

Sedimentary and Geochemical Processes Panel

Fall Meeting, 1994

12-14 October, 1994, Fukuoka, Japan

Executive Summary

1. Review of proposals

SGPP reviewed and rated the 12 proposals with their addenda and revisions that make up the 10 programs in the FY96 Prospectus. The panel then reviewed and rated 6 new proposals, 5 revised proposals, and 4 addenda. The panel also discussed and rated 22 Letters of Intent. Proponents left the room during discussion of their proposals. The results are summarized in the tables below:

1.1 Summary of Ratings of Proposals included in the FY96 Prospectus

The following table presents a summary of the ratings of proposals included in the FY96 Prospectus, sorted by relevance to SGPP goals. The order within each category is by proposal number and is not a ranking.

PROPOSAL	AREA	RATINGS					
SR-REV3	SED. RIDGES II	A1	B1.1;B2.1	C1	D1	F1	
400-REV2	COSTA RICA	A1	B1.1;B2.1	C1	D1	F1	
412-ADD3	BAHAMAS	A1	B1.1;B2.1	C1	D1	F1	
440-ADD	E J. DE FUCA	A1	B1.1;B2.1	C1	D3	F1	
415-REV2	CARIB. HIST.	A3	B1.1;B2.1	C1	D1	F4	
			(A1 for Cariaco Trench)				
386/422	CALIFORNIA	A3	B1.2;B2.1	C0	D1	E8	F2
404-ADD	W N. ATL.	A3	B1.2;B2.1	C2	D1		F3
411-REV	CARIB. BSLT	A5					F4
460	SE GRNLAND	A5					F4
461	IBERIA	A5					F4

1.2 Summary of Ratings of Other Proposals: The following table presents a summary of the ratings of other proposals, sorted by category of thematic interest level to SGPP. The order within each category is by proposal number and is not a ranking.

PROPOSAL	AREA	RATINGS					
355-REV4	PERU	A1	B1.1;B2.1	C2	D3	E8	F3
435-ADD	NICARAGUA	A1	B1.1;B2.1	C2	D3	E3;E5;E8	F2
452-ADD	ANTARCTIC	A1	B1.1;B2.1	C2	D5		F2
354-R2-A3	BENGUELA	A3	B1.2;B2.1	C1	D1		F3
454	EAST AUSTRALIA	A3	B1.2;B2.1	C2	D1	E8	F4
455	NORWEST ATL.	A3	B1.2;B2.1	C3	D1	E2;E8	F3
458	SOUTHERN OCN	A3	B1.1;B2.1	C2	D1		F4
459	FAROE-SHTLND	A3	B1.2;B2.1	C2	D1	E3;E6	F4
333-ADD2	CAYMAN TR.	A5					F4
376-REV3	VEMA FZ	A5					F4
448-REV	ONTONG-JAVA	A5					F4
451-REV	TONGA FOREARC	A5					F4
456	TJORNES FZ.	A5					F4
457	KERG.-BROKEN R.	A5					F4

1.3 Summary of Rating of Letters of Intent: The following table presents a summary of the ratings of the LOIs, sorted by relevance to SGPP goals. Order within a category does not infer a ranking.

LOI #	AREA	RATING
24	CASCADIA MARGIN II	A1
27	RHONE AND VAR	A1
34	PACIFIC SEAMOUNTS	A1
35	SAANICH INLET	A1
37	SUBSEA BIOSPHERE	A1
16	SOUTH AUSTRALIA	A3
17	MANUS & WOODLARK	A3
30	PERU MARGIN	A3
36	NANKAI TROUGH	A3
38	SCOTIA-FALKLAND	A3
18	SOUTHEAST PACIFIC	A4
19	RED SEA	A4
15	ADRIATIC	A5
20	SW PACIFIC	A5
21	W PACIFIC	A5
25	SHATSKY RISE	A5
26	GULF OF MEXICO	A5
28	JAPAN TRENCH	A5
29	HAWAIIAN-EMPEROR	A5
31	AUSTRALIAN BIGHT	A5
33	GULF OF ADEN	A5
39	KYUSHU-PALAU RIDGE	A5

SGPP strongly urges that LOIs rated A1 be developed into full proposals, and would be interested in proposals those rated A3 if they are of interest to another thematic panel.

2. SGPP Ranking of the FY96 Prospectus

Prior to ranking the programs in the FY96 Prospectus, the panel discussed each of the programs and its relevance to SGPP goals. None of the panel members attending was a proponent on a proposal included in the FY96 Prospectus.

The results of voting are as follows:

Proposal	Area	#votes	Total	Avg.	Std. Dev.
412	Bahamas	10	47	4.70	1.83
400	Costa Rica	10	42	4.15	1.00
SR II	Sed. Ridges	10	41	4.05	1.64
440	Juan de Fuca	10	36	3.55	1.21
386	Calif. Margin	10	24	2.35	1.25
415	Caribbean Hist.	10	22	2.20	1.87

3. ACTION ITEMS

3.1 PCOM Representation at SGPP Meetings: There was no representative from the Planning Committee at the SGPP meeting in Fukuoka. The panel requests that the Chairman of PCOM takes whatever steps are appropriate to ensure that a member of PCOM be present at each SGPP meeting.

3.2 Support of Site Surveys off New Jersey: SGPP requests that PCOM pass on the message that SGPP strongly supports the effort to obtain the additional funding required to complete and evaluate site survey data necessary to allow safe drilling in shallow water depths > 40m toward the inshore end of the NJ transect. Our great interest in this transect was emphasized by our ranking it as our first priority during the spring 1994 meeting.

3.3 Testing of Pressure Core Sampler: SGPP requests that PCOM press for testing of the modified PCS on a Leg well prior to 163, preferably on 160 but at the latest on 161A. The test is essential to ensure that there is a working PCS on the Gas Hydrate Leg 163.

3.4 "Proposal 404-Add": SGPP requests that PCOM and the JOIDES office recognize "Proposal 404-Add" (Paleogene and Cretaceous Intermediate Water History on the Blake Plateau and Blake Nose, Proponent: R.D. Norris) as a new proposal, not an addendum to Proposal 404.

3.5 Saanich Inlet Add-on: SGPP requests that PCOM consider a proposal to be developed from LOI 35 (High-resolution Holocene paleoenvironmental record, Saanich Inlet, British Columbia, Canada, submitted by B. Bornhold) as a possible add-on to a Leg devoted to Sedimented Ridges II. The reasons for this are outlined in the SGPP review of LOI 35, summarized here: This is to be a single 100 m hole in Saanich Inlet, a fjord off Victoria BC, in association with a port call in Victoria (in conjunction with Sedimented Ridges II?) to recover a Holocene record in laminated sediments with abundant organic carbon. In addition to its great scientific interest, this drilling could be used for publicity in Canada. A proposal would need to be formulated as a proposal by November 1 to be reviewed by SSP and PPSP.

3.6 ODP Budget: SGPP recommends that the following budget items be examined to evaluate cost/benefit ratios: a) maintenance and validation of 3rd party tools a L-DEO. Which tools

in this inventory are really of value to the program and sufficiently developed to be useful and which should be abandoned? b) The corking program should be examined to determine its fiscal impact and cost/benefit ratio for science information gained. c) The DCS development program; while recognizing the ultimate value of a working DCS system, given the budgetary constraints, SGPP reiterates that DCS is not critical to its program for the next few years. d) ODP should do a cost-saving projection for a variety of publication options, including eliminating Part B (scientific articles to be published in Journals or in a series established by a Society or commercial publisher, and a simplified production of Part A at the end of each Leg.

3.7 ODP Science Operations: SGPP believes that ODP science operations are funded minimally, and with recent personnel cuts could fall below a viable level. PCOM might recommend that ODP explore use of technicians and temporary staff scientists provided by other countries to supplement the science effort, but this should not be at the expense of existing positions.

3.8 OHP/SGPP Sea-level meeting: SGPP concurs with OHP that a meeting of representatives of both Panels especially concerned with sea-level problems would be useful in developing a common strategy, and urges PCOM to support such a meeting when it is formally proposed.

4. New Panel Membership

Bahr and Paull are rotating off the panel after this meeting. Shanks has suggested that he might resign because of the difficulties he has experienced in attending meetings. Hay will contact possible replacements to determine whether they would be willing to serve and will present names to PCOM.

5. Next Meetings

Hay will host the spring meeting March 10-12, 1995 at CIRES on the University of Colorado Campus in Boulder, Colorado.

Surlyk will host the fall meeting September 26-28, 1995, in Copenhagen, Denmark.

Sedimentary and Geochemical Processes Panel Fall Meeting, 1994

Draft Minutes

Date: Wednesday-Friday, 12-14 October, 1994

Place: Meeting Room 1, Hotel Station Plaza, Fukuoka, Japan

Host: Wonn Soh, Panel Member

Attendees:

SGPP Members:

Jean Bahr (USA)

Hans Brumsack (G. Alt. to K. Emeis)

Bob Garrison (USA)

Richard Hiscott (Can-Aus)

Finn Surlyk (ESF)

Paul Baker (USA)

Christian France-Lanord (F)

William Hay (Chair, at large)

Wonn Soh (J)

Mike Underwood (USA)

SGPP Members unable to attend:

Paul Farrimond (UK)

Charles Paull (USA)

Pat Shanks (USA)

Steve Macko (USA)

Rick Sarg (USA)

SGPP Liaisons:

Greg Blake (OHP)

Peter Harvey (BHR)

Peter Blum (ODP/TAMU)

Robert Zierenberg (LITHP)

Invited guest:

Judith McKenzie (ETH Zürich, past Chairperson)

1. Welcome, Introductions, and Logistics: Hay welcomed the participants in the meeting. They then introduced themselves and gave their affiliations. Wonn Soh explained the logistics for the meeting.

It was noted that no representative from the Planning Committee was present, and Hay was requested by members of the Panel to bring this to the attention of the Planning Committee Chairman.

2. Agenda: Hay presented an updated agenda, which was discussed and revised. In an e-mail message the Planning Committee had requested that the Panel discuss the ODP budget, using information to be supplied by the attending member of the Planning Committee. The discussion

of this item was placed on the third day to allow for receipt of information.

3. Approval of the Minutes of the last Meeting: Hay asked for corrections or additions to the minutes of the last meeting. There being none, the minutes stand approved.

4. Reports:

Representatives of ODP and its Subcontractors, liaisons to and from other Panels, and participants on recent Legs were asked to present reports on activities since the last meeting of the SGPP.

4.1 PCOM Report: No representative from the Planning Committee being present, Bob Garrison (now at NSF) described the budget parameters to the best of his knowledge. There is no support for increase in international contributions in 1996. NSF now pays about 63% of the project costs (compared to the 55% that had been anticipated). Possible budget cuts need discussion by all panels. Zierenberg reported that during the LITHP meeting two weeks ago, the immediate anticipated crisis was shortfall of the Canadian-Australian contribution, which has since been resolved. Garrison says that in a discussion of the budget, identification of general areas where cuts might be made rather than specific suggestions are what is needed. Cuts should not affect "innovation" in the program. Hay suggests that we address this issue after considering the prospectus and proposals.

McKenzie undertook to report on activities of the PCOM at its last meeting to the best of her knowledge, based on an e-mail summary sent to her and to Hay:

The JOIDES Planning Committee met August 9-12, 1994 in Reykjavik, Iceland. PCOM selected the following proposals for the FY96 Prospectus and assigned watchdogs as follows:

Proposal	Document(s)	PCOM Watchdog
Caribbean Basalt Province	411-Rev	Catherine Mével
Sedimented Ridges II	SR-Rev3	Marcus Langseth
E Juan de Fuca Hydro.	440---/Add	Marcus Langseth
Caribbean Ocean History (only the OHP focus, encompassing the Cretaceous-Tertiary boundary event and Caribbean Paleooceanography)	415-Rev21	Alan Mix
California Margin	422-Rev 386-Rev2/Add/Add2/Add3	Wolf Berger
West. N. Atl. Sed. Drifts	404---/Add	Hermann Kudrass
Costa Rica	400-Rev2	Hans-Christian Larsen
Bahamas Transect	412---/Add3	Wolf Berger
Return to Iberia	461---	Brian Taylor
SE Greenland Margin	460---	Dick Arculus

With regard to Budget Planning, the PCOM accepted the budget changes for the FY95 Program Plan budget, as tabled by JOI. PCOM recommended a reinstatement priority for computer and publications budgets followed by DCS budget in the case that the \$44.0 M budget

constraint is lifted.

PCOM has received from NSF via EXCOM guidance that the ODP budget will not increase above \$44.9M through 1998, provided there are six full partners. Given that fixed costs of the program will increase with inflation, there will be a corresponding decrease in operating budgets through 1998 requiring a restructuring of the flexible components of the program.

In light of the current funding situation, PCOM requested that all panels prioritize their needs regarding program services and facilities and identify areas where programmatic costs can be reduced.

With regard to long-range planning for technical development, the PCOM endorsed the recommendations of the JOIDES/JAMSTEC Technology Working Group. By way of clarification, Garrison reported that the JOIDES/JAMSTEC Technology Working Group had discussed an alternate Japanese platform for the 21st century to allow deeper drilling. The Japanese platform (OD-21) would have riser capability, initially 2 km, with 4 km to be developed later. There was a discussion of what type of commitment is needed from the community for development of plans for such a vessel to proceed. Garrison also noted that TAMU is also apparently planning to apply for funds to upgrade the Resolution. Can the community support two vessels? The European community seems supportive of a multi-ship program. Zierenberg noted that the 2000 m riser (as proposed by the Japanese) is not sufficient for LITHP objectives.

At its meeting PCOM requested that TEDCOM evaluate what is required for a full assessment of the feasibility of a 4 km riser system with BOP control at the seafloor. TEDCOM is to report back to PCOM at its December meeting.

Concerning Engineering Development, the PCOM recommended that ODP-TAMU continue with the current DCS development program through to a successful test of the secondary heave compensation software on the scaled (model) and computer simulators. These tests will provide the data for TEDCOM to make an informed evaluation of the feasibility of building an ocean-going DCS. PCOM reaffirmed that the DCS land test should not be initiated until completion of model and simulation tests to satisfy TEDCOM. Garrison noted that DCS land tests have been postponed.

PCOM recognized the importance of effective communications between JOIDES and other global geosciences programs having an interest in ocean drilling. Recognizing that many members of PCOM are also active participants in other global geoscience programs, the following mandate was adopted: To facilitate effective and timely exchange of information, PCOM may designate a formal liaison to national or international initiatives in global geosciences. Liaisons may be proposed to the PCOM Chair, and will be elected by a majority vote of PCOM. It is anticipated that PCOM members with appropriate expertise will be chosen as liaisons, but if a suitable member is not found, PCOM may seek a liaison who is not a member of PCOM. Liaisons will typically attend at least one meeting per year of the designated program, and will report to PCOM as scheduled by the PCOM Chair.

Concerning JOIDES Panel Recommendations and Actions, PCOM acknowledged the efforts of all four thematic panels and requests that the JOIDES Office publish the LITHP, SGPP and OHP White Papers in the October 1994 JOIDES Journal. PCOM asked the TECP liaisons to go back to TECP with specific recommendations on modification to their White Paper. PCOM expects the TECP White Paper to be ready for publication in the February 1995 JOIDES Journal.

Concerning add-on programs, PCOM noted that these should be incorporated earlier into the program to fully address budgetary implications. The most recent problem was with VSP on the Barbados Leg.

Concerning Third Party Tools, PCOM endorsed the DMP recommendations for the following third-party development tools, noting that PCOM also waives the condition of the passage of six months required by the third party tool guidelines in order that these tools may be used on Leg 158 (TAG).

- * Pressure/Temperature Memory Tool
- * High-Temperature Borehole Instrument
- * CSMA Resistivity Tool

Use of these tools on Leg 158 was made subject to the concurrence of the Co-Chief scientists.

4.2 ODP/TAMU Operations/Science Report: Peter Blum has replaced Laura Stokking as the ODP liaison to SGPP. He presented the revised ship schedule:

158 TAG is currently underway
Drydock in November
159 Equatorial transform Jan- early March
160 Med I (Eastern) March - early May
161 Med II (Western) May - early July
162 Atlantic Arctic Gateways II July - early September
163 Gas Hydrates - September to early November

He discussed how sites had been shifted in the Mediterranean. It was noted that some of the penetrations are shallower than the TECP had desired.

Regarding personnel matters at ODP/TAMU, he reported that the Director of ODP has accepted chairmanship of the Texas A&M Geoscience Department. Presumably a new director will be sought. The director of engineering operations has left and an ad has been issued for a replacement. There are other personnel changes in that department as well. Science operations is seeking a new staff scientist, and hopes to find a sedimentary geochemist. Another opening will be coming up, and Science Operations hopes to find a soft rock person for this as well.

For the Data Management Upgrade, a contract is being signed. The plan is for the new data management system to be completed in two years, but this is contingent on availability of funds. The contract tries to ensure that high priority items are completed first.

Regarding engineering developments: For the PCS, Tom Pettigrew is working on new cutting shoes, etc., as a 1st priority. The Vibra-Perussive Corer (VPC) has not been tested in the UK as planned. Land testing of the Diamond Coring System (DCS) has been postponed pending software testing and a feasibility study, deferring any sea test by at least a year.

McKenzie noted that the PCS is needed for Leg 163 Gas Hydrates, and perhaps should be tested on one of the Mediterranean Legs. The SGPP discussed whether it should specifically recommend testing of the PCS on Med II leg or even earlier. It would probably be useful to test on the mud volcano on Leg 160. It was concluded we should make a motion to PCOM (see 3.j

below).

Blum continued his report, noting that a new brochure has been prepared by the ODP Information Office to attract scientists who may want to sail. The brochure includes job descriptions and applications.

McKenzie suggested that there might be interest by ODP in temporary staff scientists and technicians to ease budgetary problems.

4.3 Wireline Logging Services:

Harvey reported that on the recent legs the one notable development was in the use of logging-while-drilling (LWD) on Leg 156 for the first time. Here LWD holes were drilled at two sites (947,948) to give gamma ray/resistivity/neutron density curves of nearly 600 m at each site. The logging was remarkably successful in comparison with past attempts at logging in these accretionary prism lithologies, and provided an immediate record of the lithology when subsequent attempts were made to core at the same sites.

The FY96 Logging Prospectus has been submitted for each of the possible Legs for next year's program. Of the legs of particular interest to SGPP (Bahamas, Costa Rica, Juan de Fuca, Sed.Ridges II, California) the recommended logging program included the standard logging suite, together with temperature probe and Formation Microscanner (FMS). The GHMT (magnetic susceptibility) tool was also suggested for the Bahamas and California Margin legs (at some extra cost), as were the use of CORKs in some cases. For the Costa Rica leg the use LWD has been proposed following its successful usage on Leg 156; this would, however, involve extra logging costs which would have to be sought from outside the L-DEO budget.

4.4 Lithosphere Panel Report:

Zierenberg (LITHP liaison to SGPP) reported on the LITHP meeting held in Bergen, Norway, March 28-30, 1994.

LITHP recommended that PCOM request the U.S. Department of State to explore the possibility of attaining clearance to drill in a number of selected sites in the Red Sea. The panel also recommended that PCOM endorse an international meeting to assemble and synthesize available geological and geophysical data in the Red Sea as a prelude to submission of one or more Red Sea drilling proposals. The Panel recommended that PCOM appoint a committee with broad thematic interest and extensive experience on the drill ship to work directly with the group developing new software for Data Management. LITHP also requested that PCOM reconsider their decision to fund site surveys for shallow water drill sites from operational funds.

The panel requested that a small group be convened in College Station to review the operations at 735B, Hess Deep, and MARK to identify problems and potential solutions to alleviate the problems that have made drilling off set oceanic crustal sites difficult. Discussion of both the white paper and the continuation of the program beyond 2003 focused on the establishing the societal relevance of the program. It was felt that an expansion of the section on metallogenesis was warranted, especially as many of the partners have emphasized this aspect in obtaining funding for the program. This increased emphasis on metallogenesis in the LITHP white paper should not be interpreted as an attempt to move thematic responsibility for this area

from SGPP to LITHP.

Former thematic division of high temperature hydrothermal processes as a LITHP objective and lower temperature hydrothermal process and metallogenesis in general as an area under the SGPP mandate remain.

However, concern was expressed that SGPP alone would not supply the support necessary to see that legs with metallogenesis objectives get on the drill schedule. LITHP hopes to continue to work with SGPP to see that the best proposals addressing metallogenic themes of interest to both panels continue to make it onto the drilling schedule.

The panel reviewed the new proposals and did a global ranking of active proposals. The results of the ranking are as follows with the highest possible score being 15.

Prop. #	Area	Ave.	S.D
411	Caribbean Basalt	14.13	1.81
457	Giant LIP	12.21	2.55
SR II	Sed. Ridges	11.93	3.67
440	Juan de Fuca flank	11.93	3.08
426	Antarctic Discordance	10.73	3.53
400	Costa Rica	10.00	4.19
NARM	Volcanic II-Voring	9.67	4.37
451	Tonga arc/forearc	9.64	3.41
420	Evolution of crust	9.38	4.21
435-rev	Mariana-Izu mass bal.	7.27	4.53
442	Mariana Trough	6.64	3.18
435	Nicaragua mass bal.	6.13	3.85
425	MAR Offset	5.86	3.44
376	Vema Fracture zone	5.67	2.69
447	Woodlark Basin	4.87	4.36
453	Bransfield Strait	4.40	2.26

Zierenberg reported that the fall LITHP meeting was held October 3-5, 1994, hosted by John Ludden in Noranda, Quebec. The Noranda area has one of the world's richest volcanic-hosted massive sulfide districts. The deposits formed during the Archean in a complex tectonic environment that shows close spatial association of island arc-, rifting-, and spreading-related volcanism, perhaps similar to the present western Pacific. A pre-meeting field trip allowed investigation of submarine bimodal volcanism, hydrothermal alteration, and mineralization similar to settings that could become high priority targets for lithospheric drilling. Field trip participants also examined classic Archean komatiites in Monroe Township, Ontario. These superheated ultramafic lava flows are generally restricted to the Archean, but are known from the Cretaceous-age Large Ingenuous Province (LIP) in the Caribbean and may be a characteristic feature of LIPs.

LITHP was greatly concerned about the manner in which their top-ranked proposal in the 1995 prospectus (Return to 735) was removed from the drilling schedule. The panel firmly endorsed the concept that the thematic panels are to rank proposals on their scientific merits and that PCOM is responsible for the logistical aspects of planning the ship track. Inherent in this

assumption is the belief that once an area of operation is defined and a prospectus assembled, every effort will be made to accommodate the scheduling of highly ranked proposals. When LITHP voted on this proposal it was not explicitly tied to the operational constraint of a port call in South Africa. Of greater concern to the panel were the consequences of scheduling and staffing a leg which is later canceled. Individual scientists make a significant commitment, and often large sacrifices, when they agree to participate in a drilling leg. The potential for disruption to individuals' personal lives and scientific careers dictate that the program should endeavor to avoid situations that could result in a decision to cancel legs once they have been scheduled and staffed.

(McKenzie noted that at the PCOM meeting when the FY95 drilling schedule was established, proponents were present when it was clearly stated that Return to 735 was contingent upon availability of a suitable drydock in South Africa.)

LITHP discussed the relative merits of cancellation of various parts of the program in response to major fiscal problems as requested by PCOM. No specific action was endorsed. LITHP reiterated its support for a Diamond Coring System (DCS) to achieve the long range objectives of not only LITHP, but much of the rest of the program. LITHP acknowledges failures within the DCS program and is frustrated by the lack of progress. However, LITHP also acknowledges that the initial test of the DCS, including the heave compensation system, were highly successful. Improvements to the secondary heave compensation system have yet to undergo a valid test and the perception that the DCS system is a technical failure is unjustified. Any decisions made regarding the future of DCS must be made based on the information available, not on unjustified perceptions.

The panel reviewed the new proposals and ranked the proposals in the FY96 prospectus. The results of the ranking are as follows with the highest possible score being 8.

Prop. #	Area	Ave.	S.D
411	Caribbean Basalt	7.21	0.97
SR II	Sed. Ridges	6.62	0.96
440	Juan de Fuca	5.79	1.19
460	SE Greenland	5.31	1.70
400	Costa Rica	5.00	1.62
415	Caribbean Ocean	2.86	0.86
386	Calif. Marg.	2.14	0.95
461	Iberia	1.79	1.12

The next meeting of LITHP will be held in College Station in part to facilitate discussion with the ODP engineering group. We will also have a field trip to the ODP core locker to view cores from LITHP's past successful legs including 504B, Hess Deep, SR I, and MARK.

4.6 Ocean History Panel Report:

Blake (OHP Liaison to SGPP) reported on the OHP meeting that had taken place September 27-29 in Townsend, Australia. He was unable to attend because of a visa problem, but was in

contact by e-mail.

The new OHP chair will be Tom Loutit, from Australia.

From the FY96 Prospectus, OHP ranked only 5 proposals:

- 1) Caribbean Ocean History
- 2) California Margin
- 3) Blake-Bahama outer ridge (noting that 404 needs more site survey data)
- 4) Bahamas transect (which they discussed vigorously)
- 5) Caribbean Basalt (they had hoped to support a 2-leg Caribbean proposal but felt this had lost OHP interest)

OHP is still interested in the Benguela Proposal. OHP Would like to see 412 (Bahamas Sea Level Transect) coordinate with 427 (South Florida Margin Sea Level).

Regarding budget priorities OHP came to the following conclusions: 1) essential items are logging, interstitial water sampling and physical properties; 2) stratigraphic control; 3) there need to be 2 volumes of publications per leg.

There was a discussion of sea level efforts: Greg feels that some members have too narrow a view of this part of their mandate, considering it to be a matter to be solved chiefly by oxygen isotopes. OHP will meet in Miami next spring and hopes to have smaller group meetings with some SGPP members to coordinate pursuing joint interests in sea level.

4.7 Tectonics Panel Report:

Underwood (SGPP Liaison to TECP) reported on the TECP spring meeting, held March 10-12 in Kona, Hawaii. The fall meeting is to be held next week in Cyprus where Wonn Soh will serve as SPGG liaison.

TECP is particularly interested in archiving of structural data. There has been very little of this compared to stratigraphy. TECP is working up forms for recording of data on ships. They recommend that 2 structural geologists be included on their highly ranked legs. They want structural data to be included in publications and to have provisions for archiving structural information at TAMU. They have assigned a panel member to serve as liaison to the data management update project.

High priority engineering developments for TECP include the PCS and tools for in-situ stress measurements.

In their global rankings at their spring meeting the following proposals of interest to SGPP were included:

1. Woodlark Basin
2. Costa Rica
3. Taiwan
6. North Australian Collision Zone
9. Return to Nankai

TECP viewed the Nicaragua proposal as immature.

The next spring meeting is to be in a location where they can take a field trip in an accretionary prism. This will probably be in the Franciscan of California, and Underwood will lead the field trip.

McKenzie noted that the TECP white paper was rejected by PCOM; apparently it needs work on writing and societal relevance. TECP has resisted attempts to have them narrow their focus.

4.8 Downhole Measurements Panel Report:

Bahr reported that the DMP has met twice since the spring SGPP meeting at College Station.

The spring meeting was held in Uppsala, Sweden in May. The meeting focussed on the status of a number of tools in development, particularly high temperature tools that would be useful on the TAG leg. It was noted that most of the "third-party" tools proposed for use on this leg did not fully satisfy the DMP's guidelines for acceptance as Development Tools, and hence for use on the leg. In some cases the deficiencies involved lack of appropriate on-land testing or poor performance on previous legs. In other cases the deficiency was that of not allowing sufficient elapsed time for approval prior to use on the leg. The DMP recognized that strict adherence to the guidelines could limit the types of science conducted at TAG or other legs. The panel therefore stated in its minutes that it would not object to use of certain tools provided they performed adequately in autoclave tests prior to the leg.

The panel also considered the proposed placement of a fluid sampler in a CORK at Barbados. There was some question as to whether this type of instrumentation actually needs approval by DMP. DMP certainly has an interest in long term measurements in boreholes, but there had been discussion at a previous meeting indicating that CORK strings were not entirely within DMP purview. The final recommendation was that the decision on use of this sampler be left to the co-chiefs and those responsible for the CORK string.

The status of a high-temperature borehole televiewer was reviewed. This tool has not performed on previous legs and the Borehole Research Group (BRG) at Lamont has already spent considerable time and money on this tool. DMP recommended that no additional ship time or BRG staff time and funds be expended on this tool. Independent development of the tool at DMT at no cost to ODP should be encouraged.

A general discussion of the Third Party Tool guidelines with the Lamont representative resulted in the recognition that the certification process is placing a strain both on contractors and on Lamont. DMP recommended that a full time engineering staff member be added to the Borehole Research Group to support implementation of Third Party Tool guidelines.

DMP is interested in augmenting capabilities for measurement of in-situ stress through breakout identification and other means. It asks that thematic panels (primarily TECP?) identify holes of exception interest for conjunctive use of the formation microscanner and borehole televiewer tools.

The fall meeting was held at Lamont in September. Lamont staff provided tours of their facilities and demonstrations of a variety of software for log interpretation. Of potential interest to the thematic panels and proponents of future legs is a new brochure that provides briefs on ODP tools including discussion of applications, limitations, specifications, and a sample log. The information in the brochures plus more will be available on CD-ROMS of data and in electronic

form (an interactive kiosk) on the ship. DMP recommended that these be distributed to the thematic panels. It will also be available on a "mosaic" system through internet - look for announcement of how to access this (not ready yet).

A review of operations at Barbados led to a discussion of future VSP experiments. DMP had some reservations about the experiment proposed for Barbados and some of these were confirmed by initial results that indicated the quality of data was limited by quality of the cement outside the casing. There also appear to have been some problems of experimental design. DMP recommends that future experiments of this type be presented to the panel much farther in advance so that potential problems of this type can be identified with attempts to resolve them addressed prior to the leg.

PCOM representative Suyehiro reported that they were not able to take any action on the DMP recommendation to increase BRG staffing. Suyehiro is exploring options through ODP Japan and will be discussing needs with staff at Lamont. The panel was supportive of this effort.

Frank Filice of Lamont reviewed the results of autoclave tests of high temperature tools that had been proposed for TAG. The CSMA resistivity tool failed in autoclave due to seal failures. A German high-T magnetometer was used on Leg 148. They had a seal failure but have replaced it and done a pressure test. This tool is ready to go for TAG. The BRGM high-temperature tool failed in the autoclave. The WHOI high temperature tool failed in autoclave due to a leak. The battery pack available for the GRC high temperature pressure-temperature tool at the time of the autoclave test was dead but this has previously been operational and spare battery packs were on route to ship. This will be used at TAG. Another tool that is going out to TAG as a back-up is a temperature tool developed at Lamont. This did pass an autoclave test in Houston very recently.

A draft logging prospectus had been prepared by Dave Goldberg based on his review of the prospectus for FY96 (see summary table). The draft includes two proposals that were in last year's prospectus and so had already been evaluated. These are still in the system but not in this year's prospectus: Alboran Basin and Return to 735B. He had assumed that Sedimented Ridges II would probably use high T tools if available. However, it was noted that the proponent had developed their proposal based on use only of standard temperature tools. Some of the issues discussed by the panel include the following. DMP would like to review VSP proposal for Costa Rica if one is proposed. (The suggestion for a VSP at this time appears to come from Goldberg, not from the proponents.) DMP would like to know more about scientific interest in BHTV for the California Margin leg. GHMT tool has a size constraint. This is a tool that BRG has flagged but only in the case of California Margin has it actually been requested. Fluid sampling - may be feasible in up-flow zones but not in downflow. Dave Goldberg has spoken with TAMU engineers about a way to use a Schlumberger sampler that is too large for ODP drill rod. This might work, but would likely be expensive. DMP will likely recommend LWD for Costa Rica if this is scheduled. Legs with special interest of core-log integration are those for the Bahamas, California Margin, Caribbean Ocean History, and Western Atlantic Sediment Drifts.

Robert Desbrandes made a presentation on potential for logging while coring using a "geosteering" technology developed by ANADRILL. The panel was quite interested in this as a possible development through ODP/Industry collaboration. It appears that it is only suitable for RCB drilling.

Phil Nelson gave a presentation on logging possibilities in gas hydrate environments.

Logging examples of hydrates in the literature include ARCO off the north slope of Alaska, ODP Leg 112, and the Beaufort Sea. At DSDP hole 570 logs show high resistivity, with high sonic but low density log traces in the zone interpreted as massive hydrate. Goldberg recalled that there were also some interesting sonic waveform data in this interval. For gas hydrates, leg logging objectives should be directed toward detection, determining physical properties particularly as related to seismic interpretation, assessing the mode of occurrence (massive vs. disseminated), and volumetrics. Recommended logs: sonic, laterolog, density, neutron, gamma, caliper, and possibly FMS. Others of possible use: BHTV, geochemical tool, NMR. Dave Goldberg suggested chlorinity freshening would support use of the geochemical tool. Rich Jarrard noted that the geochemical tool actually averages between hydrate and pore fluid. A VSP would be useful and Goldberg has spoken with one of the co-chiefs. Development of a proposal for that would be up to a PI. After some discussion the panel concluded that logging while drilling was probably not needed for the upcoming gas hydrates leg. Steve Hickman suggested that repeated acoustic logs immediately after penetrating the BSR, and again later, might provide some of the same information as a VSP. However, a minimum of 6 hours is likely to elapse before any logging can be done. VSP would require additional funding and a PI. DMP encourages preparation of a proposal for VSP if BSR is to be penetrated. DMP would need to review this at its spring meeting. Hickman also believes a BHTV would be useful for determining if massive or disseminated hydrate exists, particularly the cm scale structure. This would require that the hydrate not disseminate on the borehole wall. Analog tool would be better than digital because it allows post-processing of full waveform recording. DMP recommends use of televiewer with full waveform.

As a general note to thematic panels and proponents, DMP notes that any non-standard logs will cost extra money and there is a need to develop proposals for extra logging costs ASAP.

DMP discussed its "wish-list" that could be addressed through the use of the 4% budget that PCOM would like to devote to "innovation". After several rounds of voting, the highest priority items of the panel were selected with each member getting 3 votes

ITEM	Votes
Logging while coring	8*
High T tool system	6*
Logging while drilling	4
Test facility on land (Lamont?)	4
Gravity tool development	4
GHMT modification	4
Cross hole experiments	3

Asterisked items are to be endorsed for FY 96 funding.

4.9 Reports on Recent Drilling Legs:

4.9.1 Leg 155 (Amazon Fan) - Hiscott and Soh were participants on this Leg to drill the Amazon Fan. A large amount of core was recovered. Most sites were drilled in channel levee complexes.

They found that the entire upper channel levee complex had been deposited since the last low-stand of sea level.

Average recovery was about 80% (low in sand and gravel zones). Mud turbidites were deposited at a rate of about one every two years. They recovered some sands with APC where mud clasts existed. Although in low abundance, they found fossils throughout the sections. It was possible to separate a number of datums that are usually coincident because of the very expanded section resulting from the high sedimentation rate. There was a lot of methane gas. Gas hydrates were suspected in some cores. They observed varve-like banding immediately after the cores were split, but the color banding disappeared after a few hours. This caused difficulties for core photography, which was generally too late to record the banding. There was a discussion of what causes the banding, and why it disappears so rapidly. Hiscott suggested that it was probably an iron mineral (gregeite?) that is rapidly oxidized on exposure to air. They tried to use APC as deep as possible. They tried the unmodified PCS several times but it never retrieved anything. McKenzie noted that they got a very good isotope record that can be used to correlate land and deep sea records. Hiscott noted that they did not expect to find as much sand as they did. The logging was difficult but they got some good data. Baker asked if there had been an effort to tie the stratigraphy of the distal fan to that of Ceara Rise. This is in progress.

4.9.2 Leg 156 (Barbados) - Underwood and Blum were both on board this Leg. There was very little core recovery and many people who wanted samples. The sites were triple-cased to the bottom of the hole, with a perforated casing near the bottom. LWD was carried out at one site. Negative acoustic impedance was interpreted as reflecting high fluid pressures (close to lithostatic). There was a low chlorinity anomaly strong away from the deformation front, becoming more subtle at the deformation front. Although the pressure was high, no bottom plug was installed in the first hole, but barite mud was added to the hole to stabilize it. A CORK was placed, but is not latched. It will come off if pressure goes above weight of the cork. At the second hole they installed a plug at the bottom of the hole but had to wash the hole while installing the plug. They do not know if this CORK latched properly. They won't know until the site is revisited next summer. They installed a fluid sampler in this hole. On this leg they were able to install CORKs with some success; this is good news for proposed future legs. Peter Blum notes that casing worked well. CORKing is still experimental, particularly getting them to seal.

4.9.3 Leg 157 (VICAP-MAP) - Peter Blum reviewed a draft preliminary report prepared by participants on this leg in the Canary and Madeira Abyssal Plains. The Leg had two distinct goals - to study the evolution of a volcanic ocean island from sediments in the volcanic apron, and to study the history of sediment mass wasting in a deep-sea basin by drilling the abyssal plain turbidites. Four holes drilled north and south of Gran Canaria penetrated about 3 km of sediment and demonstrated the evolution of the composition of the volcanics, and history of its growth and mass wasting. A great thickness of hyaloclastites and debris flow deposits at the base of the two deepest holes supports the conclusion, based on dating the shield basalts, that the eruptive rate of the shield stage was very high. Three sites drilled in the Madeira Abyssal Plain had excellent core recovery. They showed that turbidite deposition has continued since the

inception of the abyssal plain, with major flows involving tens to hundreds of km³ of sediment occurring every few tens of thousands of years. Pelagic interbeds between the turbidites record dramatic changes in the CCD through the past 3 million years. The ultimate goal of the Leg 157 drilling is to produce a mass balance for sedimentation in this area.

4.10 Distribution of the Guidelines for Shallow Water Hazards Surveys:

The guidelines for shallow water hazards surveys, prepared by the JOIDES Shallow Water Drilling Working Group (Mahlon Ball, Chair), were distributed to the participants. Copies will be mailed to panel members who could not attend the meeting.

4.11 Report on Site Surveying on New Jersey Margin:

McKenzie reported on discussions she had with J. Austin in Davos. Hay had also received a letter from Austin regarding the surveys. Austin reported that funding was received from the Navy to carry out surveys because they are interested in better understanding continental margins. The survey will be run next summer, so that a drilling leg could be placed in the prospectus for 1997. The proponents would like continued endorsement from SGPP for completion of this transect.

Baker moved and Underwood seconded the following motion:

MOTION - SGPP strongly supports the effort to obtain the additional funding required to complete and evaluate site survey data necessary to allow safe drilling in shallow water depths > 40m toward the inshore end of the NJ transect. Our great interest in this transect was emphasized by our ranking it as our first priority during the spring 1994 meeting.

The motion passed unanimously.

4.12 Pressure Core Sampler:

McKenzie had written a letter to PCOM expressing concern over the timely development of the PCS, which will be needed on the gas hydrates leg. Development of the PCS is being pursued by Tom Pettigrew.

Underwood moved and Bahr seconded the following motion:

MOTION: SGPP requests that PCOM press for testing of the modified PCS on a Leg well prior to 163, preferably on 160 but at the latest on 161A. The test is essential to ensure that there is a working PCS on the Gas Hydrate Leg 163.

The motion passed unanimously.

4.13 Water Sampler, Temperature, Pressure Downhole Tool (WSTP):

Modifications to the WSTP are being pushed by Charlie Paull. Hay will request an update

from him.

4.14 Mediterranean Sapropels:

Brumsack reported that a total of 7 sites are scheduled in Legs 160 and 161 to recover sapropels. The sites are MedSap 1: Erastosthenes seamount, MedSap 2: Mediterranean Ridge west; MedSap 3: Calabrian Ridge; MedSap 4: Gela Bank (Sicily Channel); MedSap 5: Tyrrhenian Sea; MedSap 6: Menorca Ridge; MedSap 7: Alboran Sea. This transect should provide an overview of the extent of sapropel events in the Mediterranean.

5. Review of Proposals

The proposals were reviewed in two groups: first those that were included in the FY96 Prospectus were discussed on the afternoon of October 12, and then all remaining proposals were discussed on October 13. Proponents were requested to leave the room during discussion of their proposals. The recently developed "Review Criteria for Thematic Panels Review" were used for the ratings. Proposals rated A5 were given no further rating except F4. If no E rating is listed, the Panel considered the proposal to be complete.

5.1 Proposals in the FY96 Prospectus

Revisions and addenda to the proposals included in the FY96 prospectus were discussed in the context of the complete proposal. Ranking of the programs in the FY96 Prospectus was postponed until after all of the proposals, including those not in the Prospectus, had been discussed, and is reported as item 6 of these minutes.

5.1.1 Bahamas Transect.

Proposals: 412---, 412-Add2, 412-Add3

Title: The Bahamas Transect: Neogene/Quaternary Sea-level Fluctuations and Fluid Flow in a Carbonate Platform

Proponents: G.P. Eberli, D.F. McNeill, and P.K. Swart

Ratings: A1, B1.1, B2.1, C1, D1, F1

The successful completion of a sea level transect across a carbonate margin is one of SGPP's most important objectives. SGPP is interested in the effects on gross architecture of sea level change on a carbonate platform isolated from terrigenous input, not to investigate the history of changes in sea-water temperature or ice volume. It is not our intent to confirm or reject any particular part of the Vail curve, but to understand the overall geometry that results from sea level change. This study will provide information on process rates and amplitude.

This transect was started with drilling of holes in shallow water using platforms of opportunity. High resolution seismic surveys have been completed. A second aspect of our interest is in fluid-flow and diagenesis, and the strategy for study of fluid flow has been improved over earlier versions of the proposal. The proponents of this study have gone to extraordinary lengths to address previous criticisms, especially those coming from the Ocean History Panel.

The data base on which the stratigraphic interpretation will be based has recently been published. We fail to see how a better data base for interpretation of the results could be produced in advance of drilling, although we recognize that there will always be some mismatches or ambiguities in the interpretations of biostratigraphy and isotope stratigraphy on carbonate platforms or margins. Transects into shallow water and onto land will always be incomplete with respect to the time record. For the purposes of a sea-level transect, however, the time control available for the proposed Bahama Transect seems more than adequate, particularly if the sea-level issue is tied to modification of facies architecture in three dimensions. SGPP believes that the apparent infighting between proponents of competing proposals must be disregarded, and looking objectively at the science, we rank this proposal as one of our highest priorities for this phase of ODP drilling.

In the context of the overall goals of SGPP, this proposal addresses a major category of sea-level study: that of a carbonate platform. Others that remain to be addressed are the effects of sea-level change: 1) on a detrital passive margin (the New Jersey Transect, initiated on Leg 150), 2) on an active margin; 3) on a temperate carbonate margin; and 4) on a mixed siliciclastic-carbonate margin (such as the Great Barrier Reef, where shallow drilling funded outside ODP may complete the transect initiated on Leg 133).

5.1.2 California Margin

Proposals: 386-Rev2, 422-Rev, 386-Add/Add2/Add3

Title: Ocean Drilling in the California Margin and Southern California Borderland

Proponents: M. Lyle, L.D. Stott and J. Barron

Ratings: A3, B1.2, B2.1, C0*, D1, E8 (site surveys), F2

(* Scientific feasibility is rated C0 to indicate that a plan needs to be worked out to address the science that SGPP finds attractive)

These proposals are to study history of the California Current, associated upwelling, and locally anoxic sedimentation in borderland basins. Laminated carbon-rich sediments contain a near-annual record of local climate and rainfall. Transects will allow study of upwelling geometry and changes in CCD associated with sea-level changes and organic carbon supply. Four transects are planned, 3 east-west, 1 north-south, with one extending into borderland basins (flooded by intermediate, oxygen-poor water). Fourteen sites are planned, including the Eel River Basin with gas hydrates.

The latest addendum to Proposal 386 presents preliminary results from a site augmentation cruise. More detailed site survey results will be presented later, together (probably) with data from a second cruise scheduled for Spring 1995. The program needs additional site-survey data and relocation of sites (other than those in 386 Add3).

Proposal 386 has previously been ranked highly by SGPP; it contains much that is of interest to our "Carbon geodynamics" (Base of the Biosphere) theme. In particular: (1) organic carbon burial processes and factors influencing organic carbon accumulation, (2) diagenetic processes, and (3) the possibility of encountering gas hydrate in the Eel River Basin. Proposal 422 had received a lower ranking, but had not been considered by the panel since its Spring 1993

meeting.

SGPP is very much interested in organic carbon burial and diagenesis, sea-level effects, the "Monterey" carbon excursion and its causes, gas hydrate formation, and developing good chronology for borderland basins which contain intercalated sandy submarine fans at their margins (e.g., Santa Monica Basin). However, without inclusion of a substantial discussion of organic-matter diagenesis and how it will be studied, SGPP finds it difficult to lend strong support to this proposal. Shipboard procedures to adequately sample sediments for organic geochemistry need to be included in the proposal (e.g., freezing of cores or a dedicated C hole). A discussion or table of procedures to be used to evaluate organic matter character and origin should be included; many innovative new techniques have been developed over the last decade - how will these be applied? How can the organic geochemical record be linked to changes in climate? What is the predicted distribution of the different types of organic matter, and are the drill sites properly placed to best sample the variety of organic material present along this margin? Will oil seeps contaminate the organic geochemical record in these sediments? As a general guideline, SGPP would like to see an emphasis on processes of organic-matter burial and diagenesis, not simply on rates or volumes of organic deposition. Because SGPP preferred objectives in organic geochemistry and sediment diagenesis are not in the current proposal, scientific feasibility of addressing these objectives could not be judged (hence C0 rating).

McKenzie doubted that this program could be scheduled as a Leg because the site surveys will not have been completed in time.

5.1.3 Caribbean Basalt Province

Proposal: 411-Rev

Title: Proposal for Drilling a Major Large Igneous Province; The Caribbean Cretaceous Basalt Province.

Proponents: T.W. Donnelly, R.A. Duncan, C. Sinton, A. Mauffret, S. Leroy, L. Abrams and J. Diebold

Ratings: A5, F4

This is a LITHP-focussed proposal to study the Caribbean LIP. There are no SGPP objectives and no action has been taken on the comments made by SGPP at its spring 1992 meeting.

5.1.4 Caribbean Ocean History

Proposal: 415-Rev

Title: Caribbean Ocean History, Ocean Plateau and the Cretaceous-Tertiary Boundary Impact Event: Multi-objective drilling in the Caribbean Sea (Ocean history objectives only)

Proponents: H. Sigurdsson, S. Carey, S. D'Hondt, L.J. Abrams, T.W. Donnelly, R. Duncan and C. Sinton

Ratings: A3, B1.1, B2.1, C1, D1, F4 but F1 for Cariaco Trench.

The proposal as revised is directed largely toward OHP and TECP objectives, but SGPP

should have interests in the K-T boundary questions (p. 4-8) and drilling in the Cariaco Basin (p. 16-18). The K-T boundary and Chicxulub crater discussion is intriguing, but in the end it is not completely clear how drilling will contribute to resolution of all of the many interesting questions raised. On p. 7, it is stated that drilling would "provide additional information on these lithologic units, their complex depositional mechanisms, and possible facies variations _ _ _", and this seems to be the most supportable element. Page 8 promises that "studies of K-T boundary environmental effects" will be benefitted in "two ways"; but only one way is mentioned, and it is not convincing. Justification of drilling needs to be strengthened for the K-T objectives.

The Cariaco Basin site was more completely discussed in the original, stand-alone proposal by Peterson which SGPP much preferred (e.g. there is a reference to Peterson, 1993, but this reference is not to be found in the bibliography). This truncated version is probably necessary, but it suggests the Cariaco site may have become sort of an afterthought, and I hope the site does not become expendable as planning progresses. The linkages between this site and North Atlantic Quaternary events is interesting, but it is not made clear how one might make such correlations in the Cariaco cores. The proposal to use the basin as a sedimentary-tectonic model for Cretaceous black shale deposition is weak; black shales occur in all kinds of depositional-tectonic settings, from passive margins to forearc basins. What is needed to strengthen this part of the proposal is more documentation of how the laminated sequences can be used to interpret regional and global ocean history (like the Santa Barbara basin).

SGPP interest continues to center on the Cariaco Trench site, and its record of accumulation of organic carbon. This site revisits a classic anoxic basin where geochemical studies of cores obtained by relatively primitive drilling using rotary bits and coring were carried out on Leg 15 of the DSDP. SGPP strongly recommends that the Cariaco Trench site be drilled and a well-thought-out program of investigation of the carbon-rich sediments should be developed.

5.1.5 Costa Rica Accretionary Wedge

Proposal: 400-Rev2

Title: Determination of Mass Balance, Fluid Flow, and Deformation Mechanism of the Middle America Trench and Accretionary Complex off Costa Rica

Proponents: E.A. Silver, K. McIntosh, M. Kastner, T. Plank, J. Morris, and T. Shipley

Ratings: A1, B1.1, B2.1, C1, D3, F1

This is an outstanding, mature proposal with clearly defined objectives, a well designed drilling strategy, and an excellent, multi-talented research team. The objectives regarding fluid flow and geochemical fluxes are well within the themes emphasized by SGPP. The objectives of this proposal also address interests of TECP. The proponents discuss fluids as being important to the mechanical properties of the accretionary prism (a TECP interest) and in relation to quantifying fluxes of mass and determining the fate of sediments and fluids (SGPP interests). The proponents make an excellent case for the suitability of the Costa Rica margin as an ideal site for this type of mass-balance and chemical-balance experiment. For example, the 3-D seismic data base is state-of-the-art, rates of plate convergence are known, the regional sediment budget is known within reason, recent ALVIN dives have identified vent sites and mud

volcanoes, numerous heat-flow measurements have been made, and the chemistry of arc volcanics has been documented with sophistication. The proponents make a good case that this is one of the better sites for such studies given the rates of subduction and lack of ^{10}Be in arc volcanics, which could be compared to ^{10}Be in incoming sediments. They expect to be able to quantify fluid volumes in the subduction zone and constrain rates of fluid expulsion as diffuse or channelized flow. A true balance of fluids may not be possible, but determination of the relative importance of diffuse and channelized flow, as suggested on page 11, is probably a realistic goal.

This revision includes results of a heat flow survey, Alvin observations of venting conducted in February 1994, and modeling results to attempt to explain the low observed heat flow. A short appendix also discusses proposed CORK experiments. SGPP had previously noted our interest in the heat flow/Alvin results. The significant observations include lack of evidence for active venting at the deformation front but considerable current or paleo-venting approximately 5 km landward of the toe. Benthic communities and formation of carbonate crusts are evidence of vents. Heat flow over the entire prism is surprisingly low, but generally consistent with modeling results that show that rapid thickening of the wedge reduces heat flow arcward. Somewhat higher heat flow values obtained at the toe of the wedge require either advective transport by fluid expulsion or significant erosion of surface sediments.

SGPP offers two constructive criticisms that may be of value to the proponents: First, some panel members felt that there is a lack of sophistication with respect to physical hydrology. On one hand, all of the hypotheses regarding structural evolution of the prism are illustrated in detail, and it is clear how competing ideas can be tested by ODP. Similarly, the recent heat flow data have been modelled by Mark Langseth. Julie Morris has worked out a predictive model showing how ^{10}Be might change with depth in the prism toe. Treatment of the physical behavior of fluids is much more vague. Justification for the CORK experiment is provided, but there is no prediction of what the results might look like assuming one type of flow path or another. A plan needs to be developed to determine the relative importance of channelized vs diffusive fluid flow. It was felt that the proponents might wish to enlist the cooperation of a physical hydrogeologist. It would be helpful to develop predictive models of the pore pressure distribution within the prism, as was done for Barbados, to examine the sensitivity to permeability. This could also help constrain the heat flow modeling that has already been attempted. Ideally the first iteration of a predictive model of fluid flow should be completed before the drilling takes place. Results from the drilling (CORK data, physical properties, etc.) then can be used as tight constraints during a second iteration of modelling.

Second, given the recent history of drilling in Cascadia and Barbados, the plan for four sites may be overly optimistic. Installation of the CORK system at CR-2 is likely to take up half of the time allotted for the leg. Completing the reference site and either CR-3 or CR-4 will probably take up the remaining half. The reference site must be drilled. The cork site is important for fluid flow, but the most important thing first is to establish the mass balance and then, if there is time, put in a cork. Leg 156 suffered somewhat from overblown expectations because of unrealistic estimates of the operational time requirements. SGPP suggests considering a more conservative plan up-front. If everything goes well, alternative sites can always be added after the essential elements are finished.

Panel members also voiced concern regarding the priority of CORK installation, particularly in the absence of initial analyses of interstitial water geochemistry. Time estimations for

operations are less than real time allocations, even with optimistic scenarios. Some components of the proposed leg probably will have to be dropped. SGPP believes strongly that the reference site must be retained in the drilling plan. One option would be to drop the CORK program. The first priority should be to generate a basic data base, then follow with a first iteration of modelling physical behavior of fluids based on interpretations of geochemical gradients. Understanding mechanisms and rates of flow based on in situ measurements should follow as a second objective. As written, SGPP believes that a balanced model of fluid flow for the entire margin is unrealistic based on a single corked site> The proponents should consider the relative importance of CORK versus LWD logs.

All of the technologies proposed for use on the leg are appropriate, and all have been tested during recent ODP Legs (e.g. 146 and 156). However, in conjunction with the CORK, a VSP experiment is proposed. DMP should be consulted with respect to design and implementation of the VSP. The proponents also hope to use a new in-situ fluid sampler "if available", which does not seem likely at present.

In summary, this study is ready for drilling and should be ranked highly.

5.1.6 E Juan de Fuca Hydrothermal Circulation

Proposal: 440---, 440-Add

Title: Investigating the Nature and Consequences of Hydrothermal Circulation in Oceanic Crust: Drilling on the Eastern Flank of the Juan de Fuca Ridge

Proponents: E.E. Davis, M. Mottl, K. Rohr, K. Becker, D. Chapman, A. Fisher, G. Wheat and H. Villinger

Ratings: A1, B1.1, B2.1, C1, D3, F1

There was general agreement that this is a well formulated proposal. It investigates alteration of oceanic lithosphere where young crust is being buried by sediment. The east side of Juan de Fuca has an unusual sediment thickness for crust of this age. This would probably be primarily targeted to LITHP objectives. Panel consensus that alteration of oceanic crust (the major theme of this proposal) is within our mandate although our most direct interest lies in the alteration of the sediments..

The addition addresses comments of panels from the spring review. In response to a query by LITHP, the proponents note that they would be interested in deepening one or more holes to examine alteration responsible for changes in seismic velocity and to determine if these are associated with changes in permeability. They expect that hole deepening would be an objective for a second leg, but it could also be accomplished on a first leg if time for CORKing can be reduced. The September letter to PCOM notes that they are investigating potential for improved CORKs and will submit a proposal to NSF in February 95 if a good conceptual design can be formulated and funds do not appear to be available within ODP.

In response to SGPP questions, they relate their objectives to the ODP/USSAC Geochemistry Progress and Opportunities workshop report objective of basement crustal alteration, geochemical impact of fluid circulation, and global crustal mass balance. They discuss the potential for examining lateral variations in sediment alteration at one of the "permeable penetrator" sites where permeable basement crops out and is surrounded by extensive sedimentary cover. They

agree that changes in rock properties between upwelling and downwelling limbs of convection cells may be subtle but believe they will still be detectable under the assumption that the cells are stable. They believe that they can address questions of fluid source (local recharge versus deeper flow) via isotopes in rocks and porewater chemistry. They do not believe that focussed recharge is occurring in the ridge flank areas.

They refer to modelling that is currently ongoing to identify possible constraints on permeability structure. The results of this, however are not available yet.

A second letter addendum was also prepared in September to address additional questions from PCOM (See copy provided). PCOM questioned the number of CORKs anticipated and asked that they prioritize sites. They argue for the necessity of most CORKs in a first leg. Noting that hole PP-6 may be the most costly and time consuming, they believe it could be eliminated from CORKing during a first leg. (Note that a two-leg program is taken as practically essential by the proponents.)

This proposal is certainly of interest to SGPP from a hydrogeologic perspective, and in this context we note that the large number of CORKs proposed is a minimum for what one might need to evaluate what could be a spatially variable fluid flow regime. It reflects the inherent difficulty of attempting quantitative hydrogeologic analyses in this type of environment. The proponents seem to be well aware of the problems and, given the constraints, have generated a reasonable proposal.

In prioritizing this leg, SGPP should consider the results of the discussion of fluid flow objectives responding to the questions of Miriam Kastner. The importance of fluid flow in the Juan de Fuca Ridge is primarily in its effects on alteration of the crust, although sediment alteration will also result in sedimented areas.

5.1.7 Return to Iberia (NARM N-V II)

Proposal: 461---

Title: Rift-to-Drift Processes within the Ocean-Continent Transition west of Iberia

Proponents: T. Reston, M.O. Beslier, G. Boillot, D.S. Sawyer and R.B. Whitmarsh

Ratings: A5, F4

This is a tectonics proposal to study rocks near the ocean-continent transition off Iberia, with no SGPP objectives. There are four priority 1 sites, 600-950 m deep. SGPP will not comment on the science, deferring to LITHP and TECP.

5.1.8 SE Greenland Volcanic Rifted Margin

Proposal: 460---

Title: Proposal for Drilling at the Southeast Greenland Volcanic Rifted Margin

Proponents: H.-Chr. Larsen, C.K. Brooks, K.G. Cox, P.M. Holm, T. Dahl-Jensen, R.A. Duncan, G. Fitton, J. Karsen, T.D.F. Nielsen, A. Saunders and M. Story

Ratings: A5, F4

This is a tectonics proposal to study the development of a rifted margin associated with a LIP, and addresses no SGPP objectives.

5.1.9 Sedimented Ridges II

Proposal: SR-Rev3

**Title: Sed Ridges II: Revision of the Sedimented Ridges Detailed Planning Group
Drilling Strategy Based on Results of Leg 139 Drilling at Middle Valley**

Proponents: J.M. Franklin and R.A. Zierenberg

Ratings: A1, B1.1, B2.1, C1, D1, F1

The panel regards this as the best site for understanding formation of massive sulfide ores. The program differs from Juan de Fuca in being directed primarily toward metallogenesis, i.e. massive sulfides.

At the fall 93 meeting, SGPP had given this proposal a generally favorable review but had expressed concerns about the hydrogeologic experiments proposed. The third revision, submitted July 1 1994, does not adequately address these concerns, although it does incorporate information about the status of the existing CORKs which would preclude the experiment originally proposed in the earlier versions of this proposal.

Subsequent to submission of the revised proposal, a meeting was held in Portland (SCORE workshop) to discuss pre- and post- cruise experiments and monitoring. A revised plan for CORK installation and use during the cruise was also developed at that meeting and is described in a recent letter submitted by Davis, Becker and Fisher to the JOIDES office. Calculations based on a range of permeabilities consistent with those inferred from previous CORK results and modeling suggest that it should be possible to detect drilling perturbations in hole 858G if the CORK can be repaired. A revised plan details the order of steps required and time estimates to allow repair of this CORK and monitoring of subsequent drilling perturbations caused by cold water inflow during deepening of hole 857D.

Other suggestions from the workshop include pre-cruise sampling of vent fluids and installation of devices to monitor fluid temperature and flux at the sea floor in order to evaluate changes induced by drilling. Instruments developed for TAG could be used for these purposes. An array of ocean bottom seismometers installed prior to drilling could be used to monitor fracturing induced by infiltration of cold sea water during and following drilling. Such fracturing could have significant effects on the permeability structure of the system. (These types of monitoring are proposed for both Middle Valley and Escanaba Trough). The SCORE workshop also discussed opportunities to study biological communities near vents, including microbial populations. This would be relevant to SGPP's "base of the biosphere" interests.

Although the proposal that is contained in the prospectus has deficiencies with respect to the fluid flow experiments, SGPP believes that the proposed experiments coming out of the SCORE workshop can make this an exciting leg from a hydrogeologic perspective. This leg would likely benefit from an additional year for pre-cruise monitoring installation, but could also proceed in 1996.

5.1.10 Western N Atlantic Sediment Drifts

Proposal: 404---, 404-Add

Titles: 404: Late Neogene Paleooceanography from Western North Atlantic Sediment Drifts; 404-Add: Paleogene and Cretaceous Intermediate Water History on the Blake Plateau and Blake Nose

Proponents: 404: L.D. Keigwin, E.A. Boyle and R.D. Norris; 404-Add: R.D. Norris

Ratings: A3, B1.2, B2.1, C2, D1, F3

Proposal 404 is directed toward Neogene Paleooceanography interpreted from sediment drifts, whereas 404-Add is concerned with Paleogene and Cretaceous intermediate water history to be interpreted from sections drilled on the Blake Plateau and Blake Nose.

Members of SGPP did not understand why 404 is in the prospectus since it was not ranked highly by any of the panels. SGPP had been interested in drifts in 1991 but the proposal has not been updated since then, and in its present form the proposal is only of marginal interest. The comments provided by SGPP at its Fall 1991 meeting stand.

The supposed addendum is not directly related to 440 except that the drilling is to take place in the same general area. It was found "tucked in a Data Bank cubbyhole" by SSP and has never been previously reviewed by the thematic panels. The addendum touches some SGPP interests but is primarily directed toward OHP. Our OHP representative noted that the original 404 was not a full leg so perhaps the addendum was included to make a full leg. The panel requests that the JOIDES office treat 404-Add as a new proposal and should get a new number. SGPP will review this as a new proposal.

5.2 Summary of Ratings of Proposals included in the FY96 Prospectus

The following table presents a summary of the ratings of proposals included in the FY96 Prospectus, sorted by category of thematic interest level to SGPP. The order within each category is by proposal number and is not a ranking.

PROPOSAL NO.	AREA	RATINGS					
SR-REV3	SED. RIDGES II	A1	B1.1;B2.1	C1	D1	F1	
400-REV2	COSTA RICA	A1	B1.1;B2.1	C1	D1	F1	
412-ADD3	BAHAMAS	A1	B1.1;B2.1	C1	D1	F1	
440-ADD	E J. DE FUCA	A1	B1.1;B2.1	C1	D3	F1	
415-REV2	CARIB. HIST.	A3	B1.1;B2.1	C1	D1	F4	
		(A1 for Cariaco Trench)					
386/422	CALIFORNIA	A3	B1.2;B2.1	C0	D1	E8	F2
404-ADD	W N. ATL.	A3	B1.2;B2.1	C2	D1		F3
411-REV	CARIB. BSLT	A5					F4
460	SE GRNLAND	A5					F4
461	IBERIA	A5					F4

5.3 Reviews of other Proposals:

5.3.1 Proposal 333

Title: Cayman Trough: Ocean-Continent Boundary in a Transform Environment

Proponents: B. Mercier de Lépinay, P. Mann, U. ten Brink, E. Calais and M.R. Perfit

Ratings: A5, F4

After brief discussion, it was concluded that this is a tectonics proposal and does not address our mandate.

5.3.2 Proposal 354-Add3

Title: Neogene History of the Benguela Current and the Angola/Namibia Upwelling System

Proponents: G. Wefer, W.H. Berger, U. Bleil, M. Breitzke, L. Diester-Haas, K. Gohl, W.W. Hay, P.A. Meyers, H. Oberhänsli, R. Schneider, W. Spieß and G. Uenzelmann-Neben

Ratings: A3, B1.2, B2.1, C1, D1, F3

This short addendum helps slightly to overcome one of SGPP's criticism, that the SGPP objectives are not well addressed. The proponents give a little more attention to the question of paleoclimatic reconstruction with alkenones and other proxies. However, the full SGPP potential (e.g. in terms of carbon burial and diagenesis) is not addressed.

The proposal addresses important SGPP themes of organic and carbonate carbon deposition, opal accumulation and diagenesis, effects of sea-level variations on upwelling geometry/intensity and sediment facies, and development of gas hydrates; all in the zone of influence of the Benguela Current and associated upwelling systems off west Africa. However, coring will only extend to 400 or 600 mbsf, so it is not clear how seismo-stratigraphic interpretations of sea-level variations will be tested here (top p. 10). If sea-level history is to be seriously addressed, then procedures in the Sea-Level Working Group document must be followed. Add3 restricts a one-leg proposal to 10 sites on two dip and one strike transects, although a third dip transect results from consideration of existing DSDP data. Add3 also provides requested core data.

SGPP continues to support the carbon-cycle objectives of this proposal, but would like to see more details on methods to study organic-carbon diagenesis. Are dedicated frozen cores needed for organic geochemistry studies? The proponents need to give more attention to the question of paleoclimatic reconstruction with alkenones and other proxies.

From SGPP's perspective, there is more potential for studies of sediment diagenesis (organic, silica, carbonate, phosphate) in this area than are explored in the proposal. Stronger SGPP support will certainly require beefing up of these other topics and probably modification of drilling plans. For example, SGPP recommends the addition of one or more shallow piston core sites on the 30°S transect landward of site SCB 1 (in Walvis Bay area) to study formation of phosphorites, dolomite, and silica diagenesis.

If developed, the carbon burial story could be sufficient for SGPP to rate it A1. Although

we recognize that OHP is interested in both this and the California Margin, panel members felt that the Benguela area is a much better place to investigate carbon burial than the California margin. This would be also be a good place to look at phosphorite development. With the addition of a few shallower sites with HPC near the center of the upwelling zone, this could become much higher priority of SGPP. We want to send a strong request to the proponents to modify the proposal to include 30° S shallow sites which are classical places to look for early phosphate and possibly dolomite. If this were included, SGPP would support this strongly.

5.3.3 Proposal 355-Rev4

Title: Drilling the Peruvian Convergent Margin for Geophysical Determination of Gas Hydrate Properties, Investigating Vertical Tectonism and Quantification of Fluid Flow

Proponents: R. von Huene, N. Kukowski, K.Chr. Emeis, K. Kvenvolden, T. Shipley and E. Suess

Ratings: A1, B1.1, B2.1, C2, D3, E8, F3

In principle, this proposal is highly relevant to some SGPP goals, but it is not well written, is poorly organized, and leaves the impression that the proponents want to do too much. It was noted that SGPP has asked the community for hydrate proposals, and this is a response. However, it is unclear how much of the program is directed toward tectonic studies, and how much is directed toward gas hydrates. Is the strategy that they have laid out is appropriate to the study of gas hydrates? The proposal does not address the technical problems of hydrate recovery. The question was raised: why is it necessary to drill to 800 m to study the hydrates when they are restricted to the upper levels? It was noted that at one site a BSR can be seen whereas at the other there is nothing to be seen. The question was raised by some members of the panel whether the Peru margin is a good site for a hydrate study. Perhaps too much is happening here - uplift-subsidence, site of upwelling changing location, etc. It was noted that Petro-Peru should have additional lines with good seismics that could make a more complete framework for the study.

SGPP wants to see what is learned from the forthcoming gas hydrate Leg (163). Until we have the results of 163 we have a hard time knowing how the program proposed here should be modified. Then it will be easier to assess what should be done next. It seems likely that the next step will be to focus on the dynamics of the fluid flow in gas hydrate regimes. The proposal needs to have a detailed explanation of the fluid flow model (E8). Fig. 6 is not readily understood; the arrows showing fluid flow seem to be pointing in the wrong direction. SGPP concluded that it is pleased that there is such a proposal in the system and hopes that it will be revised after Leg 163 results are in.

5.3.4 Proposal: 376 Rev3:

Title: A Revised proposal for Drilling at the Vema F. Z. in the Atlantic: (1) Upper mantle; (2) Gabbro/Dyke Complex; (3) Limestone Cap on

Transverse Ridge
Proponents: E. Bonatti, K. Hastens and J.M. Auzende
Ratings: A5, F4

This is primarily a lithosphere proposal to sample ocean crust and upper mantle where exposed on the wall of Vema fracture zone. Site summary forms are incomplete, with no mention of site survey information nor coring systems. All sites apparently involve bare rock drilling, so technology needs much more discussion. Is DCS required?

The use of carbonate platforms on mobile ocean floor to evaluate past sea levels met with poor results in the drilling of atolls and guyots. Given this past failure, the panel does not believe that study of the limestone cap here be justified as a sea-level objective? A much stronger case needs to be made for this part of the program. Hydrothermal circulation during cooling of oceanic crust is mentioned in an abstract sense. Is there evidence at the drill sites for relict circulation cells?

No other SGPP issues are addressed, although one might expect fluid flow through the topographically high wall of the fracture zone at the present day. Would this mask the effects of earlier alteration?

5.3.5 Proposal: 435-Add
Title: Crustal Fluxes into the Mantle at Convergent Margins: A. The Nicaraguan Margin
Proponents: T. Plank, E. Silver and J. Morris
Ratings: A1, B1.1, B2.1, C2, D3, E3, E5, E8, F2

Proposal 435-Add is a copy of an NSF proposal for site survey work. It is our understanding that the proposed survey was not funded. Nothing else has changed, and earlier comments by the panel stand. The question was raised whether a single corked hole is going to be useful in solving the fluid flow problem. In Barbados SGPP had recommended 3 CORKs, and in that case there was a specific model that was to be tested with the CORKs.

A more complete strategy for the study of fluid flow should be developed (E8).

5.3.6 Proposal: 448-Rev
Title: Assessing the Origins, Age, and Post-emplacement History of the Ontong Java Plateau through Basement Drilling
Proponents: L.W. Kroenke, J.J. Mahoney and A.D. Saunders
Ratings: A5, F4

This proposal is directed exclusively toward LITHP and TECP objectives.

5.3.7 Proposal 451-Rev
Title: Ocean Drilling in the Tonga Forearc: Subduction Dynamics, Arc Evolution

and Deformation Processes at a Non-accretionary Convergent Margin
Proponents: D. Tappin, C. Macleod, S. Bloomer, D. Scholl, J. Hawkins, B. Pelletier and P. Kempton
Ratings: A5, F4

This proposal is most relevant to themes of the Lithospheric and Tectonic Panels. The main interest for SGPP would be among the secondary themes; in particular, studies on the nature and origin of hydrothermal circulation and on sedimentation associated with the Tonga Forearc (e.g. processes and controls on sedimentation on the forearc platform and inner trench slope, determination of the mass sediment production from island arc volcanoes). These aspects, however, are clearly quite minor in the minds of the proponents. Perhaps our most active role vis-a-vis this leg should be to insure that volcanoclastic sedimentologists are included among the shipboard scientists. Site selection will certainly be driven by the LITH and TECP panels.

5.3.8 Proposal 452-Add

Title: Antarctic Peninsula Pacific Margin: Antarctic Glacial History and Causes of Sea-Level Change

Proponent: P.F. Barker

Ratings: A1, B1.1, B2.1, C2, D5, E8, F2

This addendum is a two-page letter which adds relatively little to the proposal, first reviewed by SGPP at the College Station meeting of March 1994. It offers the promise of additional site survey data, which will be welcomed.

The portion of this proposal that is of primary interest to SGPP is the part that addresses the effects of sea level change on an ice-loaded margin. The panel is interested in the architecture of sediment sequences associated with sea level rise and fall, and the program proposed will recover sediments that should reflect the interplay between isostatic loading and unloading, sea level fall and rise, lithospheric flexure, and gravitational attraction of ocean water by the ice. A plan to resolve these complexities need to be presented (E8).

Important questions remain: 1) potential problems in coring coarse glacial till, and 2) dating of the sediments recovered; these are fundamental difficulties which must be resolved. The proposal does refer to previous good recovery by drilling from sea ice. In this case, however, the drilling operation included a riser to flush cuttings from the hole. The panel suggests that input from ODP on the feasibility of drilling, coring, and recovering the tills would be helpful for planning the drilling program. Further, it needs to be demonstrated that this is a viable site for such a study in view of the potential limitations of dating. Can this be overcome by linking the seismic stratigraphy to the biostratigraphy?

One of SGPP's major interests in this proposal (in addition to sea level variations) is in the facies architecture and sequence stratigraphy of marine glacial deposits. In this regard, the high resolution seismic data promised from the upcoming field season is encouraging. As recognized in Barker's letter, however, the glacial history and sea level aspects remain the central objectives, and it is clear that the proponents must convince OHP of the value of this leg because the facies

aspects by themselves are probably not strong enough to insure a high priority. A revised submission should be better organized than the present version.

5.3.9 Proposal 454

Title: Paleoceanography of Western Boundary Currents in Relation to Global Climate: (East Australian Current)

Proponent: C. Jenkins

Ratings: A3, B1.2, B2.1, C2, D1, E8, F4

This is primarily a paleoceanography proposal directed toward OHP. However, the interpretation will be made through the use of classic sedimentology techniques, examining contourites, etc. The proposed work deals with sedimentary processes and early diagenesis, although these themes are not well developed in the proposal as it now stands. Specifically, SGPP has interests in the following aspects: 1) evidence in the sedimentary record for erosive bottom currents - how will these be recognized and evaluated? What kind of criteria might be derived from the cores to enable recognition of erosional surfaces of this kind in the general sedimentary record (in outcrops on land as well as in cores)? How can one evaluate the temporal aspects of these surfaces? 2) sampling of sediment drifts - what are the internal structures and bounding surfaces of current-formed sediment drifts? What characteristics would ancient sediment drifts show in outcrop? 3) seafloor diagenesis associated with slow or non-sedimentation (phosphates, glauconite, ferruginous impregnations, carbonate hardgrounds) - how are these related to the East Australian Current, and to bottom currents in general? What is their temporal duration? What is their spatial distribution in shelf and slope settings? A plan to address these questions should be developed (E8).

The east Australian margin has become famous as the site of seafloor phosphogenesis in a non-upwelling environment, but there is scant mention of this in the proposal nor acknowledgement of work by Australian scientists (e.g. Heggie, O'Brien) on this topic. 4) How can boundary currents be related to sequence stratigraphic models? Do they have anything to do, for example, with sequence or parasequence boundaries?

We encourage the proponents to bolster these topics in subsequent submissions of this proposal, and the staffing of any leg in this area should include appropriate sedimentologists.

5.3.10 Proposal: 455 ---

Title: Northwest Atlantic Margin Project (NWAMP): High Resolution Record of Sediment Fluxes to the Northwest Atlantic Ocean Basin

Proponents: S. Occhietti, C.T. Schafer, J. Syvitski, B. MacLean, D. Piper, R. Hesse, P. Mudie, G. Fader, H. Josenhans, J. Andrews, J. Locat, G. Viks, J. Ceman, S. Thibaudeau, E. Collins and K. Moran

Ratings: A3, B1.2, B2.1, C3, D1, E2, E8, F3

This proposal aims to determine timing and effects of ice-sheet growth and decay in two

proximal to distal transects out of Hudson Strait and the Gulf of St. Lawrence. These two source "corridors" can be fingerprinted by petrographic differences. Melting ice sheets would produce fresh-water and sediment pulses, or acmes in ice-rafted debris like the "Heinrich layers" of the northwest Atlantic. Ice extent via loading of the sea bed would be interpreted from geotechnical properties. This is really a proposal to study "ice sheet history" rather than ocean history. There is mention of burial of organic matter, sediment fluxes, potential for examining some fan stratigraphy, and a single site to look at western boundary current. None of these is well-formulated as an objective.

Issues of particular SGPP interest include: (a) burial and diagenesis of organic matter, (b) sediment budgets, (c) controls on submarine-fan deposition, and (d) transport by the WBUC. Generally, these topics are poorly developed in the proposal.

The following points need to be addressed in a revised proposal in order to develop SGPP support (E8): 1) What is the likely biostratigraphic resolution, particularly in ice-proximal sites with fresh-water dilution? How abundant will age-diagnostic microfossils be? Could magneto- and isotope stratigraphy provide an adequate chronology so that perhaps this can be done without good biostratigraphic control? 2. Can regional isopach maps be prepared to show how coring and dating of a few sites will allow calculation of sediment budgets for a number of time slices? 3. What will be the scientific fallout from poor or low recovery of sand, or poor recovery due to ice-rafted debris (compare Site 645, Baffin Bay), or use of the XCB? How abundant will sand and IRD be at the proposed sites? 4. What global issues regarding burial of organic carbon will be addressed?

The proposal needs a better site location map, and needs better survey maps to evaluate feasibility.

5.3.11 Proposal: 456

Title: Tjornes Fracture Zone Sedimentary Basin: Late Cenozoic Paleooceanography and Sedimentation History at the Arctic Boundary

Proponents: G.O. Fridliefsson, J. Eiriksson, H. Hafliadason, K. Gunnarsson, K. Thors, B. Larsen, S. Thorhallsson and A.E. Sveinbjornsdottir

Ratings: A5, F4

This is chiefly of interest to OHP. There are brief mentions of geothermal history, sediment processes, and diagenesis in the abstract and list of objectives, but these aspects are not developed in the proposal itself and are unlikely to elicit much interest.

5.3.12 Proposal: 457

Title: Future ODP Drilling on the Kerguelen Plateau and Broken Ridge: Determining the Origin, Growth and Evolution of a Very Large Igneous Province in the Southern Indian Ocean

Proponents: F.A. Frey, M. Coffin, M. Storey, D. Weis, A. Saunders, R. Duncan and L. Könnecke

Ratings: A5, F4

After brief discussion it was concluded that this proposal does not address any of SGPP's goals.

5.3.13 Proposal: 458

Title: Deciphering Southern Ocean Paleoceanographic Evolution by Drilling a Transect Across the Southern Ocean

Proponents: R. Gersonde, G. Bohrmann, K. Gohl, G. Kuhn, H. Miller and D. Fütterer

Ratings: A3, B1.1, B2.1, C1, D1, F4

This is a good, well-written proposal, but the only objectives relevant to SGPP are the productivity of southern ocean and silica diagenesis. These topics are addressed only peripherally, and it is unlikely that this proposal will ever become a high priority for SGPP.

5.3.14 Proposal: 459

Title: Late Cenozoic History of Norwegian Sea Overflow through the Faeroe-Shetland Channel

Proponents: A. Kuijpers, L.O. Boldreel, B. Larsen, H. Lykke-Andersen and T.C.E. van Weering

Ratings: A3, B1.2, B2.1, C2, D1, E3, E6, F4

This is mainly an ocean-history proposal to evaluate the record of Norwegian Sea overflow near the Faeroe-Shetland Channel. Figures and seismic profiles are of poor quality. The only issue of interest to SGPP is the architecture and development of sediment drifts, but Site B in an area of focussed flow seems atypical for contourite deposits and is probably not a good location to study this depositional setting. SGPP interest in this proposal will likely remain low.

5.3.15 Proposal: "404-Add"

Titles: Paleogene and Cretaceous Intermediate Water History on the Blake Plateau and Blake Nose

Proponent: R.D. Norris

Ratings: A3, B1.2, B2.1, C2, D1, F3

As noted above, this supposed addendum to Proposal 440 is not directly related to that proposal except for the fact that the drilling is to take place in the same general area. It was found "tucked in a Data Bank cubbyhole" by SSP and has never been previously reviewed by the thematic panels. The addendum touches some SGPP interests but is primarily directed toward OHP. SGPP's main interest would lie in recovery of C_{org}-rich Cretaceous sediments. The panel requests that the JOIDES office treat 404-Add as a new proposal and should get

5.4 Summary of Ratings of Other Proposals: The following table presents a summary of the ratings of other proposals, sorted by category of thematic interest level to SGPP. The order

within each category is by proposal number and is not a ranking.

PROP. NO.	AREA	RATINGS					
355-REV4	PERU	A1	B1.1;B2.1	C2	D3	E8	F3
435-ADD	NICARAGUA	A1	B1.1;B2.1	C2	D3	E3;E5;E8	F2
452-ADD	ANTARCTIC	A1	B1.1;B2.1	C2	D5		F2
354-R2-A3	BENGUELA	A3	B1.2;B2.1	C1	D1		F3
454	EAST AUSTRALIA	A3	B1.2;B2.1	C2	D1	E8	F4
455	NORWEST ATL.	A3	B1.2;B2.1	C3	D1	E2;E8	F3
458	SOUTHERN OCN	A3	B1.1;B2.1	C2	D1		F4
459	FAROE-SHTLND	A3	B1.2;B2.1	C2	D1	E3;E6	F4
333-ADD2	CAYMAN TR.	A5					F4
376-REV3	VEMA FZ	A5					F4
448-REV	ONTONG-JAVA	A5					F4
451-REV	TONGA FOREARC	A5					F4
456	TJORNES FZ.	A5					F4
457	KERG.-BROKEN R.	A5					F4

6. Ranking of Programs in the FY96 Prospectus

After considering all of the proposals, there was a brief discussion whether the Panel might wish to propose any additional proposals be included in the FY96 Prospectus. There were no suggestions for additional inclusions.

The Panel then considered the relevance of Programs in the FY Prospectus to SGPP goals. The Bahamas Transect, Costa Rica Accretionary Wedge, E Juan de Fuca Hydrothermal Circulation, and Sedimented Ridges II address SGPP objectives directly. The California Margin, Caribbean Ocean History, and Western N. Atlantic Sediment Drifts have components that are related to SGPP objectives. The Caribbean Basalt Province, Return to Iberia, SE Greenland Volcanic Rifted Margin do not deal with SGPP goals. Further discussion indicated that the program for Western N. Atlantic Sediment Drifts, in its present form, does not adequately address SGPP goals although it has potential to do so.

After this discussion, Bahr moved and Underwood seconded the following motion:

SGPP will vote only on Bahamas 412, California 422, Caribbean KT 415, Costa Rica 400, Juan de Fuca 440, and Sedimented Ridges II SR-REV3

The motion passed unanimously.

The results of voting were tabulated by Zierenberg. The program with the highest average is ranked 1, as the Panel's highest priority. The ranking is as follows:

Rank	Proposal	Area	#votes	Total	Avg.	Std. Dev.
1	412	Bahamas	10	47	4.70	1.83
2	400	Costa Rica	10	42	4.15	1.00
3	SR II	Sed. Ridges	10	41	4.05	1.64
4	440	Juan de Fuc	10	36	3.55	1.21
5	386	Calif. Marg	10	24	2.35	1.25
6	415	Caribbean	10	22	2.20	1.87

7. Reviews of Letters of Intent (LOIs)

Letters of Intent were rated only for thematic relevance.

- 7.1.1 LOI: 15**
Subject: Paleozoic basement underneath the north-central Adriatic Sea
Author: U. Fracassi
Rating: A5

This LOI has tectonic objectives and is unrelated to the mandate of SGPP.

- 7.1.2 LOI: 16**
Subject: Paleooceanographic drilling south of Australia: Global impact of a maturing mid-latitude ocean
Author: B. McGowran
Rating: A3

Although directed toward OHP, this LOI includes a number of problems of relevance to SGPP: eustacy, paleocean chemistry. More supporting data are needed, particularly seismic. The DCS is probably needed for adequate recovery in these carbonates. SGPP might support this but primary support should come from OHP.

- 7.1.3 LOI: 17**
Subject: Internal anatomy of two hydrothermally active volcanoes
Author: R.A. Binns and S.D. Scott
Rating: A3

This LOI proposes drilling two hydrothermal sites near Papua New Guinea; one in the Woodlark Basin which is an area of particular interest to TECP. These sites are justified primarily on the basis of mineral exploration interests. These are a modern analog for ore deposits that are exploited on land. Drilling would provide a 3 dimensional geometry. Most sites are effectively bare rock so there is little sedimentary interest.

The fluid flow and metallogenesis themes do relate to SGPP interests, but this is primarily in LITHP's mandate. Several potential technical problems are not addressed in the letter of intent, such as the problem of drilling on bare rock without the DCS and the anticipated

temperatures and possible need for high temperature tools. Fluid sampling is listed as desirable, but tools that would be used for this are not specified. SGPP might support this, but it would need primary support from LITHP.

- 7.1.4 LOI 18:**
Subject: Southeast Pacific paleoceanographic depth transects
Author: A.C. Mix
Rating: A4

This is mainly directed at OHP, but SGPP is interested in determination of paleocean chemistry through imports and exports of phosphates, nitrates, silica and carbonate to/from the Pacific. The proposed depth transects in the Peru-Chile current would allow study of burial and diagenesis of carbon, carbonate, and other sediment components. The area of proposed operations is huge, and this must be considered in devising a realistic drilling program.

- 7.1.5 LOI 19**
Subject: Hydrothermalism and metallogenesis in the Red Sea
Authors: B. Sichler, M.F. Le Quentrec, A. Coutelle, Y. Fouquet and C. Ramboz
Rating: A4

It is our understanding that this is to be part of a larger Red Sea proposal. SGPP is certainly interested in the Red Sea but not in the program proposed here. Only 3 lines are devoted to geochemistry and metallogenesis. The letter primarily discusses magnetization patterns and opening of the Atlantis II Deep rather than metallogenesis as suggested by the title. The metalliferous sediments lie beneath pools of 60° C brine, a very corrosive environment which may present difficulties for coring.

- 7.1.6 LOI 20**
Subject: Drill the major dilational basins of the S.W. Pacific
Authors: A. Ewart and others
Rating: A5

The drilling is intended to recover volcanic basement. The issues to be addressed are tectonic and possibly related to the interests of LITHP, not SGPP.

- 7.1.7 LOI 21**
Subject: Early stages of crustal creation in the western Pacific
Author: R.J. Arculus
Rating: A5

The program is directed toward the interests of LITHP, and does not address any SGPP

objectives.

- 7.1.8 LOI 24**
Subject: Cascadia Margin II
Authors: R. Carson, L. Kulm, G. Moore, J.C. Moore and E. Suess
Rating: A1

The DPG for the Cascadia Margin has recommended 2 legs in this accretionary complex to define fluid and mass balances and the style of fluid movement. This letter of intent is to notify the panels that a second leg will be planned when analyses of Leg 146 data are complete.

One major disappointment on leg 146 was the inability to seal a second hole in a zone away from identified faults. This precludes comparison with the corked hole in a fault zone. Emplacing a cork in this diffuse flow environment remains an important objective.

The questions of fluid flow and mass and fluid balances are important SGPP themes and the panel urges follow-on studies in this area.

SGPP urges the proponents to prepare a full proposal for panel consideration.

- 7.1.9 LOI 25**
Subject: Drilling Shatsky Rise
Authors: W.W. Sager, G.R. Brown, W.V. Sliter and R. Larson
Rating: A5

This LOI replaces proposal 253 (central Pacific plateaus) and de-emphasizes Cretaceous black-shale objectives. This will weaken SGPP interest, although it is true that only poor results can be expected without DCS (or perhaps both with or without DCS). The new proposal will have secondary support from SGPP for aiding further understanding of global anoxic events.

- 7.1.10 LOI 26**
Subject: Evolution of KT Seaway
Authors: R.T. Buffler, W. Alvarez, J.A. Austin, W. Denny and A. Droxler
Rating: A5

There is something for everyone in this LOI, but not enough of a program to make it attractive. Potential SGPP interests include the sedimentary history and stratigraphic development of a foredeep fill, effects of tectonics versus sea level on sequence development, and relating seismic facies to depositional processes. Only two sites are proposed, and it is not clear how these solve the problems. A more rational program might be developed after Caribbean drilling is carried out.

- 7.1.11 LOI 27**
Subject: Integration of slopes and basins in Rhone and Var turbidites
Author: L. Droz

Rating: A1

This proposal seeks to evaluate the variable response to sea-level fluctuations of the Rhone (strong sea-level signal) and Var (strong tectonic signal) fans in the western Mediterranean. This is a partly controlled experiment because local basinal effects are the same for both systems, but external controls are not. If sequence-stratigraphic concepts are to be tested, then an effort should be made to follow the detailed recommendations of the Sea-Level Working Group. Figure 2 does not seem to have sites best placed to unravel the sea-level history. Can funding be sought for drilling on the shelf? Lessons learned from Amazon Fan regarding timing of debris flows should be incorporated in the proposal. Unlike Leg 155, the emphasis here is on dating of seismic stratigraphy and not sampling of fan architectural elements (hence 3 deep holes). How sandy will these sediments be, and how will this affect objectives? How well can such sediments be dated? Tentative drilling depths (meters, not TWTT) should be provided.

SGPP urges preparation of a complete proposal.

7.1.12 LOI 28

Subject: Japan Trench downhole observatory off Sanriku

Authors: T. Kanazawa, F. Hiromi, K. Suyehiro and A. Hasegawa

Rating: A5

The proposed project is directed to long term monitoring of seismicity. It is most likely considered a tectonics proposal.

7.1.13 LOI 29

Subject: Evolution of the Hawaiian hot spot

Authors: K.J. Spencer and J.J. Mahoney

Rating: A5

The stated objectives are not relevant to the goals of SGPP.

7.1.14 LOI 30

Subject: Erosion, mass and fluid flux, returned to the mantle

Author: R. von Huene

Rating: A3

This LOI is primarily addressed to interests of TECP while Proposal 355 for gas hydrate drilling in the same area, reviewed most completely at the Spring meeting but also discussed at this meeting, addresses SGPP interests. However, there is certainly overlap in the LOI with SGPP interests. One specific question needs to be answered: Why should we drill a transect that is currently in a state of accretion to study erosion?

One question SGPP must consider is how many convergent margin legs can be scheduled in

the next few years. Barbados is recently completed. Costa Rica may be drilled in the FY96 program. There are immature proposals for drilling off Peru and off Nicaragua. There will be a proposal for a second leg at Cascadia. The advantages and disadvantages of each of these need to be carefully considered.

7.1.15 LOI 31
Subject: Lower-plate continental margin
Author: H.M.J. Stagg and J.B. Wilcox
Rating: A5

This is a well-documented LOI to drill several holes to basement at the lower-plate margin of a conjugate pair to understand rifting processes. The South Australia margin is starved of sediment, and both basement and detachment faults in the basement can be reached more easily than off Iberia. Like NARM(NV) drilling, much of the aim is to sample and evaluate the crests of fault blocks. The following should be addressed in the full proposal: 1) In detail, why is this a better area than the Iberian margin to study rift mechanisms? This question is important because Leg 149 left many unanswered questions and PCOM may prefer to keep the first phase of passive-margin drilling in the Atlantic. 2) What are the drilling times for the proposed holes, and is this a multi-leg program? 3) Can the Antarctic conjugate be ignored, or must it also be drilled to answer fundamental questions on extension mechanisms? 4) Can sites be selected in collaboration with Noel James and David Feary (Proposal 367-Rev) so as to piggy-back sea-level sites on deeper basement objectives? 5) Why are you tentative about the biostratigraphic and paleoceanographic record in industry wells? Is fossil preservation poor?

As it stands, this proposal incorporates little that is of direct interest to SGPP. However, a fully developed drilling program along the South Australian margin would likely include targets of interest to SGPP.

7.1.16 LOI 33
Subject: Gulf of Aden Rift Project (GARP): An investigation of a young conjugate margin
Authors: J.R. Cochran, N. Driscoll and M. Steckler
Ranking: A5

This proposal is directed toward TECP and does not address any SGPP goals.

7.1.17 LOI 34
Subject: Hydrothermal and cold-water circulation within intraplate seamounts effects on rock alteration (Pacific seamounts)
Authors: V. Kurnosov, I.O. Murdmaa and C.K. Paull
Ranking: A1

Fluid circulation in seamounts may be simpler and more short lived, and thus easier to study

than in other environments. The proponents are also interested in the endo-upwelling hypothesis in development of coral reefs. This might have much of interest to SGPP; we encourage development of a full proposal.

7.1.18 LOI 35

Subject: High-resolution Holocene paleoenvironmental record, Saanich Inlet, British Columbia, Canada

Author: B. Bornhold

Ranking: A1

This LOI proposes a single hole in Saanich Inlet, a fjord off Victoria BC, in association with a port call in Victoria (in conjunction with Sedimented Ridges II?). The deposits contain a mixture of marine carbon and terrestrial carbon in laminated sediments. The intention is to take cores down to tills at about 100 m to get record of annual changes in carbon for climate change. They also want to look at frequency of recurrence of seismic events recorded as 10 cm turbidites. This is a classic site for studies of deposition of organic carbon, and the lower part of the section has never been sampled. There is general enthusiasm by SGPP for this. It could also be used for publicity in Canada. We will send a message to PCOM that if Sed. Ridges gets scheduled this should be considered as a possible add-on. It needs to be formulated as a proposal by November 1 to be reviewed by SSP and PPSP.

7.1.19 LOI 36

Subject: Multiple crustal shortening in the eastern Nankai Trough

Author: H. Tokuyama, J. Segawa, A. Taira, X. Le Pichon and J.P. Cadet

Ranking: A3

Objectives of drilling in this area are of thematic relevance to both TECP and SGPP. An arc-arc collision of Izu-Bonin and Southwest Japan causes crustal shortening on both the landward and seaward sides of the trough. Three sites are proposed for drilling to examine tectonic questions related to an intra-oceanic thrust and to investigate fluid flow in this thrust, at the edge of the accretionary wedge. There is the possibility of making measurements before and after an earthquake; this would be very exciting. A BSR is present at one of the sites so there may be gas hydrates interest as well.

The fluid flow objectives are not well developed in this letter. It appears that they would plan to install 3 CORKS. They also mention in-situ permeability measurements. A full proposal should include detailed rationale for these experiments and some predictions of what they expect to find with the CORKS.

7.1.20 LOI 37

Subject: What is the nature and extent of the subseafloor biosphere?

Authors: J.R. Delaney, M.D. Lilley, M.D. Baross, D.S. Kelley and M.S. Holmes

Ranking: A1

This is the first potential proposal to address SGPP's white paper goal of examining the "base of the biosphere". The proponents refer to recent work that suggests high temperature microbial communities exist in subseafloor systems. These results are somewhat controversial, but would certainly be exciting if they prove true. They are interested in drilling in bare rock areas of hydrothermal systems and suggest a site on the Juan de Fuca Ridge system. The letter does not begin to address any of the potential technical difficulties of sampling to avoid or detect contamination. Perhaps this type of work could initially be done in conjunction with existing legs (proposed or scheduled) to work out some of the sampling techniques prior to scheduling a full leg devoted to this topic. Some work may be underway at TAG with respect to microbiology of vents there. The proponents should be encouraged to coordinate with proponents of Sedimented Ridges and the Juan de Fuca fluid circulation legs.

7.1.21 LOI 38

Subject: Antarctic Circumpolar Current variability and Weddell Sea Deep Water interaction in the northern Scotia Sea and Falkland Trough

Authors: P.F. Barker, C.J. Pudsey, A.P. Cunningham and R.D. Larter

Rating: A3

This LOI is directed toward OHP, but involves drilling in areas subject to deep sea current scour and deposition, processes of interest to SGPP. It is also proposed to drill to basement on Falkland Plateau, which should recover black shales in the Cretaceous section. As written, the LOI is of marginal interest to SGPP.

7.1.22 LOI 39

Subject: ODP drilling site proposal at the middle Kyushu-Palau Ridge

Authors: T. Katsura, S. Kasuga, A. Nishizawa and Y. Kato

Rating: A5

This proposal is to recover volcanic basement rocks, and does not address SGPP goals.

7.2 Summary of Ratings of LOIs: The following table presents a summary of the ratings of the LOIs, sorted by category of thematic interest level to SGPP. The order within each category is by proposal number and is not a ranking.

LOI #	AREA	RATING
24	CASCADIA MARGIN II	A1
27	RHONE AND VAR	A1
34	PACIFIC SEAMOUNTS	A1

35	SAANICH INLET	A1
37	SUBSEA BIOSPHERE	A1
16	SOUTH AUSTRALIA	A3
17	MANUS & WOODLARK	A3
30	PERU MARGIN	A3
36	NANKAI TROUGH	A3
38	SCOTIA-FALKLAND	A3
18	SOUTHEAST PACIFIC	A4
19	RED SEA	A4
15	ADRIATIC	A5
20	SW PACIFIC	A5
21	W PACIFIC	A5
25	SHATSKY RISE	A5
26	GULF OF MEXICO	A5
28	JAPAN TRENCH	A5
29	HAWAIIAN-EMPEROR	A5
31	AUSTRALIAN BIGHT	A5
33	GULF OF ADEN	A5
39	KYUSHU-PALAU RIDGE	A5

SGPP strongly urges that LOIs rated A1 be developed into full proposals. SGPP would be interested in seeing proposals developed from LOIs rated A3 if they are of interest to another thematic panel.

8. Discussion of Budget Prioritization

Garrison presented budget numbers faxed from NSF in response to our request, and these served as a basis for the discussion of priorities. It was noted that there are inconsistencies in the numbers, and it was realized that they might not be accurate. They are reproduced here solely to serve as a basis for understanding our discussions.

8.1 Budget numbers used for our discussion

FY95 - Major Categories	\$MM
JOI/JOIDES/DB	1.8
L-DEO	4.85
ODP/TAMU	15.40
ODP/Ship Operations	21.81

FY95 ODP/TAMU

Engineering Development	1.97
Publications	2.15
Repository	0.93
Drilling Operations	2.39
Logistics	0.66
Technicians	3.96
Science Operations	0.99
Headquarters	2.05
Information Services	1.89

8.2 JOI: We did not know enough about the JOI budget (what is DB?) to make informed comments.

8.3 L-DEO: Logging should be reviewed to determine cost/benefit ratios. Significant savings are unlikely from any re-evaluation of the Schlumberger (wireline) contract. However, a major part of the L-DEO budget concerns the maintenance and validation of 3rd party tools, and costs in this area should be justified. It should be determined which tools in this inventory are really of value to the program and sufficiently developed to be useful.

8.4 ODP/TAMU:

Engineering Development: The item of greatest importance to SGPP is the PCS. We are also interested in "Corks," but the corking program should be examined to determine its fiscal impact and cost/benefit ratio for science information gained.

From the view of SGPP interests, the funding that continues to be absorbed by the DCS development is of concern. While recognizing the ultimate value of a working DCS system, given the budgetary constraints, this panel reiterates that it does not feel that DCS is critical to its program for the next few years.

Publications: There was considerable discussion of the publications. Baker suggested that the time might be ripe to make the transition to electronic publishing? Hay recalled the disastrous experiment that GSA made a decade ago when it tried to go to publication on microfiche. There was a discussion about the ongoing problem that many institutions do not recognize ODP reports as refereed publications for purposes of evaluating faculty. The question was raised whether part A could be published in simpler form as soon as the Leg is over, and part B farmed out to a publisher. A society would be unlikely to accept part B as a regular publication, but commercial publishers probably would. In any case, the volumes would be much more costly than they are now. The costs would simply be shifted from the member country contributions to libraries. Surlyk pointed out that using the editorial and review system of a commercial publisher might further delay publication. It was also discussed whether the articles in part B should simply be sent to journals of the author's choice and ODP could publish bibliographies of papers on ODP at regular intervals. Brumsack noted that being able to find the literature on a Leg in a single place is a great advantage, and dispersal through many journals would make it difficult for workers at institutions with smaller libraries to keep abreast.

No one had a very good idea of how much money could be saved by the different options discussed, and it was suggested that ODP should do a cost-saving projection.

Repository: The possibility of having those requesting samples pay for cost of mailing was discussed and rejected. It was concluded that the repository budget is probably lean and cost savings could not be achieved.

Drilling Operations, Logistics, Technicians: We know too little about these to comment. We assume that they are probably not negotiable and are already lean.

Science Operations: After discussion, the panel concluded that science operations are funded minimally, and with recent personnel cuts could fall below a viable level. It was proposed that technicians and temporary staff scientists might be provided by other countries, but not at the expense of existing positions. It is essential that the science operations be adequately funded to carry out their responsibilities.

Headquarters: We do not know what is included under this item.

Information Services: The budget here is mostly for the data management system. A lot of thought has gone into data management. The total cost of developing the system will ultimately be \$6 million. These costs cannot be cut without terminating the program before it is operational. Hiscott noted that even if ODP ends, it is important to have the data management system in place.

9. Data Management

The Data Management System was discussed briefly. Blum reported that Science Operations has forwarded names of persons who might be useful consultants to the contractor. Zierenberg reported that LITHP had found that people who would have been the best consultants had not been contacted. LITHP prepared a list of names of useful contacts. Blum noted that Data Management must not become involved in development of new programs. SGPP consensus was that the new system must have scientific input and that there must be contact between the contractor and the scientific community. The JOIDES group overseeing this is IHP. It was felt SGPP should activate liaison with the IHP.

10. White Paper

McKenzie reported that the SGPP White Paper has been accepted by PCOM and will appear in the October issue of the JOIDES Journal. Bahr noted that Judy McKenzie should be commended on the final result. The SGPP White Paper looks as though one person wrote it. The participants congratulated McKenzie and thanked her for her effort.

11. Sea level

OHP has suggested that it would be useful for those members of OHP and SGPP particularly concerned with sea level, to meet and work out a common strategy for the future. OHP's interest is mainly in the timing and magnitude of sea level change, whereas SGPP's interest is in the sediment architecture that results from sea level change. It had been hoped that this could be done last summer, but this was not possible. It has been suggested that the group could meet in

conjunction with the OHP (March 2-4, Miami) and SGPP (Boulder) spring meetings. It was discussed whether such a meeting might best be held in Texas. OHP members contacted were Blake, Carter, Loutit, Moore, Delaney (rotating off panel); SGPP members are Garrison, Hiscott (rotating off the panel), Sarg, Soh, Surlyk, Underwood, Hay. There are a number of non-US attendees, so it should happen at a time convenient to as many as possible. After consideration of calendars, including AAPG meeting, the decision was made that SGPP propose that the sea level meeting be held in Houston on March 9. SGPP will meet in Boulder on March 10, 11, 12.

12. Liaisons

Current liaisons to other panels are as follows:

LITHP	Shanks (may be leaving SGPP)
OHP	Baker
TECP	Underwood (in US), Soh (elsewhere)
DMP	Bahr (leaving SGPP)
SMP	Macko

New liaisons to other panels and committees

IHP	Hay
TEDCOM	Garrison (could only be present for one day of TEDCOM's November meeting) or Sarg

13. Nominations of Co-Chiefs for potential new legs:

In the following nominations, we list our first and second choices, others are listed alphabetically, not ranked in order of preference.

Bahamas Transect: 1) Gregor Eberli, 2) Noel James, Other: Harry Elderfield

Costa Rica: 1) Eli Silver, 2) Miriam Kastner, Others: Jim Gill, G. Kimura, Mike Underwood

Sedimented Ridges II: 1) Robert Zierenberg, 2) Andy Fisher (2), Others: Paul Baker, Erle Davis, Jim Franklin, T. Urabe. The panel urges that the co-chiefs be balanced, one an economic geologist and the other a geophysicist.

14. US Member replacement

Bahr and Paull are rotating off the panel after this meeting. Shanks has suggested that he might resign because of the difficulties he has experienced in attending meetings.

Possible replacements for Jean Bahr, Charles Paull and Pat Shanks were discussed. Hay is to contact possible replacements to determine whether they would be willing to serve before presenting names to PCOM.

15. Issues for the SGPP Spring Meeting

The following were identified as items that should be discussed during the panel's spring meeting:

CORK's (We could request that Andy Fisher come as LITHP liaison and inform us).
Data Management
Review of PCS
?Revisit the Budget?
Sea Level

It was also suggested that we have a scientific presentation on the status of knowledge of one of our goals. After discussion it was decided that the subject of "Accretionary Prisms & Fluid Flow" or "Bottom of the Biosphere" would be appropriate. Hay is to select a speaker from among the new panel members.

16. Time and Place of Future Meetings

Hay will host the spring meeting March 10-12, 1995 at CIRES on the University of Colorado Campus in Boulder, Colorado.

Surlyk will host the fall meeting September 26-28, 1995, in Copenhagen, Denmark.

17. Adjournment

The meeting ended at 1:00 PM on October 14, 1994.

Correction, section 7.1.2 should read as follows:

7.1.2 LOI:16

Subject: Paleoceanographic drilling south of Australia: Global impact of a maturing mid-latitude ocean

Author: B. McGowran

Rating: A3

This LOI focusses on the need to drill a maturing mid-latitude ocean, that south of Australia, in order to understand its impact on global paleoceanography. Several oceanographic problems of regional and global significance are addressed, among them the "rainbelt hypothesis", the Eocene oscillation with the terminal cooling event, the lag between cooling and sea level fall, the Miocene climatic optimum, and the initiation of the Circumantarctic Current through the opening of southern and closing of tropical gateways. Further questions likely to be answered by drilling are related to events ranging from the KT boundary to northern hemisphere glaciation, the importance of productivity and upwelling in the cool-water carbonate domain, age determination by integrated bio-, chemo-, magnetostratigraphy, and the biogeohistorical record (including cyclicality).

Even though this LOI focusses primarily on OHP goals, some topics are relevant to SGPP: a) sea level and eustasy; b) paleocean chemistry; c) C-cycle and upwelling; d) non-marine/marginal-marine to deep basin transects. In a revision the proponent should put more weight on SGPP-relevant topics, e.g. C-storage and diagenesis, and not only address biostratigraphic and paleoceanographic aspects in order to attract support from this panel.

The proposal should discuss whether the scientific goals can be reached using conventional drilling techniques, or whether DCS is required.