Ocean History Panel Meeting 28 Feb - 2 March 1991

Executive Summary

Proposal ranking

OHP reached the following ranking among proposals for the guidance of PCOM in their producing a tentative 4-year plan:

1 320/A Drilling in the Nordic Seas (the Arctic Ocean-the Norwegian/Greenland/Iceland Sea - the NW Atlantic Ocean System), Addressing High Northern Latitude paleoceanography and paleoclimatology Jansen, E. et al

336/A Arctic to North Atlantic Gateways, Oceanic Circulation and Northern Hemisphere Cooling Thiede, J. et al

305/F Arctic Ocean Drilling Mudie, P. et al

(probably 2 legs as advocated by the DPG)

2 348 Upper Paleocene to Neogene sequence stratigraphy: the ice house world and the US middle Atlantic margin. Miller, K.G. and Christie-Blick, N.

3 354 Late Cenozoic history of the Angola/Namibia upwelling system. Wefer, G. & Berger, W.S.

339 Paleoceanographic record of the Benguela Current and Associated High-Productivity Areas: Drilling Transects on the Southwest African Margin. Diester-Haass, L. et al

4 388 A proposal to Advance Piston Core the Ceara Rise, West Equatorial Atlantic: Neogene History of Deep Water Circulation and Chemistry. Curry, W.B., Backman, J. & Shackleton, N.J.

5 253 Black Shales/Shatsky Rise. Schlanger, S.O. & Sliter, W.V.

6 347 Late Cenozoic Paleoceanography, South-Equatorial Atlantic.
Wefer, G. and Berger, W.H.

7 CEPAC/390 Bering Sea.

8 386E/Rev California Margin: Neogene Palaeoceanography of the California Current, Coastal Upwelling, and Deformation of the Gorda Plate. Lyle, M., Barron, J., et al

9 345/A The West Florida Continental Margin, Gulf of Mexico: Sea Level and Paleoclimatic History. Joyce, J.E. et al

10 365/Rev Conjugate passive margin drilling - North Atlantic Ocean. Austin, J. et al with 363/ADD Paleoceanographic record at proposed drillsites NR1, NR2 & NR3 Tucholke, B.E.

11 296/C Ross Sea, Antarctica. Cooper (tied with the above)

12 313/A Evolution of a major oceanographic pathway: The Equatorial Atlantic. Jones et al

North Pacific Transect

OHP generated a drilling plan for this leg that will fit in a normal length leg providing that the leg starts from Yokahama. OHP urges PCOM and TAMU not to waste five days of science in this distant part of the ocean by returning to Honolulu after the previous leg.

Reviews

OHP reviewed many new proposals and also discussed several that have been "in the system" for a while. The proponents of some of these will be urged to update them.

OHP met 28 February in Chapel Hill, North Carolina, hosted by Tim Bralower. Present were: N Shackleton (chair), Bob Duncan (PCOM), Audrey Meyer (TAMU), Guy Smith (LITHP), Peter Swart (SGPP), Bill Berggren, Tim Bralower, Jim Channell, Peggy Delaney, Tim Herbert, Al Hine, Tom Loutit, Alan Mix, Lisa Pratt, Edith Vincent, Gerold Wefer.

On 29 February the panel was joined by Dave Rea (chairman, Atolls & Guyots DPG), Isabella Premoli Silva (alternate to Eystein Jansen, ESF), Joe Morley and Lloyd Keigwin (Proponents for the North Pacific Transect proposals).

Apologies for absence were received from Peter Davies, Eystein Jansen, John Barron and Hise Okada.

After welcoming remarks from Tim Bralower, welcome to new members and introductions, we proceeded to the PCOM Report (Duncan).

PCOM REPORT

USSR has signed an MOU and will participate from Leg 138.
The FY '92 plan was introduced (see JOIDES JOURNAL).

NJS commented that he was pleased that PCOM now allows Panel Chairmen to present Thematic Panel prioritisation at the PCOM Annual Meeting. He feels that this is a better way of ensuring that when the next Fiscal Year's drilling is planned by PCOM they are fully aware of Thematic Panel interests.

The concept of Add-On short proposals, discussed by OHP at the last meetings, is being tried. Proposals for the FY '92 plan will be accepted up to 1 June. NJS explained that this will require that the panel review these by mail since the decision on these will be taken at the August PCOM meeting before OHP meets again.

Whole-round blind sampling for OGP has been terminated as recommended by OHP.

NSF have committed support for unexpected fuel price rises, forestalling the possible delay to publication schedules that might have arisen due to the funding shortfall.

NSF has decided to renew the program for five years with the Joides Resolution, with the decision regarding other platforms to be critically evaluated after that.

STRATCOM is enthusiastic to see more good review articles on those areas of ODP science that "will be in the textbooks within a decade". Members could look, for example, to Geology Today that is edited by Eldridge Moores for GSA.

DPG's in operation are:
North Atlantic/Arctic Gateways (has met; Berggren and Jansen members from OHP, Berggren to report)
Atolls and Guyots (meeting 27-28 February, Rea to report)
Atlantic Rifted Margins (Berggren member, to report)

In addition there is one Working Group:
Sea Level (to meet 2 March, Davies and Loutit members from OHP)

NJS also reported on the Panel Chair Meeting the day before PCOM. Many of PCOM's decisions came out of this meeting. For example, this group discussed the concept of supplemental or add-on proposals in greater depth than PCOM had time for.

TAMU SCIENCE OPERATORS - REPORT (AUDREY MEYER)

AM explained that a serious effort is being made to ensure that

PCOM design drilling legs for no more than 56 days except in really exceptional circumstances.

Although the schedule for FY '92 is set, the port calls are not firm; the ports currently written in involve excessively long transits.

Staffing pressures will change with the entry of USSR. Up to now the 2-members per leg written into the MOU with non-US countries has been balanced by the informally preferred 50% US participation. To maintain this would require 4 more scientists; more likely is that the 50% US participation will not be maintained, especially as USAAC is experiencing funding difficulties. Duncan reported that the idea that non-US student participants might sail as technicians is apparently not receiving much support at present unless they were not counted in the agreed number of scientists (it had been proposed that this could ease the pressure on the number of scientist slots; there is general agreement that on many legs it would be more useful to have more technicians rather than more scientists.

ODP-TAMU has a position open for a geochemist (hopefully filled soon) and several technical staff changes.

Publications are coming very close to the target with Initial reports out around 10-14 months post cruise and Science Reports close to the 36 month target. There is funding concern resulting from the extreme length of some Initial volumes (Leg 133 may need two volumes!).

Several concerns regarding the publications and editorial handling were aired again; Audrey Meyer accepted that some of the criticisms were valid but assured the OHP that many had been dealt with already.

Leg 135: of interest to OHP is that the computer-input barrel sheets were used on this leg, although they were not actually filled through the computer on that leg. On Leg 138 the Visual Core Descriptions will be entered into the computer.

Leg 134: the Sonic Core Monitor was used successfully. This device was designed to record exactly where in section each piece of core originated. However, it requires rebuilding with sturdier components before it can be regarded as useable. Core Recovery in reefal carbonates was poor (below 15%), a which gives cause for concern for two Atolls/Guyots Legs.

The French downhole Magnetic susceptibility tool was deployed successfully, as was the new German downhole borehole televiewer.

The Vibra-Percussion corer is regarded as not yet having operated effectively despite having recovered some material on leg 133.

PCOM has declared the Formation Microscanner one of the Routing Logging Tools on the basis of its successes.

The Diamond Coring System has a great deal of development ahead before it can be used as a routine tool. Current expectations are that we cannot anticipate using it for OHP purposes in the next couple of years.

SMALL ITEMS OF BUSINESS

It was not possible to identify a permanent Liaison to SGPP; Hine is unable to attend the next meeting and NJS will try to find an ad hoc liaison for the following one.

NJS drew attention to the Moran/Worthington report on the integration of core and downhole data; the panel welcome the

document.

The existence of the AGU Paleoceanography Committee Bulletin Board PALEOCEAN on TELEMAIL was drawn to the attention of OHP members.

The USAAC Workshop on Antarctic Paloeceanography will be hosted by Kennett, 28-30 August.

The USAAC Paleogene workshop was attended by OHP members Shackleton, Herbert and Berggren. The report should help us with future planning.

PROPOSAL REVIEWS

A few points were re-iterated or re-emphasised for new members:

1. Reviews are not judgements on proponents. Proposals are the documents from which the drilling program is constructed.

2. Panel Members are chosen for their expertise. During their short tenure they should contribute as much as possible and should be encouraged to submit and promote drilling proposals; the system has ample controls as well as delays, that there is very little danger they that an individual panel member might have undue influence.

3. It is nonetheless important that every review represents the collective opinion of the panel.

4. It may well be necessary for the level of proposals addressing OHP themes that are to be presented to PCOM with high ranking to be improved considerably; the OHP should probably put more effort into assisting the proponents of proposals that the panel

seriously hopes to see drilled.

5. Proposals that have been in the system for over two years without any new support from their proponents are liable to be regarded as "dead". The OHP must keep an eye to prevent proposals that they judge important from falling into this category.

389 Cretaceous N-S Traverse in the Western South Atlantic
Malgrem, B.A.

As presently proposed only a very narrow problem is presented; either a much more substantial Mesozoic plus Cenozoic proposal should be put together (probably involving other proponents) that could justify a major N-S transect, or the proponent should contact proponents of existing proposals so that his interests can be added to their proposals.

Objectives The objectives of this proposal relate entirely to Cretaceous micropaleonotology; 1) To study biotic evolution, radiations, extinctions, speciation processes and phyletic evolution, 2) To investigate the paleobiogeography of planktonic and benthic microfossils with changes in South Atlantic paleoceanography and Late Cretaceous climate.

Drilling requirements 6-7 sites along a N-S traverse from 5°N to 50°S in South Atlantic. No site survey or depth data given.

Review This proposal is still in a very preliminary state. Even so, we feel that it is worthwhile to pass along some remarks/advice to the proponent at this time in order to help him formulate as strong a drilling proposal as possible. This proposal contains very narrow goals. If the proponent is to make it of more interest to OHP, he must broaden the scope of the

proposed investigation to include wider paleoceanographic goals such as circulation, thermal gradients, productivity etc. We have several questions which must be addressed in a more detailed proposal: (1) How will biogeographic factors be separated from other variables such as local circulation, preservational changes etc. (2) Will preservation in these sites be sufficient to do detailed biogeographic work? (3) How was the location of sites selected and are site survey data available? (4) Why the Western and not the Eastern South Atlantic? (5) What about the overlying Cenozoic section? Several of the important themes, especially those relating to evolution, should be addressable from presently drilled S.Atlantic sites. The proponent must demonstrate that many of the questions posed cannot be answered from existing material. In addition, the proponent must make an effort to compile data from existing S.Atlantic sites especially from more recent legs 73, 74, 75 and 114 and to show that the drilling is still necessary.

390 Drilling in the Shirshov region Milanovsky, V. & Neprochnov, Y.

A brief proposal with new seismic data for the Shirshov Ridge. The proponents should be encouraged to contact the proponents of the two earlier Bering Sea proposals. OHP does have strong interest in drilling in the Bering Sea and would welcome either a new major proposal or the formation of a DPG for the Bering Sea.

59/Add Continental margin sediment instability investigation by drilling adjacent turbidite sequences Weaver, P.P.E. & Kidd, R.B.

OHP feels that this proposal primarily addresses the sedimentological consequences of sea level change and is thus

primarily in the SGPP mandate. However, OHP believes that the proposal will not add to our understanding of sea level history or processes for a number of reasons. The proponents have not illustrated a link between sea level and turbidite deposition - no obvious pattern based on figures shown. There is no question that there is a repetitive pattern, but the pattern is not documented relative to specific changes in sea level. Error bars on turbidite ages are not shown and no O-18 curve was provided for comparison.

Probably should be accompanied by work on understanding the sedimentary processes on the adjacent African margin. How well known is the upwelling history on this margin? No discussion of mechanisms of mass wasting. This would seem to be a critical component of the model and should be addressed.

OHP also raised some questions concerning the effective use of nannofossil biostratigraphy in the time intervals to be studied.

Thr methodology outlined may be more appropriate for long term monitoring of sea level activity rather than details of sea level events.

323-REV The Alboran Basin and the Atlantic - Mediterranean Gateway: Neogene evolution of continental basement overthrusting and extension in the Alboran Sea and development of the Atlantic - Mediterranean Gateway. Comas, M.C. et al

The goal of reconstructing paleoceanographic changes in the Mediterranean gateway is central to OHP's themes. However, the paleoceanographic aspects in this proposal do not seem to effectively address these goals. The panel is sceptical whether the primary paleoceanographic sites in the Gulf of Cadiz will provide a suitable record, as their interpretation is based on

the presence of sand coutourites and turbidites, making stratigraphic interpretation difficult. The proposal does not discuss in any detail the potential paleoceanographic studies in the Alboran Sea. The sites are positioned primarily for achieving tectonic objectives; to receive strong support from OHP, site selection would need to fully address recovering complete, continuous pelagic sequences.

The Ocean History Panel does recognize the importance of a good tectonic reconstruction in the Mediterranean region and its role in constraining paleoceanographic reconstructions, but thinks that evaluation of these aspects is better handled by the Tectonics Panel.

391 Depositional history and environmental development during the formation of Sapropels in the Eastern Mediterranean Zahn, R. et al

This proposal outlines a PROCESS STUDY to assess the roles of productivity versus preservation in forming sapropels (but favours productivity). As proposed, the process study does not require long ODP records, and does not explain the need for transects of several cores. This study could be done more effectively on large-volume, short gravity cores available at several institutions in Europe and the U.S. The Ocean History Panel does recognize the importance of sapropel history as a part of the paleoclimatic evolution of the Mediterranean. This proposal, however, does not design a coherent experiment to address these historical aspects, as would be required to gain strong support from the Ocean History Panel.

365-REV Conjugate passive margin drilling - North Atlantic Ocean

Austin, J. et al

Objectives This proposal addresses major paleoceanographic objectives. These include the determination of earliest (Late Triassic-Jurassic) paleoenvironments of the Atlantic, documentation of Cretacous sea level fluctuations and study of circulation changes in the Cretaceous and Cenozoic.

Sites Scores (it would help in reviewing this proposal if we could get some idea of how many legs this program expects to occupy.)

Review Parts of this drilling program will doubtlessly be rewarding from a paleoceanographic point of view. Numerous excellent Upper Cretaceous and Cenozoic sections should be recovered. The site selection has clearly been dominated by tectonic considerations, however, there are numerous sites which are well positioned to achieve paleoceanographic goals.
Transect drilling is an important part of the document drawn up after the Cretaceous Rhythms, Events and Resources meeting last year, and although these transects are not in an ideal position for answering some of the questions related to the origin of organic-rich sediments in the Cretaceous, they should compliment other proposals which are currently being prepared. A major problem with the location of both transects is the likelihood of recovering sections dominated by redeposition, especially in the basinal locations, however, this is a ubiquitous problem in this part of the Atlantic. The Triassic-Jurassic goals are certainly less attractive as these sediments are likely to be highly lithified and poorly recovered.

393 Drilling the continent - ocean transition on the SE Greenland volcanic rifted margin: linking continental flood basalts to seaward dipping reflector sequences Larsen, H.C. et

al.

The proposal is primarily of TECP and LITHP interest. In order to maximize the paleoceanographic objectives of this leg the OHP suggests that the proponents contact Bill Ruddiman at LDGO who is the chair of the North Atlantic Gateways DPG. The NAGDPG recently completed a meeting and are in the process of writing a document outlining their plans. OHP also recommends that the proponents obtain copies of proposals 305, 320 and 336 as soon as possible.

395 Post-breakup compressional tectonics on a passive volcanic continental margin Boldreel, L.O. & Andersen, M.S.

Primarily of TECP and LITHP interest. However, 2 sites are of interest to OHP. Two sites in the Faroe Bank Basin offer an opportunity to look at the evolution of deep water exchange between the Arctic Ocean/Norwegian Sea and the North Atlantic. One site HPC and the other double HPC. In order to maximize the paleoceanographic objectives of this leg the OHP suggests that the proponents contact Bill Ruddiman at LDGO who is the chair of the North Atlantic Gateways DPG. The NAGDPG recently completed a meeting and are in the process of writing a document outlining their plans. OHP also recommends that the proponents obtain copies of proposals 305, 320 and 336 as soon as possible.

396 Testing of the hot-spot model for the origin of volcanic passive continental margins Andersen, M.S.

Primarily of TECP and LITHP interest. However, secondary objectives are concerned with: the Cenozoic paleoceanography of the Greenland-Iceland Faroe Ridge and the influence of this ridge on water exchange between the Nordic-Arctic Ocean and the Atlantic Ocean; drift sediments in the area; correlation of

paleoceanographic events and marine biostratigraphy to glacial events.

Specific objectives include: 1) the subsidence history of the Greenland-Iceland Faroe Ridge 2) the longevity of a possible Scotland-Faroe-Greenland land bridge 3) the history of water exchange between the Norwegian-Arctic Sea and the Atlantic Ocean; 4) the evolution of cold, oxygen-rich bottom waters.

Sites FIR/A-1,-2; FIR/B-1,-2,-3; subsidence of the ridge
Sites ICB/A-1,-2,-3; evolution of deep water drifts, sediment transport mechanisms, correlate glacio/volcanic events with paleoceanography (intercalated drift and indurated volcaniclastic sediments.)

In order to maximize the paleoceanographic objectives of the leg, the OHP suggests that the proponents contact Bill Ruddiman at LDHO who is the chair of the North Atlantic Gateways DPG.

Proposals 393, 395 and 396 all offer paleoceanographic objectives in the Norwegian-Greenland Sea. On the one hand OHP felt that since a DPG has just met to generate a drilling plan for the region taking account of carefully prepared proposals to tackle the same problems, OHP would be unlikely to give support to proposals that include contributions in this area on the side. On the other hand there was a strong feeling that if any or all of these proposals obtains strong support from other panels then the proponents should have the opportunity to make the case for their paleoceanographic interests within the context of the work proposed by the North Atlantic Gateways DPG, which should probably then be reconvened to maximize opportunities for the area. Meanwhile the proponents of these proposals should contact Bill Ruddiman as chairman of NAGDPG to be well informed.

A single S-category proposal was received for review (OHP had at their previous meeting strongly supported the proposal for the Santa Barbara Basin in anticipation of the possibility that PCOM might create this category).

Proposal S-1 is to document Lithofacies and Depositional Cyclicity, Navy Fan, California Borderland. On a technicality, NJS pointed out that in requesting 6 days drilling this proposal does not fall within the PCOM guidelines. However, on the assumption that it could be resubmitted with fewer holes in order to satisfy the guidelines, it was discussed by OHP. The objectives clearly fall only within the SGPP mandate.

ARCTIC GATEWAYS DPG

Berggren reported on the meeting of the DPG on Arctic Gateways/Norwegian Sea Drilling. A report with drilling recommendations will be produced shortly. The report will recommend two legs of drilling a year apart. Aside from enabling all the objectives to be achieved, this strategy maximizes the chance of obtaining the most important objectives which are so far North that the ice conditions would not permit drilling in some years.

Clearly since the scheduling of the second leg a year after the first would require that the decision on the second leg be taken, the panel will need, at the meeting one year from now, to rank the second leg in isolation without information on the success of the first one. OHP discussed this, and on the basis of Berggren's verbal report on the DPG meeting, were firmly convinced that a two-leg program will be needed to achieve the large range of objectives in a satisfactory manner. It was recalled that latitudinal, longitudinal and depth transects are needed in an area that is quite large, both in detail for high-

resolution Neogene investigations and for the very important geologically longer record of the role of the Norwegian-Greenland Sea in relation to the global ocean.

NORTH PACIFIC TRANSECT

The major item of business: the North Pacific Transect, was discussed next. NJS explained that PCOM scheduled this leg on the basis only of OHP support. For this reason OHP, rather than a new DPG, were invited to distil a program that could be accommodated in a not-too-long leg with transit from West to East built in. NJS also explained that he had assured PCOM that the OHP strategy of investigating the history of the response of the ocean to high-frequency climatic variability absolutely requires a North Pacific Transect; that the recovery of sequences containing carbonate microfossils had appeared impossible until recently and that these sequences will be of huge value despite the evident fact that the stratigraphic sequences are not so well displayed as in some other areas of the ocean. He also informed PCOM that the North Pacific is also very important in relation to longer-timescale objectives and here he defended sites NW3A and NW4A on the grounds that since these are not chiefly high-frequency sites there is no significant danger that low-quality survey data will prejudice the scientific returns.

Morley presented the prime justification for site NW1, which will contain an excellent high-resolution paleoceanographic record that will be documented primarily by radiolarians. The potential is well documented by the data from piston-core V20-122 and the data will extend northwards the transect provided by Leg 86 sites. Good magnetostratigraphy is expected on the basis of experience with leg 86 sites. In discussion, OHP recognised the great importance of this site.

Lloyd Keigwin presented the rationale for the Detroit Seamount

sites. The chief objective is to obtain Neogene sequences across a depth transect in order to monitor changes in the vertical structure of the ocean (using stable isotope and geochemical tracers in benthonic foraminifera as well as benthonic faunal changes). In discussion, the panel also appreciated the value of this objective. However, rather than spend time drilling deeper into Site DS2 (which was never envisaged by the proponent as a deep site) they would prefer only to APC core this intermediate water depth site, but to insert two sites in the mid part of the transect so as to improve the scientific return from the transect. Keigwin will provide survey data to support sites DS2 and DS2A. The position of the basement at site DS1 was queried by Loutit; if the basement is to be cored to satisfy non-OHP objectives then the site must be chosen so that it can be achieved without coring sediments that appear jumbled.

Alan Mix presented the rationale for the Patton-Murray seamount site since none of the proponents was able to attend. Again the chief importance of this site lies in the fact that carbonate microfossils are present in a stratigraphic sequence that appears to contain considerable promise. The basement is a significant scientific objective at this site and OHP believe, like CEPAC, that in such a distant part of the ocean time should be found for important objectives outside the thematic objectives of the leg where feasible.

Dave Rea presented the rationale for sites NW1, 3 and 4 in terms of understanding the history of wind transport (trajectories and intensity) as well as the contribution that NW3 and NW4 will have to understanding plate dynamics and the contributions that the deeper part of the sections at virtually all the sites will make to understanding the Mesozoic history of the region.

Dave Rea presented drilling time estimates and also transit time

estimates (later confirmed by TAMU) on the basis of a leg starting from Yokahama and ending in Seattle. The consensus was that in spite of the possible extra cost of using a Japanese port, the saving of five days' science was especially important for this distant part of the ocean and the panel were unanimous that planning should assume that the Yokahama option will be taken.

Even with this port call, the drilling times estimated to attain all the objectives in the CEPAC prospectus for this leg add up to about 49 days which with transit would require a 69 day leg.

CEPAC estimates:

site	drill	log	total
NW-1A	3.8	1.6	5.4
NW-3A	3.8	1.6	5.4
NW-4A	3.8	1.5	5.3
DS-1	5.3	1.6	6.9
DS-2	5.9	1.7	7.6
DS-3	10.3	2.1	12.3
PM-1	5.2	1.5	6.7
Total			49.6

OHP discussed various options and made a well balanced assessment of the multiple objectives in the program. It was proposed that site NW3A could be sacrificed. Rea explained that, although the site is desirable for both wind and tectonic objectives, its material would represent an incremental increase in information for the Aeolian history while the alternative plate history scenarios are making sufficiently different predictions of the age of the crust at NW4A that drilling this site without NW3A should solve the problem.

OHP also advocate dropping the deeper objectives of site DS2

which have not been proposed by Keigwin and could not be justified by the seismic data. However, the OHP encouraged Keigwin to seek a second site for APC drilling at a depth intermediate between that of DS1 and DS2. Thus the original proposal for the region to drill a depth transect to learn the Neogene history of intermediate- and deep- water stratification in the North Pacific, will be strengthened to a four-site program. Site DS1 on the top of Detroit Seamount may yield a valuable Paleogene record and sample the seamount core, although at the site proposed, the sediment appears from the seismic line to be nearer 1000m than 500m in thickness; further thought is needed to optimise this site.

After examining the seismic data for DS3, OHP were optimistic that this site will yield a valuable high-latitude Mesozoic record above basement. The program then becomes:

Transit Yokahama to NW1A

site	drill	log	total
NW1A	3.8	1.6	5.4
DS-1	5.3	1.6	6.9
DS-2	1.5		1.5
DS-2A	1.5		1.5
DS-3	10.3	2.1	12.4
NW-4A	3.8	1.5	5.3
PM-1	5.2	1.5	6.7

Transit PM to Seattle

Add 19 days transit

Transit estimates given to Audrey Meyer by TAMU 2.3.91:

Yokahama to Detroit Seamount sites	5.8 days (Honolulu, 10 days)
DS to NW-1 A	1.4 days
NW-1A to NW-4A	3.5 days

NW-4A to PM-1	5.1 days
PM-1 to Seattle	4.5 days
Total transit	20.3 days

But a better option is to re-order, starting with NW-1A in which case the time reduces to about 19 days as used above (or somewhat over 23 days if the transit were from Honolulu).

These drilling times assume that the objectives of sites NW1A and NW4A can be achieved by the combination of 2*APC and XCB. They also assume no significant setting up time for DS-2 and DS-2A, and that these APC-only holes will not be logged.

Guy Smith (LithP) informed the panel that the most important basement sampling would be at DS1 and PM1. However, the drilling times are based on terminating Site DS-1 at around 500m which possibly would be far short of basement.

OHP also discussed the option of returning to DSDP 192 now that USSR have signed an MOU to join ODP. This site might well have some advantages over DS2 as a component of the depth transect, but the remainder of the section at DSDP 192 does not appear from the Initial Reports to be of special value and the extra transit time to DSDP 192 would not be warranted solely to take an APC core there instead of at DS2.

ATOLLS AND GUYOTS LEGS

Dave Rea outlined the outcome of the meeting of the Atolls and Guyots DPG. He reported that the meeting had gone very smoothly despite the rather large attendance. Two legs of exciting drilling have been planned on the basis of the excellent proposals; the draft minutes of the meeting are already available

and will not be repeated here.

The new Japanese downhole 3-component magnetometer may be available for this leg (for basalt); this is designed to be compatible with the Schlumberger tool string (Audrey Meyer cautioned that it will need to have been tested successfully if it is to be used).

Peter Swart commented that although pore waters cannot properly be taken without a packer (which Rea had remarked implies that pore waters will not be available) the use of a Barnes type tool after logging can, if a tracer such as tritium is used to determine the seawater end-member, provide very valuable information on the porewater and should be used.

PROPOSAL RANKING

Proposal ranking was undertaken in four steps. (1) before the meeting NJS circulated with the minutes a list of proposals (including a few that were submitted some while ago) with names of panel members to whom copies would be sent, and invited panel members to suggest any others that ought to be reconsidered. (2) at the meeting each of these proposals was discussed. This gave the panel (including members who had not been party to earlier reviewing) the opportunity to decide whether there are any proponents who should be encouraged to do more work and submit new proposals. In effect this means that a few proponents will receive new reviews from this panel. (3) all the proposals that (a) were of thematic interest to the panel and (b) are of sufficient maturity to rank, were assigned to one of five themes. As regards (b) the degree of maturity deemed "sufficient" was judged subjectively in that taking account of the geographical area as well as the degree to which the support of the panel may accelerate the maturing of the proposal. The themes used were:

"low frequency global change/Mesozoic and Paleogene"; "high frequency global change/Neogene; "upwelling/productivity history"; "sea level history"; "high latitude problems". The last category is not a "geographical theme" but a recognition of the fact that the best proposals for inaccessible high latitude regions have multiple objectives. (4) the proposals within each "theme" were ranked (within most themes the ranking was agreed without any difficulty on the basis of the remarks made during the previous discussion). (5) the panel took a series of votes in each of which the voting was between the highest-ranked proposal remaining in each theme. In the event of a tie between the first two in a voting round, the vote was re-taken between only the two proposals tied. All panel members voted, but if at any stage the number of votes separating the first and next proposal on the slate was small enough so that the result could have been affected by the vote of a proponent, the vote was re-taken with proponents abstaining. Although this procedure was a little cumbersome, the panel judged that it was very fair and that the ranking of twelve proposals given below does reflect the judgement of the panel.

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(probably 2 legs as advocated by the DPG)

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4 388 A proposal to Advance Piston Core the Ceara Rise, West Equatorial Atlantic: Neogene History of Deep Water Circulation and Chemistry Curry, W.B., Backman, J. & Shackleton, N.J.

5 253 Black Shales/Shatsky Rise Schlanger, S.O. & Sliter, W.V.

6 347 Late Cenozoic Paleoceanography, South-Equatorial Atlantic Wefer, G. and Berger, W.H.

7 CEPAC/390 Bering Sea

8 386E/Rev California Margin: Neogene Palaeoceanography of the California Current, Coastal Upwelling, and Deformation of the Gorda Plate Lyle, M., Barron, J., et al

9 345/A The West Florida Continental Margin, Gulf of Mexico: Sea Level and Paleoclimatic History Joyce, J.E. et al

10 365/Rev Conjugate passive margin drilling - North Atlantic Ocean Austin, J. et al 363/ADD Paleoceanographic record at proposed drillsites NR1, NR2 & NR3 Tucholke, B.E.

11 296/C Ross Sea, Antarctica Cooper (tied with the above)

12 313/A Evolution of a major oceanographic pathway: The

Proposals 323, 337, 338 and 391 were also regarded as of sufficient long-term interest to be included in the ranking process although the panel chose to cut off the actual ranking above that level.

The ranking reflects the awareness of OHP that a new proposal for the Upwelling studies off Namibia is being written as a result of OHP's request after reviewing proposals 354 and 339. It also reflects the awareness of OHP that a new proposal is being written for Shatsky Rise in view of the conceptual advances that have been made since proposal 253 was submitted. As regards this proposal OHP re-emphasise that this objective, high in the panel's ranking for many years, cannot be achieved unless advances are made in the engineering problems inherent in drilling and recovering chert-chalk sequences. In view of the continuing interest in the Bering Sea, ranked well above an important Antarctic proposal, and in view of the fact that the Bering Sea Program is a construction of the now-defunct CEPAC so that the original proponents may no longer be the individuals to drive this program forward (especially with the entry of USSR interest) it may be that to set up a DPG would be the appropriate means for obtaining a first-rate proposal.

In the discussion leading up to this exercise, constructive remarks were made on several other proposals that the OHP hopes to give strong support to in the future. These include: 324 (Malta Escarpment).

Co-chief suggestions

OHP discussed possible co-chief scientists with OHP interest for legs 143, 144 and 145.

For 143 and 144, Jerry Winterer, Isabella Premoli-Silva, Wolfgang Schlager, Bill Sliter and Hugh Jenkyns would constitute a good slate for PCOM's consideration
For 145 Dave Rea, Brian Bornhold, Tom Pedersen and John Barron were suggested.

Under other business, NJS expressed concern regarding the phenomenon whereby the length of sediment shown to have been recovered after compiling a double APC site is about 7-10% greater than the thickness of section cored. Audrey Meyer undertook to send an engineer's memo on this question; the OHP agreed that the phenomenon should be investigated and, ideally, eliminated.

Next meeting: 1-3 October, Yamagata, host Hisatake Okada.

NJS thanked Tim Bralower for hosting the meeting in a very enjoyable locality, and Peggy Delaney for assistance in keeping notes on the meeting.

The meeting closed at 2.00 on March 2nd.

Posted: Wed, Apr 3, 1991 6:31 AM EST Msg: AGJB-4658-5377
From: N.SHACKLETON
To: joides.utig
Subj: ohp minutes

One think that is not crystal clear in the executive
summary of the minutes is that the third priority as listed
there is a combination of proposal 354 and proposal 339;
we anticipate a revised proposal coming in that will include
proponents of both these.
cheers, Nick