

JOIDES SITE SURVEY PANEL MEETING

July 24 - 26 2000

Lamont-Doherty Earth Observatory, Palisades, NY

Members: Diebold, John (*LDEO, NY, USA*) -- Chair
Anselmetti, Flavio (*ESF*) – will miss next meeting, his last
Caress, David (*MBARI, USA*)
Driscoll, Neal (*WHOI, USA*)
Enachescu, Michael (*Husky, Canada*)
Kleinrock, Martin (*VU., USA*)
Kuramoto, Shin'Ichi (*GSI, Japan*)
Lee, Chao-Shing (*PACRIM*)
Lizarralde, Daniel (*GA Tech, USA*)
Lyle, Mitchell (*BSU., USA*)
Meyer, Heinrich (*BGR, Germany*)
Silver, Eli (*UCSC, USA*)
Whitmarsh, Robert (*SOC, UK*)

Liaison: Brueckmann, Warner (*JOIDES Office*)
Klaus, Adam (*ODP/TAMU*)
Becker, Kier (*SCICOM/OPCOM*)
Quoidbach, Daniel (*ODP Data Bank*)

Apologies: Hine, Albert (*USF, USA*)
Holbrook, Steve (*UWYOM, USA*)
Leroy, Silvie (*France*)
Yao, Bochu (*GMGS, China*)

1. PRELIMINARY MATTERS

2. REPORTS

2.1 JOIDES

2.2 PPSP

2.3 ODP Data Bank

Quoidbach reported that 455 data items have been submitted since the February SSP meeting. The Data Bank assisted the proponents/co-chiefs of Legs 199 and 200 in preparations for PPSP review. Milly Giarratano attended the April PPSP meeting in lieu of Daniel Quoidbach.

The Data Bank has been working with the ODP Logging group on the IESX pilot project for handling digital seismic data. A demo of the system was given to the SSP during Monday afternoon. More material has been scanned into the digital watchog books and some additional work has been done on the data tracking system. the data.

2.4 TAMU

2.5 NSF

2.6 SCICOM/OPCOM

2.7 SCIMP

Report on SSP Liaison to SCIMP, 14th June, 2000

Bob Whitmarsh attended the SCIMP meeting at the Free University of Amsterdam for the afternoon of 14th June, 2000 as SSP Liaison to discuss two matters: 1. SCIMP's plans for reviewing underway geophysics on the JOIDES Resolution and; 2. SCIMP's recommendation 00-1-12 about submission of digital site survey data. It was a valuable meeting; the discussions revealed that there had been poor communication in the past between the respective panels.

1. Underway geophysics. The momentum behind the idea of a review of UG seems to have come mainly from Alan Huffman who resigned from SCIMP earlier in the year; thus recently the project had been in abeyance. It turns out that SCIMP had wanted to review all possible scenarios and the idea of abandoning underway seismic profiling altogether, which had alarmed SSP at its meeting in February, 2000, was just an extreme example of the possible range of scenarios to be addressed. Sverre Planke made a strong bid, as part of a proposal to have an on-board 'operational seismic laboratory' [for UG acquisition, downhole seismic acquisition and on board seismic modelling using IESX] for continuing to have an UG facility on board as some form of insurance against the need, in an emergency, to collect more seismic during a drilling leg. Bob Whitmarsh supported him on this and after some discussion the committee (who on the whole didn't seem to be seagoers or even drillers) seemed to be supportive too. There was also discussion about training of technicians, about who should run the system, about specific seismic sources etc. The upshot of all this was that SCIMP will recommend setting up a 'sub-committee' on which SCIMP, SSP, TAMU, the Lamont Borehole Group etc. will be represented. Because of the delays that had already occurred Tom Janacek (SCIMP Chair) was keen that this group gets moving quickly and reports before the end of 2000 if possible.

2. Recommendation 00-1-12. It turned out there was some history behind Recommendation 00-1-12. Apparently in an earlier recommendation (99-1-13) SCIMP had suggested that all seismic data within 2 n.m. of a drilled site should be available both digitally (during a leg) and in the public domain (some time after a drilling leg). The laudable rationale behind this was that not enough had been done in the past to reconcile core and borehole petrophysics and seismic reflection profiles over sites. Somehow this got expanded later into Recommendation 00-1-12. However, because the February, 2000 SSP response to Recommendation 00-1-12 had not reached SCIMP Bob Whitmarsh read it out to the Panel (the SSP response raised concerns about strictly enforcing an all-digital submission of reflection profiles because some drill sites are still chosen on the basis of perfectly adequate analogue records for which digital data do not exist). The Panel's response to the analogue data issue was that, at least within 2 n.m. of a site, the analogue data could be scanned and even 'digitised' as waveforms. There was even a suggestion that data submitters (or proponents) should take on the cost of 'digitising' analogue profiles. But SCIMP also realised that Dan Quoidbach's (ODP Databank) objections re the current lack of resources to handle fully digital datasets were valid. SCICOM is believed to have turned down SCIMP Recommendation 00-1-12 so maybe this is a dead issue.

3. SITE SURVEY IMPLICATIONS OF RECENTLY DRILLED LEGS

4. Site Survey Status of upcoming scheduled Legs for 00 & 01

4.1 Leg 192: Ontong Java (448)- Assessing the origins, age and post-emplacement history of the Ontong-Java Plateau through basement drilling

Proposal: 448 (Leg 192)

Target Type: D, E

SSP Review: July, 2000 at Lamont-Doherty

SSP Watchdog: Whitmarsh

SSP Proponent(s): none

SSP Review: Since the last SSP review in February 2000 the proponents have submitted A4 sized sheets illustrating the processing and interpretation of sonobuoys 17 and 31. It is regrettable that, contrary to the previous SSP request, only refracted arrivals have been picked and not reflected arrivals which would have better constrained the velocity-depth models. Whereas the interpretation of sonobuoy 31 appears to confirm the estimated sediment thickness, and therefore basement pick, for Sites OJP-3B and OJP-3C it seems very likely that the interpretation of sonobuoy 17 indicates that the basement pick and estimated sediment thickness at Site OJP-11C are in error. The sonobuoy velocity-depth profile strongly suggests that the sediments are ~580 m thick at that site yet Table 1 in Proposal 448 Rev.4 indicates a thickness of 330 m.

SSP recalls that at the Summer 1999 meeting it examined the migrated data for all sites and reported as follows "The panel continues to have concerns about basement identification. For most sites the proponents have picked basement as the top of a rough reverberant reflection. However, at sites OJ7D and OJ7E, the basement picks coincide with a strong smooth reflection about 0.45 s twt below the top of the rough reverberant reflection. Misidentification of basement will result in incorrect drilling time estimates, so SSP feels it is important to explain why different events are picked as basement at different sites." The Panel still awaits an explanation of the basement picks made at Sites OJP-7D and OJP-7E.

SSP Consensus: The sediment thickness and drilling time for Site OJP-11C should both be recomputed in the light of the sonobuoy 17 velocity-depth model submitted to the Database. SSP requests an explanation of the basement picks made at Sites OJP-7D and OJP-7E.

Site Survey Readiness Classification: 1A for all sites except Site OJP-11C, which remains 1B until revised sediment thickness estimate is provided, and Sites OJP-7D and OJP-7E, which remain 1B, until a satisfactory explanation of the basement picks made at Sites OJP-7D and OJP-7E is received.

4.2 Leg 193: Manus Basin (479) -

Proposal Title: Massive sulfide mineralization in felsic volcanics of the Eastern Manus back-arc basin, Western Pacific

Proposal#: 479

Target Type: F

SSP Watchdog: Diebold

SSP Proponent(s): none

SSP Consensus: All required data in support of the four primary sites proposal 479 (PACMANUS Basin) were deemed to be in the data bank at several previous meetings. Since our last meeting, four alternate sites, each within a few hundred meters of the associated primary site, have been designated. Additional data, supporting these alternate sites, have been submitted to the data bank. Site forms for these alternate sites should also be prepared and submitted to the DB.

Site survey classification: remains 1A.

4.3 Leg 194: Marion Plateau (510)

Proposal Title: Sea Level Magnitudes Recorded by Continental Margin Sequences on the Marion Plateau

Proposal #:510 FULL 3 (Leg 194)

Target Type: B

SSP Watchdog: WHITMARSH

SSP Proponent(s): ANSELMETTI

SSP Review: Dr. Anselmetti (Co-Chief) indicated to Dr. Whitmarsh (watchdog) that permission to drill within the Great Barrier Reef National Park still had not yet been granted by the Australian authorities. The Co-Chiefs had therefore proposed alternate sites CS-11-A through CS-17-A and submitted tables and site forms electronically to the Data Bank during the SSP meeting. According to

the forms only Sites CS-14-A, CS-16-A and CS-17-A have crossing seismic lines. There are no cross lines for Sites CS-11-A, 12-A, 13-A and 15-A; these will have to be shot by the JOIDES Resolution if necessary.

However on investigating the submitted data it appeared that the key line MAR-20 (on which all alternate sites lie) has not yet been submitted to the Database and that the CDP positions of the sites along the crossing lines 14-A, 16-A and 17-A have not been tabulated, recorded on the forms or marked up on the lines. It is therefore not possible at present for SSP to review these new alternate sites.

SSP noted that because the sonobuoys deployed during the site survey cruise did not yield useful results existing stacking velocities and velocity data based on Leg 133 will have to be used to determine target depths and depth to key horizons and that these velocity data have now been submitted to the Data Bank.

SSP Consensus: The Co-Chiefs should submit the missing line MAR-20 as soon as possible to the Databank and also ensure that the CDPs that define each alternate site are tabulated on the Site Description Forms and the alternate sites are marked up on ALL the seismic lines.

Site Survey Readiness Classification: 1B

4.4 Leg 195: Western Pacific ION (431B) – 1A

Proposal Title: Western Pacific Geophysical Network: WP-2

Proposal #: Leg 191

Target Type: E

SSP Watchdog: Diebold

SSP Proponent(s): None

SSP Review: This leg will drill one site into basement in the western Pacific in order to install a broadband ocean seismometers as part of the Ocean Seismic Network. In their previous investigation, SSP was concerned about the location of WP2 because of reverberations in the seismic profile, raising questions about basement identification and sediment thickness. It was suggested that this site be moved about 100 CDP points to the left where basement is better imaged. No correspondence with, or action by, proponents has yet resulted from this recommendation.

SSP Consensus: All required data has been submitted to the data bank for this site with the exception of a survey ship track with annotated shot points. It is suggested that site WP2 be moved 100 CDP values to the left where basement is better imaged.

Site Survey Readiness Classification: 1A

4.5 Leg 196: Nankai II (517)

Proposal Title: Nankai trough LWD/ Advanced CORK experiments

Proposal No: 517 Full

Target type: C (active margins)

SSP watchdog: Eli Silver

SSP proponents: None

SSP review: The SSP finds the new sites proposed to be well documented and adequate data are in the data bank. We urge the proponents to provide the data bank with the processed 3D data when they are available.

SSP consensus: All new sites (ENT 04A-09A) are backed by data in the data bank.

Site Survey Readiness Classification: 1A

4.6 Leg 197: Hawaiian/Emporer Hotspot (524)

Proposal Title: Motion of the Hawaiian Hotspot During Formation of the Emperor Seamounts: a Paleomagnetic Test

Target Type: G

SSP Watchdog: Diebold

SSP Proponent(s): none

SSP Review: All of the primary sites are at or near previously drilled DSDP and ODP holes. Alternate sites are located according to data ancillary to locating those sites. The Data Bank has now located single channel and 3.5KHz data for every site

SSP Consensus: Although all of the primary sites have been drilled before, some of them were drilled before the existence of the ODP Data Bank. DB workers have located and assembled the required data.

Site Survey Readiness Classification: 1A

4.7 Leg 198: Gas Hydrates on Hydrate Ridge (546)

Proposal Title: Hydrate Ridge

Target Type: C (Hydrate)

SSP Watchdog: John Diebold

SSP Proponent(s): None

SSP Review: 546 has advanced to Leg 198, scheduled for late, 2001. No new data has been submitted to the Data Bank since the July 1999 meeting of SSP. A 3-D high resolution MCS survey was carried out aboard R/V THOMPSON by the lead proponent during June, 2000, and further data will be collected during October. It is anticipated that when the processed data are submitted to the Data Bank, the leg will be rated 1A. Until then, it will be classified as 2A.

SSP Consensus: Critical data for site selection have been collected during June/July and will be during an October survey. Preliminary data from the June/July cruise should be submitted for the February 1, 2001 Data Bank deadline, as well as observations of surface morphology collected during 1999 studies.

Site Survey Readiness Classification: 2A

4.8 Leg 199: Paleogene Equatorial Pacific APC Transect (486)

Proposal Title: A Paleogene Equatorial APC Transect

Target Type: A

SSP Watchdog: John Diebold [for Yao Bochu]

SSP Proponent(s): None

SSP Review: The data package for this proposal was completed in time to be rated 1A at our previous meeting. No changes in site location have occurred since then, and the rating remains unchanged.

SSP Consensus: No change from previous classification.

Site Survey Readiness Classification: 1A

4.9 Leg 200: H2O Observatory (500)

Proposal Title: Drilling fast spread Pacific crust at the H2O long term seafloor observatory

Target Type: E

SSP Watchdog: David Caress

SSP Proponent(s): None

SSP Review:

This scheduled drilling leg 200 will drill a reentry hole at the Hawaii-2 Observatory (H2O) site in the eastern Pacific; a broadband seismometer will be installed within the hole as part of the worldwide ION program.

As requested, the proponents have now designated drilling sites and provided a package of figures satisfying the site survey requirements, including site locations and annotated SCS and 3.5 kHz records.

SSP Consensus: All required data are in the Data Bank.

Site Survey Readiness Classification: 1A

4.10 Leg 201: SE Pacific Pleoceanography (465)

Proposal Title: SE Pacific Paleooceanography

Target type(s): A

SSP Watchdog: Lyle (South)/Driscoll (North)

SSP Proponents: None

SSP Review:

This proposal has been scheduled as ODP Leg 201. Because Lyle was responsible for data acquisition for the northern drillsites (NEMO-3 survey) and is conflicted, Neal Driscoll is reviewing that data submission.

Site Survey comments, South:

SSP Watchdog: Mitch Lyle

New data has arrived at the data bank for one site in the south, SEPAC 19. The site is currently a priority 2 drillsite, but has interest for drilling because it has a probable sedimentation rate greater than 1 km/kyr. The only data available for this site is a parasound profile from a 1995 Sonne cruise. The data resolves reflectors from the proposed drilling depth (80 m), so are adequate for the primary drilling goals. If this site is to be drilled, 3.5 kHz and seismic profiles along the primary line and the crossline need to be gathered. This could be done on the Joides Resolution.

All other sites except SEPAC-13A are rated 1A—ready for drilling. There is a possibility that the site location for SEPAC-13A is incorrect, since there is an inconsistency between the map position and the position on the seismic profiles. It is important that the proponents explicitly examine the site position and make certain that is correct, since one of the alternate positions is outside the basin that is their target.

Site Survey comments, North (NEMO-3 survey):

SSP Watchdog: Neal Driscoll

The proponents propose to drill a series of sites along the eastern equatorial Pacific to address a number of objectives concerning paleocirculation and paleoproductivity. The required data exists for all the priority sites (COC-3, CAR-1C, and CAR-2C) on the Cocos and Carnegie Ridges. The data exists in the data bank for the alternate sites with the exception of a seismic cross line for site TEH-1. Site COC-4 is located over an overlapping sediment pond that might be recording gravity flows and could compromise the site for paleoclimate studies. Inconsistencies exist in the location of COC-3 from the proposal and latest data package submitted to the data bank. These inconsistencies should be examined and resolved by the proponents.

Site survey readiness status: 1A, except for the following sites rated 1B: SEPAC-13A, TEH-1

SSP Consensus: Except for some minor items that need to be checked and confirmed, all sites are ready for drilling.

Site Survey Readiness Classification: 1A/ 1B

5. Forwarded to SCICOM for consideration, August 2000

5.1 Core complex (512) - Quantifying the Processes of Oceanic Core Complex Formation

Proposal #:512

Target Type: F plus

SSP Watchdog: Marty Kleinrock

SSP Proponent(s): None

SSP Review: In order to study the formation of oceanic core complex massifs, the proponents propose to conduct a series of holes to bit destruction (expected to be approx. 100m deep, one of which might be deepened) in the gabbroic and ultramafic rocks exposed in the footwall of a detachment fault at the Western RTI of the MAR-Atlantis FZ. In addition, a single hole to bit destruction is proposed through a hangingwall block and the detachment below. There are several issues that the proponents must address.

1. At present, there are no data present in the ODP Data Bank, though much data are believed to exist. The proponents are requested to compile and provide to the Data Bank all existing data required for such bare rock drilling, and additional data as specified in the Site Survey Detail Form accompanying this report (July 25, 2000).
2. There are required data expected to be collected in a seafloor mapping and sampling cruise scheduled for November 2000 using DSL-120, Argo-II, and Alvin. Once these data are collected, the proponents should forward them to the ODP Data bank.
3. There are conventional refraction and NOBEL refraction data being processed by John Collins. These data should be forwarded to the ODP Data Bank as soon as they are available.
4. Data to be collected during the upcoming multi-channel seismic reflection cruise aboard R/V Ewing should also be forwarded to the ODP Data Bank as they become available. Of particular importance are data from the hanging block proposed drill sites in order to determine, hopefully, the depth to the detachment there.
5. The proponents need to specify their tentative sites and complete Site Survey Detail forms for a modified Target-type F (bare rock drilling) for each proposed site (as described in the accompanying form). The ranking of 2B is tentative, depending on final specification of sites and objectives.

SSP Consensus:

Required data are not in the data bank, not believed to exist, but could be available in time for consideration for FY2002 drilling if a scheduled site survey proceeds as planned. Drilling the upper block site would benefit from multichannel seismic data.

Site Survey Readiness Classification: 2B (pending final site selection)

5.2 Maldivé Achipelago (514) - Timing and amplitude of Oligocene/Miocene sea level fluctuations in the Inner Sea of the Maldivé Archipelago: An intra-oceanic carbonate system

Proposal #:514

Target Type: A/D

SSP Watchdog: Flavio Anselmetti

SSP Proponents(s): None

SSP Review:

The panel acknowledges receipt of a very well documented extensive data package. It includes a complete set of annotated MCS lines in uninterpreted and interpreted versions at different scales. Velocity information from a VSP experiment from nearby well ARI-I plus navigation data have been also submitted.

The evaluation of the site survey readiness was supported by high-quality explanatory notes, such as regional interpretation of various seismic horizons, schematic figures on geologic evolution, and a detailed description of the scientific rationale for each site.

The only major concerns of the panel were the locations of the two newly proposed sites MAL-8 and MAL-9. MAL-8 is located at the edge of Line 120 and does not have a crossing line, and since line 120 is longer than the adjacent E-W lines, MAL-8 cannot be characterized by quasi-3D information on sediment geometry. In contrast, all other sites, that do not have true crossing lines, all lie within the quasi-3D grid and allow thus for a good evaluation of the local geometries. We encourage the proponents to reconsider position of site MAL-8 and to evaluate whether no other site could offer a seismically better-documented drilling target to achieve similar scientific goals.

The suggested deepening of ODP site 716 is only poorly covered with the seismic lines of Leg 115 that are available in the databank. The site is positioned at the crossing of two ELF lines (ELF-MLD73-07 and ELF-MLD 76-03) which exist in the databank only as letter-sized paper copies. The quality is not comparable with the quality of the submitted MCS grid. Site 716 only reached a depth of 267m, while the planned depth of MAL-9 amounts to 1700m. We recommend strongly that the

proponents move the site onto the new seismic grid to Line E-100, about 1.5 km south of Site 716, so that they can use all advantages of having a site positioned on the interpreted seismic data.

The panel noticed also, that drilling time for all primary sites exceeds significantly the available drilling time of a normal Leg duration. We acknowledge the large number of sites that could be available as alternate sites for a detailed drilling plan, but we would like to see a priority list among the flagged primary sites. In addition to the already submitted well-labeled and annotated seismic sections, the panel would appreciate to see a table stating the exact shotpoint locations of each proposed site.

In summary, Sites MAL-1 - MAL-7 are well documented with a complete dataset and have site survey readiness classification 1A. Since no 3.5 kHz data are available, we recommend 3.5 kHz lines to be acquired when approaching the sites with the drilling vessel. The panel recommends that Sites MAL-8 and MAL-9 should be moved to positions on the seismic grid, where better seismic information is available.

SSP Consensus: Newly submitted multichannel seismic data, regional seismic interpretations, VSP-velocity and navigation data complete the site survey data for proposed sites MAL-1-MAL-7 and result in a Site Survey Readiness Status of 1A. Seismic coverage of Sites MAL-8 and MAL-9 (ODP Site 716) is poor so that the panel recommends these two sites to be moved to better locations on the new seismic grid.

The site survey readiness classification is 1A (Sites MAL-1 - MAL-7).

5.3 Tahiti Sea Level (519) - The Last Deglacial Sea-Level Rise in the South Pacific: Offshore Drilling in Tahiti (French Polynesia) and on the Australian Great Barrier Reef

Proposal #:519

Target Type: A

SSP Watchdog: Neal Driscoll

SSP Proponent(s): None

SSP Review: The proposed drilling will use the Portable Remotely Operated Drill (PROD) in conjunction with submersible (JAGO) observation and mapping, downhole measurements and high resolution seismic profiles in Tahiti and the Great Barrier Reef to reconstruct the deglaciation curve for the period of 20,000-10,000 years BP. The water depths for the proposed sites range from 50-300 m and are not accessible to the JOIDES Resolution. The proponents state that the required site survey data will be collected (boomer, multi-electrode sparker, and 10 cubic inch airguns). At present, no data have been submitted to the data bank. Given the shallow water targets, the proponents need to adhere to the ODP site survey requirements for shallow water drilling. Furthermore, the proponents propose to collect multiple cores at each site with each core penetrating 50-100 meters with 10 meters of penetration into the underlying basement. Finally, the success of this proposal depends heavily on the success of PROD. Can PROD operate in high energy environments and is the small diameter core appropriate for the proposed sampling strategy?

SSP Consensus: Required seismic data are still not in the data bank and are not believed to exist. A site survey proposal has been submitted to IFREMER for a cruise in 2001.

Site Survey Readiness Classification: 4

5.4 Kyushu-Palau Ridge (520) - Continental crust formation in the Western Pacific: Drilling at the Kyushu-Palau Ridge

Proposal #: 520_Full3

Target Type: G

SSP Watchdog: Heinrich Meyer

SSP Proponent(s): none

SSP Review: The aim of this proposal is to drill tonalitic rocks on the Kyushu-Palau Ridge, which is a remnant of a juvenile oceanic island-arc of the Western Pacific. The objective is understanding the process of early development of continental crust.

One site was originally proposed. In the "Proponents' Letter of Response to ISSEP external review of 1999" a new site (KPR-2) was added.

Data for (now) two sites were sent to data bank, but these sets are not complete, although the missing data are believed to exist, and the submitted data are not in a final shape. Here are some recommendations for updating the data bank package:

According to the SSP Description Form for this target Type G 3.5 kHz data and navigation are required, but there are no 3.5 kHz in the data bank, although mentioned in the proposal, and the navigation was sent as a print out for every 100th shot; better is a drawing with marked shotpoints especially near the proposed sites.

Further recommendations:

- On the seismic sections the site locations should be marked. The sections should be blown up, so that the seismic up to the target is clear and interpretable. The processed and used velocities on the top of the sections should be readable.
- For KPR-1 a crossing line was mentioned in the proposal (fig. 3): why is this line not in the data bank?
- Refraction data mentioned in the proposal (fig. 2 and 3), also informations from diversings (for Photography and Video): send them to data bank.
- Bathymetry, Magnetics and Gravity are too small in scale; lines and proposed sites are not marked.
- Water current data are not submitted although are mentioned.

Data for this site have been acquired and are believed to exist or should be available in time. So the classification is 2A.

SSP Consensus: All relevant data for this target type G, especially clear MCS-, 3.5 kHz- and navigation data have to be updated, improved and submitted to the data bank before February 1, 2001 for examination at the next SSP meeting.

Site Survey Readiness Classification: 2A

5.5 Fast Spreading (522) - An In Situ Section of oceanic crust spread at superfast rate

Proposal #:522

Target Type: E

SSP Watchdog: David Caress

SSP Proponent(s): None

SSP Review: The proponents propose to drill a complete upper crustal section including volcanic rocks, sheeted dikes and into gabbros in 15 Ma crust generated at a superfast spreading ridge. An addendum to the proposal and a data package have been submitted since the last SSP meeting. Based on results from MCS and OBH tomography, the proponents have changed the primary site, with a designation of GUATB03B. The new site is located on MCS line 22, between crossing lines 26 and 27. The data package includes a new location map, processed lines 21 and 22, and results from OBH 2D refraction tomography along lines 21 and 27. The data package is of very high quality.

The tomography results for lines 22 and 26 should be submitted to the databank when available. SSP also requests an MCS navigation plot annotated with CDP or shot number, new MCS with CDP/shot number and time annotation, and a location figure showing the location of the gravity core. SSP recommends that the proponents select alternate sites in the GUATB03 seismic grid, and that they indicate whether GUATB03A is considered an alternate site.

SSP Consensus: 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 FY2002 drilling schedule.

Site Survey Readiness Classification: 2A

5.6 Arctic Ocean (533) - Paleoceanographic and tectonic evolution of the Central Arctic Ocean

SSP Watchdog: Lyle
SSP Proponents: None

Target type(s): A/G

SSP Review: This proposal was first examined at the February 2000 SSP meeting, and this is the second examination of the data package. No new data have arrived in the data bank since February. However, proponents have assured us that a package of bathymetric data and high resolution chirp data will be assembled and deposited at the Site Survey Data Bank in the late summer of 2000. In addition, Jan Backman has informed the panel he has arranged for site survey time on the Oden for the 2001 Summer field season and is proposing funding for completion of the seismic survey. We are appreciative of the amount of effort that has gone into making these arrangements, and look forward to reviewing the new data packages when they arrive.

Concerns about specific sites: These are a reminder of concerns noted in February. LORI-2A. The proposed location of LORI-2A is on the edge of a basement structure which might prove to be a safety hazard. In addition, there is a possibility that the middle stratigraphic section (the target section) might be involved in a slump. The position of this site should be examined closely and alternates for this drilling objective should be proposed.

SSP Consensus: Significant data in support of this drilling proposal have been deposited in the data bank. A significant amount of critical data is also known to exist and should be deposited in the near future. Seismic reflection crosslines for the proposed drillsites have not yet been collected but will be collected next summer if a proposed site survey goes as planned. We thank the proponents for their efforts to complete this data package and look forward to reviewing it in the next year.

Site survey readiness status: 2C

5.7 Proto-Seismogenic Zone (537) - Drilling the Proto-Seismogenic Zone with Joides Resolution

Proposal #: 537-Full3
SSP Watchdog: S. Kuramoto
SSP Proponent(s): E. Silver

Target Type: C

SSP Review: SSP appreciates that the proponents have uploaded several data to the ODP Data Bank. Processed MCS lines document the proposed primary site quite well. However, additional processed data (including depth sections) are needed to evaluate the exact drilling strategy. Also a 3.5 kHz profile crossing the proposed site is required.

We could not find any data relating to alternate sites. SSP asks the proponents to send data for any proposed alternate sites.

SSP Consensus: Some data have been submitted to the Data Bank for primary sites, but additional data are required, both to characterize the sites, and to refine the drilling plan. We ask the proponents to send the remaining data to the DB as soon as possible.

Site Survey Readiness Classification: 2A

Blake Ridge (539) - The Dynamics of Methane Cycling in a Large Gas Hydrate Deposit on the Blake Ridge

Proposal #: 539-Full2
SSP Watchdog: S. Kuramoto
SSP Proponent(s): S. Holbrook

Target Type: B

SSP Review: SSP appreciates the efforts of proponents who have deposited several new data to the DB. A new site survey is scheduled in September to October, 2000. R/V Ewing will survey the proposed sites by 2D seismic and 3D seismic survey in the area of the proposed sites on the Blake

Ridge. We recommend to the proponents that they send these data to the DB as soon as possible after the cruise.

SSP Consensus: We ask the proponents to send data from the scheduled site survey to the DB as soon as possible. When these properly annotated data, along with navigation, are present in the data bank, the sites may be ready for drilling in 2003.

Site Survey Readiness Classification: 2B

5.9 Costa Rica Subduction Zone (544) - Proposal Title: Fluid Flow, Seismic Cycling, and Pressure-Temperature Characteristics of the Costa Rica Subduction Zone

Proposal #:544-Full2

Target Type: C, D

SSP Watchdog: Dan Lizarralde (July 2000)

SSP Proponent(s): Eli Silver

SSP Review: Sites 1039-S and 1039-T, previously not on a seismic line, have been moved eastward to lie on seismic line CR-30. Now all Sites lie along existing seismic lines. Although no cross lines exist through the 1039X Sites, Lines CR-20 and 30 are only ~1.5 km apart and exhibit very little lateral variability. All Sites are now considered 1A in site survey readiness.

SSP Consensus: Sites 1040R and 1043R lie close enough to previously drilled sites to be considered 1A. Sites 1039R,S and T lie along closely spaced seismic lines within a clear stratigraphic context of Leg 170 Sites 1039, 1040 and 1043. These Sites are now also considered 1A.

Site Survey Readiness Classification: 1A

5.10 Juan de Fuca Ridge (545) -

Proposal Title: The Hydrologic Architecture of the Basaltic Oceanic Crust: Crystal-Scale Properties and Multiple Hydrothermal Systems on the Eastern Flank of the Juan de Fuca Ridge

Proposal #: 545

Target Type: D

SSP Watchdog: CS Lee

SSP Proponent(s): None

SSP Review: This proposal was first examined by SSP on February 2000. At that meeting, the site survey data were not available. The proponents asked the Data Bank to re-plot the old site survey data of Leg 168 for the SSP to review. Due to the locations of new sites, the proponents have finally submitted a set of A4-size seismic sections. The SSP members have examined the data on July 2000.

The SSP members also notice that the proponents will have two site surveys in the summer of 2000: a German-lead program to collect MCS data around the proposed drill sites, and a joint US-Canadian-UK-French cruise to collect heatflow and core data. However, the data may not be submitted to the Data Bank until winter 2001. The proponents wish the SSP members to use the Leg 168 data to evaluate the proposed sites.

SSP Consensus: The SSP members wish to know from the proponents how important the additional MCS and heatflow data are to the selection of final sites. Are the existing Leg 168 data adequate to select the sites, or the new data will be needed? Can the new data be submitted any earlier than winter 2001?

Site Survey Readiness Classification: 1B

5.11 N. Arabian Sea Monsoon (549)

Proposal Title: Moonsoonal Variability and Oxygen Minimum Zone Intensity in the Northern Arabian Sea

Proposal #: 549

Target Type: A

SSP Watchdog: Diebold, for Yao Bochu

SSP Proponent(s): None

SSP Review: The proposal suggests seven ODP well sites located on the basis of MCS profiles, high resolution seismic profiles and SCS profiles with GPS navigation. Gravity, magnetic data and sediment cores are available for nearby Leg 133 sites. The data which have been submitted to the data bank are in very rudimentary form. Site locations are annotated on the seismic profiles, but other annotation, such as horizontal scales, are lacking. Large scale maps, or better, digital navigation must be supplied to accompany the seismic profiles. Locations and descriptions of existing sediment cores in the area should be supplied. None of the sites seem to have crossing lines. We understand that efforts are being made to obtain additional seismic data. Hopefully, these will allow correlation of the proposed sites with leg 133 site 521. Without additional data, the SSEPs concerns that some sites may be located in areas of sediment slumping cannot be adequately addressed. It is strongly recommended that swath bathymetry data be acquired to answer the question of possible seismicity-induced slumping in the vicinity of the Murray Ridge sites.

SSP Consensus: Additional site survey work is required, and existing data need to be properly annotated and navigation supplied.

Site Survey Readiness Classification: 2C

5.12 Hess Deep (551) - Exploring the Lower Crust and Mantle at a Fast-Spreading Ridge: New Drilling at Hess Deep

Proposal #:551

Target Type: H

SSP Watchdog: Marty Kleinrock

SSP Proponent(s): None

SSP Review: The proponents propose to conduct a series of up to 3 holes of at least 300m deep in the gabbroic and ultramafic rocks created at the East Pacific Rise and presently exposed in the Hess Deep in order to study the nature of the generation and evolution of the lower oceanic crust. This general area of Hess Deep was the subject of ODP leg 147, where ODP sites 894 and 895 were drilled. Hence, there is a great deal of relevant data existing at the ODP Data Bank. As of now, however, a few items need attention.

1. A portion of the data originally filed under the Leg 147 have been tentatively forwarded to the Proposal 551 file at the ODP data Bank, but at present the proposed sites (sites HD-01A, 02A, and 03A) and the proposed alternate site (site HD-04A) are identified on only the bathymetry map, but not on the other data/maps. The proponents are requested to continue a detailed discussion with the ODP Data Bank personnel to guide them to forward the appropriate data from the Leg 147 file to the Proposal 551 file and to identify the new proposed sites onto more of those data. Alternatively, the proponents may find it advantageous to provide the Data Bank with a newly compiled set of existing data with proposed sites and other relevant information included.
2. There are required data that still need to be collected, specifically video and detailed sonar/bathymetry. Proponents say that this work will be proposed in Feb 2001 for 2002 field season. This is strongly encouraged.
3. The proponents need to complete Site Survey Detail forms for Target-type H (offset drilling) for each site.
4. There are believed to exist GEOMAR seismic data north of Hess Deep that may provide an important constraint on the initial crustal thickness prior to rifting. The proponents are encouraged to investigate these data.
5. The proponents are encouraged to review the existing and any future high-resolution data to assure that the drilling is into true outcrop and not slumps.

SSP Consensus: Required data are not in the data bank, not believed to exist, but could be available in time for consideration for FY2003 drilling if a site survey is proposed and proceeds as proponents plan.

Site Survey Readiness Classification: 5 (though will be 3B if site survey proposal is resubmitted in Feb 2001 as expected)

5.13 Crete (555) - Backstop Hydrology and Deformation Mechanisms Related to Incipient Continental Collision and Exhumation Processes off Crete, Eastern Mediterranean Sea

Proposal #: 555Full2

Target Type: C

SSP Watchdog: Heinrich Meyer

SSP Proponent(s): none

SSP Review: This is a proposal to drill three sites south of Crete (E.Mediterranean) from the distal part of the Mediterranean Ridge accretionary prism across its backstop. The main objectives are: Mass and fluid transfer at an accreting convergent margin, spatial variability of fluids from mineral dehydration and diagenetic alteration at depth, the control of seismicity by in situ physical properties and deep biological activity near the updip limit of the seismogenic zone to be contrasted with study of living bacteria within shallowly buried sediments in the same area. Long term investigations using CORK shall help to study variations through time.

All required data for this target type C are believed to exist or should be available in time. Therefore the readiness was classified to 2A.

A part of the data volume was submitted to data bank, some are still missing.

According to the ODP SPP requirements the following recommendations can be given:

- Seismic lines should be added with crossing lines (coming from the 1999 survey) and/or by parallel lines; all seismic lines should exist at least as time sections to make them comparable to all other seismics (or all additional seismic lines have to be prestack depth migrated); the lines should have shotpoint markers and a proper resolution.
- 3.5 kHz data are required; navigation track charts need shotpoint and site markers; this is also necessary for magnetic-, gravity- and other plots.
- The requirements of the SSP Review / Description Forms for target type C should be compared with the existing data (which were mentioned in the proposal) and what was submitted to data bank. It is not enough to make a note to a figure in the proposal.

SSP Consensus: All relevant missing and/or updated data for this target type C should be submitted to the data bank before February 2001 for evaluation and getting higher readiness at the next SSP meeting.

Site Survey Readiness Classification: 2A

5.14 Walvis Extreme Climate (559) - Proposal Title: Early Cenozoic Extreme Climates: The Walvis Ridge Transect

Proposal #:559

Target Type: A

SSP Watchdog: Neal Driscoll

SSP Proponent(s): None

SSP Review: The proponents propose to conduct a depth transect across the Walvis Ridge to determine the paleoceanographic variations associated with several prominent episodes of early Cenozoic climate change (e.g., the Latest Paleocene Thermal Maximum (EOGM)). Six sites (double/triple coring) have been proposed to recover intact sediments in water depths ranging from 2500 and 4500 m. At present, low resolution seismic data exist in the region (R/V Thomas and Vema). To improve the quality and coverage of the seismic reflection data, the proponents are in the process of organizing a cruise on the R/V Meteor for a regional survey of the proposed sites. The preliminary request for ship time to acquire the high-resolution seismic data has already been submitted and the cruise should be completed by early 2001. Some of the proposed sites are not located along seismic lines (e.g., W-6) and it is unclear what criteria were used to locate these sites. The next SSP data deadline is February 1, 2001.

5.17 Nankai Hydrates (566) - Gas Hydrate drilling in the active margin. Occurrence, amount and origin of gas hydrate of Nankai Trough

Proposal Number: 566-Full3

Target type: C (active margin)

SSP Watchdog: Eli Silver

SSP proponents: S. Kuramoto

SSP Review: The proposed drill sites are located on a seismic line obtained using a deep-towed hydrophone streamer. Crossing lines are provided on two MCS lines that were taken as part of an MCS seismic grid. The sites are not located on these lines, but are indicated on the page-sized figure 5. It is difficult for SSP to carefully evaluate the sites and their locations on the crossing lines without having better annotation to show clearly how these tie into the seismic grid.

Only the seismic lines and 3.5 data are present or referred to in the databank. A 3D seismic survey has just been completed. It is expected that all necessary data do exist, but they need to be made accessible to SSP.

While sites DBSR 1 and 5 are indicated on one figure, Sites DBSR 3 and 4 are not indicated on any figure.

SSP Consensus: We urge the proponents to properly annotate the data for the data bank. We also urge them to send the results of the 3D survey to the databank as soon as they are processed, again annotated properly. Other data, such as side scan, swath bathymetry, gravity, magnetics, core data, etc. need to be either sent to the data bank or if it exists in other proposals, to refer specifically to this data and document the proposed locations on these data. All sites, whether primary or alternate, must be documented on maps and sections.

Site Survey Readiness Classification: 2A

5.18 Drilling at EPR (570) -Origin and Evolution of Fast-Spread Ocean Crust: Drilling at the East Pacific Rise 9-10N

Proposal #:570-Full

Target Type: F

SSP Watchdog: David Caress

SSP Proponent(s): None

SSP Review: This three-leg proposal will drill 1 near-axis and 3 on-axis bare-rock holes on the EPR between the Clipperton and Siqueros transforms. The proposed drilling will allow the proponents to address the formation of crustal layer 2A, along-axis melt transport, microbiology within the upper crust, and axial hydrothermal processes. The off-axis hole (EPR-1) is proposed to be drilled to 600 mbsf, two on-axis holes (EPR-2 and EPR-3) are to be drilled to 200-300 mbsf, and a third (EPR-4) on-axis hole to 500-600 m. The first leg of proposed drilling encompasses holes EPR-1 and EPR-2.

A vast and varied amount of data have been collected along the targeted section of the EPR. After the previous SSP meeting, the proponents were requested to provide a data package for the first proposed drilling leg. The data package has been submitted to the Data Bank, and the proponents have done a stellar job of assembling and organizing the data. The panel greatly appreciates this effort.

Although seismic reflection data are not required for all bare rock drilling sites, SSP thinks that including the existing MCS lines is important for this proposal. The only elements of the data still missing from the Data Bank are MCS profiles with current drill site annotation (the two profiles already in the Data Bank date from a previous drilling proposal). Specifically, the panel would like to see:

- MCS line track chart with both drill site locations and CDP annotation.
- MCS profiles with CDP annotation and drill site locations.

We know that MCS lines 31 and 41 and WAP line 507 are relevant to the proposed sites, but the proponents should check to see if any other lines are also relevant.

SSP Consensus: For the first leg sites (EPR-1 EPR-1A EPR-2 EPR-2A): A few required items are missing from the Data Bank but are believed to exist and to be readily available. For the other sites (EPR-3 EPR-4): 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 FY2002 drilling schedule.

Site Survey Readiness Classification: 1B/2A

5.19 Peru Margin Deep Biosphere (571) -Controls on Microbial Communities in Deeply Buried Sediments

Proposal #:571

Target Type: A

SSP Watchdog: Neal Driscoll

SSP Proponent(s): None

SSP Review: The proponents propose to drill a series of sites along the Peru Margin and eastern equatorial Pacific to address a number of objectives concerning the controls on microbial communities in deeply buried sediments. The sites range from 426 to 5070 m water depth with penetrations ranging from 124 to 400 mbsf. The following objectives will be addressed by the proposed drilling:

- Are different sedimentary geochemical regimes characterized by different microbial communities or only reflect different distributions of similar communities?
- How does the flow of electron acceptors through deep sediments affect microbial communities and sediment chemistry?
- What is the impact of previous oceanographic conditions on microbial communities now buried in deep-sea sediments (i.e., are microbial communities tape recorders of past environmental conditions)?

In order to build on previous site surveys and to remove the need for additional detailed site surveys, the proponents propose to drill in the immediate vicinity of existing DSDP (320, 321) and ODP (680, 681, 684, 685, 846, and 851). The proponents have submitted much data to the databank. However, site locations and scales need to be annotated on the seismic data for PRU-01A, PRU-02A, PRU-03A, and PRU-04A. No data was provided for proposed sites PRB-1A and PRB-2A. Proposed sites EQP-1A and EQP-2A are complete with navigation and crossing lines, but they need to be relabeled to be consistent with the sites in the proposal.

SSP Consensus: No new data have been submitted to the data bank and thus the SSP consensus remains the same. Required data for sites PRB-1A (320) and PRB-2A (321) are not in the data bank and Leg 34 predates the data bank so there is no data package for that Leg. The proponents need to look through the DSDP Leg 34 volume and microfilm available at the data bank for seismic data crossing sites PRB-1A and PRB-2A. Kana Keoki track kk007 passes through site 320 and Vema 1905 crosses site 321. The seismic data for sites PRU-01A, PRU-02A, PRU-03A, and PRU-04A need to be annotated and better linked to the navigation maps. In addition, crossing lines for the sites need to be submitted. Proposed sites EQP-1A and EQP-2A are complete with the exception of being labeled for the Equatorial Pacific (Leg 138) site survey package and need to be relabeled for this site survey package,

Site Survey Readiness Classification:

PRB-1A and PRB-2A - 2A,

PRU-01A, PRU-02A, PRU-03A, and PRU-04A - 2A,

EQP-1A and EQP-2A - 1B

5.20 Demerara Rise (577) - Demerara Rise: Equatorial Cretaceous and Paleogene Paleooceanographic Transect, Western Atlantic

Proposal #: 577

Target Type: B

SSP Watchdog: CS Lee

SSP Proponent(s): None

SSP Review: This is the second time that SSP has reviewed this proposal. The proponents have obtained and re-processed the 1974 Shell MCS data in the proposed region. Four lines (2206, 2206A, 2207 and 2211) with both stacked and migrated sections were examined during the meeting. The results of reprocessing are excellent, and satisfy much of the requirement for site survey data. However, still lacking are crossing lines for several proposed sites (DR-2, DR-3, DR-3alt, DR-4, DR-5, DR-6alt and DR-8).

The industrial seismic data grid around the Esso-Elf-Shell Demerara-2A-1 well (in the shallow water area) has a line spacing of 2-5 km. However, near the proposed sites, the line spacing increases to 20-30 km (in the 2000-3000m water depth area). A site survey cruise to obtain the crossing lines will be needed.

The proponents have indicated that they have been funded and scheduled (Meteor, April '01) to collect high-resolution single channel seismic lines and multibeam data. In addition, they will also conduct a US-funded "piggy-back" cruise (probably in March 2001) to collect additional crossing lines and core samples. We wish them success in these site surveys.

SSP Consensus: The seismic data on crossing lines, swath bathymetry, core, and velocity data will be required for this proposal. A local consultant company has recently collected some 6000 km of MCS data in the area. The SSP members urge the proponents to contact with this company for more information. The proponents have indicated that there are no hydrocarbon shows in the Demerara-2A-1 well (75 km away from the proposed sites). However, because of the industrial activities in the region, the proposal should be previewed by PPSP.

Site Survey Readiness Classification:
1A for DR-1, DR-6 and DR-7;
2B for others (lack of crossing lines).

5.21 Conical Seamount (APL-10) – (leg 193)

SSP watchdog: Diebold
SSP Proponents: None

Target Type: G

SSP Review: The APL proposes drilling a single, additional site, quite a few miles north of the PacManus area. None of the leg 193 data apply to this site, a fact appreciated by the proponents, who give a comprehensive list of available data. Since none of these data are present in the DB, we cannot evaluate them.

SSP Concensus: Sufficient data, thought to exist, must be submitted to the Data Bank in order for SSP to evaluate them.

Site Survey Readiness Classification: 2A

5.22 Hawaiian Apron - Hydrothermal (APL-11) - Drilling the Hawaiian archipelagic apron to explore patterns of submarine heat and fluid flow (Leg 200)

Ancillary Program Letter: APL-11
SSP Watchdog: Whitmarsh
SSP Proponent(s): None

Target Type: E

SSP Review: July, 2000 at Lamont-Doherty

SSP Consensus: The Panel needs to see the Oahu profile (Fig.3), on which the site (unnamed) is located, at a larger scale. A crossline will also have to be provided over the proposed site before it can be approved for drilling by SSP (single channel seismic lines are thought to exist in the area collected during GLORIA and other surveys). SSP will need to know the source of the Brocher and ten Brink, 1987 reference which reportedly gives the remarkably high sediment velocity of 4 km/s. The

proponents should provide swath bathymetry in the vicinity of the site (data are reported by Caress, MBARI to have been collected by JAMSTEC).

Site Survey Readiness Classification: 2A

5.23 Hawaiian Apron - Paleoclimate (APL-12) - Pleistocene Evolution of the subtropical Pacific: a depth transect off the Hawaiian Islands (Leg 198)

Ancillary Program Letter: APL-12

Target Type: A

SSP Watchdog: Lyle

SSP Proponent(s): None

SSP Review: The APL proposes two holes south of Molokai in the Hawaii archipelago for a high resolution Pleistocene paleoceanography study. The two sites have adequate information from analog 3.5 kHz records and surface sediment cores to indicate that hemipelagic sediments exist in the areas they have indicated for drilling.

SSP Consensus: No high-resolution seismic data are available yet, but a short acquisition cruise is proposed while the R/V Revelle is in Hawaii, in August 2000. The seismic reflection data are necessary for drilling to the planned drilling depths (150 m). These data should be in a grid to understand the geometry of the sediment package. Highly desirable but not strictly necessary are swathmap bathymetric maps

Site Survey Readiness Classification: 2C

5.24 Okinawa (APL-14) - Pleistocene Kuroshio Paleooceanography: Transient One-Site Drilling in the Southern Okinawa Trough, Western Pacific

Ancillary Program Letter: APL-14

Target Type: A

SSP Watchdog: Kuramoto

SSP Proponent(s): Lee

SSP Review: Jul. 25, 2000 at Lamont-Doherty

SSP Consensus: This is the first time this panel has seen this APL and its associated data. There are several MCS lines which include high resolution MCS data. All data required have been submitted to the DB. It seems to be ready to go. If proponents have any information about the Kuroshio current at the proposed site, this would be very useful in planning drilling.

Site Survey Readiness Classification: 1A (All required data are in the DB).

5.25 MertzDrift (APL-16) - Ancillary Proposal: Mertz Drift Holocene Deposit on the George Vth Continental Shelf

Proposal #: APL-16 (re: 482)

Target Type: B – Passive Margin

SSP Watchdog: Marty Kleinrock

SSP Proponent(s): None

SSP Review: In order to add detailed constraints on Holocene paleoclimatology, the proponents propose to collect a single 35m APC drillcore from the rapidly accumulating (3m/ky) Mertz Drift off of Antarctica. This is to be an ancillary to ODP Proposal #482 "Cenozoic East Antarctic Ice Sheet History from Wilkes Land Sediments"

The existing data, including the newly acquired Chirp data, need to be sent to the ODP Data Bank, along with navigation charts. The proposed drill site should be indicated on each of the maps and cross-sections. It appears that all the necessary data exist.

SSP Consensus: Required data are not in the data bank, but are believed to exist. Please forward the data.

Site Survey Readiness Classification: 2A

6 SSEPS SENT FOR EXTERNAL REVIEW OR REVISION

6.1 Laurentide Ice Sheet Outlets (455) - High Resolution Transects of Laurentide Ice Sheets Outlets

Proposal #:455-Rev 3

Target Type: A/B

SSP Watchdog: F. Anselmetti

SSP Proponent(s): None

SSP Review: No new data has been submitted since the last SSP meeting in February 2000. We therefore reissue the recommendation made in the last minutes. The proponents informed the panel in their March-2000 update that the results of a IMAGES coring campaign might alter the drilling plan, but that the core analysis are not completed yet. In addition, new site survey data that will be acquired next year that might move the site at Orphan Knoll from the crest to the flank. The panel would like to see a new and well-documented drilling strategy, so that we can evaluate the proposal more thoroughly during the next meeting.

Since no new data has been submitted, the site survey readiness classification remains 1A for Sites HUD01A-HUD07A and LAW02A-LAW05A, while it remains 2A for Sites HUD08A, LAW01A and LAW06A.

We encourage the proponents to submit missing data and a clear drilling strategy till the February 1 deadline, so that these items can be considered during the next SSP meeting in February 2001.

SSP Consensus: No new data have been submitted to the databank since the February 2000 meeting. The site survey readiness classification remains 1A for Sites HUD01A-HUD07A and LAW02A-LAW05A, while it remains 2A for Sites HUD08A, LAW01A and LAW06A. We encourage the proponents to submit missing data and the announced new drilling strategy till the February 1 deadline, so that these items can be considered during the next SSP meeting in February 2001.

The site survey readiness classification is 2A/1A.

6.2 Cascadia Margin Gas Hydrates (553) - Gas Hydrate on the Cascadia Margin

Proposal #:553

Target Type: C, D

SSP Watchdog: Dan Lizarralde (July 2000)

SSP Proponent(s): None

SSP Review: The proponents aim to study fluid flow and dynamics of the gas hydrate system on the Cascadia margin. Five sites are proposed: CAS-1A, 2A, 3A, 4A, and 5A.

No new data have been submitted to the SSP Data Bank since the last two SSP meetings. Comments from the previous two SSP Report Forms still apply and will not be duplicated here.

.A new site survey data package should be submitted for this proposal to proceed to 1A readiness status. Relevant data from the 1993 single-channel survey, the 1996 MCS survey, the 1999 3D survey, and the DTAGs survey should be submitted to the databank. Results of these surveys are of such higher resolution than the 1989 MCS data that they will no doubt profoundly impact site selection. Comments on other new data mentioned in the proposal (e.g. seafloor electro-magnetic surveys) should also be communicated to the SSP.

SSP Consensus: The consensus remains that the Leg 146 site survey data does not fulfill all site-survey requirements for this new proposal; a new site survey data package should be submitted to achieve 1A status.

Site Survey Readiness Classification: 2A

6.3 Caribbean LIP (561) - **The Caribbean large Igneous Province (CLIP)**

Proposal #: 561-Full3

Target Type: D and G

SSP Watchdog: Michael E. Enachescu

SSP Proponent(s): Driscoll, Diebold

SSP Review: This proposal consists of 5 deep water (1500 to 4650 m) holes located in the Venezuelan Basin/Beata Ridge within the Caribbean Large Igneous Province (CLIP) and demanding each for sediment and basement penetration. One sits is a re-entry and deepening of an older ODP location.

The proposal must be better organized both as text and illustrations, Illustrations should contain all primary and secondary sites plotted on maps and on MCS data. A significant volume of data exists in the Data Base as pre-drill documentation for Leg 165 or obtained during the JR cruise. Numerous multi-channel and high-resolution data sets related to CLIP were inspected prior leg 165. The various sets exist in the DB but must be repackaged to address the specifics of the new proposal. Only data pertinent to this proposal should be extracted, cleaned, redisplayed and newly proposed sites should be properly annotated.

Gravity, magnetic and bathymetry maps should be included with the package. We expect that the proponents would prepare a clean and complete package. This re-assembled package is unconditionally necessary both to support the scientific objective of the CLIP transect and document the new sites from a site survey point of view. Representative MCS lines that include site location should be submitted in digital form. All this remaining repackaging and documenting of the new selected sites should be received at the DB prior to the deadline of February 2001 SSP meeting.

SSP Consensus: The SP acknowledges that most of the required data for this type of sites is in DB, but must be properly organized and repackaged to document the new proposal. Final site forms should be adequately completed, properly displayed on data, should be analyzed and discussed by the panel. All required missing data, final site location and attached stratigraphic study should arrive at DB prior to January 2001 meeting

Site Survey Readiness Classification: 2A

6.4 TAG II (584) - **TAG II: Evolution of a Volcanic-Hosted Hydrothermal System on a Slow Spreading Ocean Ridge**

Proposal #: 584-Full

Target Type: F

SSP Watchdog: Dan Lizarralde (July 2000)

SSP Proponent(s): M. C. Kleinrock

SSP Review: This proposal seeks to drill at all of the 5 identified mound zones in the TAG hydrothermal region in order to extend the work of Leg 158 and continue investigations into the evolution of hydrothermal systems and the nature of the deep biosphere.

Site 1 is located in the Leg 158 active mound area, for which there is adequate site survey data, and so it's readiness is considered 1A.

The Leg 158 site-survey packet (which is all that exist for this proposal) is not sufficient for the remaining 4 sites, and a new packet should be submitted that organizes pre- and post-Leg 158 data relevant to site survey. This packet should contain enlarged maps of bathymetry and side-scan sonar images with site locations and locations of other relevant data, including heat flow sites, sediment cores, submersible tracks and particularly photography and video indicated.

It is possible that sufficient bottom photography and video exist to consider the remaining sites (2-5) as 1A without the need for additional data collection.

Until the demonstration that these photographic and video data exist, and the demonstration that all of the bathymetry and side-scan data are of sufficient quality (similar to that in the active-mound area), then Sites 4-5 must be considered as a Readiness Classification 5: Impossible for FY2002, required data are not in the Data Bank and not believed to exist.

SSP Consensus: Site 1 lies within the Leg 158 drilling area (active mound) and is considered 1A based on existing Leg 158 site survey data. It is not clear from the presentation of data in this packet whether or not the appropriate imagery exist for the remaining sites. These data may exist, but pending a new packet demonstrating their viability, Sites 2-5 are considered as Readiness 5.

Site Survey Readiness Classification: 1A(1), 5(2-5)

7. POTENTIAL FUTURE DRILLING - 2001 PROSPECTUS

5.1 7.1 Okhotsk and Bering Seas Plio-Pleistocene History (477)

Proposal Title: The Okhotsk and Bering Seas: High resolution Plio-Pleistocene Evolution of the Glacial/Interglacial Changes in the Marginal Seas

Proposal #: 477 – Full2

Target Type: A; Paleoenvironment

SSP Watchdog: Diebold

SSP Proponent(s): None

SSP Review: The proponents have responded to SSEP advice, and focussed their selection of sites considerably. In addition, data from a recent site survey, including seismic, bathymetry and core descriptions, have been submitted to the data bank. Receipt of the new data raises the classification of the BOW and GAT sites to 1B. Some items, such as digital navigation, or adequate maps, are required to raise the rating of these sites to 1A. Preexisting data have been submitted, including cross lines for the UMK and COP sites. However, the remaining ASR, KAM and SHR sites are located on single single-channel seismic lines, with no crossing lines. In addition, no 3.5KHz are present for these or the COP sites. The proponents are encouraged to continue in their efforts to improve the site survey data package for this drilling proposal.

SSP Consensus: BOW, GAT and UMK sites are nearly ready for drilling, pending receipt of better maps or, preferably, digital navigation for seismic lines. Some progress has been made in submitting copies of existing data for other sites, but other essential data are still be missing. It is unclear from correspondence with the proponents whether the missing data are available or not, nor whether additional site surveys are proposed or scheduled.

Site Survey Readiness Classification: 1B (BOW, GAT, UMK) / 5 (ASR, KAM, SHR, COP)

7.2 Eastern Nankai Subduction Processes (478) - Characterization of Eastern Nankai subduction processes

Proposal No: 478-Full4

Target type: C (active margins)

SSP watchdog: Eli Silver

SSP proponents: None

SSP review: Available seismic data are inadequate to clearly image the structural relations between the Tokai thrust and the decollement. Better seismic data and crossing lines for all sites are required. Crossing lines are also needed for the FTZ sites. High resolution seismic lines 901-915 are indicated to exist but are not in the data bank.

SSP consensus: The proposed sites have inadequate seismic data and lack crossing lines. A 3D seismic study has now been completed. Please send the processed data to the data bank when ready. We also urge that crossing lines are run for the FTZ sites.

Site Survey Readiness Classification: 2A

7.3 Wilkes Land Margin (482) - Wilkes Land Margin

Proposal #: 482

Target Type: B

SSP Watchdog: Neal Driscoll

SSP Proponent(s): None

SSP Review: We received a message from the proponent that the WEGA MCS cruise collected crossing lines for several of the sites. A new proposal was received in March, 2000, incorporating some of this new data collected during the WEGA cruise. Please provide updated site forms for all proposed sites when the new WEGA profiles are submitted in October. Other site-related records such as 3.5 kHz profiles should also be submitted, perhaps grouped as a package for each site. The specific cores or sediment samples which are related to each site should also be identified. Also, please provide the seismic velocities being used to calculate depth from travel time. Since stacking velocities are being used, please also compare these data to regional sonobuoy data, and provide the regional data. Digital navigation data for the seismic lines should also be provided to the Data Bank if this has not already been done for existing lines, and for new lines as soon as available. A number of alternate sites are now available, but not all alternate sites have crossing lines. New lines have been submitted for many of the sites, but they need to be labeled (site location & penetration) and crossing lines need to be plotted at the same scale. An alternate drilling plan should be presented if ice cover prohibits occupying primary sites. The proponent also may want to come to the Data Bank at LDEO before the February SSP meeting to be sure that the new sites are properly annotated on the records in the Data Bank. The next SSP data deadline is February 1, 2001.

SSP Consensus: We are pleased that the long awaited MCS cruise to this area acquired sufficient data for selecting sites on the shelf and rise. An updated proposal and data package are expected based on these data. Three or four of the sites already specified appear to have sufficient data now. The SSP rating is 2A because data needed for the site survey package were acquired and will be submitted in time for the Feb. 2001 data deadline.

Site Survey Readiness Classification: 2A

7.4 Ross Sea (489) - Past behavior of the West Antarctic ice sheet

Proposal: 489 Rev.3

Target Type: B

SSP Watchdog: Whitmarsh

SSP Proponent(s): None

SSP Review: SSP notes the submission of MCS profile IT89A-33, on which a new site RSSHE-07D is marked, and a fragment of a track chart showing this line, to the DataBase.

At the last SSP meeting in February, 2000 SSP recommended the following, the locations of all the 6 proposed sites should be checked so that the Site Forms (revised if necessary) and annotations on seismic profiles are consistent with each other, sites whose locations have been changed in Rev.3 should be renamed with a unique name according to ODP guidelines, the stacking velocities used to compute depths from two-way times should be compared where possible with sonobuoy results, Site RSSHE-08C which will now penetrate 1450 m requires a crossline, A digital navigation file is required so that all site locations can be picked from it.

SSP notes that **none** of the above actions has been executed.

Further, in checking the match of site locations between Site Forms and profiles in the DataBase it was noted that at,

Site RSSHE-08B, CDP locations on the Site Form and profile do not match,

Site RSSHE-07B, no corresponding profile (PD90-21) exists in the Data Base,

Sites RSSHE-01B, 06B, 02B, and 02C no CDPs are marked on profile PD90-30 in the Data Base,

Site RSSHE-07B (alternate to 07B?) also appears on profile BGR02 whereas the Form refers to PD90-21.

Site RSSHE-07D appears on the profile IT89A-33, recently sent to the DataBase, but there is no corresponding Site Form.

SSP Consensus: This data set is now so disorganized that SSP urgently requests the proponents to take remedial action before the next SSP meeting in February, 2001. This will involve either submitting a completely new set of documents to the DataBase or one or more proponents visiting the DataBase to set up a consistent set of documents. SSP recommends that this is done as soon as possible.

Site Survey Readiness Classification: 2A (no change)

7.5 Equatorial Pacific ION (499)

Proposal #:499-Full

Target Type: E

SSP Watchdog: David Caress

SSP Proponent(s): None

SSP Review: This proposal will drill a cased, cemented hole in the equatorial East Pacific and install a reentry cone. A seismometer will be installed in the hole as part of the ION program. The proposed site OSN-2 has previously been ranked 1A by SSP (July 1998). The site has not changed since that ranking.

SSP Consensus: This proposal remains ranked 1A.

Site Survey Readiness Classification: 1A

7.6 East Antarctic ice Shield and Weddell Basin (503) -Cenozoic History of the East Antarctic Ice Shield and the Evolution of the Restricted Mesozoic Weddell Basin

Proposal #: 503-Full2

Target Type: B/D

SSP Watchdog: Flavio Anselmetti

SSP Proponent(s): None

SSP Review: No new data have been submitted since the last SSP meeting in February 2000. We therefore reissue the recommendations made after the last meetings concerning the choice of alternate sites for WS04 using the existing seismic dataset. This will make the drilling strategy most efficient and flexible to retrieve best scientific results during any ice condition.

The site survey readiness classification remains 1B. A few crossing lines are still missing. We encourage the proponents to submit these data and the additional alternate sites in time for the February 1 deadline, so that these items can be considered during the next SSP meeting in February 2001.

SSP Consensus: No new data have been submitted to the databank since the last meeting in February 2000. The site survey readiness classification remains 1B. The panel encourages the proponents to submit the few missing items till the February 1 deadline, so that these items can be considered during the next SSP meeting in February 2001.

Site Survey Readiness Classification: 1B

7.7 Mariana Convergent margin Subduction Factory (505) - Mariana Convergent Margin: Geochemical, tectonic, and biological processes in the intermediate depths of an active subduction factory

Proposal #: 505

Target Type: C/G

SSP Watchdog: Flavio Anselmetti
SSP Proponents(s): None

SSP Review: The panel acknowledges the receipt of new navigation and 3.5 kHz data that has been submitted to the databank, which cover the site at South Chamorro Seamount (Sites MAF-4b, 8a) and Celestial Seamount (Sites MAF-9a, 10a). The proponents also submitted an alternate plan to drill only one site that could achieve almost all scientific objectives (MAF-4B).

Since Site MAF-4B at South Chamorro Seamount drills 400 m into the crest of the seamount and does not include any basement penetration, we changed the target type to G (topographically elevated feature). Site MAF-4B lies on two crossing 3.5 kHz lines that were submitted to the databank. With the formerly submitted site survey data, the package is now complete for this site, so that its site survey readiness classification was raised to 1A.

Sites MAF-8A (South Chamorro Seamount) and MAF-9A and 10A (Celestial Seamount) are now covered with 3.5 kHz and deeper penetrating seismic profiles. Since the objectives at these sites include basement or other subsurface horizons (faults), the panel still is concerned about the quality of the subsurface imaging for these sites (see notes on velocity data in last minutes). The submitted 3.5 kHz data raises the site survey readiness classification for these sites to 1B. The panel, however, issues serious concern on the location of MAF-8A at the base of slope, where the 3.5 kHz is strongly disturbed by numerous diffractions. We encourage the proponents to check carefully the other bathymetry data to verify the position of that site. The proponents also mentioned a planned site survey cruise during this year that might result in an improvement in data quality.

No new data was submitted for the sites at Pacman Seamount (MAF-2B and 3B) and their classification remains 3B.

We encourage the proponents to submit missing or new survey data till the February 1 deadline, so that these items can be considered during the next SSP meeting in February 2001.

SSP Consensus: With the recently submitted 3.5 kHz data, Site MAF-4B (target type G) at South Chamorro Seamount is now well covered with site survey data and its site survey readiness classification is raised to 1A. The submitted 3.5 kHz data for Sites MAF-8A, 9A, and 10A (target type C) raise their status to 1B. The site survey readiness classification for sites MAF-2B and 3B (Pacman Seamount) remains at 3B, since no new data was submitted.

Site Survey Readiness Classification 1A/1B/3B

7.8 Himalayan uplift/Indian Monsoon (521) - Himalayan Uplift and the History of the Indian Monsoon Recorded in the Indus Fan

Proposal #: 521-Full4

Target Type: A and secondary B

SSP Watchdog: Michael E. Enachescu

SSP Proponent(s): Heinrich Meyer, BGR; indirect

SSP Review: This proposal consists of one deep hole located in the deep water of the Indus fan (3000m) asking for 2700m sediment penetration. This well site IF-1 and its alternates (sites 1A and 1B) will core the middle Indus fan to investigate the tectonic and erosional history of western Himalayas and its possible links to the Indian monsoon. Drilling these sites will clearly challenge current JOIDES capabilities.

The panel acknowledges the proponents for responding to our suggestions and demands expressed at the July 1999/February 2000 SSP meetings. Logs and geochemical info from the Wintershall Indus Marine A-1 well necessary to assess gas hazard are with the proponent and can be viewed by a Safety Panel rep after signing a confidentiality agreement. All geophysics maps were accordingly modified to account for exploration well status. Recently, depth converted seismic stratigraphic profiles, interpreted from site location lines were sent to the Data Bank. Correct site locations and properly labeled geologic profiles were received. All the required Site Survey data for a target A type are now in the Data Bank. The lead proponent and co-authors have to be congratulated for their efforts in documenting the IF sites.

The seismic stratigraphic study attached to the proposal uses good quality MCS for location selection. Significant progress in dating and description of fan packages were made. Color profiles describing

geometry of fan successions are in the DB. A report on this study should be in the DP by this winter. Nevertheless, the seismic stratigraphic study lacks true 3-D or dense 2-D coverage, necessary for detailed correlation of fan architecture. However, we urge the proponents to review all our past observation and recommendations regarding the proposal.

In light of these reservations we will upgrade the proposal's standing but share the SSEP and SCICOM reservations about the adequacy of the existing data.

SSP Consensus: The SP acknowledges that all required data, display corrections and colored depth profiles requested during previous meetings are in the DB. Required survey data for this type of site is in DB and has been analyzed by the proponents and properly inspected by the panel. A comprehensive seismic stratigraphic report should arrive before the February 2001 SSP meeting. No hazards are identified on seismic lines, but presence of gas should be closely monitored by an on-board experienced petroleum geochemist.

Site Survey Readiness Classification: 1A

7.9 MAR Mantle Peridotites (525) - Proposal for Drilling Mantle Peridotite along the Mid-Atlantic Ridge from 14° to 16° N

Proposal #: 525

Target Type: F

SSP Watchdog: Driscoll

SSP Proponent(s): None

SSP Review: This proposal is for drilling of mantle peridotites along the Mid-Atlantic Ridge from 14° to 16°N, where igneous crust is locally absent and the structure and composition of the mantle can be determined at sites over 100 km along strike. There are 7 primary and 4 alternate sites, all of which are classified as Target Type F: hard-rock drilling. This target type requires the following data types for drilling: swath bathymetry, photography or video over site, rock samples, and navigation. A substantial amount of data has been deposited into the data bank.

Regional swath bathymetry was submitted to the data bank, but it is insufficient for drilling. SSP requests enlarged swath bathymetry maps for each site with the site marked. Dive videos exist for all primary sites and 3 of the 4 alternate sites; however, only the Shinkai videos have been submitted to the data bank at this time and the SSP requests that the Nautilite dive tapes be deposited in the data bank. Descriptions of rock samples for all sites are in the data bank. SSP requests that the bathymetric maps with compiled sample locations for all known dredging and submersible cruises be submitted to the data bank. Plots of all dives exist in the data bank; it is recommended that digital navigation of these dives also be supplied. The site survey readiness status of these sites is ranked 2A.

SSP Consensus: No new data have been submitted to the data base and thus the SSP consensus remains the same. The following data is believed to exist, and is requested for submission to the data bank: enlarged swath bathymetry maps for each site with the site marked, Nautilite dive videos, bathymetric map with compiled sample locations, and digital navigation of Shinkai and Nautilite dives.

Site Survey Readiness Classification: 2A

7.10 Extreme Warmth/Shatsky Rise (534) - Paleogene/Cretaceous Shatsky Rise

SSP Watchdog: Lyle

SSP Proponents: None

Target type(s): all Sites D

SSP Review: No new data has arrived at the data bank since July 1999. Readiness status remains the same.

SSP Consensus: No new data have arrived at the data bank. There are minor amounts of missing data which exist and could be provided to the data bank in short order if the proposed drilling were scheduled.

Site survey readiness status: All Sites 1A except for SHAT-13, which is 1B

7.11 Lower Crust/Shallow Mantle/Slow-spreading Ridge (535) - 735 Deep: The Nature of the Lower Crust and Shallow Mantle at a Slow Spreading Ridge

Proposal #:535 – Full2 **Target Type: E (Open ocean crust with sediments < 400 m)**
SSP Watchdog: H.Meyer
SSP Proponent(s): None

SSP Review: This proposal is to drill a hole immediately adjacent to site 735B up to 3000 m through the gabbroic massifs exposed on the Atlantis Bank in the southern rift mountains of the slow spreading Southwest Indian Ridge. It is intended to obtain a complete gabbro section, determine the crust-mantle boundary and get a section of the uppermost mantle beneath the crust at a slow spreading-ridge.

The site 735B was first established during Leg 118 in a water depth of 731 m and cored to a depth of 500 mbsf. On leg 176 this site was extended to 1508 m.

All site survey data, which were necessary for drilling Leg 118 and Leg 176, were in the data bank. The proposed hole is only a few meters adjacent to the drilled 735B, so no further data are required. New results from surveys with 'remotely operated vehicles' in 1998 were added to the data bank.

We would like to point out, that SSP cannot verify the MOHO and mantle objectives of this proposal from the data in the data bank.

SSP Consensus: All required data for proposal 535 are present in the data bank and the proposal is ready for drilling.

Site Survey Readiness Classification: 1A

8. OTHER BUSINESS

- 8.1 SSEP Liaisons November 2000 Hawaii meeting 7-9 Nov ISSEP: Enachescu, ESSEP Lyle. Alternates are Lizarralde and Caress.
- 8.2 July, 2001 meeting dates 23 – 25 July, at L-DEO.
- 8.3 SSP acknowledge the invitation from PRC representative Yao Bochu to host the February 2001 SSP meeting in Beijing, and request that the meeting should be scheduled there.

SSP recommends submission of data in IESX-compatible formats for drilling at time of scheduling [highly recommended] and earlier, if possible [recommended]. In addition to improving shipboard management and interpretation, this would enhance working of the ODP Data Bank and SSP.

SSP Recommendation: A new kind of APL has arisen for the first time at this SSP meeting. Rather than proposing additional science or measurements at a previously approved site, these APLs propose new sites, some distant from the associated proposal area. SCICOM should clarify to proponents that site survey requirements for APLs which propose new sites are the same as they are for full proposals.