommittee on Phase IV of ODP (Diebold, Srivastava)

10.3 Panel Membership (Srivastava)

10.4 Next meeting (Srivastava)

10.5 Forms (Quoidbach)

* --- For Legs 175 data sets were approved at previous SSP meetings and no changes have taken place since.

PPSP - items in the proposal of concern to PPSP

Executive Summary

Charge and procedures for the meeting (Srivastava)

The goals for this meeting were to: (1) to evaluate the site survey readiness of proposals recommended by special SSEP, (2) to evaluate the site survey readiness of legs scheduled for drilling, and (3) to assess any site survey issues arising from legs that were drilled since our November meeting. The main customer for the output of this meeting are the proponents of proposals and OPCOM, who uses the evaluations resulting from item (1) above as input into designing the drilling prospectus for FY'99 at their April meeting.

The discussion during the meeting resulted in SSP making the following recommendation to SCICOM, action items and point of consensus.

SSP Recommendation # 1 to SCICOM for the formation of a DPG or PPG to address the site survey requirements for deep drilling during phase IV of ODP: SSP earlier had recommended to PCOM that it should form a special group of expertise from TECP, LITHP, SGPP, ODP/TAMU and SSP to look into the ways of finding parameters of the upper crust which would have to be determined for successful drilling to such great depths. Even though the recommendation was adopted but no results could be obtained. We are again making this request for the formation of a DPG or PPG in the new system to address this problem.

Explanatory note:

The entire question of imaging the upper and lower part of the crust using new and innovative techniques is a difficult one and needs careful consideration by a group of experts. We would prefer if this question could be addressed by a group of scientists from SSP and from scientific community at large. The reasons for suggesting formulation of such a group are summarised below.

Successful deep drilling either in deep oceanic environments or in continental margin environment requires the best possible information to determine true X, Y, Z positioning of targets in the presence of structure, and to predict "drillability." The first question will mostly be answered with seismic surveys, designed to provide both three dimensional coverage and velocity information. Whether these objectives are linked via depth migration of 3-D MCS data or through analysis of looser regional grids and wide-angle velocity profiles depends on the structure and drilling objectives.

Safety and feasibility of deep drilling depends on many factors, including downhole temperature gradients, stress, and material properties such as permeability. Several other types of geophysical survey (including heat flow and MT) are likely to be employed in different cases to provide guidance on these issues. When drilling deep holes, it is advisable to conduct downhole logging and other experiments e.g. VSP from time to time in the deepening hole (or in preliminary, shallow holes) to calibrate the site survey results obtained from surface measurements.

Since many of these questions have been addressed by land-based groups, such as the International Continental Drilling Project, it was suggested that they should be approached by some ODP organization, not necessarily SSP, for information and liaison activity, as should land-

based deep-crust geophysical groups, including Lithoprobe and Cocorp. Similarly other related issues have been addressed and are presented in JOIDES' Bare Rock Drilling Report, which should be examined. It was felt that the entire question of what measurements should be conducted to image the deeper part of the crust was a difficult one for SSP to resolve alone, although the panel recognised that it was SSP responsibility to see that the required data are deposited by the proponents to the DB for SSP evaluation and thus the panel should make efforts to find out more about these measurements. For this reason we are proposing a special group to be formed to address these questions.

Suggested candidates from SSP for this panel: Srivastava, Diebold, Casey, Sibuet and Christeson

Action item # 1: All watchdogs to write to lead proponents of all programs discussed, reporting the sense of SSP discussion and enclosing the relevant section of the minutes. A copy of this letter must be sent to the DB. The letter can be sent by e-mail.

Action item # 2: Data Bank manager, Dan Quoidbach, to write to the Co-Chiefs of designated legs, reporting the sense of SSP discussion and enclosing the appropriate section of the minutes.

Action item # 3: The JOIDES Office liaison is to ask the SCICOM Chair about the status of alternates for the US members from the SSEPS.

Action Item # 4 : SSP Chair Srivastava to write to SCICOM asking for their permission to hold their summer meeting from July 16 to 18, 1997 at LDEO and Winter meeting at Punta Arenas (Chile) from February 10 to 12, 1998.

Action Item #5 : Dan Quoidbach to have ready the new ODP guide booklet together with data forms for discussion at the next (July) SSP meeting.

Action item # 6 : Srivastava to write to SCICOM about nomination of the following SSP members as liaison to SSEPs.

Earth Environment:

Larry Peterson ----- June 1997

Charlie Paull ----- November 1997

Roger Flood ----- Alternate 1997

Earth Interior:

Lack Casey ----- June 1997

John Diebold ----- November 1997

Jean-Claude Sibuet ---- Alternate November 1997

SSP Consensus # 1. SSP would like to thank TAMU for implementing SSP's recommendation made to PCOM during their December meeting about the possible use of GI guns during Leg 172 for collection of high resolution seismic data and on the

evaluation of the effective use of these guns and their possible use onboard JOIDES RESOLUTION on a permanent basis.

SSP Consensus #2 : During their November meeting SSP had requested that the positions of all sites for Leg 174A that have new coordinates be submitted to the JOIDES office on ODP Site Summary Forms, that shelf sites be prioritized, and that justification be provided for the newly designated slope sites. This has now been deposited with the DB. The Leg is declared to be ready for drilling.

SSP Consensus # 3: SSP reiterates that all the required data is now available in order to deepen Site 735B. However, SSP continues to request that the proponents submit a survey map derived from the JOIDES Resolution video tapes to show the distribution of sediments, slopes and potential alternate sites near Site 735B. The proponents indicated they would reconstruct the video track from the audio portions of the tape because the original JR track map cannot be located. This is important given the potential of selection of alternate sites if difficulties in deepening 735B are encountered (see PCOM MOTION 95-3-11).

SSP Consensus # 4: During our November meeting we found the data package for proposal 464 (Leg 177, Southern Ocean Paleooceanography) is nearly complete and the proposal was designated 1A. We had mentioned that deepening of some of the holes is best done after consideration of the deeper seismic structure and for that it may involve the proponents working more closely with a seismic stratigrapher. It is our understanding that the proponents are well aware of this problem and will look into it closely prior to drilling. The impact of deepening any holes on overall leg timing also needs to be considered carefully. If any sites are moved or deepened, they will need to be re-evaluated by SSP and will need good velocity control. All required data has been deposited in the Data Bank and the Leg is ready to be drilled.

SSP consensus # 5: SSP urges the proponents to complete the processing of the Palmer Deep profiles as well the newly data collected on two recent cruises so that these profiles and other data can be used for the safety review in May 97. Also true-amplitude plots should be made, as was requested during November meeting, for the APRISE-sites to help the safety evaluation of these sites. All other data for this leg is now in the Data Bank. The site survey data package for Leg 178 is complete.

SSP Consensus # 6: This proposal calls for installation of a broadband ocean seismometer into a borehole drilled into basement on the Ninety east Ridge (Leg 179). Plans call for reoccupation of either ODP Site 756 or 757. Since site survey data for these previously drilled sites are already on file with the ODP Data Bank, SSP considers the site survey readiness status to be 1A. However, the panel recommends velocity-depth information from seismic refraction profiles be collected so that the crustal thickness and its variation near the site can be determined.

SSP Consensus # 7 : SSP acknowledges that a complete data package supporting drilling in the West Woodlark Basin (Leg 180, 447-rev3) exists in the Data Bank. The

reviewed proposal contains four feasible, well-documented sites. It is SSP opinion that the shallow angle reflector imaged on the side of the Morsbey Seamount is very likely a true reflector representing shallow angle fault and is not a side reflector as was suggested by Tectonic Panel. Site Survey Readiness Classification remains as 1A.

SSP Consensus # 8: The scheduled resurvey of SW Pacific Gateway (Leg 181) sites by the R/V *Tangaroa* has recently been completed and proponents are in the process of compiling a final data package for submission to the ODP Data Bank. SSP anticipates having a complete set of all required data types to examine at its July meeting and should be in a position at that time to make final decisions on individual site readiness.

SSP Consensus # 9: A complete set of site survey data for proposal 367 (Great Australian Bight, Leg 182) is in the DB. Migrated lines, isochrone maps constructed by interpreting migrated sections and seismic derived velocity information with hole plots including total depth, were reviewed and found adequate. Site survey readiness: 1A.

SSP Consensus # 10: SSP recommends the proponents of Leg 183 (Kerguelen Pl.) to submit 1) brute stack profiles of all profiles obtained on RS 179 & 180 cruises before 15th June 1997 data deadline to the DB for the review at the next SSP meeting in July and 2) a track chart from this survey. It is also recommended that the proponents should plan to have all data processed before the end of October in case PPSP decides to hold a review of this Leg during their November 1997 meeting. In that case SSP may be required to preview the processed data during a special meeting to be held in late October or early November. SSP also requires proponents to submit the profiles for the sites KIP3A & 2B/9A to be obtained by the French cruise as soon as possible. If new profiles could not be obtained, SSP cannot recommend drilling of KIP3A & 2B/9A as no other data exist at these sites.

SSP Consensus # 11 : The existing data set partially fulfils the requirements for proposal 355, Peruvian Gas Hydrate. A large scale map containing water depths, all seismic lines with SP numbers and site locations annotated, showing the extent and distribution of the gas hydrate zone (BSR) should be supplied to the DB before June 15 deadline before next SSP meeting. Sites should also be located on the existing or to be acquired cross lines. Site Survey readiness judged as 2C provided the proponents can collect required data on a future cruise.

SSP Consensus # 12: Since July 1996, proponents prepared a set of data in which they document each of the proposed sites. Though the poor quality of Melville data, sites 1, 13, 14 and 16 were considered, during the November SSP meeting, as drillable sites but SSP recommended to run a complementary survey to show where pockets of at least 50 m of sediments exist. For that, 3.5 kHz record were required. SSP also felt that it was very important to simultaneously run a high resolution seismic system able to give permanently the whole sediment cover.

A Melville cruise was performed in February-March 1997. Proponents will submit a new data package that SSP will examine during its next July meeting. SSP decided to

still rank the proposal as 2C.

SSP Consensus # 13: Data in support of all four western Pacific seismic network sites (proposal 431) now exist. These data indicate the potential viability of all four sites for seismometer installation, but further processing of the recently collected MCS data is required. At present, no velocity control exists for the four sites, although OBS data was collected at the JT sites and still remains to be modelled. All sites are now classified as 2A in terms of present site survey readiness.

SSP Consensus # 14. SSP noted that high resolution seismic profiles are required in case of NMT-1A, NMT-2 and NMT-5A for proposal 442 (Mariana Back Arc Basin). Also SSP recommends the track chart of essential profiles be plotted for each site on detailed bathymetric map for easy visualisation. In view of the proposed site survey cruise to this area by JAMESTEC the Site Survey readiness of the proposal is classified as 2C. Every effort should be made in acquiring appropriate data at most of the sites in order for this proposal to make to the drilling prospectus for 1999.

SSP Consensus # 15: No data has been received for Nankai Trough (445-Rev2, Add 2) since the last meeting. Detailed navigation plots that merge the major data types are still missing. The proposal remains rated 1B.

SSP Consensus # 16. SSP noted that MCS, velocity, and 3.5 subbottom data are required for all proposed sites for proposal 448 (Ontong Java Plateau). SSP, therefore, recommends to proponents to propose to ORI to plan to run a grids of intersecting lines at all of the proposed sites, for obtaining MCS profile and other required data.

SSP Consensus # 17: All vital data for proposal 450 (Taiwan arc-continent collision) have been deposited in the DB. The proposal was rated 1A during the November 1996 SSP meeting, which means that it is ready to become a drilling leg. However, in view of the presence of BSR at some sites that it is very likely that PPSP will pre-review this proposal. For that reason the proponents are advised that they should make every effort of making true amplitude plots for those sites (e.g.TC2A, TC7A).

SSP Consensus # 18: All required site data for Tonga Forearc proposal (451) now resides in the DATA BANK including the processed dual channel section from R/V Melville Boomrang cruise. The proposal, from an SSP perspective, is now ready to be considered for drilling.

SSP Consensus # 19: 3.5 Khz data for proposal 463 (Shatsky Rise), believed to exist, must be deposited in the DB before SSP approval is possible. The migrated 6-channel seismic reflection data in the DB are adequate to identify basement at all proposed sites, and sediment thicknesses estimates based on previous drilling in the area should be fairly accurate. One primary site, SRS4 and its alternate, apparently located on bare rock (SSP cannot tell without 3.5 Khz data) should be dropped, or moved, unless the proponents are prepared to provide the data required for

employment of the HRGB. With these modifications, the data set will be complete, though deep penetration MCS data would greatly enhance the interpretation of the results of deep drilling (and, perhaps, the location of the drill sites). Short surveys by the drill ship would be desirable, to provide cross lines at the 15 sites which lack them.

SSP Consensus # 20: A good data package has been assembled for Izu-Mariana Convergent Margin proposal (472). The package was judged to be complete and the proposal ready for drilling at our November 96 meeting and the same remains now. If any paleoceanography objectives are intended, a good quality SCS profile through the BON site must be collected by the JOIDES Resolution.

SSP Consensus # 21: An incomplete set of site survey data was submitted for proposal 496 (VRMS and Oceanic pl.). Site location lines must be adequately processed and resubmitted. Intersecting MCS must be collected and provided for the platform margin sites. Detail locations must include the analysis of sub-bottom profiler data. Site survey readiness: 2C.

SSP Consensus # 22: This proposal (499, ION) calls for drilling a hole near ODP site 852 for seismometer installation in support of the ION and OSN programs. SSP feels it is important that the ION sites be well characterized in terms of seismic structure, and thus requires a grid of deep penetration seismic reflection lines and velocity control via crustal refraction measurements. This site is classified as 3B in terms of site survey readiness.

SSP Consensus # 23: No new data have arrived at the ODP Data Bank in support of SE Pacific drilling since our last discussion of this proposal. However, a new NSF-funded site survey of all proposed sites was underway at the time of our Tokyo meeting. We encourage proponents to compile and submit the results of this survey to the Data Bank in a timely manner for further SSP consideration. The site survey readiness for this drilling program remains 2B in anticipation of seeing new survey results at a future meeting.

SSP Consensus # 24: No data for proposal 467 (Sea level changes in W. Mediterranean) is yet in the data bank, yet all of the required data types are believed to exist. Previews of the Sites indicate that two drilling environment classifications will be applied. Sites with penetration exceeding 300 m will be classified as Passive Margin, while the shallower sites are classified as Fan. MCS and good velocity data will be needed for deep penetration sites. The proponents are encouraged to submit the required data to the data bank before June 15 deadline. Drilling 23 holes with two of them to 1300m depth seems like too ambitious a program and the proponents should check drilling times estimates with TAMU engineers. The proposal is rated 2A.

SSP Consensus # 25: Proponents have revised their proposal for South China Sea drilling and selected new sites in response to earlier SSP and thematic panel comments. Examination of data already submitted in support of proposed sites suggests that existing data are probably adequate to approve site locations on the

basis of scientific objectives. However, strong SSP concern exists over potential safety issues, especially at the northern suite of sites. Proponents will need to supply adequate data for SSP and PPSP to fully evaluate potential hydrocarbon hazards. These include information on oil and gas shows in local exploration wells below the target depth, and data on the productivity of source rocks in the region. The placement of sites on crossing lines will be a strict requirement, and may necessitate further adjustments of site position or additional survey efforts. Site survey readiness is considered to be 3B, with critical data still missing but believed to probably exist or to be collected.

SSP Consensus # 26: All of the required data for proposal 485 (Southern Gateway Australia-Antarctic) is now submitted to the DB. The proponents are thanked for their efforts in processing all the required data and depositing it with the Data Bank in time for SSP meeting. This proposal is now ready to be considered for drilling.

SSP Consensus # 27: Available data in support of drilling objectives for this Paleogene Equatorial Pacific Transect (486) have not yet been submitted to the ODP Data Bank, but are reportedly being compiled by proponents for preliminary review by SSP at the July meeting. In addition, a site survey cruise aboard R/V *Ewing* has been funded and is scheduled to begin in December 1997. SSP wishes the proponents luck in assembling available data and urges them to design their future survey with target type A data requirements in mind.

SSP Consensus # 28: A nearly complete data package has been provided in support of proposed drilling for proposal 489 (Ross Sea), although some required items, thought to exist, are still missing and so the proposal is rated as 1B. Also needed is a drilling plan that identifies alternate sites should ice conditions not allow some sites to be drilled.

SSP Consensus # 29: There is a large amount of seismic lines on the continental slope but just a few lines in the deep ocean. The proponents have recently completed a survey cruise. Based on this new data set and previously acquired data, they intend to submit a new set of sites and the appropriate data in the Data Bank. SSP will examine these data during its July meeting. The site survey readiness of the proposal is 2A.

SSP Consensus # 30: It seems certain that the existing data can meet site survey requirements for the Weddell Sea proposal (503). However, until the large scale map showing all existing SCS and MCS with their position information can be supplied it is difficult to evaluate the data properly. The proposal is ranked as 1B as some essential items are still missing.

SSP Consensus # 31: A limited amount of data in support of proposal 511 (Sea level modes in the Canterbury Basin) has been supplied to the Data Bank. While the copy quality of the multichannel data was marginal, the data appears to be of excellent quality. Given the importance of the seismic data to the objectives of the cruise, improved displays of the data need to be provided. Many of the proposed sites are not located at crossing lines. A large number of sites will require shallow water

hazard survey to be conducted. The proponents are urged to keep in communication with PPSP together with TAMU in designing this survey. Additional data required and not at the Data Bank include water current in the region, weather conditions, detailed velocity information and large scale navigation plots. In view of the shallow water hazard survey to be conducted in the region the proposal is rated as 2C.

SSP Consensus # 32: The panel would like thank Hidekazu Tokuyama for the care and thought he put in organising so many events during this meeting and giving the panel a chance to appreciate the culture and beauty of this superb country. We thank him and his associates for being such superb host for this meeting.

Minutes

JOIDES Site Survey Panel Meeting
April 1 - 4, 1997
Ocean Research Institute
University of Tokyo, Tokyo, Japan

1. PRELIMINARY MATTERS (Srivastava)

1.1 Introduction of members, liaison, guests and meeting logistics.

SSP Chair Srivastava welcomed all those present, especially the new members Gail Christeson who replaced Doug Toomey and Adam Klaus the new liaison from TAMU. Also he welcomed Jean-Claude Sibuet back to the panel as French member for the next three years. He mentioned John Jones's, from UK, inability to attend the meeting because of an accident in the family. Hidekazu Tokuyama, the host for the meeting, also welcomed members and outlined the planned social activities during the meeting and provided information about the various facilities at ORI which members needed to use during the meeting. The minutes of November meeting and the agenda for this meeting were approved unanimously.

1.2 Charge and procedures for the meeting (Srivastava)

The goals for this meeting were to: (1) to evaluate the site survey readiness of proposals recommended by special SSEP, (2) to evaluate the site survey readiness of legs scheduled for drilling, and (3) to assess any site survey issues arising from legs that were drilled since our November meeting. The main customer for the output of this meeting are the proponents of proposals and OPCOM, who will use the evaluations resulting from item (1) above as input into designing the drilling prospectus for FY'99 at their April meeting.

1.3 Watchdog assignments (Srivastava)

Srivastava outlined the new watchdog assignments as agreed upon by most before the meeting and requested Gail Christeson to look after John Jones's assignments because of his absence. The old and recent watchdog assignments on each proposal are listed in a tabular form in the Appendix A.

1.4 Feedback to proponents (Srivastava)

Srivastava restressed the need for the watchdogs to send copies of their letters to the lead proponents of the proposals soon after the meeting as these are needed in order for proponents to respond appropriately. In the past, some proponents have complained that they could not meet proposal or site survey deadlines because of the lateness of the SSP watchdog letters. Without this the entire purpose for this panel gets into jeopardy. It was agreed that copies of the relevant portion from the preliminary minutes will be sent by the watchdogs to the lead proponents as soon these minutes are received by them together with their letters. Items to be included in their letters are listed in the Appendix B.

Action item #1: All watchdogs to write to lead proponents of the proposals discussed at the meeting soon after the preliminary minutes are received, reporting on the sense of the SSP discussion and enclosing relevant section of the minutes. A copy this letter MUST be sent to the Data Bank. Those who are unable to do so should let the Chair know about it. This material can be sent by e-mail.

Action item #2: Data Bank manger, Dan Quoidbach, to write to the Co-Chiefs of designated legs discussed, reporting the sense of SSP discussion and enclosing relevant portion of the minutes about their Legs.

1.5 Action items from November 1996 LDEO meeting (Srivastava)

All action items were taken care of by those responsible for with the exception of watchdog letters by some.

2. REPORTS

2.1 SCICOM (Ellins)

2.1.1 SCICOM, EXCOM, JOIDES OFFICE

Ellins reported on activities in the JOIDES Office since the November SSP meeting. Motions passed and issues discussed at the final PCOM Meeting (December, 1996) and the winter EXCOM meeting (February, 1997) that are of relevance or interest to SSP were reviewed (Appendix B). Ellins responded to questions raised by panel members.

2.1.2 SSP in new JOIDES advisory structure .

Ellins reported on the role of SSP in the new JOIDES Advisory Structure. The minor changes made to the mandate and terms of reference for SSP by EXCOM were noted (Appendix B). Two liaisons from SSP to the two SSEPs (Interior and Environment) are required. Jack Casey (Interior) and Larry Peterson (Environment) will attend the first SSEP meeting (June 2-4) at JOI; John Diebold and Charlie Paul will attend the November Meeting. The alternates are Roger Flood (Environment) and Jean-Claude Sibuet (Interior).

2.2 PANCH (Srivastava)

Tom Loutit chaired the meeting. Several items pertaining to the new JOIDES structure were discussed. Following are the highlights of this discussion and recommendations.

* PANCH recommended that the new JOIDES Science Advisory Structure namely OPCOM should have two main objectives: 1) resolve short-term scheduling issues and 2) advise SCICOM on long-term technical requirements;

* PANCH emphasised the need to maintain continuity and consistency in the evaluation system for proposals that have already been highly ranked by thematic panels prior to the transition to the new advisory structure;

* PANCH endorsed the IHP recommendation that JANUS Phase II be implemented as soon as possible.

* PANCH endorsed the efforts to develop new guidelines (will be released soon) for sampling and curation.

* Considerable discussion took place on shipboard collaborations approval. A formal recommendation was made to PCOM about such collaborations which was approved by PCOM. Basically all arrangements will have to be conveyed formally in writing to the Staff Scientist by the end of a Leg. Co-Chief scientists will ensure that all shipboard agreement are completed. Responsibility for adjudicating any ensuing conflicts that cannot be dealt with directly by ODP-TAMU will rest ultimately with JOI.

* PANCH recommended that PANCH should continue to meet as usual prior to SCICOM meeting once a year.

* SSP thanked PANCH for supporting it and stressed that the two recommendations which were approved by PCOM last year concerning reduction in its work load be carried forward into the new structure.

Srivastava said that he recalled that PANCH had recommended that the SSEPs should provide alternates to SSP in cases where regular US SSP members could not attend. This is because the US SSP members do not have alternates, although the non US representatives do. This recommendation is not reflected in the PANCH minutes.

Action item # 3: The JOIDES Office liaison is to ask the SCICOM Chair about the status of alternates for the US members from the SSEPS.

2.3 PPSP (Ball/Quoidbach)

Mahlon Ball was unable to attend the SSP meeting so Dan Quoidbach delivered his report. At their February meeting in La Jolla, the PPSP reviewed Leg 177 (S. Ocean Paleooceanography), previewed Leg 180 (Woodlark Basin) and reviewed again the Angola Basin sites of Leg 175 (Benguela).

At the Fall meeting of PPSP Leg 175 was reviewed, but substantial safety problems were found at the Angola Basin Sites. The Co-chiefs were asked to return with true amplitude plots of their seismic data and allow the panel a second look at these sites.

Between meetings it was determined that the Angola Basin is an area of active hydrocarbon exploration, and that the proposed drill sites were in an area of interest to Exxon. A representative of Exxon(?) provided information that a possible BSR exists in the vicinity of NAB-2, that piston cores in the area show signs of thermogenic hydrocarbons and that MAB sites are in a region that show amplitude anomalies below 200m.

Upon examining the reprocessed data the panel was able to approve most sites with modifications to proposed depth, location, or both. The change of CMP scale due to the reprocessing of the data caused the panel some confusion, and the consensus was that the horizontal scales on all seismic lines should be in shotpoints. This would provide a uniform horizontal scale on all seismic data throughout the lifetime of a proposal. Shotpoints were chosen because it was felt that they were less likely to change location due to a change in processing techniques than were CDPs or CMPs.

Leg 177 was reviewed and all sites were approved as proposed with the exception of TSO-7A. This site was approved, but the location was shifted slightly to avoid a potential trap structure.

Leg 180 was previewed and the panel had no serious concerns regarding the safety of the proposed sites. The panel did recommend that ACE-9A be moved to a cross line and be located on a structural low. Advice on further processing was given to the proponent and new versions of the seismic lines should be provided by the next PPSP meeting in late May.

Charlie Paull presented the panel with a report on the results of Leg 164 gas hydrate drilling and the panel discussed the implications of the findings for site safety.

The next meeting of the PPSP was set for May 26-27, at which time Legs 178, 180 and 182 will be reviewed.

2.4 Data Bank (Quoidbach)

Since the November 1996 SSP meeting the Data Bank has received 226 data items in support of JOIDES proposals. The Data Bank prepared shipboard data packages for Legs 171A,

171B, and 172, and processed safety packages for the February '97 PPSP meeting in La Jolla. The data package for Leg 173 is currently being prepared.

In January LDEO submitted a proposal to JOI, Inc. in response to the RFP for the Data Bank Services subcontract. The decision on the next subcontractor is still pending.

In early December the Data Bank upgraded all of its computers to Power Macintosh machines and purchased a workgroup server to act as a file and web server. A Pentium system and digitizing pad were purchased along with a colour inkjet plotter to improve the Data Bank's ability to create and output digital data. While all of the Macintosh systems are currently fully functional and have been integrated into the LDEO network, the Pentium machine and the plotter are still waiting for the installation of new ethernet cabling to be placed on-line.

In late December the Data Bank hired a consultant from Knowledge Software, Inc. to produce a new data tracking system for the Data Bank. The work is in its early design stages, but hopefully a working prototype can be demonstrated to the SSP at the July meeting.

2.5 TAMU (Klaus)

Adam Klaus presented a comprehensive report from Tamu under the following headings:

1. Status of recommendation from last SSP meeting
2. P-Code/dGPS
3. Solaris 2.5 upgrade project for seismic acquisition and processing computers
4. Six channel seismic streamers and new chart recorders.
5. Open positions (vacancies)
6. Core repository expansion
7. New Database system (JANUS)
8. New additions to the AUS/CAN consortium
9. New sample policy
10. Publication

1. Status of recommendation from last SSP meeting; GI-Gun deployment: A GI-gun was obtained on loan from SSI for use on Legs 172 (reflection survey) and 174A (VSP). Three ODP technical staff visited SSI for training in gun use and maintenance. Gun has been used in 5 surveys so far on Leg 172 (See Appendix 1 below for Leg 172 Underway Technicians report). Tests during Leg 172 indicate records degrade at speeds >8 nmi/hr. My (Klaus) recommendation remains that seismic reflection data be collected at ~5-6 nmi/hr for best results.

SSP Consensus # 1. SSP would like to thank TAMU for implementing SSP's recommendation made to PCOM during their December meeting about the possible use of GI guns during Leg 172 for collection of high resolution seismic data and on the evaluation of the effective use of these guns and their possible use onboard JOIDES RESOLUTION on a permanent basis.

2. P-Code/dGPS: In contrast to the previous few years, Dolly Dieter (the NSF person responsible for coordinating the MOU between UNOLS ships and DOD concerning P-code deployment) said her DOD contact seemed receptive to exploring adding the JR to the MOU. She cautions, however, that this process may take ~12 months. ODP will ensure dGPS is available for Leg 174A (New Jersey Shelf) but only traditional GPS will be available once the ship leaves waters surrounding North America. Currently reevaluating other "worldwide" alternatives (for example

GPS/GLONASS combination and/or Starfix). This may include a free one leg trial of Starfix (dGPS good to ~2000km offshore of most continental regions) if the company is still amenable.

3. *Solaris 2.5 upgrade project for seismic acquisition and processing computers:* Operating system and seismic software for acquisition (a2d) and processing (sioseis) was installed during Leg 171A. Fatal bugs in Solaris 2.5 version of seismic acquisition program (a2d) provided by developer were fixed by ODP programmers prior to deployment to the ship. ODP has since provide software fix and completely functioning Solaris 2.5 version of a2d to U. Hawaii and Scripps to allow them to perform similar system upgrades. New system was successfully used to collect a single seismic line during Leg 171B. Based on this successful test, the backup seismic acquisition computer was also upgraded during Leg 171B. During Leg 172, at least 5 surveys have been conducted with the new system. This project is considered complete with only the end of project evaluation remaining.

4. *Six channel seismic streamers and new chart recorders:* Two 6-channel streamers were redeployed on Leg 172 and an ITI representative met with ODP staff at the Charleston port call to assist with installation. One streamer had been repaired and another was completely replaced. Fortunately, multiple seismic surveys required during Leg 172 is permitting the ODP technical staff with unusual repeated opportunities for testing and trouble-shooting these new streamers. This points out the serious problem with lack of survey time to implementing and trouble-shooting new underway equipment on the JOIDES Resolution. During the initial two Leg 172 surveys, incorrect wiring by the manufacturer resulted in no data being collected on the 6-channel streamer (however, good data was collected by the backup single channel streamer). The new streamer worked well during the third survey, but had trouble during the fourth survey (potentially due to problems other than the streamer). Implementation of these streamers continues to be a problem partly due to lack of time available for testing but also due to streamer malfunctions. ODP will continue to refurbish the single channel streamers until we can be certain of the viability, durability and integrity of the 6-channel streamers.

One of the new chart recorders was sent to Pelagos, Inc (envelopers of our navigation software) for evaluation of effort required to provide program to control and annotate. Statement of work for software control of chart recorder operation and annotation is currently being finalized and some beta code has already been written. We intend that the chart recorders and annotation will be controlled from within our navigation software which already obtains all the required for the annotation. Software will allow independent control of all four chart recorders and associated annotation for each (3.5, 12, Seismic #1, Seismic #2). Anticipate deployment of chart recorders and software about Leg 174.

5. *Open positions (vacancies):* Manager of Science Services: Interviews will be completed 27 March. Supervisor of Technical Support: Interviews have been completed. Expect position to be filled by mid-April.

Curator: Position is being internationally advertized (EOS, 11 Mar). Deadline for applications will be 15 April.

6. *Core repository expansion:* Texas A&M University has made an initial commitment to construct a \$3,500,000 expansion to the Ocean Drilling Program refrigerated repository. The current repository core storage is 8,000 square feet. Initial expansion plans will double the space

available for core storage. Architectural plans have been narrowed to a single model that will fulfill requirements and fit within available land.

7. *New Database system (JANUS):* Leg 171: First full implementation of Janus for cruise science (various modules have been tested on previous legs). Fully utilized for data collection. Two Tracor developers sailed to (1) facilitate smooth implementation; (2) assist/ train scientists, ODP staff, and ODP system managers in use, capabilities, and support; (3) fix bugs; (4) document code.

Charleston portcall (Leg 171/172): Janus steering group meeting to review status and remaining tasks.

Leg 172: Janus continues to function as primary database. ODP sailed two additional Programmer Specialists in addition to normal staffing of two computer system managers (1) to ensure Leg 172 science will proceed smoothly, (2) to document all remaining issues to be resolved, and (3) to write additional database utilities to extract data for scientists and ODP staff use.

8. *New additions to the AUS/CAN consortium:* Korea and Chinese Taipei have joined the Australia/Canada Consortium.

9. *New sample policy:* In November 1996, JOI held a Curation Workshop to review ODP curation and existing sample policy. A new sample policy was drafted and is currently being reviewed and revised.

10. *Publications:* The future of ODP publications continues to be evaluated. A JOI Publications Steering Committee (PUBCOM) has been formed and its first meeting will take place 3-4 April in Washington D.C. In December 1996, JOI selected David Scholl, USGS, to serve as the Chair of this committee and committee members were selected in January 1997. The PUBCOM mandate is to guide ODP in the transition of publication of scientific data and results from a mostly printed to a mostly electronic format. Fundamentally, PUBCOM functions to advise JOI in the implementation of the ODP Publications Strategy. Specifically, PUBCOM will:

1. Provide an on going evaluation of the ODP Publications Strategy and provide JOI with any recommendations for change that should be made.
2. Ensure that the Strategy is in step with the direction of the scientific publishing world and the needs of the scientific community;
3. Make recommendations on the design and function of formats for electronic ODP Proceedings volumes;
4. Evaluate new formats for electronic CD-ROM volumes as well as a WWW (Internet) version of the Proceedings;
5. Recommend a timetable to move forward toward a complete or mostly electronic publishing of ODP scientific data and results;
6. Develop a strategy to ensure an archival record of all Proceedings materials.

PUBCOM will work in two phases. During the Alpha phase, the format for new electronic publication will be formulated and an implementation plan will be developed. During the Beta phase, committee members will assist ODP/TAMU Publications staff with development of prototype and final electronic publications, based on the specification defined by the Alpha group. The first committee meeting will be held on 3-4 April 1997.

Prior to the first official meeting, the Publications Steering Committee has been doing

background research exploring the best way to implement a transition strategy from all-print to all-electronic publications. Though the current directive states that beginning with Leg 169, all prime data will be printed on CD only, this may not be the wisest way to implement the transition. When the Publications Steering Committee will hold their first meeting in early April this issue will be discussed. One option that ODP/TAMU has been asked to price out is how much extra it would cost to continue to publish all the material (site chapters and prime data) in book format (while continuing to produce the companion test CDS). ODP/TAMU has given these figures to JOI.

2.6 JOIDES (Ellins)

See Appendix B.

3. SITE SURVEY IMPLICATIONS OF RECENTLY DRILLED LEGS

3.1 Leg 170: Costa Rica Margin (Tokuyama/Klaus)

Leg 170, Costa Rica: Data sufficient for site selection. All 3-d digital seismic data (and Landmark workstation) was brought on board by participating scientists working with 3-d survey seismic.

3.2 Leg 171A & B: Barbados & Blake Nose (Lykke-Andersen/Klaus)

Leg 171A: Data sufficient for site selection. Data package not utilized very much as scientists who conducted 3-D seismic survey brought all digital seismic and navigation data aboard (and Landmark workstations).

Leg 171B: Utilized data package extensively. Mostly used main seismic line across transect of sites (USGS MCS line TD-5) and navigation plot. Did not use other crossing lines (Farnella, etc) however, expect that these will be essential for post-cruise science. Lack of a digital version of the 1975 vintage USGS MCS line TD-5 inhibited flexibility in ability integrating with other data. Norris attempted to obtain digital version before the cruise but with no luck and we are trying again post-cruise to locate digital data for post-cruise science. Data mostly sufficient for site selection except that the navigation of the 1975-vintage USGS MCS line TD-5 was rather poor. This was confirmed by the JR seismic profile collected using dGPS to reconfirm exact site locations.

4. SITE SURVEY STATUS OF UPCOMING SCHEDULED LEGS FOR 97 & 98

4.1 Leg 174A: New Jersey II; 348 (Srivastava)

SSP Consensus #2 : During their November meeting SSP had requested that the positions of all sites for Leg 174A that have new coordinates be submitted to the JOIDES office on ODP Site Summary Forms, that shelf sites be prioritized, and that justification be provided for the newly designated slope sites. This has now been deposited with the DB. The Leg is declared to be ready for drilling.

4.2 Leg 176: Return to 735B (300)

SSP Watchdog : Casey

SSP proponent(s) : none

Target type : G

This is a two Leg proposal to: 1) deepen Hole 735B and 2) drill five offset holes

along a transect across the wave-cut platform in order to penetrate gabbros and possibly peridotites. Alternate back-up sites SWIR 5 and 6 have also been selected for the second Leg. The first Leg is now scheduled as Leg 176. SSP considered only the scheduled Leg 176 to deepen Hole 735B.

The priorities for Leg 176 for the 735B drilling were defined by PCOM consensus at the Annual Meeting are reiterated below as SSP feels that they are important to bear in mind when looking at SSP recommendations which have been made over and over again in the past but no action have been taken by the proponents:

1. Deepen existing 735B to 2km below the seafloor
2. Logging of the deepened hole is a high priority
3. Conduct both Packer and VSP experiments in the deepened hole. As there are limited ODP SOE funds, it will be necessary to identify proponents and funding for these objectives.
4. The following priorities in the event of difficulties in deepening 735B should be maintained:

offset HRGB in present 200 m survey box.

bare rock spud -in at 400 m intervals on flow line.

video survey and distal HR GB deployment.

5. Efforts should focus on the wave cut terrace on which 735B is located. A conjugate basalt site should be drilled as an alternate only as a "LAST RESORT".

The proponents have indicated an interest in requesting a change in this motion, but this request cannot be considered by SSP.

SSP regards the first Leg to deepen 735B as having all the required data, but has asked the proponents to submit a reconstructed video survey map of the JOIDES Resolution video tape with navigation. Two unedited tapes have been deposited in the data bank. We were informed by the proponents that the original track plots for the video survey cannot be located at ODP, but that the XY positions relative to 735B can be located by depths and positions called out and recorded on the tapes. At a minimum, however, the video data confirms the suggestion that there are abundant low slope outcrops along the wave cut platform that could be used for an alternate HRGB and the proponents believe that these points along the video survey can be located using the audio on the tape. The proponents have been asked to submit a track map reconstructed from the audio tapes with a descriptions of the video.

A site survey proposals has now been funded, this is regarded as critical prior to the second Leg for HRGB offset drilling sites as the bottom video or photographic data needs to be supplied prior to a second Leg. Based on criteria established by SSP, the HRGB offset sites and conjugate sites are not considered ready for drilling.

Site survey readiness classification. By considering separate drilling legs, it is possible to rank the proposal to deepen 735B as 1A. The second Leg for offset drilling proposed remains as 2C until additional site survey data is collected.

SSP Consensus # 3: SSP reiterates that all the required data is now available in order to deepen Site 735B. However, SSP continues to request that the proponents submit a survey map derived from the JOIDES Resolution video tapes to show the distribution of sediments,

slopes and potential alternate sites near Site 735B. The proponents indicated they would reconstruct the video track from the audio portions of the tape because the original JR track map cannot be located. This is important given the potential of selection of alternate sites if difficulties in deepening 735B are encountered (see PCOM MOTION 95-3-11).

4.3 Leg 177: Southern Ocean Paleoceanography (464)

SSP Watchdog: Srivastava

SSP Proponents: None

Target Type: A

SSP Consensus # 4: During our November meeting we found the data package for proposal 464 (Leg 177, Southern Ocean Paleoceanography) is nearly complete and the proposal was designated 1A. We had mentioned that deepening of some of the holes is best done after consideration of the deeper seismic structure and for that it may involve the proponents working more closely with a seismic stratigrapher. It is our understanding that the proponents are well aware of this problem and will look into it closely prior to drilling. The impact of deepening any holes on overall leg timing also needs to be considered carefully. If any sites are moved or deepened, they will need to be re-evaluated by SSP and will need good velocity control. All required data has been deposited in the Data Bank and the Leg is ready to be drilled.

4.4 Leg 178: W. Antarctic Peninsula Margin: Glacial history and sea-level change. (452-Add3&502) - PPSP

SSP Watchdog: Lykke-Andersen

SSP Proponents: None

Target Type: B (and A)

SSP acknowledge the receipt in the Data Bank of site location map for the sites APSHE-13A and -14A and of filtered stack versions of the SEDANO 95 MCS profiles crossing the sites APRISE-01A to -04A.

Near trace plots and base maps of profiles recently acquired in the Palmer Deep was received during the meeting. The data, that is of good quality, clearly show sediment thicknesses in excess of 50 m at the site APSHE-13A and close to the alternate site APSHE-14A. It is noted that migration is likely to significantly improve the imaging of the flanks of the deep. Together with the data that will be acquired - as advised by SCICOM - by JOIDES RESOLUTION on approach to the sites, these new data will allow optimal selection of sites for obtaining cores exceeding the originally planned depth.

SSP urges the proponents to complete the processing of the Palmer Deep profiles so that

the profiles can be used for the safety review in May 97. Also true-amplitude plots should be made, as was requested during November meeting, for the APRISE-sites to help the safety evaluation of these sites.

In terms of site survey data readiness the proposal is ranked as 1A.

SSP consensus # 5: SSP urges the proponents to complete the processing of the Palmer Deep profiles as well the newly data collected on two recent cruises so that these profiles and other data can be used for the safety review in May 97. Also true-amplitude plots should be made, as was requested during November meeting, for the APRISE-sites to help the safety evaluation of these sites. All other data for this leg is now in the Data Bank. The site survey data package for Leg 178 is complete.

4.5 Leg 179: NERO - Ninety East Ridge Observatory & Hammer Drilling (508)

SSP Watchdog: Christeson

SSP Proponents: None

Target Type: G

This proposal, which targets objectives of the ION program, proposes installation of a broadband ocean seismometer and instrument package into a single borehole drilled into basement on the Ninety east Ridge. Plans call for reoccupation of either ODP Leg 121 Site 756 (primary target) or Site 757 (alternate target), with placement of a re-entry cone, drilling and installation of casing to basement, and penetration of basement to a minimum of 100 m to allow for installation of the instrument package. No new site survey data have been submitted for this proposal, and the site survey readiness status of this proposal remains 1A. However, since the purpose of drilling is to provide a "vault" for broadband seismic instrumentation, it is imperative that the site be well characterized in terms of seismic structure. Therefore, the panel recommends velocity-depth information from seismic refraction profiles be collected some time so that the crustal thickness and its variation near the site can be determined. The science will be much better served with this information available.

The panel was unable to comment on site survey requirements for Hammer drilling as no firm decision has yet been made about the site location for this purpose.

Site survey readiness status: 1A

SSP Consensus # 6: This proposal calls for installation of a broadband ocean seismometer into a borehole drilled into basement on the Ninety east Ridge (Leg 179). Plans call for reoccupation of either ODP Site 756 or 757. Since site survey data for these previously drilled sites are already on file with the ODP Data Bank, SSP considers the site survey readiness status to be 1A. However, the panel recommends velocity-depth information from seismic refraction profiles be collected so that the crustal thickness and its variation near the site can be determined.

4.6 Leg 180: West Woodlark Basin (447-rev3)

SSP Watchdog: Enachescu

SSP Proponent: none

Target Type(s): B (passive margin)

The ODP proposal 447-rev3 was re-assessed during the April 1997 meeting in Tokyo. The revised proposal is a re-write of earlier versions modified to reconcile the presence of sedimentary rocks dredged from the Moresby Seamount and accommodate some of the remarks of other panels with the exception of TECP's concerns expressed during their spring and fall 96 meetings. All required data including that recently collected MCS was fully processed and is deposited in the Data Bank. Numerous reprocessed (stack and migrated) variants of the site location lines were submitted to the DB since last meeting. The reprocessing package includes a depth migration for the line 1218. This depth cross-section answers this and other panels' request for depth information on the drilling targets.

The four proposed sites are judged as passive margin targets (including, site 3C after sampling of ponded sediments on the top of the mound). All four locations are feasible and strongly documented in the revision. A dense grid of intersecting migrated MCS exists in the DB, at different display scales and with several processing variants.

We addressed the concerns expressed by the TECP, the interim SSEP and others concerning 1) the existence of the low-angle fault and 2) the validity of the scientific objectives of the ACE-8a site. Listed below are a number of arguments in support of the existence of the low-angle extensional fault on the northern flank of the Moresby fault block:

- (i). evidence for earthquakes on low-angle normal faults (appr. 25-30), north of the seamount (e.g., Abers et al, in press),
- (ii). well documented extensional regime, progressing from intra-continental to oceanic rifting in the area (e.g., Mutter et al, 1992, 1993, 1996; Taylor et al, 1995, 1996),
- (iii). all seismic lines, potential field data, heat flow, bathymetry in the region indicate extensional regime characterised by fault blocks, horsts and half grabens,
- (iv). persistence of the shallow angle strong reflector on all consecutive dip lines crossing the Moresby seamount and the basin,
- (v). constant thickness of sediment infill on parallel 2-D lines precludes interpretation of oblique reflector as an out-of-line artefact,
- (vi). geometry of the rift sedimentary sequence: dipping onto the fault plane rather than onlapping the mound shoulder,
- (vii). existence of antithetic faults linked to the main low-angle detachment.

Therefore, all SSP members believe that the strong oblique reflection on dip lines (e.g., 1218, 1369, 1374) does not represent an artefact but very likely a seismic image of a fault plane corresponding to the northern flank of the Moresby seamount.

SSP acknowledges that a comprehensive set of data exists in the DB fulfilling all data requirements. All locations are validated by SSP. Our concern that some sub-unconformity trapping of sediments may exist at the ACE-1C and 7A locations was reviewed by the Safety Panel. We consider the proposal ready to be drilled.

Site Survey Readiness Classification: 1A.

SSP Consensus # 7 : SSP acknowledges that a complete data package supporting drilling in the West Woodlark Basin (Leg 180, 447-rev3) exists in the Data Bank. The reviewed proposal contains four feasible, well-documented sites. It is SSP opinion that the shallow angle reflector imaged on the side of the Morsbey Seamount is very likely a true reflector representing shallow angle fault and is not a side reflector as was suggested by Tectonic Panel. Site Survey Readiness Classification remains as 1A.

4.7 Leg 181: SW Pacific Gateway (441, ADD-2)

SSP Watchdog: Peterson

SSP Proponents: None

Target Type(s): all Sites A (Paleoenvironment)

No new data for this scheduled leg have been submitted to the Data Bank since our last meeting. However, the anticipated resurvey of sites by the *R/V Tangaroa* was recently (February 1997) carried out as planned. An e-mail message received at our meeting from proponent Lionel Carter summarized the results of that survey and the plans for final data submission. Five of the seven proposed sites (SWPAC-2A, -5A, -6B, -7A, and -8A) were surveyed by the *Tangaroa* with collection of seismic and 3.5 kHz data, and all were sampled by Kasten core except for SWPAC-5A and -8A which were previously cored. New data for Site SWPAC-1A are apparently also available from a recent *Melville* survey. Proponents are in the process of compiling the survey data and plan to have the complete data package submitted to the Data Bank by the end of the month. Based on completion of the planned survey, the site survey readiness status for this program is upgraded to "2A". SSP congratulates the proponents on the apparent success of their survey and anticipates having the finalized data package for this leg to review at its July meeting.

Site survey readiness level: 2A

SSP Consensus # 8: The scheduled resurvey of SW Pacific Gateway (Leg 181) sites by the R/V *Tangaroa* has recently been completed and proponents are in the process of compiling a final data package for submission to the ODP Data Bank. SSP anticipates having a complete set of all required data types to examine at its July meeting and should be in a position at that time to make final decisions on individual site readiness.

4.8 Leg 182: Great Australian Bight (367- rev3)

SSP Watchdog: Enachescu

SSP Proponent: none

Target Type(s): B (Passive margin)

SSP acknowledges that a comprehensive set of data exists for this proposal that is highly ranked by OHP and SGPP. An impressive volume of geophysical and geological data for site characterisation. was submitted to the panel. All collected data has been processed, interpreted and displayed and now reside in the DB. The submitted package is well presented and organised and the graphics are excellent.

No further information was received since the fall 1996 meeting at Lamont. However, the submitted data fulfils all SSP requirements and the proposal has secured a 1A ranking from site readiness point of view. Throughout the evaluation process, the proponents were extremely responsive of this panel's concerns and observations and sent all required data in adequate forms to the DB.

SSP Consensus # 9: A complete set of site survey data for proposal 367 (Great Australian Bight, Leg 182) is in the DB. Migrated lines, isochrone maps constructed by interpreting migrated sections and seismic derived velocity information with hole plots including total depth, were reviewed and found adequate. Site survey readiness: 1A.

4.9 Leg 183, Kerguelen Plateau and Broken Ridge: origin, growth and evolution (457-rev 4)

SSP Watchdog: Tokuyama

SSP Proponent: None

Target Type: G (Topographically elevated features)

At Nov. 1996 SSP meeting, SSP had recommended to the proponents to propose to AGSO to plan to collect grid of intersecting seismic lines during their proposed cruises (RS 179 & 180) at sites 6B, 7A, 12A and 18C or intersect the previous seismic lines at these sites. Similarly it was requested that they should ask IFREMER to perform site survey at sites of KIP3A & 2B/9A.

Geophysical survey (RS179) consisting of MCS, magnetics, gravity, and 3.5 /12 kHz echo sounding using R/V Rig Seismic was conducted from January to February 1997 and the profiles intersecting the previous seismic lines were obtained at sites KIP-7A and KIP-6B. However, no seismic lines were obtained at the other proposed sites of 12A and 18C. Additional MCS survey using the same vessel (RS180) is now going on (March - April 1997). SSP has not received the information on the planned tracks for this survey.

SSP recommends the proponents to submit 1) brute stack profiles of all profiles obtained on RS 179 & 180 cruises before 15th June 1997 data deadline to the DB for the review at the next SSP meeting in July and 2) a track chart from this survey. It is also recommended that the proponents should plan to have all data processed before the end of October in case PPSP decides to hold a review of this Leg during their November 1997 meeting. In that case SSP may be required to preview the processed data during a special meeting to be held in late October or early November.

It is SSP's understanding that another site survey for sites KIP3A & 2B/9A will be performed by French vessel (IFREMER project) in summer season of next year (Dec. 1997 to March 1998?). SSP, also, requires proponents to submit the processed data obtained by this cruise as soon as possible. If new profiles could not be obtained, SSP can not recommend drilling sites KIP3A & 2B/9A as no other data exist at these sites.

SSP Consensus # 10: SSP recommends the proponents of Leg 183 (Kerguelen Pl.) to submit 1) brute stack profiles of all profiles obtained on RS 179 & 180 cruises before 15th June 1997 data deadline to the DB for the review at the next SSP meeting in July and 2) a track chart from this survey. It is also recommended that the proponents should plan to have all data processed before the end of October in case PPSP decides to hold a review of this Leg during their

November 1997 meeting. In that case SSP may be required to preview the processed data during a special meeting to be held in late October or early November. SSP also requires proponents to submit the profiles for the sites KIP3A & 2B/9A to be obtained by the French cruise as soon as possible. If new profiles could not be obtained, SSP cannot recommend drilling of KIP3A & 2B/9A as no other data exist at these sites.

5. POTENTIAL FUTURE DRILLING: SSEP (Earth Int.)

5.1 Peruvian Margin Gas Hydrate (355-Rev)

SSP Watchdog : Hinz

SSP Proponent: None

Target Type : C (Active margin)

The proposal calls for drilling seven sites along a transect across the Peruvian continental margin to address the dynamics of the methane gas/gas hydrate system and its interrelationship with tectonic movements and fluid flow regime.

The proposed sites, P1A, P2A and P3A, are located along the MCS line 1018, with penetrations of 700 m and 800 m in the region of Lima Basin. Three of the sites (P4A, P5A and P6A), with penetrations of 700 m and 750 m, are located on the lower slope to study gas hydrate properties and fluid migration paths, and one hole on the lower oceanic plate as a reference hole.

The site survey package prepared for ODP Leg 112 is in the DB, and the reprocessed MCS lines 1017 and 1018 have been submitted to the DB also together with a list of heat flow values estimated from the depths of the BSR. SSP appreciates supplying estimated heat flow values but would appreciate receiving any measured heat flow values.

Given the strong objectives on gas hydrates and considering that at least six of the sites (P1A to P6A) are classified as type C, it is highly desirable that the present BSR be properly mapped from the existing or would be acquired data. This would be required during PPSP review if this becomes a Leg. The existing data does not allow this to be imaged properly. Hence, SSP request that (1) the proponents compile a map with water depths and with SP numbers and site locations showing the extent and distribution of gas hydrate zone (BSR), (2) locate sites on either existing or on to be acquired cross lines and submit an updated navigation plot together with the updated Site Summary Form to the DB before the June 15 deadline for next SSP meeting.

Since one of the proponents of this proposal is presently at the WHOI, SSP would welcome him to compile the recommended items at the DB at the LDEO if so desired.

SSP Consensus # 11 : The existing data set partially fulfils the requirements for proposal 355, Peruvian Gas Hydrate. A large scale map containing water depths, all seismic lines with SP numbers and site locations annotated, showing the extent and distribution of the gas hydrate zone (BSR) should be supplied to the DB before June 15

deadline before next SSP meeting. Sites should also be located on the existing or to be acquired cross lines. Site Survey readiness judged as 2C provided the proponents can collect required data on a future cruise.

5.2 Australia-Antarctica Discordance (426)

SSP Watchdog : Sibuet

SSP Proponent: None

Target Type : E (Open Ocean crust with sediments < 400m)

The intent of this proposal is to locate and to characterise the boundary between sea-floor basalts that were derived from the mantle of the Pacific ocean and those belonging to the Indian ocean.

During the July 96 SSP meeting, SSP examined the R/V Melville site survey data collected in February 96. Unfortunately the quality of seismic and 3.5 kHz data was so poor that SSP was not able to evaluate the sediment thickness at all sites. It was recommended that proponents looked at data collected during other cruises in order to select possible sites.

Since July 1996, proponents prepared a set of data in which they document each of the proposed sites. Though the poor quality of Melville data, sites 1, 13, 14 and 16 were considered, during the November SSP meeting, as drillable sites on the basis of available data. However, there is not enough sites to properly tackle the scientific objectives of the proposal. SSP looked at the Vema and Eltanin analog seismic records at Lamont and found several areas in the close vicinity of already proposed sites which might be appropriate for future site locations.

Consequently, SSP recommended to run a complementary survey to show where pockets of at least 50 m of sediments exist. For that, an operational 3.5 kHz mud-penetrator was required. SSP also felt that it was very important to simultaneously run a high speed seismic system able to give permanently the whole sediment cover.

A Melville cruise was performed in February-March 1997. Proponents will submit a new data package that SSP will examine during its next July meeting. SSP decided to still rank the proposal as 2C.

SSP Consensus # 12: Since July 1996, proponents prepared a set of data in which they document each of the proposed sites. Though the poor quality of Melville data, sites 1, 13, 14 and 16 were considered, during the November SSP meeting, as drillable sites but SSP recommended to run a complementary survey to show where pockets of at least 50 m of sediments exist. For that, 3.5 kHz record were required. SSP also felt that it was very important to simultaneously run a high resolution seismic system able to give permanently the whole sediment cover.

A Melville cruise was performed in February-March 1997. Proponents will submit a new data package that SSP will examine during its next July meeting. SSP decided to still rank the proposal as 2C.

5.3 Western Pacific Seismic Network (431)

SSP Watchdog: Christeson

SSP Proponents: None

Target Types: E (Open Ocean Crust with sediments <400 m)

This proposal seeks to drill four sites into basement in the western Pacific in order to install broadband ocean seismometers and create permanent seafloor seismic observatories as part of the ION program. Sites survey data in support of sites WP-1C and alternate site WP-1D were presented at the meeting by guest member Kiyoshi Suyehiro. The MCS profiles OT97 Lines 1-4 were of reasonable quality, but the data have only been stacked and need further processing in order to better define basement topography and the time to the MOHO. A large event, possibly a diffraction, was observed on OT97 Line 3 near site WP-1C. The SSP suggests that WP-1D be named the primary site. No new survey data were submitted for sites JT-1B, JT-2B, or WP2.

Note: data bank now requires shot point annotation on all processed data, in addition to or instead of CDP/CMP annotation.

3.5 kHz data - Required 3.5 kHz profiles of good quality have been submitted for sites WP-2 and JT-1, but are currently lacking for JT-2 and WP-1.

Velocity control - Refraction lines for JT sites need to be modelled. If crustal structure control exists for WP sites, these should be submitted to the data bank.

Other - For site JT-2, a track line showing the track of the older JT90 line needs to be supplied. The proponents should deposit all processed data before June 15 deadline with the Data Bank for next SSP meeting if they wish it be considered for inclusion in 1999 drilling schedule.

Site survey readiness status: 2A for all sites.

SSP Consensus # 13: Data in support of all four western Pacific seismic network sites (proposal 431) now exist. These data indicate the potential viability of all four sites for seismometer installation, but further processing of the recently collected MCS data is required. At present, no velocity control exists for the four sites, although OBS data was collected at the JT sites and still remains to be modelled. All sites are now classified as 2A in terms of present site survey readiness.

5.4 Marian Back Arc Basin (442-Add)

SSP Watchdog: Tokuyama

SSP Proponent(s): None

Target Type(s): D (Open ocean with sediments > 400 m).

SSP had reviewed proposal 442 during their Spring and Summer 96 meetings and had recommended to proponents to submit seismic profiles which have enough resolution to calculate the depth to basement because four of the five proposed sites are aimed in recovering basement rocks as long as 100m. At the April 97 SSP meeting, proposal 442-Rev2 was reviewed with the help of one of the proponents (Yamazaki) who was invited to present the data to the panel. However, high resolution seismic profiles was not included in the package reviewed by the panel.

SSP noted the followings at this meeting. 1) Sites NMT-1A, NMT-2B, NMT-5A were still not acceptable for drilling using the presently available data. This is because basement could not be identified from these profiles which were submitted to ODP Data Bank. SSP recommends that the proponent make every effort in collecting new site survey data during a proposed Jamestec cruise to this region which is to be devoted to obtaining seismic profiles with enough resolution to identify the basement. 2) Site NMT-3 and NMT-1A are acceptable on the basis of present data as only shallow sediments are to be collected at these sites. 3) SSP recommends track chart of representative profiles be plotted for each site on detailed bathymetric map for easy visualisation. 4) In view of the proposed site cruise the Site Survey readiness of the proposal is classified as 2C.

SSP Consensus # 14. SSP noted that high resolution seismic profiles are required in case of NMT-1A, NMT-2 and NMT-5A for proposal 442 (Mariana Back Arc Basin). Also SSP recommends the track chart of essential profiles be plotted for each site on detailed bathymetric map for easy visualisation. In view of the proposed site survey cruise to this area by JAMESTEC the Site Survey readiness of the proposal is classified as 2C. Every effort should be made in acquiring appropriate data at most of the sites in order for this proposal to make to the drilling prospectus for 1999.

5.5 Nankai Trough Accretionary Prism: Deformation and fluid flow (445)

SSP Watchdog: Paull

SSP Proponent(s): Tokuyama

Target Type(s): C (Active margin)

SSP Consensus # 15: No data has been received for Nankai Trough (445-Rev2, Add 2) since the last meeting. Detailed navigation plots that merge the major data types are still missing. The proposal remains rated 1B.

5.6 Ontong Java Plateau Origin (448-Rev3)

SSP Watchdog: Tokuyama

SSP Proponent(s): None

Target Type(s): D (Open Ocean Crust with sediments >400m)

At our April '97 meeting ODP proposal #448-Rev3 was reviewed. The revised proposal calls for a two leg drilling plan. Drilling a set of holes at sites OJ1a&b, OJ3, OJ6, OJ11A, , and OJ12A (if time permits) in the first Leg and drilling additional holes at sites OJ2, OJ7a, OJ8, and OJ10A in the second Leg if a two Leg program was feasible. The entire proposal calls for drilling a set of holes on the Plateau to determine its age, duration of emplacement, the style and environment of emplacement, range and diversity of emplacement and its post emplacement tectonic history.

The proposal is characterized to penetrate deep holes into the basement which is presumably composed of igneous rocks or altered igneous and sedimentary rocks. All

of the sites fall under the open ocean crust drilling where sediments are greater than 400 m. The proposal was initially reviewed in April 95 and specific suggestions were made at that time for type data required for it. It is, therefore, important that the proponents follow the suggestions made at that time for the type of data required for this proposal. In order to achieve the objectives, MCS profiles are required to determine detailed basement topography and to clarify riftward dipping reflectors. Velocity data are also required not only to determine the deep crustal structure but also to calculate the drilling depth. However, the proponents have not submitted any new geophysical data to ODP Data Bank for this proposal since our last meeting in spring 95. Therefore, from SSP point of view this proposal is still remains immature.

Ocean Research Institute in Tokyo is planning a geophysical cruise in this area using Hakuho-Maru from January to February in 1998. During this cruise, MCS, OBS, magnetic and 3.5 subbottom profiling surveys data will be collected. Tentative survey lines could be run across the sites of OJ1a, OJ1b, OJ3, and OJ12A. SSP, therefore, recommends the proponents to propose to ORI to plan to run a grids of intersecting lines at all the proposed sites, mainly for obtaining MCS profile data.

Site Survey readiness classification : 3A (for sites OJ1a&b, OJ3, OJ6, OJ11A, OJ12A)

SSP Consensus # 16. SSP noted that MCS, velocity, and 3.5 subbottom data are required for all proposed sites for proposal 448 (Ontong Java Plateau). SSP, therefore, recommends to proponents to propose to ORI to plan to run a grids of intersecting lines at all of the proposed sites, for obtaining MCS profile and other required data.

5.7 Taiwan arc-continent collision (450) PPSP

SSP Watchdog: Sibuet

SSP Proponent(s): None

Target Type(s): C: Active margin for sites 1-5,7 and D: Open Ocean Crust with sediments >400m for site 6.

During the last November meeting SSP rated this proposal as 1A which means that it is ready to become a drilling leg. Since that time, the proponents submitted page size copies of bathymetric, magnetic and gravity maps of the area of proposed sites. However, in view of the presence of BSR at some sites that it is very likely that PPSP will pre-review this proposal. For that reason the proponents are advised that they should make every effort of making true amplitude plots for those sites (e.g. TC2A, TC7A).

SSP Consensus # 17: All vital data for proposal 450 (Taiwan arc-continent collision) have been deposited in the DB. The proposal was rated 1A during the November 1996 SSP meeting, which means that it is ready to become a drilling leg. However, in view of the presence of BSR at some sites that it is very likely that PPSP will pre-review this proposal. For that reason the proponents are advised

that they should make every effort of making true amplitude plots for those sites (e.g.TC2A, TC7A).

5.8 Tonga Forearc: Geodynamics, arc evolution and deformation (451-Add2)

SSP Watchdog: Diebold

SSP Proponent: None

Target Type: C (Active Margins)

At the November 1996 SSP meeting, only a few pieces of data, known to exist, were missing from the Data Bank, and this proposal was rated as 1B. Shortly after that meeting, the final processed dual channel sections from the R/V Melville Boomerang cruise were delivered to the Data Bank and the data set is considered complete. Migrated sections of one older MCS line, currently being prepared under the direction of David Scholl, are yet to be delivered, but this is considered an enhancement, not a requirement. The proposal, from an SSP perspective, is ready for drilling.

Site Survey Readiness Classification: 1A

SSP Consensus # 18: All required site data for Tonga Forearc proposal (451) now resides in the DATA BANK including the processed dual channel section from R/V Melville Boomrang cruise. The proposal, from an SSP perspective, is now ready to be considered for drilling.

5.9 Plume impact at Shatsky Rise (463-Rev1)

SSP Watchdog: Diebold

SSP Proponents: none

Target Type: G (Topographically elevated region) and E(open ocean crust with sed. < 400m)

A transect of seventeen primary sites over the three main volcanic edifices comprising the Shatsky Rise is proposed. Objectives include confirming a plume origin for the volcanics, dating them and determining plume dynamics. Igneous crust is to be sampled at each site. Most of the data from a site survey have been submitted to the data bank, including migrated 6-channel seismic reflection lines and hydrosweep-derived bathymetry. All but one of the sites are of target type G "topographically elevated feature" and as such, unequivocally require 3.5 Khz data, which have not yet been submitted. One primary site, SRS4 and its alternate, are located where sediment is thin or absent (sediment penetration listed by proponents as zero) which would require use of the HRGB and the ensuing stringent site survey requirements, which have not been met in this case. While the science might be better served if deep penetration MCS data were available to reveal the internal structure of the rise and the stratigraphic relationships of its component flows and sills specially at the deep penetration sites, the objectives at other sites, as described, can be attained with the existing data set (assuming that the absent 3.5 Khz data is of sufficient quality). The proposal is not clear about the rationale behind the variety and distribution of basement penetration depths, but some late correspondence from the communicating principle investigator has

clarified this.

Site Survey ranking of the proposal: 1B

SSP Consensus # 19: 3.5 Khz data for proposal 463 (Shatsky Rise), believed to exist, must be deposited in the DB before SSP approval is possible. The migrated 6-channel seismic reflection data in the DB are adequate to identify basement at all proposed sites, and sediment thicknesses estimates based on previous drilling in the area should be fairly accurate. One primary site, SRS4 and its alternate, apparently located on bare rock (SSP cannot tell without 3.5 Khz data) should be dropped, or moved, unless the proponents are prepared to provide the data required for employment of the HRGB. With these modifications, the data set will be complete, though deep penetration MCS data would greatly enhance the interpretation of the results of deep drilling (and, perhaps, the location of the drill sites). Short surveys by the drill ship would be desirable, to provide cross lines at the 15 sites which lack them.

5.10 Mass Balance: Izu Mariana (472)

SSP Consensus # 20: A good data package has been assembled for Izu-Mariana Convergent Margin proposal (472). The package was judged to be complete and the proposal ready for drilling at our November 96 meeting and the same remains now. If any paleoceanography objectives are intended, a good quality SCS profile through the BON site must be collected by the JOIDES Resolution.

5.11 VRMS and oceanic Plateaus (496rev)

SSP Watchdog: Enachescu

SSP Proponent: none

Target Type(s): B (Passive margin), D (open oceanic crust with more than 400 m sediments), G (topographically elevated feature)

This proposal was recently re-submitted (February 1997) and is accompanied by a large volume of AGSO data. Five drilling sites are proposed along a DRSP oriented NW-SE across the Cuvier Margin and Wallaby Plateau, Northwest Australia. One reference site is located on oceanic crust on the nearby Cuvier abyssal plain.

The objectives of the proposal include:

- I. to distinguish between mantle plume versus non mantle plume origin for the Cuvier volcanic margin and the Wallaby plateau
- II. to research volcanic emplacement environment, age, volume and duration
- III. to study volcanic margin geodynamics, rift and break-up mechanism and subsidence history
- IV. to establish relationship between the formation of volcanic margins and oceanic

plateaus

V. to refine plate tectonic models of the eastern Indian Ocean during the Cretaceous

Present geoscience data in the area do not allow to discern clearly between a mantle plume or a non-mantle plume origin of the large volcanic plateaus. Moreover, sampling the volcanic basement is impeded by the presence of a sedimentary cover. However, this cover is generally thin, allowing for an accessible transect to ODP drilling. Geochemical analysis of basement samples obtained through drilling will help elucidate the origin of this margin. The drilling proposal is in accordance with the ODP Long Range Plan: "Dynamics of the Earth's Interior themes of deformation at extensional boundaries and formation of large igneous provinces".

Most of the data deposited at the DB belongs to early 70's but the MCS lines used to locate the sites are as recent as 1994-1996. The submitted data includes:

1. AGSO MC Deep Seismic Reflection lines
2. MC industry reflection lines
3. Single channel seismic data
4. Corresponding navigation data for the modern MCS data
5. Velocity information from seismic records and DSDP site 263
6. 3.5 and 12 KHz data
7. Gravity, magnetic, satellite altimetry and bathymetry data
8. Cores, dredges, gravity and box cores collected in the area

The drilling sites are located in water depth between 2300 and 5000m. Maximum penetration in sedimentary rocks varies between 250 and 1000m and in basement between 75 and 200m. The total proposal consists of approximately 5000m of drill core. Presence of dry exploration wells drilled in the area show less likelihood of hydrocarbon accumulation in the area. However, processed MCS must be screened for shallow hazards. The DSDP hole contained no hydrocarbons and eventual source rocks are immature in the area.

ODP Site Survey Forms are completed for all designated sites. Quality of data varies from excellent (DRSP) to inadequate (SCS). Our recommendations include:

- VI. The modern MCS data used to locate the sites need multiple suppression and migration processing, and adequate displaying with proper tie points between the data sets. Only the upper 8 sec need to be reprocessed.
- VII. The velocity information should be used to mark the hole trajectory and total depth on the seismic sections.
- VIII. The single channel seismic set are poor quality and cannot be used for scientific correlation nor for site survey purpose. The sites (2A or 2B) are not supported by intersecting MCS lines as required by SSP guidelines. *We suggest that MCS data has to be collected at these and other sites to study the evolution on strike of the targeted reflectors.* Another variant (in absence of cruise funding) will be to move the sites at intersecting good quality SCS and try to reprocess and currently display this data set. We must reiterate that for platform margin sites intersecting MCS are required and that existence of close-by poor quality SCS lines is not sufficient

IX. The alternate 2B site is not properly discussed

X. Better correlation of site locations on MCS and 3.5 (12) Khz data

We found the proposal interesting and we recommend the proponents to improve on the data base submitted for both scientific and Site Survey reasons.

SSP Consensus # 21: An incomplete set of site survey data was submitted for proposal 496 (VRMS and Oceanic pl.). Site location lines must be adequately processed and resubmitted. Intersecting MCS must be collected and provided for the platform margin sites. Detail locations must include the analysis of sub-bottom profiler data. Site survey readiness: 2C.

5.12 ION Equatorial (499)

SSP Watchdog: Christeson

SSP Proponents: None

Target Type: E (Open ocean crust with sediments <400m)

This proposal, which targets objectives of the ION and OSN programs, proposes that a cased, cemented hole be drilled and fitted with a re-entry cone in the equatorial western Pacific. A broadband seismometer will be installed in the borehole using wireline re-entry and does not require installation by the drilling ship. The site will fill in a major gap in coverage between Central America and the Pacific Islands which exists with the current seismic network. The proposed site is near ODP site 852 which was drilled on Leg 138. In accordance with discussions on previous ION sites, SSP will require the following data: 1) 3.5 kHz data. 2) Deep penetration seismic reflection data; data should be capable of defining the basement topography at each site and the time to Moho. SSP does not require 3D data, but would like crossing lines at the site location. 3) Velocity-depth information from seismic refraction data. Clearly, since the purpose of drilling is to provide a "vault" for broadband seismic instrumentation, it is imperative that the site be well characterized in terms of seismic structure. The requested data will be used to evaluate the roughness of the sediment-basement interface, the presence or absence of any intra-crustal reflectors beneath the drill hole, and the crustal thickness and its variation near the site. At present only the 3.5 kHz data exists in the data bank. The proponents will propose a site survey of the location to include noise measurements, crustal refraction measurements including rudimentary tomography to delineate crustal properties in three dimensions, and an intersecting grid of seismic lines. SSP wish the proponents good luck in completing the proposed site survey for this important site.

Site survey readiness status: 3B

SSP Consensus # 22: This proposal (499, ION) calls for drilling a hole near ODP site 852 for seismometer installation in support of the ION and OSN programs. SSP feels it is important that the ION sites be well characterized in terms of seismic structure, and thus requires a grid of deep penetration seismic reflection lines and velocity control via crustal refraction measurements. This site is classified as 3B in terms of site survey readiness.

6. POTENTIAL FUTURE DRILLING: SSEP (Earth Env.)

6.1 Laurentide Ice Sheets outlets (LISO, 455-rev) New

SSP watchdog: Lykke-Andersen

SSP Proponents: None

Target Type: A (Paleoenvironment)

The proposal (455-Rev3) "High resolution transects of Laurentide ice sheet outlets (LISO): ice-sheet forcing of high-latitude climate and sedimentation systems" was evaluated at the Site Survey Panel April 97 meeting in Tokyo.

All the proposed sites were classified as "A" (Paleoenvironment). It was noted that Site Summary Forms for the alternate sites HUD-03B and LAW-02B and -04B are not yet included in the proposal. The seismic data that is presently available in the Data Bank was evaluated on the basis of samples selected by the Data Bank for the meeting. The panel found that the data is of good quality, although it was noted that the vertical scales are not explicitly indicated on all the profiles.

The panel examined the profile Dawson 89-007, and found a series of narrow, partly filled sinks in the sea floor in the vicinity of Site LAW-02B. The panel expressed the concern that these features could be possible indicators of gas seeps. The proponents are asked to address this question and comment to the panel.

For Site LAW-01A it was found that the estimated depth 750 m to the basement exceeds the depth that is indicated on the seismic profile attached to the Site Summary Form. It appears that the sediment thickness is only approximately 400 m, although it is unclear to the panel whether the diffuse reflection pattern rather may represent diffuse reflections from the steep flanks of the fiord.

From the list of data already submitted to the Data Bank it appears that required seismic data is still missing for a number of sites, and core data for all sites.

SSP understands that the required data exists and it is suggested that the proponents make an attempt to submit the remaining data, i.e. seismic profiles (high resolution and 3.5 kHz data), working scale maps and descriptions and location maps for previously collected core data, before the next data dead line of June 15, so that the data can be evaluated during the SSP meeting in July.

In terms of site survey data readiness the proposal was ranked "2A" (Substantial items of required data are not in the Data Bank but are believed to exist and are likely to be available in time for consideration for FY 99 drilling schedule).

SSP Consensus # 22: All the sites are classified as "A" (Paleoenvironment) for Laurentide Ice Sheet (proposal 455). Seismic data and base maps for some of the proposed sites is available and was examined. The data quality is good. The panel noted the presence of narrow sinks in the seafloor in the neighbourhood of site LAW-02B, that possibly could be suspected as indications of gas seeps. It was also noted that the planned total depth at site LAW-01A apparently is in conflict with the sediment thickness displayed in the seismic profile. SSP understands that most of the required data already exists and will be deposited with the

Data Bank in the near future, and in terms of Site Survey Readiness the proposal was ranked 2A.

6.2 SE Pacific Paleoceanography (465)

SSP Watchdog: Peterson

SSP Proponent: None

Target Type: All sites A (Paleoenvironment)

This highly ranked proposal calls for recovery of Neogene and older sediments in a series of latitudinal and depth transects from the SE Pacific to allow for investigations of a major eastern boundary current system, mid-depth and deep water circulation, paleoproductivity, and tectonic-climate connections. Since our last discussion of this proposal at the July 1996 meeting, no new data have been submitted to the ODP Data bank. However, at the time of our meeting in Tokyo, an NSF-funded site survey aboard the R/V *Revelle* was underway and nearing completion. Plans for this ongoing cruise included new surveys of all fifteen proposed sites using survey criteria required for target type A sites. SSP encourages proponents to compile and submit a complete data package in as timely a manner as possible after the cruise for further panel review, and the proponents should note that the deadline for data submission for review at our July meeting is June 15. If a complete data package cannot be assembled by that time, it would still be valuable to submit as detailed a summary of survey results as can be provided. We wish the proponents luck in their efforts to synthesize the results of the survey and stand ready to assist in any way we can.

Site Survey Readiness Status: 2B

SSP Consensus # 23: No new data have arrived at the ODP Data Bank in support of SE Pacific drilling since our last discussion of this proposal. However, a new NSF-funded site survey of all proposed sites was underway at the time of our Tokyo meeting. We encourage proponents to compile and submit the results of this survey to the Data Bank in a timely manner for further SSP consideration. The site survey readiness for this drilling program remains 2B in anticipation of seeing new survey results at a future meeting.

6.3 Sea Level Changes in the W. Med., (467); New - PPSP

SSP Watchdog: Paull

SSP Proponent: None

Target Type: A (Paleoenvironment) for shallow penetration sites; B (Passive margin) for deep penetration sites.

The Site Survey Panel discussed this proposal (467; sea level changes in w. Med.) for a drilling leg in Var and Rhone Fans. It is a very interesting proposal. Many of the sites in this proposal are categorized as being in a Fan Environment where the drilling is planned for <300 mbsf, but sites for penetration of 300 mbsf or more are

classified as being in the passive margin drilling environment. Annex 1 of this proposal indicates that most (or all) of the required data in both regions exist. However, the proponents must follow the guide lines as mentioned in the June 1994 issue of the JOIDES Journal where the site survey data requirements are outlined. Sites where deep holes with penetration in excess of 1000 m is desired would require MCS with good velocity control. The proponents are encouraged to submit the data before the June 15 deadline in order for the SSP to review this proposal again at their July meeting.

During the SSP's discussions of this proposals some concern about hydrocarbon problems was raised and some apparent seismic wipe-outs were observed on some of the illustrated seismic profiles. It would be beneficial if the proponents would outline the available information about the hydrocarbon occurrence in the region. This problem would certainly be of major concern during PPSP review should this proposal makes into the drilling schedule. It is, therefore, suggested that all relevant information on hydrocarbon occurrences in this region be assembled as soon as possible and be deposited with the Data Bank.

The panel would like to know what the targets are in the deeper holes, and whether the available velocity information is adequate to assure that they can be reached. It seems like too ambitious a proposal to drill altogether 23 holes with two of them to a depth 1300m. It is suggested that the proponents must pay close attention to drilling time estimates with the help of TAMU engineers.

SSP Consensus # 24: No data for proposal 467 (Sea level changes in W. Mediterranean) is yet in the data bank, yet all of the required data types are believed to exist. Previews of the Sites indicate that two drilling environment classifications will be applied. Sites with penetration exceeding 300 m will be classified as Passive Margin, while the shallower sites are classified as Fan. MCS and good velocity data will be needed for deep penetration sites. The proponents are encouraged to submit the required data to the data bank before June 15 deadline. Drilling 23 holes with two of them to 1300m depth seems like too ambitious a program and the proponents should check drilling times estimates with TAMU engineers. The proposal is rated 2A.

6.4 484: East Asian Monsoon History (484-rev)

SSP Watchdog: Peterson

SSP Proponents: None

Target Types: SCS-1 to -5, Type B (Passive Margin); SCS-6 and -7, Type A (Paleoenvironment)

SSP reviewed the latest version of this proposal for drilling in the South China Sea, 484-REV. The revised proposal calls for the drilling of a total of seven sites to study the evolution and variability of the East Asian Monsoon since the Oligocene. Five of the proposed sites are located on the northern continental slope of the South China Sea and are classified as type B, or passive margin. The two remaining sites are proposed for the southern portion of the basin and are considered to be target type A (Paleoenvironment).

Most of the sites have been shifted from their original locations to address previous SSP and thematic panel concerns about site placement.

An initial data package in support of the proposed sites was received from the proponents by the ODP Data Bank in November 1996. These data were not examined at our November meeting since the proposal was not included in the drilling prospectus for 97. Due to a Data Bank error, most of these data were not included in the data box sent to Tokyo and were again not available for direct examination. However, SSP looked carefully at the seismic profiles shown in 484-REV and examined data availability on a site by site basis. In general, the quality of the Sonne seismic lines used to pick new sites is good. However, SSP is particularly concerned about the northern set of sites and their locations in an active area of hydrocarbon exploration. In order to satisfy immediate SSP concerns, and the concerns that will inevitably arise from PPSP review, additional information is clearly required. For exploration wells located on or close to individual sites and submitted profiles, data on all oil and gas shows below the target drilling depths are essential, as is general information regarding the productivity of source rocks in the basin. For evaluation of potential hydrocarbon hazards, SSP will need good quality displays of available MCS or industry profiles so that we can better evaluate the amplitude contrasts of shallow reflectors in the sequences. Finally, we note that crossing lines at all sites will be a strict requirement for final SSP and PPSP approval. Sites may need to be relocated to adhere to this request, or additional survey efforts may have to be planned.

The *site survey readiness* status for this proposal is judged to be 3B, based on the assumption that the required data types either exist and can be supplied to the Data Bank in the near future or to be collected. We look forward to assisting proponents in any way we can to help them assemble a complete data package for this potentially exciting program of drilling.

SSP Consensus # 25: Proponents have revised their proposal for South China Sea drilling and selected new sites in response to earlier SSP and thematic panel comments. Examination of data already submitted in support of proposed sites suggests that existing data are probably adequate to approve site locations on the basis of scientific objectives. However, strong SSP concern exists over potential safety issues, especially at the northern suite of sites. Proponents will need to supply adequate data for SSP and PPSP to fully evaluate potential hydrocarbon hazards. These include information on oil and gas shows in local exploration wells below the target depth, and data on the productivity of source rocks in the region. The placement of sites on crossing lines will be a strict requirement, and may necessitate further adjustments of site position or additional survey efforts. Site survey readiness is considered to be 3B, with critical data still missing but believed to probably exist or to be collected.

6.5 Southern Gateway Aus.-Antarctic (485); PPSP
SSP Watchdog: Casey

SSP Proponent(s): none
Target Type: B, D and G

This proposal involves drilling between Tasmania and the South Tasman Rise and Antarctica to address Cenozoic climate changes, paleo-ocean currents, the K/T boundary event, and the evolution of a transform margin. The proposal was reviewed by SSP during the April, 1997 meeting. Significant new data has arrived at the data bank since the November meeting and the proponents are thanked for the high quality of the data submitted. Of the remaining items that the proponents submitted since the last meeting include migrated AGSO cruise 125 (Tamante) MCS seismic profiles, as well as velocity information for each of the proposed sites.

The data in the Data Bank includes all navigation files and maps, shot point data, SCS deep penetration profiles, migrated MCS profiles, velocity, 3.5 kHz, swath bathymetry, hi-resolution side looking sonar, magnetics, gravity, coring, rock sampling data. This data package is comprehensive and detailed. The proponents are thanked for their high quality data submissions.

Site Survey Readiness: 1A

SSP Consensus # 26: All of the required data for proposal 485 (Southern Gateway Australia-Antarctic) is now submitted to the DB. The proponents are thanked for their efforts in processing all the required data and depositing it with the Data Bank in time for SSP meeting. This proposal is now ready to be considered for drilling.

6.6 Paleogene Equatorial Pacific APC Transect (486), New

SSP Watchdog: Peterson

SSP Proponents: None

Target types: All sites A, Paleoenvironment

This proposal, not previously seen by SSP, calls for a two leg program to drill a north-south transect of sites in the eastern Pacific Ocean designed to yield sediment sequences that were deposited near the equator during two key time intervals of the Paleogene. The main scientific objectives of the proposal are to investigate the oceanographic consequences of long-term cooling since the Eocene, to map the latitudinal position of the ITCZ (a key measure of atmospheric circulation), and to examine the history of hydrothermal activity in the Eocene and its possible relationship to warm Eocene climates and/or to episodes of chert formation. The expectation based on previous rotary coring by DSDP is that Paleogene sediment sequences will be recoverable by APC/XCB that are amenable to paleoceanographic reconstructions using stable isotopes and calcareous micro fossils because of minimal overburden and diagenesis. The majority of the 22 proposed sites fall at modern water depths between 4 and 5 km and will be triple cored to depths ranging between 60 and about 450 mbsf.

No data in support of this proposal have yet been submitted to the ODP Data Bank, although data for a subset of sites are identified and clearly exist. Communication with the proponents at the time of the SSP meeting indicates that available data are being

compiled and should be submitted to the Data Bank prior to the July meeting. In addition, a new site survey cruise has been recently funded by NSF and is currently scheduled to begin in December 1997 aboard the R/V *Ewing*. SSP encourages proponents to design the upcoming survey with data requirements for target type A sites in mind. This drilling program is currently given a site survey readiness of 3A. We look forward to seeing currently available data deposited in the Data Bank and to working with proponents in the future to develop a complete data package for this exciting program.

Site survey readiness status: 3A

SSP Consensus # 27: Available data in support of drilling objectives for this Paleogene Equatorial Pacific Transect (486) have not yet been submitted to the ODP Data Bank, but are reportedly being compiled by proponents for preliminary review by SSP at the July meeting. In addition, a site survey cruise aboard R/V *Ewing* has been funded and is scheduled to begin in December 1997. SSP wishes the proponents luck in assembling available data and urges them to design their future survey with target type A data requirements in mind.

6.7 Ross Sea, Antarctica: Paleoceanography (489)

SSP Watchdog: Peterson

SSP Proponents: None

Target types: B (Passive margin)

Some new data has arrived in the data bank since the November, 1996 SSP meeting relevant to proposed drill sites for 489 (Ross Sea). These include a list of cores near the proposed sites, navigation lines, and 2 Eltanin 3.5 kHz records. In comparing submitted maps with proposal 489-REV, it appears that sites have been moved since the initial submission and creation of the maps. The old site designations and positions are on the maps. Data was submitted in support of all Ross Shelf proposed sites (RSSHEL-01B to RSSHEL-8B) In addition to regional data (ANTOSTRAT CD-ROMs, gravity, sediment thickness, velocity), MCS lines were received from Germany, Italy and France, and SCS lines were received from the US.

All shelf sites are where MCS lines cross. (Portions of MCS lines IT88A-34 and M_87007 are close to proposed sites and should be provided). Portions of MCS lines IFP 201-B1 and/or M_89027-B are in the region of most drill sites and should be provided. The proponents may also consider providing enough MCS data to permit correlation between sites in different areas (esp. correlating 8B with nearby sites.) All shelf sites are also on or close to SCS lines, but again only in some cases where lines cross. The proponents should consider whether or not proposed sites can be moved to locations where MCS and/or SCS lines cross (proposed penetrations ranging from 600 to 1000 m suggest that good MCS records are very desirable at drill sites). 3.5 kHz data appears to exist at a few sites.

The proponents may need to visit the Data Bank to properly annotate and locate

sites and cross-reference different data types for each site. Also, there will be a need for the proponents to summarize the occurrence of organic sediments in near shore drill holes (e.g., CIROS holes) and in outcrop on land. Data on sediments will also be needed, especially where reentry is planned.

In summary, a data package for the Ross Sea is nearly complete, except for some SCS. Nearby or crossing lines are most critical. These data are thought to exist. We rate this data package as 1B as some of the required is still not in the Data Bank.

SSP Consensus # 28: A nearly complete data package has been provided in support of proposed drilling for proposal 489 (Ross Sea), although some required items, thought to exist, are still missing and so the proposal is rated as 1B. Also needed is a drilling plan that identifies alternate sites should ice conditions not allow some sites to be drilled.

6.8 Prydz Bay Glacial History (490)

SSP Watchdog: Sibuet

SSP Proponents: None

Target types: B (Passive margin)

Proposal 490 (Prydz Bay) is one of the 5 Antostrat proposals dealing with ice sheet fluctuations to document oceanic changes such as sea surface temperature, bottom water formation ...

There is a large amount of seismic lines on the continental slope but just a few lines in the deep ocean. The quality of these lines, acquired by different institutions (BMR, Japan and Russia), is probably different but it is difficult to have a precise idea as no data have been deposited in the Data Bank.

The proponents have recently completed a survey cruise. Based on this new data set and previously acquired data, they intend to submit a new set of sites and the appropriate data in the Data Bank. SSP will examine these data during its July meeting.

As for the other Antostrat proposals, we have classified all the sites of this proposal as target B (passive margin), even if all these sites have paleoenvironmental objectives, because the proposed penetration is always larger than 400 m and site are located near the margin. MCS data and crossing lines with velocity analyses are required. 3.5 kHz data are also required.

The site survey readiness of the proposal is 2A.

It is now mandatory to have realistic alternate sites in ice infested waters which can be drilled to achieve the objectives in case the prime sites can not be approached because of ice condition present at the time of drilling. Such sites must be included in the proposal.

SSP Consensus # 29: There is a large amount of seismic lines on the continental slope but just a few lines in the deep ocean. The proponents have recently completed a survey cruise. Based on this new data set and previously acquired data, they intend to submit a new set of sites and the appropriate data in the Data Bank. SSP will examine these data during its July meeting. The site survey

readiness of the proposal is 2A.

6.9 Weddell Sea: Cenozoic glacial history and evolution of Weddell Sea Basin (503- add) -PPSP.

SSP Watchdog : Hinz

SSP proponents : none

Target type : B for site WS04A/05A/06A; D for site WS01A.

The revised proposal comprises four primary sites and five alternate sites. The primary sites WS01A and WS04A with penetration of 500 m and 1200 m address the glacial history of the East Antarctic Ice Sheet while the other primary sites WS5A and WS6A (penetration of 800 m) address the early evolution of the Weddell sea basin.

The proponents have submitted most of the data to the DB. However, until the large scale map showing all existing SCS and MCS with their position information can be supplied it is difficult to evaluate the data properly.

It is now mandatory to have realistic alternate sites in ice infested waters which can be drilled to achieve the objectives in case the prime sites can not be approached because of ice condition present at the time of drilling. Such sites must be included in the proposal.

SSP Consensus # 30: It seems certain that the existing data can meet site survey requirements for the Weddell Sea proposal (503). However, until the large scale map showing all existing SCS and MCS with their position information can be supplied it is difficult to evaluate the data properly. The proposal is ranked as IB as some essential items are still missing.

6.10 Sea Level models- Canterbury Basin, New (511) - PPSP

SSP Watchdog : Paull

SSP proponents : none

Target type : B (passive margin)

This proposal is categorized as a passive margin drilling environment. Thus, deep penetration seismic survey with intersecting profiles, seismic velocity determinations, and 3.5 kHz data are usually required, along with adequate navigation. All together 9 hole holes in water depth ranging from 74 m to 1050 m are designed to be collected with penetration of 1590 to 910 m. Because most of these holes lie in shallow water depths, it will definitely require shallow water hazard survey. Communication between the lead proponent and PPSP are under way concerning modification of shallow water hazard survey to meet the scientific objective of this proposal that the details of these surveys cannot be outlined at this time. The proponents are encouraged to pursue funding for these surveys. Shallow water drilling will also require water current and sea state condition data in the region.

Some initial data in support of this proposal has been submitted to the data bank. While the copy quality of the multichannel data was marginal, the data appears to be of excellent quality. Given the importance of the seismic data to the objectives of the cruise, improved displays of the data need to be provided. Many of the proposed sites

are not located at crossing lines. However, given that the sites cannot be moved without compromising the objectives, that there will be a high resolution survey, and that structure contour maps are available for the major reflectors, SSP is prepared to relax this requirement. Swath bathymetry, side-scan sonar, heat flow, gravity, and sediment core data are highly recommended for passive margin proposals. However, given the location and nature of the proposed project, the absence of swath bathymetry and side-scan data probably will be acceptable in view of the high resolution survey which will be conducted at most of the sites. The structure contour maps are in metres which required a velocity for the conversion, probably determined from move-out. However, the source of the velocities should be explained and a velocity structure be provided at each of the proposed sites. The proponents are reminded that the next data deadline is June 15 for proposal to be looked at during SSP July meeting.

Because shallow water drilling is involved water current and sea state condition data will be required. However, this can simply be reprints of appropriate journal articles.

The copy of the master navigation shot point map is too small to read, thus an improved copy needs to be provided along with an explanation of the accuracy of the navigation system used. The velocity structure at each site also needs to be provided.

Site Survey readiness: At present the proposal is rated 2C.

SSP Consensus # 31: A limited amount of data in support of proposal 511 (Sea level modes in the Canterbury Basin) has been supplied to the Data Bank. While the copy quality of the multichannel data was marginal, the data appears to be of excellent quality. Given the importance of the seismic data to the objectives of the cruise, improved displays of the data need to be provided. Many of the proposed sites are not located at crossing lines. A large number of sites will require shallow water hazard survey to be conducted. The proponents are urged to keep in communication with PPSP together with TAMU in designing this survey. Additional data required and not at the Data Bank include water current in the region, weather conditions, detailed velocity information and large scale navigation plots. In view of the shallow water hazard survey to be conducted in the region the proposal is rated as 2C.

7.0 OTHER BUSINESS

7.1 Report of SSP subcommittee on Phase IV of ODP drilling (Srivastava and Diebold)

The subcommittee felt that this issue was too large to be considered solely by a subset of the SSP. Following much discussion, it was decided that SSP would recommend to SCICOM that if a PPG or DPG was established to examine ODP initiative III (Exploring the Deep Structure of Continental Margins and Crust), SSP should be adequately represented on the panel. JOIDES Office liaison suggested that SSP prepare a list of potential panel members to be sent forward to SCICOM. A recommendation was made by the panel at their March 96 meeting to PCOM to address this problem by a special group of people. PCOM had asked the convenors of the Inter Ridge meeting held at

WHOI in May 96 to address this problem, but no solution emerged from this meeting. It was, therefore, decided at this meeting to put another recommendation to SCICOM for the formulation of a DPG or PPG to look into this problem.

SSP Recommendation # 1 to SCICOM concerning formation of a special group namely DPG or PPG to look into the problem of imaging deeper part of the crust for drilling deep holes during the IV phase of ODP drilling program. SSP earlier had recommended to PCOM that it should form a special group of expertise from TECP, LITHP, SGPP, ODP/TAMU and SSP to look into the ways of finding parameters of the upper crust which would have to be determined for successful drilling to such great depths. Even though the recommendation was adopted but no results could be obtained. We are again making this request for the formation of a DPG or PPG in the new system to address this problem.

Explanatory note:

The entire question of imaging the upper and lower part of the crust using new and innovative techniques is a difficult one and needs careful consideration by a group of experts. We would prefer if this question could be addressed by a group of scientists from SSP and from scientific community at large. The reasons for suggesting formulation of such a group are summarised below.

Successful deep drilling either in deep oceanic environments or in continental margin environment requires the best possible information to determine true X, Y, Z positioning of targets in the presence of structure, and to predict "drillability." The first question will mostly be answered with seismic surveys, designed to provide both three dimensional coverage and velocity information. Whether these objectives are linked via depth migration of 3-D MCS data or through analysis of looser regional grids and wide-angle velocity profiles depends on the structure and drilling objectives.

Safety and feasibility of deep drilling depends on many factors, including downhole temperature gradients, stress, and material properties such as permeability. Several other types of geophysical survey (including heat flow and MT) are likely to be employed in different cases to provide guidance on these issues. When drilling deep holes, it is advisable to conduct downhole logging and other experiments e.g. VSP from time to time in the deepening hole (or in preliminary, shallow holes) to calibrate the site survey results obtained from surface measurements.

Since many of these questions have been addressed by land-based groups, such as the International Continental Drilling Project, it was suggested that they should be approached by some ODP organization, not necessarily SSP, for information and liaison activity, as should land-based deep-crust geophysical groups, including Lithoprobe and Cocorp. Similarly other related issues have been addressed and are presented in JOIDES' Bare Rock Drilling Report, which should be examined. It was felt that the entire question of what measurements should be conducted to image the deeper part of the crust was a difficult one for SSP to resolve alone, although the panel recognised that it was SSP responsibility to see that the required data are deposited by the proponents to

the DB for SSP evaluation and thus the panel should make efforts to find out more about these measurements. For this reason we are proposing a special group to be formed to address these questions.

Suggested candidates from SSP for this panel: Srivastava, Diebold, Casey, Sibuet and Christeson

7.2 Panel membership (Srivastava)

Panel Chair Srivastava mentioned that the panel membership will be for a three year period for all new member in the new system. Roger Scrutton, the UK member, retired last November but his replacement has not been decided by UK yet. Two other members, one from USA and one from Japan, are due to rotate of early next year and we need to think the kind of replacement we need in their places. Members should suggest names of possible candidates to Srivastava any time between now and the next meeting as these names would have to be forwarded to SCICOM for consideration at that time. Another problem to think about is the size of the panel as this need to be discussed at the next panel meeting.

7.3 SSP meetings for 1997 and 1998 (Srivastava)

We discussed timing and places for the coming meetings. Following was the general consensus about times and places for holding these meetings.

Summer --- **July 16 to 18, 1997** at **LDEO**, Dan Quoidback and John Diebold will be the host.

Fall---- Early November or late October 1997 depending on the need to have this mini meeting. Only three to four members will be needed.

Winter 1998 --- **Punta Arenus (Chile)** during JOIDES RESOLUTION Port Call there **Feb 9-12, 1998.**

Action Item # 4: SSP Chair Srivastava to write to SCICOM asking for their permission to hold SSP summer meeting from July 16 to 18, 1997 at LDEO and Winter meeting at Punta Arenus (Chile) from February 10 to 12, 1998.

7.4 Other business

Dan Quoidbach had circulated copies of new proposal forms which effectively will replace the present forms all proponents have to include with their proposals. Some discussion took place and a number of suggestions were made. These will be incorporated and the new forms will form part of new guidelines for submission of proposal to the JOIDES office. The booklet, to accompany these forms, is to be updated by Kathy Ellins, Dan Quoidbach and Shiri Srivastava with some help from Mahlon Ball. This is to be ready for further discussion at the next meeting. The revised forms have been included in the SCICOM Agenda Book and will be discussed at the inaugural April Meeting.

Action Item # 5: Dan Quoidbach to have ready the new ODP guide booklet together with data forms for discussion at the next (July)

SSP meeting.

Kathy Ellins had requested to get nominations for SSP liaisons to new SSEP. Srivastava then asked volunteers to the two SSEPs. After some discussion it was decided to have one member for each meeting. Long term members to the panels could be perhaps be decided next year when a better feel for their role in these panels will be known. The followings were chosen as liaison to the two panels.

SSEP Earth Interior: June 97 meeting ---- Jack Casey
 November 97 meeting ---- Diebold
 Alternate --- Jean-Claude Sibuet

SSEP Earth Environment:
 June 97 meting ----- Larry Peterson
 November 97 meeting ----- Charlie Paull
 Alternate ---- Roger Flood

Action item # 6: Srivastava to write to SCICOM suggesting names of the SSP liaisons to SSEPs.

SSP Consensus # 32: The panel would like thank Hidekazu Tokuyama for the care and thought he put in organising so many events during this meeting and giving the panel a chance to appreciate the culture and beauty of this superb country. We thank him and his associates for being such superb host for this meeting.

**Quantitative Classification of proposals
Site Survey Readiness Classification Scheme.**

1. Presently viable proposal for FY 99 drilling.

1A. All required data are in the data bank

1B. A few required items are missing from the data bank, but data are believed to exist and to be readily available.

2. Possibly viable proposal for FY 99 drilling; likely for FY 2000

2A. Substantial items of required data are not in the data bank but are believed to exist and are likely to be available in time for consideration for FY 99 drilling schedule.

2B. Substantial items of required data are not in the data bank, not believed to exist but could be available in time for consideration for FY 99 drilling if a **scheduled** site survey proceeds as planned.

2C. Substantial items of required data are not in the data bank, not believed to exist but could be available in time for consideration for FY 99 drilling if a **proposed** site survey proceeds as planned.

3. Unlikely for FY 99; possible for FY 2000.

3A. Required data are not in the data bank, not believed to exist but are likely to be available in time for consideration for FY 2000 drilling if a **scheduled** site survey proceeds as planned.

3B. Required data are not in the data bank, not believed to exist but could be available in time for consideration for FY 2000 drilling if a **proposed** site survey proceeds as planned.

4. Impossible for FY 99: Required data are not in the data bank and not believed to exist. Data could be available after FY 99 if a **proposed** site survey proceeds as planned.

5. Impossible for FY 99: Required data are not in the data bank and not believed to exist. A site survey needs to be conducted but is not proposed at this time.

6. Not considered because data in the Data Bank does not match present proposal; awaiting a new proposal.

7. Not considered because no data has been submitted to the data bank.

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* ---- depends on the data collected

** ---- criteria modified, see minutes