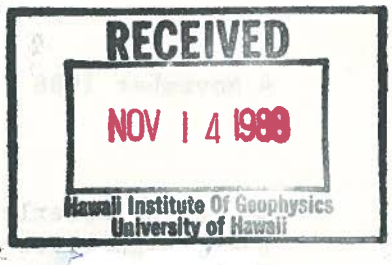
Information Handling Panel
19-21 September 1988



Executive Summary

A great deal of time was spent on discussion of shipboard computers and graphics software (see pages 6-7 and Attachment V). IHP applauds ODP's acquisition of four new Macintoshes and a laser printer for shipboard use.

IHP expresses its gratitude to USSAC, NGDC, and ODP for a joint project that will put the entire DSDP data base, with index, on a CD-ROM (see pages 11-12 and Recommendation 4 below).

IHP will review cases and forward to the PCOM chairman names of ODP participating scientists who have failed to live up to their obligations to provide papers for the Scientific Results volumes (see page 10 and Recommendation 2 below).

Recommendations

1. Noting that "guest investigators" on ODP legs are not now required to submit data collected on board to the ODP data base, or other public domain data bases, IHP recommends that the official sampling policy be changed to state that all data collected during ODP legs must be placed in a public domain data base (see page 10).

2. In hopes of encouraging ODP leg participants to live up to their commitments for publication and reporting on samples received, IHP recommends that ODP send a stern warning to participants (with copies to USSAC or appropriate secretariats) when it appears that the participant may not meet the deadline for submission of papers for inclusion in the Scientific Results volume. This letter should indicate that failure to comply with their commitments could preclude any further participation in the Program.

3. IHP recommends that ODP Editorial Review Boards elect a chairman to coordinate their activities (see page 9).

4. It is recommended that JOIDES fund the production of CD-ROM copies of the ODP data base on a biannual basis. These data-base copies would contain all data available from all legs completed at least 18 months prior to issuance of the CD-ROM copy (see page 12).

5. IHP recommends that ODP recover costs of producing the video disk of core photographs by charging $50 per copy (see page 12).

4 November 1988

Dr. Ralph Moberly
Hawaii Institute of Geophysics
University of Hawaii
2525 Correa Road
Honolulu, HI 96822

Dear Dr. Moberly:

Enclosed is your requested copy of the report of the Information Handling Panel Meeting of 19-21 September 1988.

Sincerely,

Elsa Kapitan Mazzullo

Enclosure

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Information Handling Panel
Meeting Notes - 19-21 September 1988

Present: T. Moore, I. Gibson, J. Hertogen, R. Ingersoll, M. Jones, A. Loeblich, W. Rose, E. Kappel, M. Loughridge, E. Moussat, R. Merrill, C. Broglia, M. Hobart, J. Foster

A. Opening Comments by T. Moore

J. Nowak is not able to attend, but she sent a Telex for input.

M. Latremouille cannot attend and is planning to resign from the IHP.

B. Discussion of Action Items

1. Data-base format information has been forwarded to the IHP by P. Brown and R. Merrill.

2. Reviewers for Interstitial Water, Rock Eval, and Gas Chromatography data-base formats have yet to be selected. T. Moore has reviewed Carbon/Carbonate; J. Hertogen and I. Gibson will review the Hard Rock and XRF data bases.

3. Two models of title pages listing the Editorial Review Board members were submitted by N. Stewart and W. Rose. This topic will be discussed with other Publications topics.

4. R. Merrill and B. Bryant submitted the whole-round sample request policy to the IHP (Attachment I).

5. T. Moore reported on his discussions with T. Pyle and B. Riedel concerning the role of the IHP in the submission and review of Paleo Reference Center support. B. Riedel has projected submitting a proposal (tentatively in October 1988) to JOI for funding the collection and preparation of additional reference center samples.

6. The Smithsonian Institution has agreed to accept an eighth set of reference samples. (R. Merrill will check that the sample set has been shipped.)

7. C. Broglia will meet with M. Lovell next week at Lamont and subsequently report on their discussion on passing data requests by British scientists on to him. This delegation will avoid duplication of requests and generation of data.

8. M. Jones recommended that the approach to European non-performers for Scientific Results publications be to intervene early, as opposed to penalizing scientists afterward. R. Merrill supports this approach for the international committees, involving direct ODP notification to the scientist's country. This topic will be covered in depth in the discussion of "non-performers."

9. C. Broglia noted that there was a continuing problem involving parity errors and the unreadability of some logging tapes. This delays data processing and distribution. M. Loughridge said that NGDC does not have a tape renewal program but is investigating archival procedures. Although the adoption of a new non-tape media should avoid problems of permanency, NGDC has not made a decision on whether transferred data should be cleaned up, which requires time and money.

C. Planning Committee Report

T. Moore read a letter from PCOM (dated 1 September 1988) with the following concerns:

Scientific community dissatisfaction with the shipboard computer graphics capabilities (PICSURE) and available printers.

PCOM approves ODP volume costing to recover full volume cost by charging prices based on $0.061 (U.S.) per Initial Reports page and $0.057 per Scientific Results page. Questions regarding this pricing are posed by PCOM and are answered in W. Rose's letter to N. Pisias (Attachment II).

E. Kappel reported on the PCOM meeting in Oxford:

Summary of the Performance Evaluation Committee meeting in March 1988: the PEC is worried that ODP publications are not sufficiently thematic and instead focus on a leg by leg approach. USSAC will be advancing seed money to help the scientific drilling community develop a thematic "Part C" publication, which would be published through established scientific journals instead of being an ODP responsibility. I. Gibson and J. Hertogen agreed that thematic concerns typically overrode the DSDP tie-in in considering where to publish hardrock papers. M. Loughridge estimated a two-year preplanning period for ODP to handle theme publishing; according to R. Merrill, Publications would be able to handle ad hoc, but not regular, volumes now. The IHP is in favor of theme volumes, despite the impracticalities involved, if they are privately published (cf. the AGU Ewing series).

Panel structure has been changed after a review. Panels will stay intact through the November 1988 PCOM meeting, with changes implemented in January 1989. The Sediments and Ocean History Panel will be split into the Sediment Processes and Diagenesis Panel and the Ocean History Panel. The new Shipboard Measurement Panel will be kept smaller than the usual panel size, with a prerequisite that panel members have sailed on the Resolution. The Western Pacific Regional Panel (WPAC) and Central & Eastern Pacific Regional Panel (CEPAC) will continue to function in an advisory capacity but will be downgraded from panel status. Toward the end of and after completion of CEPAC drilling, proposals will be accepted for all oceans, from which the best proposals will be entertained on scientific merit, regardless of political and logistical considerations.

The JOIDES office will move to Hawaii, starting with the new fiscal year in October 1988. R. Moberly is the new chair.

D. Lamont Logging Operator Report

M. Hobart discussed the Logging Operator report.

In regard to the Gibson report (Attachment V) and D. Rea's letter, the Lamont logging computer can be connected to the ship via Ethernet.

Apple Macintosh computers have been added to the shipboard downhole lab. Macs are being experimented with at Lamont to set up graphics procedures. For example, Cricket Graph supports files with up to 2700 rows by 40 columns but will be limited by the Mac memory.

Because PICSURE is limited to 5000 x-y points per graph, it is overwhelmed by the large amount of logging data (one data point every 0.5 ft).

A new Masscomp and uninterruptable power supply have been installed at the Borehole lab for much faster processing capabilities. A new Schlumberger Elite 1000 workstation based on a MicroVAX II is used for onshore processing of geochemical data for Initial Reports volumes.

The MicroVAX aboard ship will be linked by Ethernet (with the Carnegie Mellon program instead of Decnet) to handle the Schlumberger Formation MicroScanner (FMS) tool, to be introduced next year (Schlumberger is donating the software, which runs on VMS). The FMS drains computer time, with 100 m of hole generating 60 megabytes of data. The only FMS real-time processing done is for engineering corrections. Actual shipboard processing time is not known, with initial data reduction shown on the Versatec printer. Development of FMS processing (similar to borehole televiewer image analysis) on the Mac II will begin in early 1989.

R. Merrill wanted to know if gamma-ray spectrometry tool (GST) data reduction software would be able to run on the free time. M. Hobart responded that this would require a 600+ megabyte disk and a significant processing and training load. M. Hobart also noted that the "cool"-source GST under commercial development has a slower logging rate and much slower processing than the current GST tool.

Plans at LDGO for next year include developing a network graphics standard that implements x-windows. Another option is the use of remote log-in on the ship PCs to the log data (for availability prior to hard-copy issue) via Ethernet TCIP interfaces.

Although the use of the same scale for barrel sheets and log printouts was discarded by the Downhole Measurements Panel in 1986, calibration will be tried on Leg 124 with the usual shipboard logs produced. Log data spacing is 15 cm, but not all tool resolution is this close (up to 2 m); FMS shipboard processing would have a close resolution.

File movement between Mac SEs and Masscomp will be accomplished via Kermit. TERRALOG processing dumps data in ASCII columnar files for manipulation with Cricket and Excel on the Macs (for which the file size limits for graphics have not been explored yet; the limits mentioned in the

Cricket documentation are mentioned in the preceding). Lamont is also developing software to aid Mac access to perform data overlay.

E. Data Base Group Report

R. Merrill updated P. Brown's report (Attachment III) through 16 September 1988 as follows:

Personnel losses from the Visual Core Description (VCD) task force have prevented completion of the project. As of 30 September 1988, the fiscal support will end. Full-time support for K. Conner (as supervisor) and three student workers will continue for another six months.

VCD leg status is complete for Legs 101, 103 through 105, 110, 114, 117, and 118. Leg 112 data have been entered and edited, but corrections have not been input yet. Data for Legs 108, 113, and 115 have been entered but not edited. Legs 107, 111, 116, 119, and all subsequent legs are partially entered.

R. Merrill explained that the entire handwritten description on the VCD paper form is entered into the data base and that the data-base retrieval index is developed from selected key words in the description. In response to I. Gibson and T. Moore's queries about the future backlog and the role of shipboard automated VCD entries, R. Merrill noted that extra money is probably not available, especially with the increase in ship costs probably slicing the Program's budget.

I. Gibson wanted to know if the barrel sheet sediment description could be entered as a long text string into the data base. R. Merrill noted that the VCD is a prime data base that is not edited at the post-cruise meeting (whereas the barrel sheets are edited).

M. Loughridge wanted to know who the users of the VCD data base are. R. Merrill cited the production of the NGDC Pacific lithologic log publication and its use as a key-worded (primary) index for text data-base search. Statistics show that the VCD is the most commonly accessed data base because it is the one organized for key-word searches. I. Gibson noted that entry of the barrel sheet summary for timely data availability would incur a significant loss of information in comparison to the core section summaries of the VCD entries. T. Moore suggested that we need to make data capture more efficient and timely. R. Merrill explained that the use of guidelines for hardrock VCDs is an experiment that began on Leg 106. Scientists use these guidelines as a checklist, with additional room for comments. The free-form method of recording sedimentary VCDs slows the data entry procedure by having ODP personnel extract key words onshore. Automation of core description with a VCD station would aid investigators, with a secondary benefit being data entry facility. T. Moore will write a note to the future Sediment Processes and Diagenesis Panel for comments on the descriptive aspects of a system that follows the VCD data-base key words and is similar to the hardrock VCD system.

R. Merrill also updated the status of the paleo data sets, entry of which was postponed until the publication of the first Scientific Results (Leg 101). As of 12 September 1988, the data-set design was completed for use with

Checklist II software. Science Operations has arranged for the author of the program to tailor a version to meet ODP's needs. The IHP agreed that paleo data should be entered aboard ship, but not integrated into the data set until it has been reviewed and updated. The shipboard data would be the scientist's personal copy; s/he would bring a corrected version of it to the leg's post-cruise meeting.

R. Merrill also introduced an update as of 16 September 1988 by P. Brown on the status of the Paleo Reference Center sample index, which includes descriptions of our samples supplied to the Paleo Reference Centers through Leg 60. The paleo index was given to J. Saunders about two years ago, and he has found problems with incorrect and missing entries. The full extent of the problems and how these errors originated are not known, so there is not an accurate estimate of the work required for correction yet. R. Merrill added that although ODP/TAMU is supposed to support the Paleo Reference Centers, if someone else was able to obtain funding, then access would be granted to our data bases.

R. Merrill passed out copies of a preliminary version of the proposed Paleo Reference Center brochure. The IHP decided to formally title the brochure as "Micropaleontological Reference Centers," and R. Merrill solicited other corrections to the draft. Distribution is planned for the eight Paleo Reference Centers, headquarters of participating countries, and JOIDES offices.

In response to questions by J. Hertogen, J. Foster explained that ODP provides investigators with data in a standard ASCII text stream file, from which users can write their own load programs. J. Hertogen will investigate data-base accessibility. It was determined that data strings separated by commas could be output from the S1032 system. E. Moussat advocated remote access by scientists who would become familiar with the S1032 data base while aboard ship.

F. Computer Services Group Report

J. Foster reported (Attachment IV) that new equipment to be sent to the ship includes two Mac SEs, two Mac II color systems with 20-megabyte hard drives (making a total of five Macs aboard ship), and an Apple laserwriter printer. This Mac environment will be duplicated onshore. The new equipment is donated by Apple, based on R. Merrill's approach to both DEC and Apple to contribute to a showplace lab integrating the two systems on the ship. Installation is targeted for the port call at the end of Leg 124.

The VAX system will be upgraded with the addition of a MicroVAX 3500, which will greatly improve response time. Leg 124E will include a shakedown of the new local area VAX cluster arrangement. In addition, M. Benson will reinstall the latest software on the underway geophysics lab Masscomp.

J. Foster indicated that initially the shipboard Macs and the IBM PCs in the user room would be connected using Appletalk in order to permit access to the Apple laserwriter printer. During the next year, it is anticipated that the units on the Appletalk network will be bridged to the shipboard Ethernet cable, and Lisashare software will be added to the VAX to permit storage and

sharing of files from the Macs and PCs. An installation of this type will also be made on shore to gain experience and knowledge of the system. M. Hobart recommended the use of fiber optic cables on the ship for extending the Ethernet link to the downhole measurements lab, underway geophysics lab, and the Schlumberger logging van, based on their use between buildings at Lamont. SEDCO will install the cable as a regular maintenance function during a cruise.

In addressing the point raised by PCOM as to meeting the needs of graphics users, IHP notes that graphics needs will be temporarily satisfied by February 1989 (124E). In response to J. Hertogen's comments that PICSURE is inadequate and obsolete and that it is a resource hog that slows down the computer, R. Merrill agreed that PICSURE is not capable of handing the "freehand" art requirements of sedimentologists. These needs can now be met with the Mac systems to be installed. R. Merrill also noted that PICSURE is only a collection of user-friendly "canned" routines, admittedly of limited application, that have been tailored for our needs. PICSURE plots can tie up the system, especially when they access data in S1032.

It was decided that initial criteria (to be expanded upon) for a graphics system include (1) that it must be transferable onshore for editing (Initial Reports volumes), (2) that ODP conventions be employed, and (3) that the system use shipboard hardware, ideally with local plotting in the labs where the data is generated and collected. Scientists would be allowed to bring their own graphics programs to the ship, with the understanding that for inclusion in the Initial Reports these programs must be available for preparing the art for publication; otherwise the product is just a fancy "pencil drawing." (Scientists could send in samples to ODP for evaluation approximately two months pre-cruise, similar to the Scientific Reports routine.) R. Merrill named SIGMAplot graphics package from JANDEL Scientific as the most promising candidate for a PICSURE complement for the IBM PCs. PICSURE would not be abruptly discarded, but would be continued for the time invested in the tailored routines it features. New routines would be developed for whatever complementary graphics program is selected. The new graphics program would not be required to be redundant on the VAX and PCs, as word-processing and spreadsheet packages are, with a preference to decentralizing the graphics environment, thereby freeing the VAX.

Discussion of Items (not previously mentioned) from I. Gibson's Report (Attachment V)

Sampling Program: the sub-bottom depth facility requested is already in place (since Leg 113) as a daily update routine. J. Foster will investigate the procedure.

Sedimentology/Stratigraphy: entry and format have been discussed. J. Foster reiterated the intent to have SLIDES run not on the VAX but on a stand alone, if possible.

XRF/XRD Linkage: completion to Ethernet link is planned for the next port call.

Underway Geophysics and Downhole Logging: the Lamont MicroVAX 3200 to be installed will be linked with Ethernet. J. Foster will check into an Ethernet

link for the UG lab. In regard to a real-time navigation plotting system that would plot ship position with Loran, GPS, and DRs to data as an alternative to the costly Motorola setup, R. Merrill queried IHP members for possible packages. The current ODP system requires human intervention to edit points before autoplotting. Lamont has a prototype that ODP will be looking at that matches our hardware (PC clones with the Masscomp), and they would customize the connections, but this is about $60,000. IHP members submitted various sources for R. Merrill to investigate. T. Moore inquired as to the quality of seismic-reflection data after refit of the ship. R. Merrill replied that the problem is in the flat hull design of the ship and not easily rectifiable. He noted that the slow (6 kt) speed for quality data retrieval is now accepted as a given. Problems are in processing because of the incomplete state of M. Wiederspan's software, an upgrade of which has not been proposed yet by the responsible committee.

Staffing: increased support for computing services is needed. Regarding informing shipboard participants prior to the cruise as to the system facilities aboard the Resolution, R. Merrill reported that the information sent to the scientists precruise is up to date and that it is their responsibility to read through it and contact the CSG about their particular needs instead of waiting until they are on board. Reading the material en route to the ship is too late.

Applications Status Report - "Wish List"

Igneous/Metamorphic Thin Section Description: this project is assigned to the data-base assistant manager, a position with high turnover that hampers completion. C. Segade will assume this position 1 October 1988. The aim is to convert the paper form (as published in the Initial Reports) to a S1032 forms package with the screen image the same as the paper one. I. Gibson offered to review the data-base design.

J. Hertogen, I. Gibson, and J. Foster discussed the XRF/XRD data bases. XRD data cannot be moved onto the VAX, but this will be solved with Decnet (scheduled for the last port call, but was not completed). XRF data is currently keyboarded in but not directly loaded to S1032. R. Merrill prefers to load that data directly to a file first, which can be edited as necessary, before uploading to the VAX; this is similar to the Paleo data update to be loaded after the post-cruise meeting. Raw XRD data are not archived.

Comments on the Status of the Applications Completion Report

Graphics are noted as a big source of delay in the production of the Initial Reports volume (barrel sheets). This delay could be lessened with more shipboard preparation.

M. Loughridge voiced concern about the dilution of effort by the CSG by agreeing to do too much, especially in regard to CSG's required support of engineering and logistics departments, as mandated by JOIDES. R. Merrill explained that implementation priority is set at the managers meetings and stressed that CSG needs more manpower and equipment support.

J. Foster explained that although the CSG budget appears large, it includes money to support maintenance by CSG personnel for all of the

shorebased computing equipment and software throughout the ODP departments. In addition, during the year, departments requiring computer equipment transfer money to the CSG account for such purchases. CSG will normally evaluate and acquire equipment for various departments, assuming that it will conform to the ODP long-range computing plan. CSG personnel also service all IBM PCs as well as provide program-wide user support.

G. Publications Report

W. Rose provided the following updated information (Attachment VI) to the publications report:

Initial Reports: 113 is at the printer, to be distributed next week; 114 and 115 are being sent to the printer for distribution in November; and 116 will go to the printer in October for December distribution.

Scientific Results: 101 and 102 are at the printer, with distribution in November, and 103 is being paginated to be sent to the printer at the end of September for distribution in December.

The index for 101 and 102 has been received from subcontractor Richardson and is at the typesetter now.

An update of the Publications schedule was posted.

The following changes are recommended for the title page design to include the Editorial Review Board. There should be separate title credit for the co-chiefs, staff scientist, and participating scientists. The ODP editor of the volume should be included as a review board member. The volume editor should be listed at the bottom of the title page in the "prepared by..." section with the title "Managing Editor" so as to distinguish him/her from the scientific direction supplied by the co-chiefs for the volume. The listing of peer reviewers is approved as is.

Publications Time Table

Currently it takes about 20 months post-cruise to publish an Initial Report volume. This amount of time continues to be reduced. However, R. Merrill noted that there is an artificial lengthening in the time table because of printer-originated difficulties with Volume 108 and 110. He reported that R. Silk claims that the minimum production period will be 14 to 16 months as a result of timing of the post-cruise meeting and the 2.5 months required by the printer. Co-chief review of some galley proofs has not been possible, but this is not a mandatory part of the production cycle and is done when time permits. E. Kappel noted that USSAC provides extra money for the biostratigraphers to meet early at the post-cruise meetings, which R. Merrill commended as being critical to the timely conclusion of editing the hole summary. R. Merrill also noted that all co-chiefs should take their obligation to finish the book at the meeting seriously.

In regard to these points, the IHP supports the ODP publication policies for (1) co-chief review of the galley proofs as desirable, but optional; (2) timing of the post-cruise meeting as early as possible (related to the

accomplishments of each particular cruise); (3) use of USSAC money to allow the biostratigraphers to meet early; and (4) the co-chiefs to finish editing of the volume at the meeting.

IHP further recommends that Editorial Review Boards follow R. Merrill's suggestion in electing chairs to coordinate their activities.

An action item for R. Merrill is to investigate how the implementation of the Editorial Review Board has affected timing and costs of Scientific Results production, once more data is available.

H. Non-Performers - Legs 103, 104, and 105

R. Merrill distributed documents listing non-performers with summaries of their activities and supporting documentation. An action item for R. Merrill is to provide information as to the type of investigations (e.g., physical properties) of each non-performer to aid in IHP evaluation. It was decided that T. Moore would draft a letter to be sent to each non-performer by R. Moberly as chairman of PCOM. This first letter would explain the basis for the perception that the scientist has failed to meet the ODP publication and/or sample distribution requirements (samples to be returned if still in the scientist's possession) and would spell out that failure to live up to the agreed-upon duties and responsibilities of a participating scientist could preclude further participation in ODP activities. Copies of this first letter would be sent to either USSAC or the secretariat of the appropriate member country. This letter would be put in the Science Operations and Curatorial files, along with any response from the scientist.

It was decided that evaluation is not to be cut-and-dried at this early stage in the review of non-performers. Cases will be judged individually after a preliminary letter is used to query the author and inform him/her of possible repercussions by PCOM. An IHP subcommittee will be appointed to routinely process non-performer actions prior to IHP meetings.

J. Hertogen and M. Jones noted that setting up a procedure to catch non-performance early by notifying authors of missed deadlines should also serve to notify the funding agency/member country secretariat. M. Jones agreed that member countries would rather encourage participation than merely be informed of failures that are past possible correction. It was recommended that stern warning should be sent to participants and to USSAC or the appropriate secretariats when it appeared that the participant might not make the deadline for submission of papers for the Scientific Results volume.

It was noted that "guest investigators" are not now required to submit data collected on the Resolution to the ODP data base or to other public domain data bases. E. Kappel said that USSAC could require that data be released by guest investigators who are not publishing in the Scientific Results volumes. M. Loughridge explained that the policy at the NGDC and world data centers is that the funding organization owns the data generated but that the investigator owns the interpretation. He will provide E. Kappel with the wording of NGDC policy. Following R. Merrill's advocacy of investigators filing data with their national data centers, IHP decided to

recommend to JOIDES that the official sampling policy state that data belong in the public domain.

I. CD-ROM Project at NGDC for DSDP Data

USSAC has funded the development of software, quality control, mastering, and production and eventual distribution of 500 copies of the DSDP CD-ROM. The IHP recommended that E. Kappel query JOIDES members as to whether they are interested in receiving copies of the CD-ROM. Secondary possible distribution could be to libraries and concerned institutions.

C. Moore and C. Lambrecht reported on NGDC's project of developing a CD-ROM format for DSDP data, to serve as a companion to the DSDP Initial Reports volumes. The CD-ROM has been designed as a two volume (i.e., two disk) project: Volume I has sediment, hardrock, and reference (indexes and bibliography) files and Volume II has downhole logs (LIS format) and underway geophysics data. R. Merrill announced that he has the 25-megabyte DSDP cumulative index to hand over in tape copy for C. Moore to check. Index hard copy is also in the proofing stage. The DSDP data are in ASCII files, with extra spaces removed. Search software is designed for IBM PC to access two subdirectory structures: by location (maps) for leg and site/hole (nested, with indexes of information and help files) or by a certain parameter (data type).

E. Kappel inquired as to software for the Macintosh. M. Loughridge noted that this development will be costly, but that the ISO standard file structure is accessible to PC/Apple CD-ROM readers, with the accession software to be included on a floppy disk.

I. Gibson noted that the 600-character-line file size is too large for many programs to handle a direct dump.

In response to M. Jones' query, C. Moore allowed that the only graphics capability provided in the software will be for simple "wiggle" diagrams and range charts (simplicity of data format allowing for accessibility).

I. Gibson noted that a common search application is for a range of variant values, which C. Moore explained could not be indexed like distinct values; however, range values could be accessed within data-base programs to which data were loaded.

J. Foster praised the format of providing access to data extraction in ASCII, from which users could manipulate data in their own data bases. R. Merrill suggested including a sample of data manipulation on the accompanying software floppy.

E. Moussat wanted to know what the demand would be for DSDP data on the CD-ROM: just a one-shot deal for an investigator? R. Ingersoll noted that the CD-ROM will be available in libraries and scientific community facilities as well as for individual users. R. Merrill predicted that many other CD-ROM products would be released, emphasizing that this format has a standard already set with interfaces available for other systems.

Regarding the JOIDES Journal and JOI/USSAC Newsletter announcements of the DSDP CD-ROM, E. Moussat urged that additional information be provided on the technical aspects of CD-ROMs to interested European parties, since the industry standard is fixed. R. Merrill recommended MicroSoft Bookshelf as a hands-on introduction, which comes complete with floppy interfaces to the hardware of card, cable, and drive.

R. Merrill and M. Loughridge are considering two versions of the bibliography: one in ASCII, which is too large for easy download retrieval to a PC hard disk, and another in the Personal Librarian commercial software format. Searches could be performed in the cumulative index, with topics by page number (users can cross-reference to the bibliography).

C. Moore has data-use statistics of ODP-managed data supplied by P. Brown, but she noted that these numbers are too low for specific analysis beyond the popularity of certain data types. C. Moore and P. Brown have developed a plan for resolution of paleontology code errors and also for changing age and lith codes, in consultation with P. Woodbury.

I. Gibson queried R. Merrill as to ODP data in CD-ROM format. R. Merrill noted that the video disk of ODP core photos would be released in mid-October 1988 and that ODP could use C. Lambrecht's design with ODP additional fields for a CD-ROM. In response to an IHP request that R. Merrill look into the possibility of a CD-ROM, R. Merrill will send tapes of ODP data to NGDC as a reimbursable project (JOIDES money), which also fulfills legal requirements of data delivery to NGDC. The IHP will also send a recommendation to PCOM that costs be recovered for the video disk with a price set at approximately $50. The "cost recovery" money would be fed back into Publications.

ODP CD-ROM Data Base

The IHP recommends that ODP data issued in CD-ROM format be in a "diagonal" matrix (availability at present time, instead of full data base per leg). Based on Leg 101, it would take four years to have a complete data set for a leg, with the paleo data base not entered until it is finalized with publication of the Scientific Results volume. Inorganic geochemistry data also comes from the Scientific Results.

CD-ROM updates would be issued, repeating everything on the previous disk(s).

T. Moore will recommend CD-ROM issue as a JOIDES budget item, not including costs for distribution and recovery of nonrecovered expenses. Cost includes (1) production, mastering, and distribution and (2) ODP and Lamont's cost to provide data on tape in acceptable format for NGDC to produce. JOI has already underwritten the cost of accession software with the DSDP CD-ROM, and R. Merrill designated P. Brown to provide quality control of the data at ODP.

R. Merrill will coordinate cost estimates, based on formats to be provided by M. Loughridge. T. Moore will notify C. Broglia at Lamont as to the possibility of issuing a separate CD-ROM of well logs, which R. Merrill noted are "stable" data, not revised like the other data bases and thus not likely to require reissue updates.

R. Merrill noted that he is already planning for possible yearly issue of the core photo video disk and could envision another CD-ROM series released approximately 18 months post-cruise, concurrent with the publication of Initial Reports volumes. It was decided that the actual producer/distributor of the CD-ROM was not a significant item, because responsible parties would be credited.

J. Publications Budget Discussion

The philosophy of budget cuts was discussed. Savings already implemented by Publications include a commitment to purchasing a high-quality laser printer to produce type, working with CSG to improve the SLIDES program for barrel sheet text, and printing the list of panel members and sample distribution policy in smaller type to save pages. The IHP would not oppose dropping the inclusion of panel member listings and the sample distribution policy within each volume, and substituting inclusion in every fifth or sixth volume.

The current volume quality meets with IHP approval, with possible improvement being in the paper used (as affecting core photo quality) and control of figure duplication. The IHP consensus, as expressed by A. Loeblich, is that instead of cutting volume quality, it would be better to cut the (expletive deleted) of duplicated figures.

K. Repositories Report

T. Moore will mail a copy of the memorandum by R. Merrill and B. Bryant to IHP members for comment on how guidelines should be set up for the Curator in regards to whole rounds (currently tri-axial sample requests are routed through the IHP) (Attachment I). Unless there are major objections, he will present this at the November 1988 PCOM meeting.

R. Merrill noted that the memo delegated responsibility to the Curator, as previously recommended by IHP: maximum limits on tri-axial sampling would be six samples per site of 15 cm per sample, with one sample per lithologic unit or per 60 m of recovery, whichever is less. Requests exceeding these limits would be forwarded to the Panel.

R. Merrill discussed the Curatorial report, which is concentrated on sampling and core refrigeration. A question raised at the April PCOM meeting as to possible conflict of interest by the Curator was not pursued by PCOM with IHP. Gulf Coast Repository expansion is to begin, to be ready next year to receive Indian Ocean and Pacific cores. LDGO is ready to start expanded refrigerated storage construction in 1990-1991. Sampling rates are at predicted levels with personnel reductions in force.

An automated-color-measurement tool is being investigated by R. Merrill to replace the variability introduced by use of the Munsell Soil Color Charts. The tool uses international standards to determine color from programmed color charts or in terms of light wavelengths. It would probably be part of the automated description station. This instrument is not affected by the ambient lighting and sample moisture content.

J. Hertogen is concerned about the delay in publication of ODP leg articles in Nature. He will work up statistics in conjunction with R. Merrill to present to the publishers.

R. Merrill announced that the ODP/DSDP site map art is finished and was sent to NGDC last week (data are through Leg 120). M. Loughridge has developed a Mercator projection that shows all sites. This cooperative publication is funded by NGDC.

L. Next IHP Meeting

The next IHP meeting is planned for 8-10 (Wednesday through Friday) March 1989 at ODP.

IHP Action Items

P. Brown will send a copy of igneous rock description procedures to T. Moore by Thanksgiving.

M. Loughridge will send the "data stuffing" routine deemed most appropriate for possible sediment VCD automation.

T. Moore will contact appropriate JOIDES panels for comments on a more automated approach to VCD.

When completed, J. Foster will send I. Gibson the Ign/Meta thin section data-base design for review.

R. Merrill will provide information as to the type of investigation promised by "non-performers" as an aid to IHP evaluation of each case.

R. Merrill will begin to gather data on how implementation of the Editorial Review Board has affected timing and cost of the Scientific Results volume production.

R. Merrill, C. Broglia, and M. Loughridge will provide cost estimates for production of ODP CD-ROMs (T. Moore will inform C. Broglia of this task).

T. Moore will investigate desire for companion volumes to Pacific Lithologic Data publication at next PCOM meeting.

J. Hertogen and R. Merrill will keep tabs on publication delay of ODP leg articles in Nature.

W. Rose and R. Merrill will provide society membership lists to T. Moore. These lists may serve to identify new panel members with publication/production experience.

Attachment I

Merrill and Bryant recommended policy for physical-properties sampling of whole rounds

Attachment II

Pisias and Rose letters

Attachment III

Data Base Group report

Attachment IV

Computer Services Group report

Attachment V

I. Gibson report

Attachment VI

Publications report (Pyle letter and responses)

ATTACHMENT I

odp$ type wr.txt
From: NELSON::MERRILL "Russell Merrill" 26-JUL-1988 12:08
To: AUDREYM,CHRIS,MERRILL
Subj: copy of draft new whole-round policy

20 May 1988

M E M O R A N D U M

TO: Dr. Ted Moore,
Chairman, Information Handling Panel

FROM: R. B. Merrill, W. Bryant
Committee on Whole-Round Sampling Policy

SUBJECT: Recommendations on Whole-Round Sampling Policy

We met today, and formulated the following recommendations:

> The Curator has the authority to act upon whole-round requests unilaterally, or to refer them to the Information Handling Panel for decision, as he/she judges appropriate. The whole-round sample policy presented in the current edition of the Shipboard Handbook (ODP Technical Report #3, April 1987), and as it may be amended by this panel in future, shall guide the decisions of the Curator.

The policy with regard to whole-round samples taken for triaxial measurements should read as follows:

> Triaxial samples should be taken only from APC holes, unless the material sampled is entirely lithified. Sampling of RCB/XCB/NCB unlithified material is not approved. Triaxial samples may be taken from dedicated holes without restraint, subject to approval of the co-chiefs. For samples taken from the first or second holes at a site, a reasonable sample should consist of a maximum of three (3) 15-cm-long whole-round sections taken adjacent to one another (45 cm maximum). No more than one (1) triaxial sample should be taken per 60 m of recovered material, with a maximum of four (4) samples per site. No triaxial samples should be taken until all other whole-core measurements (GRAPE, P-wave logging, paleomagnetics, thermal conductivity, etc.) have been completed, and the core is about to be split. Biostratigraphers should explicitly approve the interval selected for triaxial sampling before the samples are taken.

We recommend no other changes in the whole-round policy as set out in the Shipboard Handbook.

ATTACHMENT II

8 September 1988

Dr. Ted C. Moore, Chairman
JOIDES Information Handling Panel
c/o Exxon Company International
820 Gessner
Houston, TX 77024

Dear Ted:

In a letter to you dated 1 September 1988, Nick Pisias reported on discussion at the August PCOM meeting concerning the pricing of ODP Proceedings volumes. Russ Merrill asked me to furnish pertinent information on this matter.

First, volume prices are calculated on an individual basis for each volume, taking into account the total history of production of the volume, including such costs as typesetting, printing, indexing, back-pocket illustrations, the press run, and so on. So these cost estimates do fully account for extended press runs as well as other factors.

To clarify the other question PCOM raised, both Russ and I feel there is no cost involved in maintaining inventory on the volumes, since they are presently stored in TAMU-furnished space at no cost to us. Thus we have not figured in any such costs.

I look forward to seeing you and the other Panel members in Estes Park.

Best regards,

Bill

William D. Rose
Supervisor of Publications

pc: Lou Garrison
Russ Merrill

Ocean Drilling Program
Publications
Texas A&M University Research Park
0 Discovery Drive
lege Station, Texas 77840 USA
(409) 845-1909
Telex Number: 62760290

Attachment II

JOIDES Planning Office

College of Oceanography
Oregon State University
Corvallis, OR 97331
Telephone: 503-754-2600

1 September 1988

Dr.Ted Moore
EXXON Production Research Co.
P.O. Box 2189, Room PT 1785
Houston, TX 77252-2189

RE: IHP ISSUES FROM THE 23-25 AUGUST PCOM MEETING

Dear Ted:

PCOM discussed on-board computer graphics and the new ODP Publications costing at the August meeting. PCOM has asked that IHP address the following at your September meeting:

Computer Graphics:

The reports from Ian Gibson and Dave Rea were reviewed by PCOM, as well as reports of first-hand experience on the Resolution by PCOM members. PCOM recognized community dissatisfaction with the current PICSURE program. An option that should be investigated other than adding only Apple computer to do graphics is acquisition of graphics software for the IBMs and the necessary high quality printers. Lou Garrison mentioned that Apple is donating several Macs for the ship; IHP may want to investigate ways to utilize these effectively.

ODP Volumes Costing

IHP liaison Steve Gartner reported on the new pricing structure set up by TAMU. PCOM has no opposition to pricing the volumes according to page count and selling them at cost ($ 06.1/page for Part A, $ 05.7/page for Part B). PCOM does want to know whether these costs estimates fully account for extended press runs and costs of maintaining inventory on the volumes. IHP may want to clarify this issue with Russ and report its findings to PCOM.

As you know, both PCOM liaisons have conflicts with your upcoming meeting dates. Ellen Kappel at JOI has agreed to attend the meeting and the meeting materials were forwarded to her. I hope you have productive meeting in Boulder.

Sincerely,

Nick Pisias

cc. S.Gartner E.Kappel
R.Merrill R.Moberly

OCEAN DRILLING PROGRAM

DATA BASE GROUP REPORT TO IHP July 30, 1988

I. PERSONNEL

	[Feb.	Mar.	Apr.	May	June	July]
Supervisor	[----------	----------	Patricia Brown	----------	----------	----------]
Assis. Supervisor	[-------	Dennis Duval	---------]			
Data Librarian	[----------	----------	Kathe Lighty	----------	----------	----------]
Data Analyst	[----------	----------	Susan Collinsworth	----------	----------]	
Graduate Student	[----------	----------	Mark Simpson	----------	----------	----------]

Christian Segade will be joining the DBG as Assistant Supervisor in Oct. A temporary (until Sept. 30th) part-time worker was hired in July to key enter the DSDP IR bibliographies. Attachment A discusses the personnel hired for the sedimentary/sed. rock visual core descriptions task force.

II. DATA REQUESTS

To date the Data Librarian has responded to 230 requests outside of ODP.

Data Base Accessed	Number of Times Accessed
Photos	136
Sediment Description	17
Leg, Site, Hole Summary	15
Underway Geophysical	13
Paleomagnetics	12
Physical Properties	11
Sample Record	8
Sample Request	6
Chemistry	6
Paleontology	4
Sediment Smearslide	3
Igneous/Metamorphic Rock Description	3
Corelog	2
Bibliography	2
Igneous/Metamorphic Thin Section Descr.	1

III. STATUS OF THE DATABASES (See Table 1)

IV. MISCELLANEOUS

1. Paleo Reference Center Brochure Status--The brochure is in the final stages before printing. A copy will be provided at the Sept. meeting.
2. We are currently examining the itemized report prepared by DSDP for the Paleo Reference Center samples. The status of this item will be provided at the Sept. meeting.
3. A copy of the DSDP data files in S1032 is now available on the ship. Attachment B will be in the Shipboard Scientist's Handbook and distributed on the ship.
4. The DBG began in July sending reminders to persons contributing to the ODP Scientific Results asking for the data they generated. We have received 8 responses to our request and plan to file the data until we have the manpower to incorporate what we can into the ODP database.
5. A memo was sent to Ted Moore and several IHP members discussing the solutions we found for the DSDP paleo code problems identified by NGDC. A memo was also sent to Ted Moore regarding the databases we felt might be considered for outside review.
6. The DBG prepared an index for all the DSDP and ODP color core photographs through Leg 121. The index is to be used with the core slide and video collection being prepared by publications.
7. Attachment C contains the Data File Documents (DFD's) for Carbon/Carbonate, Interstitial Water, Sediment/Sedimentary Rock Lithology.

OCEAN DRILLING PROGRAM
DATA FILE DOCUMENTATION

March 1988

SEDIMENT CHEMICAL ANALYSIS

CARBON/CARBONATE

I. INTRODUCTION

The Carbon/Carbonate data file contains data generated in the chemistry laboratory onboard the JOIDES Resolution. The data file includes the weight percentages of inorganic carbon, organic carbon, total carbon, and calcium carbonate. Although other carbonates may be present, all acid-soluble carbon is calculated as calcium carbonate.

The instruments used and the Legs on which they were used are listed below followed by a brief description. For more information about the instruments and methods refer to the references listed in section III.

Instrument	Legs
Carbonate Bomb	101-105
Perkin Elmer CHN Elemental Analyzer	101-111
Coulometrics 5020 TC Apparatus	112-present
Coulometrics 5030 Carbonate Carbon Apparatus	103-present

Carbonate Bomb:

The calcium carbonate content of a sample is determined by measuring the increase in gas pressure caused by acidifying a dried sediment sample in a closed vessel. The percent carbonate is then read from a pressure-concentration curve constructed from standard runs. (Section VI describes the pressure-concentration data available).

Perkin Elmer CHN Elemental Analyzer:

The model 240C Elemental Analyzer is used to determine the total carbon of a sample. Samples are combusted at 1000 degrees C in an oxygen atmosphere. The concentrations of the combustion products are then determined against known standards.

Coulometrics 5020 TC Apparatus:

The TC Apparatus combusts a sample at 1000 degrees C, converting the mineral and organic carbon to CO_2. Results for the percent total carbon content are given.

Coulometrics 5030 Carbonate Carbon Apparatus:

The Carbonate Carbon Apparatus determines the amount of carbon in a sample from the acid digestion of carbonate. Results are given in micrograms of carbon, percent calcium carbonate or percent inorganic carbon.

If you have problems or questions concerning these data, please contact:

Data Librarian, Data Base Group
Ocean Drilling Program
Texas A&M University Research Park
1000 Discovery Drive
College Station, Texas 77840 U.S.A.

(409) 845-8495, 845-2673
Telex Number: 792779 ODP TAMU
Easylink Number: 62760290

II. LEGS IN THE DATA FILE

The data file contains data from Legs 101 to the present. No Carbon/Carbonate data were collected on Legs 102, 106, 109, or 118.

III. BIBLIOGRAPHY

Emeis, K., and Kvenvolden, K.A., 1986. "Shipboard Organic Geochemistry on JOIDES Resolution", Ocean Drilling Program Technical Note No. 7, 130 p.

Kvenvolden, K.A., and McDonald, T.J., 1986. "Organic Geochemistry on the JOIDES Resolution--An Assay", Ocean Drilling Program Technical Note No. 6, 147 p.

Shipboard Scientific Party, 1987. Explanatory Notes. in Kastens, K.A., Mascle, J., Auroux, C., et al., Proc. Init. Repts. (Pt. A) ODP, 107, 65-88.

IV. DATA ITEM FORMATS

CARBON CARBONATE ITEMS	FORMAT
SAMPLE_CODE	Text 4
LEG	Integer 3
SUBLEG	Text 1
SITE	Integer 4
HOLE	Text 1
CORE	Integer 3
CORETYPE	Text 1

TABLE 1. STATUS OF THE ODP DATABASES

7/30/88

DATABASE	COMPLETED DATABASE DESIGN	COMPLETED SHORE - SHIP ENTRY SCREENS	COMPLETED DATA FILE DOCUMENT	LEGS IN THE COMPUTER	IN S1032 FORMAT	EXPECTED DATE FOR "STEADY STATE"
Corelog	•	• - •	•	101-120	yes	•
Leg, Site, Hole Summary	•	• - •	•	101-120	yes	•
Sediment/Sedimentary Rock						
Visual Core Descriptions	•	• - undet.	•	101, 103-105	yes	undet.
Smearslide/Thin Section	•	• - •	•	101-120	yes	•
Igneous/Metamorphic Rock						
Visual Core Descriptions	•	1/89 - undet.	3/89			7/89
Thin Section Descriptions	1/89	2/89 - undet.	4/89			8/89
XRF	•	• - undet.	•	106,109,111,113-120	yes	•
Physical Properties						
G.R.A.P.E.	•	(not applicable)	•	101-120	no	•
Thermal Conductivity	•	• - undet.	•	108-117	yes	11/88
P-Wave Logger	undet.	(not applicable)	undet.	113-120	no	7/89
Compressional/Shear Wave Velocity	•	• - •	undet.			undet.
Index Properties (Bulk density, Porosity, Water Content, Grain Density)	•	• - •	undet.			undet.
G.R.A.P.E. Spec. 2 Min. Count	•	• - •	undet.			undet.
Shear Strength	•	• - •	undet.	101-111	yes	4/89
Atterberg Limits -no data-						
Consolidation/Triaxial Leg -no data-						
Down Hole Tool Data						
Heatflow from HPC Coring Shoe	1/89	(not applicable)	3/89	102,104-117	no	undet.
Pressure and Temperature from the Barnes Tool	1/89	(not applicable)	3/89	110-112,116-117	no	undet.
Chemistry						
Rock Evaluation	•	• - •	•	101-120	yes	•
Carbon/Carbonate	•	• - •	•	101-120	yes	•
Interstitial Water	•	• - •	•	101-120	yes	•
Gas Chromatography	undet.	undet. - undet.	undet.			undet.
Paleomagnetics						
Intensity and Direction	•	• - •	•	101-120	yes	•
Susceptibility	•	• - •	•	101-120	yes	•
Paleontology	•	12/88 - (nt appl)	5/89			10/89

Underway Geophysical—Legs 101-118 processed by Stu Smith

• = indicates that the task has been completed
"Steady State" = having no backlog of data to computerize
No data was collected on Leg 102, except Downhole Tool Data and Underway Geophysical Data

(nt appl) = not applicable
undet. = undetermined

ATTACHMENT A

VCD TASK FORCE REPORT
July 30, 1988

The sediment/sedimentary rock Visual Core Description (VCD) Task Force was created to computerize the backlog of VCD data on paper forms generated since the start of ODP. The group was to key enter data from Legs 101-121 by Sept. 30th, bringing the sediment lithology dataset up to date. Although the Task Force will not be able to completely meet it's goal, the progress made by the group was tremendous and the VCD backlog will be significantly reduced.

I. Personnel

The main reason the Task Force did not reach its goal was because of personnel problems, that is finding and keeping people. The supervisor for the group was hired at the beginning of January. We were unable to fully staff the rest of the group until March. The original group totalled 8 people with 4 full-time and 4 half-time workers. Several changes in personnel have occurred, resulting in the present staff of 2 full-time and 4 half-time people (see attached table).

II. Status of the Data

The VCD Task Force has been tackling the VCD's in three steps: 1) keypunch the data into the computer using the forms and barrel sheets; 2) edit the entered data, making any corrections that are necessary, and catching anything that was missed; 3) retype in the corrections that were needed. The current status of each Leg is as follows:

Completed through step 3	Leg 101 103 104 105
Completed through step 2	Leg 110 117
Completed through step 1	Leg 114

Legs 107, 108, 112, 113, 115, 116, and 119 are all partially entered into the computer (step 1).

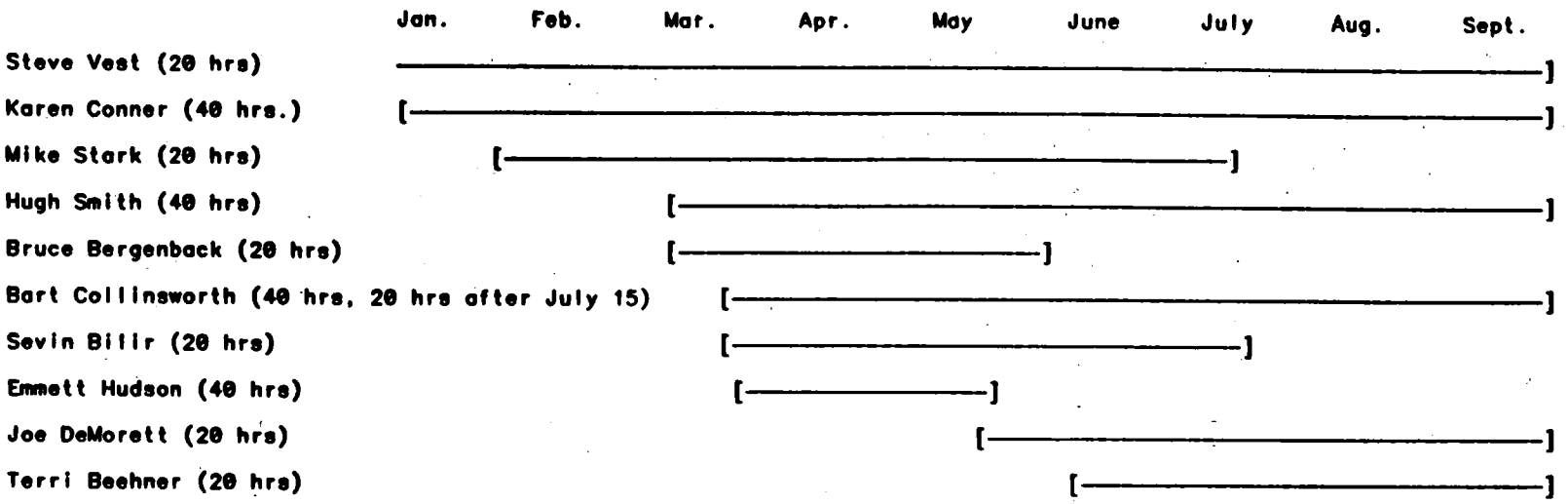
III. Projected Status of the Data at the End of September

With the current number of Task Force members and the rate of completing Legs, at least the following Legs should be completely finished (through step 3) by the end of September:

Legs 101, 103, 104, 105, 106, 110, 111, 112, 113, 114, 117.

The rest of the Legs will be completed as much as possible with the time and personnel remaining.

VCD PERSONNEL
1988



ATTACHMENT B

July 1988

DSDP DATA AVAILABLE ON JOIDES RESOLUTION

All computerized data generated from Legs 1-96 of the Deep Sea Drilling Project (DSDP) are available for use on JOIDES Resolution. The following outlines the data available and how to access them.

The DSDP data are stored in System 1032 (S1032) which is a database management system used by ODP. The data are organized into datafiles, called datasets in S1032, which reflect the type of analyses or descriptions resulting in the data. Table I lists the names of the datafiles and the S1032 names of the datasets in which the data are stored. For a complete explanation of the DSDP datasets see ODP Technical Note #9 "Deep Sea Drilling Project Data File Documents" located in the ship's library. The document lists and briefly explains the data items in each dataset.

To use the DSDP data onboard the ship, contact the System Manager on the cruise who will help you get oriented and provide more detailed information. To access the data, you will need to enter the S1032 database management system. To do this, type "S1032" at the "$" prompt. S1032 is a very user friendly program. The following list should help to get you started. However, you will need to review the S1032 User's Guide or S1032 Primer, available on the ship, to learn more about searching the data, creating hard copy printouts, etc.

A FEW S1032 BASIC COMMANDS

The following commands are used at the "S1032" prompt. Data items or fields are called "attributes" in S1032. See the User's Guide for an explanation of "keyed" values.

OPEN DATASET "dataset name"	To open a dataset with the given dataset name.
FIND ALL	Finds all the records in the dataset.
FIND "attribute name" EQ "value"	Finds all records containing the value you enter in the attribute you specify. "Find" can only be used with keyed attributes.
SEARCH "attribute name" EQ "value"	Locates all records containing the value you enter in the attribute you specify.
PRINT ALL	Prints to the screen all the values of the attributes for all the records selected.
PRINT "attribute name"	Prints to the screen all the values for the attributes you specify for all the records selected.
HELP	Provides on-line help.

TABLE I

DATAFILE	S1032 DATASET NAME
CHEMISTRY DATA	
Carbon/Carbonate	CARBONATE
Interstitial Water Chem	IW_DATA
	IW_COMMENTS
IGNEOUS/METAMORPHIC DATA	
Thin Section Descriptions	THIN_SECTION
Visual Core Descriptions	HR_VISUAL
Major-Element Chemical Analyses	MAJOR_ELEMENTS
Minor and Trace-Element Chemical Analyses	MINOR_ELEMENTS
PALEONTOLOGY DATA	
Agecodes	AGECODE
Ageprofile	AGEPROFILE
Paleontology	PALEO
Fossil Code Dictionary	FOSSIL_DICT
PALEOMAGNETIC DATA	
Alternating Field Demag.-Sediment	PALEOMAG_AFD
Paleomag. Measurements-Igneous/Metamorphic	PALEOMAG_IGN
Long-Core Spinner Magnetometer-Sediment	PALEOMAG_LCS
Paleomag. Measurements-Sediment	PALEOMAG_NRM
PHYSICAL PROPERTIES DATA	
Density-Porosity	DENSITY_POROSITY
Grain Size	GRAIN_SIZE
G.R.A.P.E	GRAPE
Sonic Velocity	SONIC_VELOCITY
Vane Shear	VANE_SHEAR
SEDIMENTARY DATA	
Processed Smear Slide	SMEAR
Screen	SCREEN
Visual Text	SED_VISUAL
SUMMARY DATA	
Cored Interval and Recovery	DEPTHDECK
Site Summary	SITESUM
X-RAY DATA	
X-ray	XRD

ATTACHMENT C

SECTION	Text 2
TOP_INTERVAL	Integer 3
BOTTOM_INTERVAL	Integer 3
INORGANIC_CARBON_PERCENT	Decimal F6.2
CACO3_PERCENT	Decimal F5.1
TOTAL_CARBON_PERCENT	Decimal F6.2
ORGANIC_CARBON_PERCENT	Decimal F6.2
CACO3_METHOD	Text 1
BOMB_PRESSURE	Decimal F4.1
BOMB_STANDARD_LINK	Integer 2
COMMENTS	Text 55

V. EXPLANATION OF THE CARBON/CARBONATE DATA ITEMS

SAMPLE_CODE - An alpha code identifying the investigator or test for which the sample was taken.

LEG - Number identifying the cruise. The Ocean Drilling Program started numbering the cruises of the JOIDES Resolution at Leg 101.

SUBLEG - Letter identifying a subleg or transit. A subleg is the continuation of a Leg in the same area with the same objectives after a port call and crew change.

SITE - Number identifying the site. A site is the position of a beacon around which holes are drilled.

HOLE - Letter identifying the hole.

CORE - Number identifying the core. Cores are numbered serially from the top of the hole downward.

CORETYPE - A letter code identifying the drill bit/coring method used to retrieve the core. The coretype codes are:

- B - Drill Bit
- C - Center Bit
- D - Positive Displacement
- H - Hydraulic Piston Core
- M - Miscellaneous
- N - Downhole Mud Motor (Navidrill)
- P - Pressure Core Barrel
- R - Rotary
- S - Side Wall Core
- W - Wash Core
- X - Extended Core Barrel

SECTION - A core is cut into 1.5 meter long sections that are numbered serially from the top of the core. A core with full recovery will have 7 sections and a core catcher and be approximately 9.8 meters long.

TOP_INTERVAL - The location of the top of a sample within a section in centimeters.

BOTTOM_INTERVAL - The location of the bottom of a sample within a section in centimeters.

INORGANIC_CARBON_PERCENT - The weight percent of inorganic carbon in a sample measured directly or calculated as follows:
Inorganic_Carbon_Percent x 8.33 = CaCO3_Percent.

CACO3_PERCENT - The weight percent of calcium carbonate in a sample. It may be measured directly by the Carbonate Bomb or indirectly from the Coulometrics 5030 Carbonate Carbon Apparatus using the following calculation:
Inorganic_Carbon_Percent x 8.33 = CaCO3_Percent.

TOTAL_CARBON_PERCENT - The weight percent of total carbon measured by the Perkin Elmer CHN Elemental Analyzer or the Coulometrics 5020 TC apparatus.

ORGANIC_CARBON_PERCENT - The weight percent of organic carbon in a sample. This value is obtained by subtracting the Inorganic_Carbon_Percent from the Total_Carbon_Percent.

CACO3_METHOD - Indicates the method used to obtain percent calcium carbonate ("C" for Coulometrics, "B" for Carbonate Bomb).

BOMB_PRESSURE - Pressure value in psi obtained from a Carbonate Bomb analysis.

BOMB_STANDARD_LINK - An internal number that links records in the Carbon/Carbonate data file and the Bomb Standards data file (see section VI).

COMMENTS - Contains any comments or remarks about the sample.

VI. BOMB STANDARDS DATA FILE

The Bomb Standards data file contains data generated from Carbonate Bomb standard runs. Each record in the data file includes a set of weight and pressure values used to construct a pressure-concentration curve. From a given curve, several percent carbonate values were determined and stored in the Carbon/Carbonate data file. Thus, each record in the Bomb Standards data file has several corresponding records in the Carbon/Carbonate data file. Records in the Carbon/Carbonate data file with CaCO3_Method equal to "B" can be tied to a record in the Bomb Standards data file by matching the values for Leg, Subleg, Site, Hole, and Bomb_Standard_Link.

Data are available in the Bomb Standards data file only for

samples in the Carbon/Carbonate data file with CaCO3_method equal to "B".

Below is a list of the data items in the Bomb Standards data file, followed by a brief description of each data item.

BOMB STANDARDS ITEMS	FORMAT
LEG	Integer 3
SUBLEG	Text 1
SITE	Integer 4
HOLE	Text 1
BOMB_STANDARD_LINK	Integer 2
STANDARDS	
A_GRAMS	Decimal F4.1
A_LBS_PRESSURE	Decimal F4.1
.	
.	
.	
F_GRAMS	Decimal F4.1
F_LBS_PRESSURE	Decimal F4.1
REMARKS	Text 50

LEG - Number identifying the cruise. The Ocean Drilling Program started numbering the cruises of the JOIDES Resolution at Leg 101.

SUBLEG - Letter identifying a subleg or transit. A subleg is the continuation of a Leg in the same area with the same objectives after a port call and crew change.

SITE - Number identifying the site. A site is the position of a beacon around which holes are drilled.

HOLE - Letter identifying the hole.

BOMB_STANDARD_LINK - An internal number that links records in the Carbon/Carbonate data file and the Bomb Standards data file.
STANDARD

A_GRAMS - Weight of sample in grams for run A.

A_LBS_PRESSURE - Pressure value in pounds for run A.

.
.
.

F_GRAMS - Weight of sample in grams for run F.

F_LBS_PRESSURE - Pressure value in pounds for run F.

REMARKS - Contains any comments or remarks about the sample.

OCEAN DRILLING PROGRAM
DATA FILE DOCUMENTATION

March 1988

SEDIMENT CHEMICAL ANALYSES

INTERSTITIAL WATER

I. INTRODUCTION

The Interstitial Water data file and the Borehole_IW data file contain the results of analyses performed on interstitial water samples collected from cores and downhole tool instruments onboard the JOIDES Resolution. The Interstitial Water data file includes data from (1) water samples extracted from cores, and (2) water samples, collected by a downhole tool instrument, that can be associated with a core. This second type of water sample was extracted from the top of a core while the core was still in situ. The Borehole_IW data file contains the results from (1) surface sea water samples, and (2) water samples, collected by a downhole tool instrument, that cannot be associated with a core. These samples were not extracted from the top of an in situ core, but from somewhere within the drilled hole.

Each record in either data file includes a sample identifier along with the results and methods used for any parameters analyzed. The sample identifier in the Borehole_IW data file does not include Core, Coretype, Section, Top Interval, or Bottom Interval. Instead each sample is identified by Leg, Subleg, Site, Hole, and Depth in the hole. On most legs, interstitial waters were routinely analyzed for pH, alkalinity, salinity, chlorinity, calcium, magnesium and sulfate. The data files also contain "Other_Components" data items to allow for parameters that are not commonly determined for a sample.

The method of obtaining interstitial waters from core sediments, using a stainless steel press, has been described in detail by Manheim and Sayles (1974). The use of a downhole tool instrument to obtain water samples is discussed in Barnes (1979), Barnes (1988) and the "Explanatory Notes" chapters in the Proceedings of the Ocean Drilling Program. The IAPSO (International Association of Physical Science Organizations) standard seawater is the primary standard for water analyses used onboard the ship.

If you have problems or questions concerning these data, please contact:

Data Librarian, Data Base Group
Ocean Drilling Program
1000 Discovery Drive
College Station, Texas 77840 U.S.A.

(409) 845-8495, 845-2673
Telex Number: 792779 ODP TAMU
Easylink Number: 62760290
Bitnet Address: DATABASE@TAMODP

II. LEGS IN THE DATA FILE

The Interstitial Water data file contains data from Legs 101 to the present. No data were collected on Legs 102, 106, 109, or 118.

The Borehole_IW data file contains data from Legs 101 to the present. No data were collected on Legs 103, 105, 106, and 114 to present.

III. BIBLIOGRAPHY

Barnes, R. O., 1979. Operation of the IPOD in situ pore water sampler. In Sibuet, J.-C., Ryan, W. B. F., et al., Initial Reports. DSDP, 47, Pt.2:Washington (U.S. Govt. Printing Office), 19-22.

Barnes, R. O., 1988. ODP in situ fluid sampling and measurement: a new wireline tool. In Proceedings of the Ocean Drilling Program. Initial Reports (Pt.A), 110,

Explanatory Notes chapters, 1986 - present. In Proceedings of the Ocean Drilling Program. Initial Reports (Pt. A).

Gieskes, J. M., and Peretsman, G., 1986. Water chemistry procedures aboard JOIDES Resolution--some comments. ODP Technical Note No. 5, 46 p.

Manheim, F. T., and Sayles, F. L., 1974. Composition and origin of interstitial waters of marine sediments based on deep sea drill cores. In Goldberg, E. D., (Ed.), The Sea, (Vol. 5): New York (Wiley), 527-568.

IV. METHODS

The methods used to analyze the interstitial waters are listed below. Preceding each method is a one letter code. For each parameter in the data file, there is a corresponding methods data item (ie. Alkalinity_method, etc.). The one letter code is recorded in the methods data item to indicate which method was used to determine a given parameter.

CODE	METHOD
I	ION CHROMATOGRAPHY

-using a Dionex Ion Chromatograph which is equipped with both anion and cation separation columns.

T	TITRATION -using a Metrohm titrator
R	REFRACTOMETER -using a Goldberg optical refractometer which measures total dissolved solids
S	SPECTROPHOTOMETER -Using a Bausch and Lomb spectrophotometer
A	ATOMIC ABSORPTION -Using a Varian atomic absorption spectrophotometer
E	ELECTRODE -Using a Brinkmann combination electrode for pH and Eh measurements.

A more complete discussion of the methods used on a particular leg can be found in each of the "Explanatory Notes" chapters in the Proceedings of the Ocean Drilling Program (see section III, above).

V. DATA ITEM FORMATS

INTERSTITIAL WATER AND BOREHOLE_IW ITEMS	FORMAT
SAMPLE_CODE	Text 4
LEG	Integer 3
SUBLEG	Text 1
SITE	Integer 4
HOLE	Text 1
*CORE	Integer 3
*CORETYPE	Text 1
*SECTION	Text 2
*TOP_INTERVAL	Integer 3
*BOTTOM_INTERVAL	Integer 3
!DEPTH	Decimal F7.1
WATER_VOLUME	Integer 3
PH	Decimal F5.2
PH_METHOD	Text 1
ALKALINITY	Decimal F7.3
ALKALINITY_METHOD	Text 1
SALINITY	Decimal F4.1
SALINITY_METHOD	Text 1
CHLORINITY	Decimal F7.2
CHLORINITY_METHOD	Text 1
MAGNESIUM	Decimal F6.2
MAGNESIUM_METHOD	Text 1
CALCIUM	Decimal F6.2
CALCIUM_METHOD	Text 1
SULFATE	Decimal F6.2
SULFATE_METHOD	Text 1
PHOSPHATE	Decimal F6.2

PHOSPHATE_METHOD	Text 1
AMMONIA	Integer 5
AMMONIA_METHOD	Text 1
SILICA	Integer 4
SILICA_METHOD	Text 1
POTASSIUM	Decimal F6.2
POTASSIUM_METHOD	Text 1
NITRATE	Decimal F4.1
NITRATE_METHOD	Text 1
BROMIDE	Decimal F6.2
BROMIDE_METHOD	Text 1
MANGANESE	Integer 3
MANGANESE_METHOD	Text 1
IRON	Integer 3
IRON_METHOD	Text 1
STRONTIUM	Integer 4
STRONTIUM_METHOD	Text 1
OTHER_COMPONENTS (up to 4 groups)	
NAME	Text 10
UNITS	Text 8
RESULTS	Text 10
METHOD	Text 1
COMMENTS	Text 67

* Found only in the Interstitial Water data file
! Found only in the Borehole_IW data file

VI. EXPLANATION OF THE INTERSTITIAL WATER AND BOREHHOLE_IW DATA ITEMS

For all method data items, refer to the method codes listed in Section IV above.

SAMPLE_CODE - An alpha code identifying the investigator or test for which the sample was taken. The following sample codes are used to indicate the type of downhole tool instrument used to take a downhole tool water sample:

CODE	DOWNHOLE TOOL
KUS#	Kuster
RFT#	RFT
PACK	Packer
PW	Barnes (old, pre-1986)
WSTP	Barnes (new, 1986+)

For information about these methods, refer to the "Explanatory Notes" chapters in the Proceedings of the Ocean Drilling Program (see section III). The presence of any of these codes in the Interstitial Water data file indicates that the sample was taken from a core, while it was in situ.

LEG - Number identifying the cruise. The Ocean Drilling Program started numbering the cruises of the JOIDES Resolution at Leg 101.

SUBLEG - Letter identifying a subleg or transit. A subleg is the continuation of a Leg after a port call; it often involves a crew change.

SITE - Number identifying the site. A site is the position of a beacon around which holes are drilled.

HOLE - Letter identifying the hole.

CORE - Number identifying the core. Cores are numbered serially from the top of the hole downward. (Only found in Interstitial Water data file.)

CORETYPE - A letter code identifying the drill bit/coring method used to retrieve the core. (Only found in Interstitial Water data file.) The coretype codes are:

B - Drill Bit
C - Center Bit
D - Positive Displacement
H - Hydraulic (Advanced) Piston Core
I - Interstitial Water Core
M - Miscellaneous
N - Downhole Mud Motor (Navidrill)
P - Pressure Core Barrel
R - Rotary
S - Side Wall Core
W - Wash Core
X - Extended Core Barrel

SECTION - A core is cut into 1.5 meter long sections that are numbered serially from the top of the core. A core with full recovery will have 7 sections and a core catcher and be approximately 9.8 meters long. (Only found in Interstitial Water data file.)

TOP_INTERVAL - The location of the top of a sample within a section in centimeters. (Only found in Interstitial Water data file.)

BOTTOM_INTERVAL - The location of the bottom of a sample within a section in centimeters. (Only found in Interstitial Water data file.)

DEPTH - Depth in meters down the hole from which the sample was taken. (Only found in Borehole_IW data file.)

WATER_VOLUME - The water volume of the sample in ml.

PH - The pH value of the sample.

ALKALINITY - The alkalinity value in millimoles/liter.

SALINITY - The salinity value in g/Kg.

CHLORINITY - The chlorinity value in millimoles/liter.

MAGNESIUM - The magnesium value in millimoles/liter.

CALCIUM - The calcium value in millimoles/liter.

SULFATE - The sulfate value in millimoles/liter.

PHOSPHATE - The phosphate value in micromoles/liter.

AMMONIA - The ammonia value in micromoles/liter.

SILICA - The silica value in micromoles/liter.

POTASSIUM - The potassium value in millimoles/liter.

NITRATE - The nitrate value in micromoles/liter.

BROMIDE - The bromide value in micromoles/liter.

MANGANESE - The manganese value in micromoles/liter.

IRON - The iron value in micromoles/liter.

STRONTIUM - The strontium value in micromoles/liter.

OTHER_COMPONENTS

NAME - The name of an additional component or parameter that was analyzed.

UNITS - The units of the additional component.

RESULTS - The value determined for the additional component.

METHOD - One letter method code indicating the method used for the analysis (See Section IV above).

COMMENTS - Contains any comments or remarks about the sample.

OCEAN DRILLING PROGRAM
DATA FILE DOCUMENTATION

June 1988

SEDIMENT/SEDIMENTARY ROCK LITHOLOGY

I. INTRODUCTION

The Sediment/Sedimentary Rock Lithology data file contains the visual descriptions of the cores collected on JOIDES Resolution. These descriptions were written by participating shipboard scientists on each cruise as the cores were retrieved from the ocean floor. The classification scheme used by the Ocean Drilling Program (ODP) on Legs 101-118 was the same as that used in the latter days of the Deep Sea Drilling Project, and can be found in the "Explanatory Notes" chapters of the Legs 101-118 Proceedings of the Ocean Drilling Program, Initial Reports volumes. The classification scheme used by ODP from Leg 119 onward can be found in Mazzullo and Graham (1988).

The data file allows a record for every sediment layer described by the shipboard party, however, it requires that there be a minimum of one record per section. This means that the data file views each layer as having a maximum thickness of a single section (1.5 meters). If in fact the geologic layer is greater than 1.5 meters, it is then represented by two or more records.

In computerizing the Sediment/Sedimentary Rock Lithology data, keywords were used for several of the data items (see Section VI). The use of keywords facilitates data searches and helps to standardize the data.

If you have problems or questions concerning these data, please contact:

Data Librarian, Data Base Group
Ocean Drilling Program
Texas A&M University Research Park
1000 Discovery Drive
College Station, Texas 77840 U.S.A.

(409) 845-8495, 845-2673
Telex Number: 792779 ODP TAMU
Easylink Number: 62760290
Bitnet Address: DATABASE@TAMODP

II. LEGS IN THE DATA FILE

The data file contains data from Legs 101 to the present. No Sediment/Sedimentary Rock Lithology data were collected on Legs 102 and 109.

III. BIBLIOGRAPHY

Explanatory Notes chapters, 1986 - present. In Proceedings of the Ocean Drilling Program, Initial Reports.

Mazzullo, J. M. and A. G. Graham, 1988, "Handbook for Shipboard Sedimentologists", Ocean Drilling Program Technical Note #8.

"Shipboard Scientist's Handbook", Ocean Drilling Program Technical Note #3, 1987.

IV. DATA ITEM FORMATS

The following table lists the data items and their formats. For data requests other than on paper (ie. on magnetic tape), an accompanying sheet will contain any additional information needed to read the data.

SEDIMENTARY LITHOLOGY ITEMS	FORMAT
LEG	Integer 3
SUBLEG	Text 1
SITE	Integer 4
HOLE	Text 1
CORE	Integer 3
CORETYPE	Text 1
SECTION	Text 2
OBSERVER	Text 4
TOP_INTERVAL	Integer 3
PIECE_NUMBER_TOP	Integer 3
SUB_PIECE_TOP	Text 1
BOTTOM_INTERVAL	Integer 3
PIECE_NUMBER_BOTTOM	Integer 3
SUB_PIECE_BOTTOM	Text 1
LITHOLOGY	Text 120
COLOR	Text 115
COLOR_NUMBER	Text 80
STRUCTURES	Text 120
DRILLING_DEFORMITIES	Text 60
UNUSUAL_OCCURRENCES	Text 60
MINERALS	Text 60
PALEONTOLOGY	Text 65
OTHER or COMMENTS	Text 100
INDURATION	Text 90
MORE_DATA_AVAILABLE	Text 1
CODE	Text 40

V. EXPLANATION OF THE SEDIMENT/SEDIMENTARY ROCK LITHOLOGY DATA ITEMS

LEG - Number identifying the cruise. The Ocean Drilling Program started numbering the cruises of the JOIDES Resolution at Leg 101.

SUBLEG - Letter identifying a subleg or transit. A subleg is the continuation of a Leg after a port call; it often involves a crew change.

SITE - Number identifying the site. A site is the position of a beacon around which holes are drilled.

HOLE - Letter identifying the hole.

CORE - Number identifying the core. Cores are numbered serially from the top of the hole downward.

CORETYPE - A letter code identifying the drill bit/coring method used to retrieve the core. The coretype codes are:

- B - Drill Bit
- C - Center Bit
- D - Positive Displacement
- H - Hydraulic (Advanced) Piston Core
- M - Miscellaneous
- N - Downhole Mud Motor (Navidrill)
- P - Pressure Core Barrel
- R - Rotary
- S - Side Wall Core
- W - Wash Core
- X - Extended Core Barrel

SECTION - A core is cut into 1.5-meter-long sections that are numbered serially from the top of the core. A core with full recovery will have 7 sections and a core catcher and be approximately 9.8 meters long.

OBSERVER - Three or four letter code identifing the person who described the interval.

TOP_INTERVAL - The location of the top of the unit being described within a section in centimeters.

PIECE_NUMBER_TOP - Number identifying a rock piece located at the top of the unit being described. A piece is one rock fragment or a group of rock fragments that can be fitted together.

SUB_PIECE_TOP - Letter identifying an individual rock fragment within a piece located at the top of the unit being described.

BOTTOM_INTERVAL - The location of the bottom of the unit being described within a section in centimeters.

PIECE_NUMBER_BOTTOM - Number identifying a rock piece located at the bottom of the unit being described. A piece is one rock fragment or a group of rock fragments that can be fitted together.

SUB_PIECE_BOTTOM - Letter identifying an individual rock fragment within a piece located at the bottom of the unit being described.

LITHOLOGY - Lithologic name given to the sediment or sedimentary rock layer being described.

COLOR - Color or colors of the sediment or sedimentary rock layer being described.

COLOR_NUMBER - Color number or numbers from the Munsell color chart that identifies the color of the sediment or sedimentary rock layer being described.

STRUCTURES - Includes any structures (other than those resulting from drilling) found in the layer being described.

DRILLING_DEFORMITIES - Contains information about deformation resulting from drilling.

UNUSUAL_OCCURRENCES - Contains information about any unusual occurrences found in the lithology being described.

MINERALS - Lists any specific minerals mentioned in the lithologic description.

PALEONTOLOGY - Lists macrofossils and microfossils mentioned in the lithologic description.

OTHER or COMMENTS - Includes other observations or comments that do not fit into any of the other data items.

INDURATION - Description of the relative hardness of the lithology.

MORE_DATA_AVAILABLE - A "Y" (for "yes") indicates that more data or information was available on the paper form, but could not be included in the data file, for example any additional diagrams drawn by the observer.

CODE - This is a manually supplemented code for areas where no smear slide data are available. It is for internal use only.

VI. KEYWORD LIST

The following is a list of keywords used for the data items indicated.

LITHOLOGY

See Explanatory Notes in Initial Reports
hardground
hole (holes in core surrounded by other material), see **OTHER** also

COLOR

See Munsell Soil Color Chart, Blebs

COLOR NUMBER

See Munsell Soil Color Chart

STRUCTURES

algal biscuit
angular unconformit
anticline
arcuate fault
asymmetric fold

ball & pillow structure
band
bed (layer)
bed(ding) fault
biogenic structure
bioturbat (minor, moderate, strong)
boring
boudinage
burrow (see also infilled burrow)

chevron fold
Chondrites
climbing ripples
coarsening
compact
complete shell
concretion
contort
convoluted bed
core-in-core structure
cross bed
cross lamina
cross stratifi
current ripple

cylindrichnus

dewatering vein
diapir
dip fault
discontinuit(-ies or -y)
drag fold
dropstone

fault
fining
flame structure
flaser bed
fold
fossil (general)
fracture

geode structure
gouge
graded bed (precede with Normal or Reverse)

imbrication
infilled burrow
isolated pebbles and cobbles

lamin (-ae, -ation)
layer
lenticular bed
load cast

macrofault
massive bedding
megafossil
micro-cross lamin
microfault
microstylolite
mottl
mud crack

pillow basalt
planolites
rhythmic bed

scour
soured, sharp contact
seam
shell
slickenside
slide fold
slump (structure, block, fold)
solution feature
stylolite (see also microstylolite)

teichichnus

unconformit(-ies or -y)

varve
vein (seam)
vuggy

water escape pipe
wavy bed
wood fragment

Zoophycos

DRILLING DEFORMITIES

SOFT SEDIMENTS

highly disturbed
moderately disturbed
slightly disturbed
soupy

HARD SEDIMENTS

drilling breccia
highly fragmented
moderately fragmented
slightly fractured

drilling contact

UNUSUAL OCCURRENCES

calcite crystal
calcite rhomb
chondrule
concretion
contact metamorphism

dolomite crystal
dolomite rhomb
dropstone

erratic
evaporite

geode

hydrocarbon
hydrogen sulfide odor

manganese nodule
manganese clast
marcasite

micronodule (see **OTHER** also)
microtektite
methane odor

nodule

oil
oolite
ooid

pebble
peloid
phosphorite nodule
phosphorite clast
pisolite (see **PALEONTOLOGY** also)
precious metal
pumice

red bed
rework

spherule
spherulite

tektite

volcanogenic (use only if really unusual in leg)

MINERALS

AG (for silver)
anhydrite
AU (for gold)

basalt fragment
biotite

calcite
carbon fragment
celestite
chert
chlorite
coal
corundum
CU (for copper)

dolomite

FE (for iron)
ferric
ferrous aggregate

garnet
glass

glauconite
goethite
gypsum

halite

lignite

marcasite
metal
metallic spherule
mica
microcrystalline quartz
MN (for manganese)
muscovite

NI (for nickel)
nontronite

opal
opaque mineral

phosphorite
pumice
pyrite

rock fragment

sericite
smectite

terrigenous detritus
topaz
tourmaline

volcan

zeolite

PALEONTOLOGY

algae
ammonoid
annelid
Aptychi
archeomonad

bioclast
bivalve
bryozoan

cephalopod
coal

coccolith
conodont
copsolite
coral

diatoms

echinoid

fecal pellet
fish teeth
foram(s)
foraminifer

gastropod

hydrozoan

lignite

mollusc

nannos

oncoid
oncolite
organic
other fossil
otolith

pellet
pelecypod (bivalve used for pelecypod)
pisolite (see **UNUSUAL** also)
plant
plant material
pollen
pteropod

radiolarian

sapropel
scolecodont
serpulid
shell
silicoflagellate
skeletal
spicule
spine

unidentified calcareous fossil
unidentified siliceous fossil
unidentified fossil material

OTHER

blebs (if no color assoc.)
burrow (typically comments on size or shape)

carbonate fragment
cement (spar)
chicken-wire fabric
clast(s)
clay (when unsure if $CaCO_3$ or terrigenous)
cohesive
contact (adjectives include: lower, upper, inclined, sharp, gradational)

dissolution (of shell material)
dropstone

... fabric
fracture

grain aggregate
grain

hardground (see **LITHOLOGY** also)
hole (holes surrounded by other material) see **LITHOLOGY** also

intraclast(s)

lithoclast(s)

matrix (adjectives include: ooze)
micrite
moldic (use as adjective for porosity)
mosaic chicken wire fabric
muddy
mud-supported (used when refering to debris flows (e.g. floatstone), which, by definition contain mud but are not necessarily mud-supported)

porosity
possible downhole contamination
possible terrigenous component

sandy inclusion
silty (used in **OTHER** when lithology is carbonate)

texture (adjectives include: sucrosic
turbidite (adjectives include: probable, distal

vug

INDURATION

indurat
lithified
partly lithified
unlithified

ABBREVIATIONS

across = diameter
aherm = ahermatypic
benth = benthic
comp. = component
crs = coarse (always use the abbrv)
dn = down
esp = especially
frag(s) = fragment(s)
herm = hermatypic
irreg = irregular
med = medium
mtx = matrix
plank = planktonic
textr = texture

VCD TASK FORCE REPORT UPDATE
Sept 16, 1988

I. Personnel

The attached table shows the actual status of the VCD Task Force personnel through the end of September. After September, we will have one full-time person until March working on the data along with three half-time graduate students for an indefinite period.

II. Status of the Data

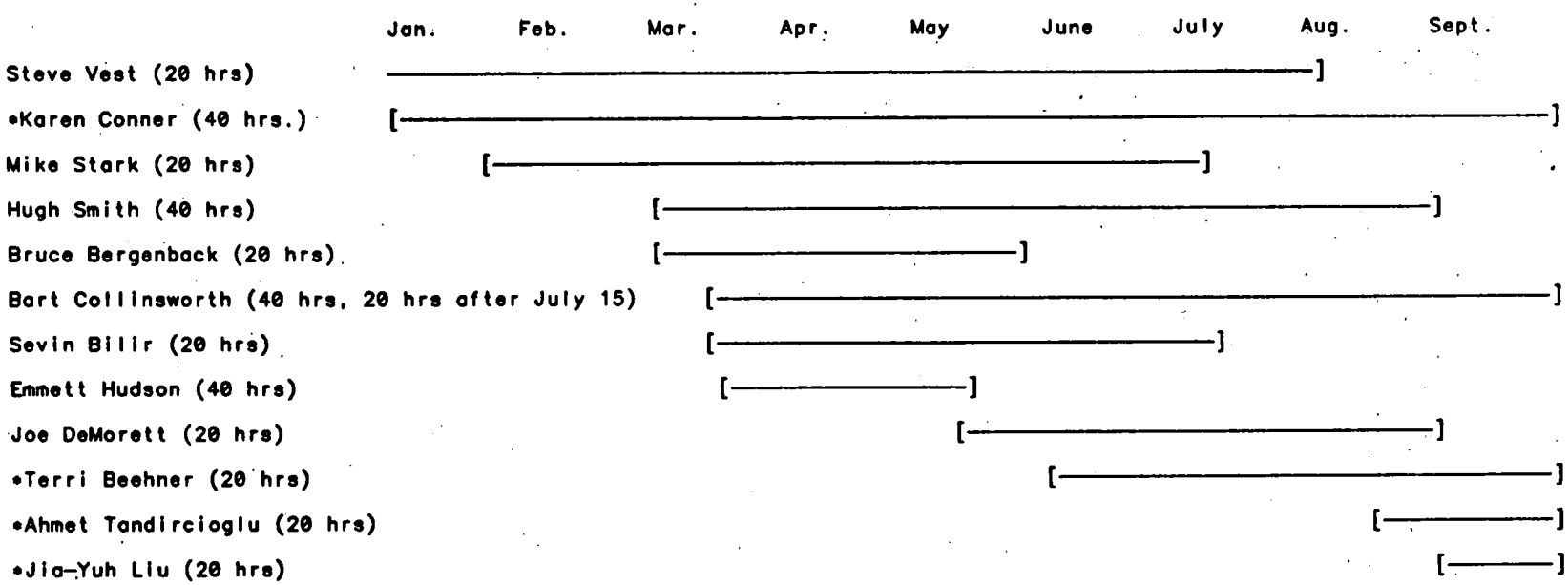
The Task Force was again unable to reach the goals outlined in "Attachment A" to the July IHP report due to losses in personnel.

The three step process used by the Task Force is: 1) keypunch the data into the computer using the forms and barrel sheets; 2) edit the entered data, making any corrections that are necessary, and catching anything that was missed; 3) retype in the corrections that were needed. The current status of each Leg is as follows:

Completed through step 3	Leg 101
	103
	104
	105
	110
	114
	117
	118
Completed through step 2	Leg 112
Completed through step 1	Leg 108
	113
	115

Legs 107, 111, 116, and 119 are all partially entered into the computer (step 1). No sediment/sedimentary rock cores were collected on Legs 102, 106, and 109.

VCD PERSONNEL
1988



• Persons remaining beyond Sept. 30.

STATUS OF THE PALEO REFERENCE CENTER SAMPLE INDEX

September 16, 1988
From Patricia Brown

To provide important information about the samples at the Paleo Reference Centers, DSDP began compiling an index to the paleo reference center samples. The index included such information as: latitude, longitude, ocean name and area, depth below sea floor, age of the sample, fossil group, zone, and sediment lithology. DSDP completed the index through Leg 57 for foraminifera and diatoms, and through Leg 60 for nannofossils and radiolarians.

John Saunders and I spoke about the sample index over the summer. He is concerned that some of the samples are not listed in the index, some sample identifiers are incorrect, and that there appear to be problems with some of the ages and zones given in the index. Also, the ages and zones are missing for several samples.

We are unable to locate any programs here that DSDP used to generate the sample index. However, with System S1032, it will not be difficult to cross-reference the datasets we have created from the DSDP data to generate the rest of the sample index.

The following items need to be done to complete this index.

ACTION ITEMS

1. Work with John Saunders to resolve problems relating to the age and zones of the samples.

2. Work with Curation to resolve problems with the sample identifier and missing samples.

3. Write a program to generate the remainder of the report.

4. Create the rest of the report and error check it.

It is difficult to estimate the amount of time needed to complete this assignment. Items #1 and 2 will be the most time consuming (probably months). Item #3 should only require about a week to create. Item #4 will require about three weeks if no errors are found. If there are numerous errors found in the new report, probably several months will be required.

DATA BASE GROUP

STATUS OF THE PALEONTOLOGY DATASETS

Sept. 12, 1988
From Patricia Brown

The paleontology datasets have been completed and reviewed by the paleontology scientists at ODP. The datasets include: 1) the Paleontology dataset containing fossil abundances for a given fossil group in a particular sample and; 2) an Age Profile dataset containing the ages of the core material downhole.

1) To accomplish data entry and reporting with the Paleontology dataset, Science Operations, the Data Base Group, and Publications have reviewed a computer program called Checklist II. Checklist II allows paleontology data to be entered into computer data files and then uses the data files to produce range charts. A contract is being negotiated with the program's author which will result in modifications that meet the specific needs of ODP. The updated Checklist II program should be completed by Dec. By January, 1989, the Data Base Group should begin entering the paleontology data into the dataset.

The advantages of using the Checklist II program for data entry and reporting include:

The data entry forms will not need to be created at ODP.

The data entry forms make data entry fast and easy because you do not have to keep retyping the fossil names.

Checklist II will be able to accept ASCII data files from S1032 datasets and data files created by paleontologists working on ODP publications. These files can then be used to create range charts.

Checklist II will produce ASCII data files that can be loaded into the S1032 dataset.

Checklist II will provide camera-ready range charts for use by Publications.

2) Data will be entered into the Age Profile dataset using the S1032 forms package to generate data entry forms. Data entry should begin before the end of this year.

Computer Services Group
Applications Status Report
09/07/88

Application Name	Ship/Shore Usage	Status	Expected Compl.Date	Comments
Core Sample Inventory (Phase 2) – tracking samples on shore	Both	Development	October 1988	
– linkage with VAX central data base		Pending	To be detrmnd	
Physical Props.– Strength (Phase 2)	Ship	Development	September 1988	Phase 2 is for enhancements to plotting & printing capabilities in the programs based on user feedback while using Phase 1 programs.
– Index Properties	Ship			
– Velocity	Ship			
– 2–minute GRAPE	Ship			
Chemistry – Gas Chrom. (Phase 1)	Ship	Design	November 1988	Phase 1 permits data to be collected in machine readable form with minimal reporting and plotting capability provided in the programs.
Chemistry – Calc. Carb. (Phase 2)	Ship	Development	October 1988	Phase 2 is for enhancements to plotting & printing capabilities in the programs based on user feedback using Phase 1 programs. More analysis required than planned as users want to use spreadsheet.
– Inter. Water (CHEMDB)	Ship	Development	October 1988	
– Gas Chrom.	Ship	Pending	To be detrmnd	
– Rock Eval.	Ship	Pending	To be detrmnd	
Sedimentary Smear Slides/ Thin Sections (Phase 2)	Ship	Design	November 1988	Phase 2 is for enhancements to plotting & printing capabilities in the programs based on user feedback using Phase 1 programs. Multi–user support to be added.
Sedimentary Smear Slides/ Thin Sections (Phase 3)	Ship	Design	To be detrmnd	Phase 3 consists of some advanced data analysis capabilities requested by users.
Multi Sensor Track(MST)	Ship	Development	November 1988	To ship for Leg 124, support of PWave Logger, Mag. Susceptibility, and GRAPE with hooks for additional sensors.
GRAPE(MST version)	Ship	Conversion	November 1988	Conversion for use on MST.
Pwave Logger(MST vers.)	Ship	Conversion	November 1988	Conversion for use on MST.
Install IBM PC compat. and Macintosh systems on shore	Shore	In Process	October 1988	Equipment on order
CHECKLIST II (stratigraphic data entry and retrieval)	Both	Analysis/ Design	December 1988	Enhancement of commercial package and customization for ODP – to be done by original author as consultant subject to ODP specifications and oversight.
Upgrade shipboard VAX systems with MicroVAX 3500 and local area VAXcluster	Ship	In progress	January 1989	Hardware received on shore, system in process of being configured, tested, and evaluated on shore. environment.
Logging VAXstation 3200 for FMS processing (LDGO)	Ship	In progress	January 1989	Equipment on order to be shipped to LDGO.
Ethernet installation to LDGO Logging MASSCOMP FMS VaxStation, and Schlumberger logging van	Ship	Pending	To be detrmnd	Awaiting decision to proceed.
Igneous/Metamorphic Thin Section Desc.	Both	Pending	To be detrmnd	Analysis was being done by Asst. DB Supvr. Currently waiting for replacement to continue work.
Publications Tracking	Shore	Analysis/ Design	To be detrmnd	Manuscript data set maintenance base and interface to ODP participant data base (ODASI) under analysis; consideration being given to implementation on PC.
Materials Management (MATMAN) enhancements – bar–code support	Both	Pending	To be detrmnd	

Core Log Enhancements - Inclusion of more engineering data, enhancement of video displays.	Ship	Pending	To be detrmnd	
Duplication of shipboard system ashore for testing	Shore	Analysis/ Design	To be detrmnd	
Shipboard performance optimization (Phase 2)	Ship	Analysis/ Design	To be detrnmd	Phase 1 (optimizing sample ID editing and depths look-ups) completed Sept 1988.
Batch editing of accumulated data; preparation of public-access data base	Shore	Analysis	To be detrmnd	
Implementation of on-line DSDP Cumulative Index	Shore	Analysis/ Design	To be detrmnd	DSDP data loaded, software being tested, currently trying to determine the user interfaces
Core Description Stations	Ship	Pending	To be detrmnd	Automation of core descriptions.
Real-Time Navigation Plotting System	Ship	Pending	To be detrmnd	Plotting of ship position in near real time from multiple positioning sources.
Magnetometry	Ship	Pending	To be detrmnd	Rewrite and enhancement of software.
Thermal Conductivity	Ship	Pending	To be detrmnd	Rewrite and enhancement of software.
XRD (X ray Diffraction)	Ship	Pending	To be detrmnd	Transfer software from PDP11 to VAX.
Engineering Drawings Data Base	Both	Pending	To be detrmnd	Eng. Drawing data base with link to MATMAN system for component inventory.
Develop and Improve User Interface to Computers	Both	In Progress	To be detrmnd	On-going project
Data Analysis Software	Both	Pending	To be detrmnd	Additional data analysis software as identified and specified by scientists.
Interfacing of MASSCOMP Logging Computer to VAX	Ship	Pending	To be detrmnd	Connection of Lamont Logging computer to VAX for data transfer.
Computer Utilities and Tools	Both	Pending	To be detrmnd	Make CSG utility libraries available to users with appropriate documentation, supply other utilities as requested.
Heat Flow (Bowmar/White) (Production Model)	Ship	In Progress	To be detrmnd	Software has been completed and tested with prototype. Hardware delivery delays from Bowmar/White prevent final delivery of production model to ship.
Evaluating MacIntosh PCs as workstations	Both	In Progress	To be detrmnd	

Computer Services Group
Applications Completion Report
09/07/88

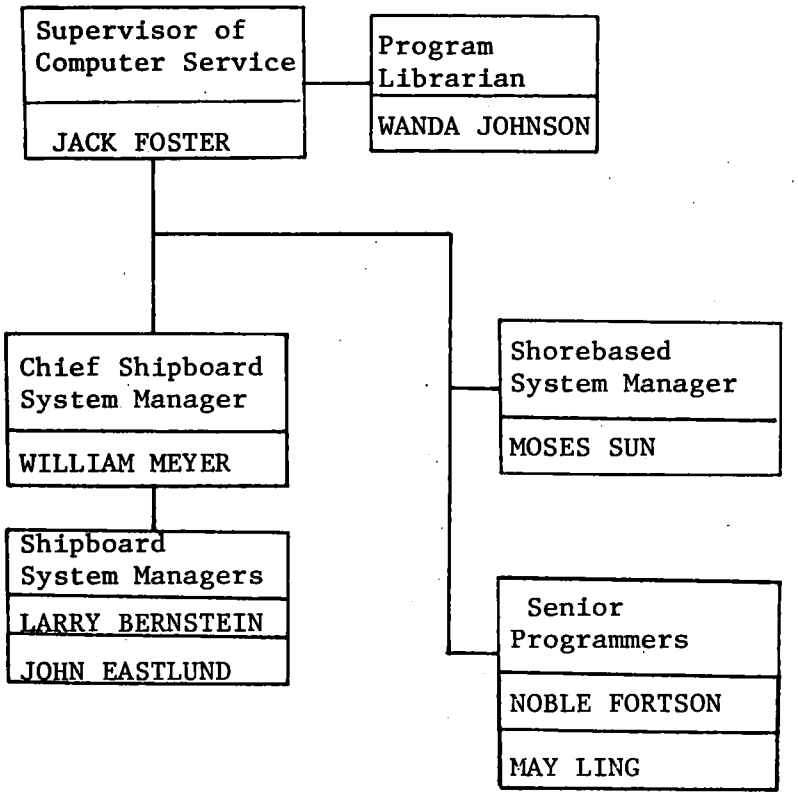
• Completion since last IHP meeting

Application Name	Ship/Shore Usage	Status	Comments
re Log	Ship	Complete	Some enhancements planned, but unscheduled at this time. (see Applications Status Report)
Art Stations	Shore	Complete	
Sedimentary Smear Slide/ Thin Section (Phase 1)	Both	Complete	
Leg, Site, Hole Data Base & Reports	Both	Complete	
NAVLOG (GPS data to seismic headers)	Ship	Complete	
Navagation Plotting (SMOOTH)	Both	Complete •	NOTE! Inadvertently omitted from previous reports.
Materials Management (MATMAN)	Both	Complete	Bar-code support to be added when time permits. (see Applications Status Report)
Enhancements			
– addit. report/retrieval procedures		Complete •	
– task/user security implemented		Complete •	
ODP Participant Data Base	Shore	Complete	
Underway Data Analysis	Both	Complete	
Core Sample Inventory (Phase 1)	Both	Complete	
GRAPE (Standalone vers.)	Ship	Complete	
COM Communication Msg. Distribution and Billing	Shore	Complete	Software to distribute messages received via daily satellite communication with the ship to the shorebased electronic mail system and to provide billing information so that each cost center pays for messages sent.
Pwave Logger (Standalone)	Ship	Complete	
Heat Flow (Prototype)	Ship	Complete	Refer to Heat Flow on Applications Status Report
Sample Request and Bibliographic Data Base	Shore	Complete	
Load DSDP Data Bases to System 1032 Data Sets	Both	Complete	25 DSDP datasets are available for System 1032 access via System 1032 DBMS.
Physical Props.– Strength	Ship	Complete	Phase 1 permits data to be collected in machine readable form with minimal reporting and plotting capability provided in the programs.
(Phase 1) – Index Properties	Ship	Complete	
– Velocity	Ship	Complete	
– 2-minute GRAPE	Ship	Complete	
Chemistry – Calc. Carb.	Ship	Complete	Phase 1 permits data to be collected in machine readable form with minimal reporting and plotting capability provided in the programs.
(Phase 1) – Inter. Water (CHEMDB)	Ship	Complete	
– Rock Eval.	Ship	Complete •	Phase 1 permits data to be collected in machine readable form with minimal reporting and plotting capability provided in the programs.
Modify WordPerfect Word Processing Software to C form to ODP Standards	Both	Complete •	Establish default parameters, printer definitions, and special character support to ODP standards.
Install IBM PC compat. Systems on Resolution	Ship	Complete •	Installation of IBM PC compatible wordprocessing stations on ship.

Core Log Enhancements – Paleontological age update pgm rewritten to simplify forms interface, in replacing PRO by PC – Data set def changed to remove unused attributes, remove leg from DS name – Implementation of forms interface with full editing for Core Log updates	Ship	Complete • Complete • Complete •	
Shipboard Performance Optimization (Phase 1)	Ship	Complete •	Maintenance of logical name table in shared memory to minimize acessing Core Log data set when editing sample IDs and calculating depth values

ORGANIZATIONAL CHART

COMPUTER SERVICES GROUP



ATTACHMENT V

Computer Utilization and Data Handling on the JOIDES Resolution

A Report prepared for Dr. Ted C. Moore, Chairman, Information Handling Panel, Ocean Drilling Program

by

Ian L Gibson, Shipboard Petrologist, Leg 121, and
Canadian Representative, Information Handling Panel.

Singapore. 28th June. 1988

Introduction.

This report on computer utilization and data handling on the JOIDES Resolution is the result of an evaluation made during Leg 121, and intensive discussions with the other scientists and technical personnel on board. The author, as one of the shipboard scientists, used many of the computing facilities on board, including those related to the VAX mainframe, instrumental on-line data capture, down hole logging, graphics and database management. The assistance of the staff and scientists on board, and in particular of John Eastlund, the Shipboard system manager, is gratefully acknowledged.

Overview

The Computing facilities on the "JOIDES Resolution" fall into three categories:

1. The Vax 750 Mainframe computer System
2. The Lucky AT and PRO-350 workstations
3. Miscellaneous other computer systems, including a lone MAC and computers related to such activities as underway geophysics, down hole logging, and the analytical laboratories.

Scientists and technical staff on board require that these separate facilities function as a unified system. Unfortunately there are significant incompatibilities between the smaller systems grouped under item (3), and the Vax + workstations. Although ODP was aware of these incompatabilities at the time the systems were purchased, the problems are exacerbated by the lack of a centralized overview of on board scientific, curatorial, and administrative computing requirements and objectives: responsibility appears to be divided among Science Operations, Science Services, and Logistics. In order to promote a more balanced, rational, integrated approach to ALL the computing activities on board I recommend:

> The management structure at ODP be changed so that computing matters relating to shipboard scientific work, data handling, database management, administration, and publications be handled by one unified structure able to prioritize and organize the computing requirements of Science Services, Science Operations and Logistics.

The Vax Mainframe Installation

At times the present shipboard VAX 750 is significantly overloaded and user response is VERY slow. This overloaded condition has been recognized for some time, conditions appear to have been particularly bad on Leg 121! Although one of the main thrusts of this report is to recommend a decentralization of computing on board and the wider use of networked peripheral work-stations, nevertheless there is an ongoing need for a powerful mainframe centralized facility. I therefore recommend that:

> The onboard VAX 750 be upgraded as soon as possible.

Although the planned upgrade will increase the power of the VAX system by about a factor of five, there is an URGENT need to decentralize computing on board, down to the work-station level. Networked workstations have the advantage of (a) providing greater flexibility (b) providing increased computing power to the user (c) being cost effective. Such a system of networked workstations was envisaged during the design of the initial computer installation for the JOIDES Resolution. However the hardware and software necessary to support such a system has only ~~beeome~~ recently become available! I therefore recommend that:

> Efforts continue to implement a system of peripheral workstations to the VAX, networked with a high-speed ethernet link, perhaps DECNET or an alternative non-proprietory network protocol.

and that:

> Efforts continue to redistribute compute intensive tasks down to the work station level.

This network would allow use by the workstations of a centralized file system and databases maintained on the VAX: more limited terminal capabilities would also be provided.

Vax Utilization

The addition of an effective network of workstations connected to the VAX should allow the central system to be freed for a variety of specialized tasks not supported at the work-station level. These include: (a) Maintenance of the centralized databases, (b) Support of specialized peripherals including the magnetic tape units, large plotter, fast line printers etc. (c) Support of the centralized file system (d) Network support for DECNET or a similar protocol. Other activities, which should be handled primarily at the work-station level are discussed below under a series sections. To assess progress at decentralizing computing, I recommend that

> VAX activity be continuously monitored by the onboard systems manager preparing a summary of VAX usage at the end of each leg using the standard VMS accounting utility (See sample in the Appendix).

Graphics

I estimate that more than 50% of the VAX-based computing activity on LEG 121 involved generating graphical representations of data using the PICSURE graphics package. This software was designed for the commercial market for the preparation of business charts and graphics. It is not suitable for displaying: shipboard generated underway geophysical data, down hole logging results, generalised stratigraphic summary data, or depth/time paleontological charts. In fact any diagram requiring the integration of text and graphics, or with special requirements in relation to ornamentation, lettering, or line work is difficult or impossible with PICSURE. In view of the general inflexibility of the PICSURE package, I recommend that

> Use of the PICSURE software be phased out.

The preparation of graphical presentations of data is a very compute-intensive activity used by many of the shipboard scientists. In order to relieve pressure on the central computing system I recommend that:

> The search for a replacement package that will run in the workstation environment be speeded up and that such a package be installed to allow graphical plots required for shipboard data evaluation and subsequent publication to be generated on the workstations.

This would require programming effort, but the change would remove a significant load from the VAX. However, in view of the very considerable number of installed applications using PICSURE on board, I recommend that, as a temporary interim measure:

> Scientists continue to be allowed to use the PICSURE package to generate publication quality graphics for Part A.

Those graphics not needed for Part A, however, should be generated using software other than PICSURE. Scientists on both Leg 120 and Leg 121 prepared diagrams using MACDRAFT. A normal MAC user can teach him or herself to use MACDRAFT in about half a day, in part because of the very standard graphics user interface for the MAC. Scientists on board should be encouraged to provide this type of author-prepared artwork for Part A. I therefore recommend:

> The installation of additional Apple MAC computers on board, primarily for the use with graphical software.

If, as I expect, MAC utilization continues at a high rate, I recommend that:

> Apple laser printers be installed on board for use by both the MAC and AT workstation users.

It may well be feasible to place the MACs, and the Apple laser printers, on the shipboard VAX-workstation Ethernet. Alternatively it may be prefereble to link the MACS and laser printers via APPLETALK.

Although initially it appears that the recommendations in relation to graphics will be costly, graphics is a major shipboard computing activity. The additional personnel support required is minimal and there may be some significant savings. Mac utilization for graphics on legs 120 and 121 thrived without the active support of the computer manager or other technical staff on board. Users were essentially self-supporting. This is not uncommon in a microcomputing environment. Experience suggests that MAC hardware is robust, as is the system software. Good quality author-prepared graphics, generated on board will speed the production of part A and reduce drafting costs at College Station.

Although MAC graphics appear very suitable for use on board, it is not obvious that the MAC wordprocessing environment has any significant advantages over wordprocessing on the PC workstations. Additionally transferring text and spreadsheet files between the MAC and the VAX can be difficult. An improved version of Wordperfect for the MAC may improve the position

Sampling

Most scientists on board assisted with sampling during coring operations and the SAM program worked well and was easy to use. It is an excellent example of a program, running on a remote work-station, generating a file which is later incorporated into the VAX main database. I recommend that:

> Users be encouraged to access this sample database in read-only mode and that a procedure for adding sub-bottom depths to the individual samples be made readily available to the scientists.

Wordprocessing

Wordprocessing is a significant activity on board and the wordprocessing environment is important. Many scientists use the AT workstations only for wordprocessing. The recent change to Wordperfect has met with a reasonable degree of acceptance on board and the program is significant improvement over the software in use before. The tutorial is particularly useful. However, the printers used with the AT workstations are only marginally adequate and the keyboards need replacing. I recommend that:

> The keyboards be replaced as soon as possible and the printers used for wordprocessing and general purpose computing be progressively replaced by a smaller number of networked laser printers capable of supporting graphics.

This should also obviate the necessity of replacing the LVP plotters in the user-room, which can simply be scrapped when they reach the end of their useful life.

Paleomagnetics Facilities

The computing arrangements provided for the paleomagnetic group are excellent and as a result, on Leg 121, the scientists involved were productive and effective investigators. No radical changes are envisaged other than those related to PICSURE and graphics. In fact the technician has already started to move graphics applications away from PICSURE because of the poor service provided by the VAX 750 when running this software. Data capture is under control of separate microcomputer systems (PRO 350s to be replaced by IBM PCs or compatibles) and yet files of data for each site, of both magnetic susceptibility and magnetometer results, are maintained on the VAX. This is how the system should work! Unfortunately the programming support provided to the Paleomagnetic Group will be reduced with the departure of one of the more senior Technicians who has contributed significantly to the software used on board.

Sedimentology/Stratigraphy

During the description of the sedimentary cores, the scientists create a Wordperfect file for the barrel sheets. This seemed to work well, using a work-station immediately adjacent to the core-description table. I understand that this barrel sheet file for sedimentary rocks is used in the preparation of Part A. I recommend:

> That consideration be given to using the same file as a long text entry, essentially without modification, into a machine readable data base.

The file could be keyed by site, hole, core, type, sub-bottom depth etc. This simple step would initiate the on-board data capture of at least some visual core description data.

SLIDES, the S1032 application package for the entry of data from smear slides, runs on the VAX 750. At the present time the program for data entry runs painfully slowly. I recommend that:

> SLIDES be modified so that the data capture and data verification is completed on a work-station and that subsequently the data is transferred to S1032 as an "off-line" VAX task.

The data can be captured as a simple ASCII file, and the data capture program might be written as a spreadsheet, or as a compiled code in BASIC, FORTRAN or Turbo Pascal. Not only would data entry be quicker, but several users could run the SLIDES program at the same time - something that is not possible at present and a considerable source of irritation to the scientists involved.

GRAINSIZE is another software package used by the sedimentologists. It runs on the VAX and again inputs data into a shipboard database. Again data entry need not involve interaction with the mainframe system. However, as the amount of computation and data checking is less the program runs more quickly and immediate changes are not required, although user access to the program could be simplified.

Inorganic Chemistry

At present, although some of the analytical equipment used in the Chemistry lab is computer controlled and generates digital output, no data is captured at source and all the entry of the results into the Chemistry database is by hand. Unfortunately one data entry program runs on the VAX, allowing direct data entry into the S1032 database. This program also runs miserably slowly at present and I recommend that CHEMDB be treated in exactly the same way as SLIDES (see above) and that:

> CHEMDB be modified to allow data capture and data verification to be completed on a work-station and that subsequently the data is transferred to the S1032 chemistry database as an "off-line" task.

Until alternative graphics systems become available, scientists should be encouraged to use the existing CHEMPLOT facility

Petrology

The XRF and XRD both generate files of digital output results which are stored on the hard-disks of the controlling computers (two DEC LSI11s). I recommend that:

> Efforts continue to link these two microcomputer systems to the central VAX to allow the resulting files to be transferred to the VAX every day, or perhaps at the end of every shift.

The link could be via a simple serial line and KERMIT. The ASCII output files should be made available to the shipboard scientists as soon as possible. The files will need verification and "cleaning" before the information is incorporated directly into the XRF and XRD databases.

Physical Properties.

The physical properties scientists struggled for some time to utilize the PPLAB data entry software, but eventually abandoned the effort. As a result one of the scientists wrote and documented a data acquisition, verification and previewing package for the shipboard physical properties lab. The program adheres to the model recommended above for revised versions of CHEMDB and SLIDES in that it is written as a spreadsheet which allows data entry, verification, listing and plotting, all from within the same package which runs on the AT

workstation operating MSDOS. The ASCII file is then transferred to the VAX as envisaged in the original PPLAB software. It took an experienced scientist/programmer (unfamiliar with the 20/20 software) a few days to write this data aquisition package and a longer period to generate the documentation. Although it will take further developments to assess whether this user-supplied software is robust enough for routine use, the experience does suggest that the recommendations under CHEMDB and SLIDES are feasible.

Underweigh way Geophysics and Down hole Logging

These two laboratories together generate large amounts of numerical data during an average leg and have relatively sophisticated Unix-based MASSCOMP super-microcomputers installed for data-aquisition and handling. I did not evaluate the computing in these areas in any detail and I therefore recommend, particularly if the enhancement of the VAX system goes ahead,

> That ODP immediately initiate a review of the computing requirements in these two laboratories, particularly in relation to the overall computing facilities on board, and the possible development of a system of networked workstations linked by Ethernet.

A cursory examination suggests that computing in these two environments proceeds in almost total isolation from the VAX, and that the transfer of data between these labs and the VAX is difficult. Data can be moved to the VAX by magnetic tape. However the VAX-oriented shipboard scientist is hindered in attempts to numerically manipulate data generated in these two labs.

Staffing

The proposals outlined above envisage continued growth of computing on board. Computing will be an increasing part of all the areas of shipboard scientific research. Under these circumstances, I reccomend most strongly that

> ODP provide more shipboard staff support for computing.

As a minimum, the onboard Systems manager should be supported by an applications programmer who would also be available as an alternate to oversee the VAX during the second 12 hour shift. Leg 121 was supported a member of the technical staff who performed a significant amount of programming during his spare time; as well as by the Palaeomagnetic technician programming in his and other areas. Support at this level is essential if the scientists on board are going to benefit from the very significant investment in people and hardware by ODP.

However, ODP for its part has every reason to expect the onboard scientist not a computer programmer, but to be computer literate, and able to use the industry standard shipboard workstations with a minimum of support. I recommend that:

> ODP informs shipboard scientist applicants as to the computing facilities on board at the time of their application, and advises such applicants that they will be expected to utilise the systems in an effective way!

Such computing information should be updated in the normal way when scientists are invited to join specific legs.

Conclusions

The shipboard computing environment on the JOIDES Resolution is difficult to structure and rationalize. It has to service a wide spectrum of requirements, the staff and users are continually changing, and yet visiting scientists have every right to expect that the facilities on board will be of an extremely high calibre. The changes recommended should improve the computing services provided to Scientists, and hence enhance the quality and quantity of the scientific research conducted on Board.

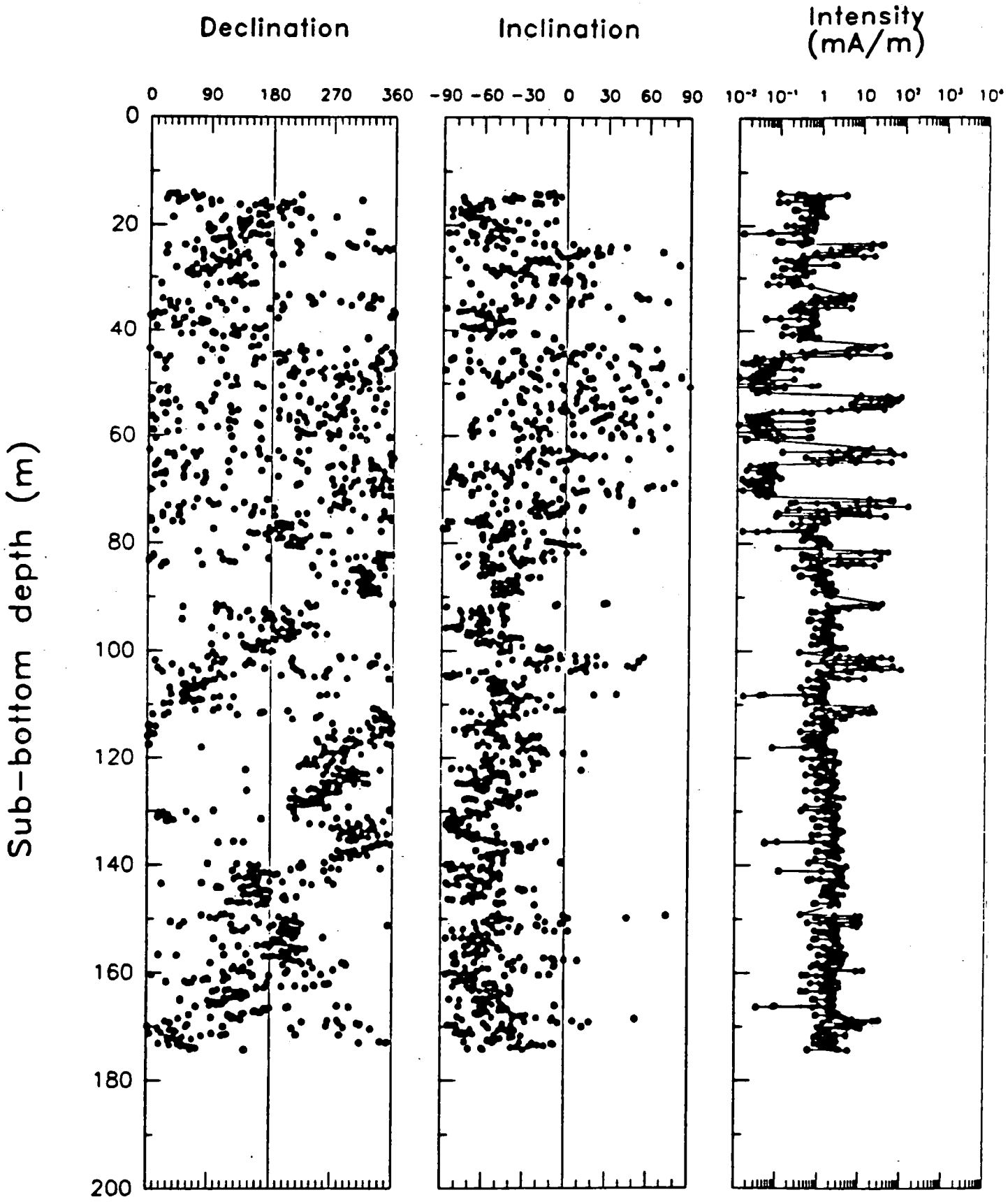
APPENDIX 1: Leg 121 Vax Utilisation

Leg 121 Vax Utilization
From: 27-APR-1988 To: 22-JUN-1988 16:13

Username	Processor Time	Major Activity
	d h m s	
PALEOMAG	2 22:40:15	PICSURE plots, data reduction
SYSTEM	2 16:51:47	Backups - system manager
VIDEO	1 09:45:56	Shipboard Video
PP	1 06:28:54	PICSURE plots, data reduction
SLIDES	0 15:53:06	S1032 description of Sections
SCIENCE02	0 15:40:34	Petrologist (PICSURE)
UNDERWAY	0 14:29:52	Geophysics, tape copying
SAMUTL	0 11:36:24	S1032 Sample satabase
CHEMDB	0 10:32:44	S1032 Inorganic database
SMOOTH	0 09:39:23	Shipboard track plots.
JAXMGR	0 09:25:41	Database Manager
PHYSPROPS	0 09:09:44	Physical Properties
YEOP	0 09:06:10	Yeoperson
SCIENCE04	0 08:31:12	Petrologist (PICSURE)
MATMAN	0 06:02:58	Lab Supplies inventory
X	0 03:42:48	Telex traffic
LOGGING	0 03:34:51	Down hole logging
CHEMISTRY	0 03:18:13	Inorganic Chemistry
DAWN	0 02:26:36	Technician
LEGS	0 02:23:21	Entry of Leg Site Hole information
HAMLIN	0 02:08:45	Lab Officer

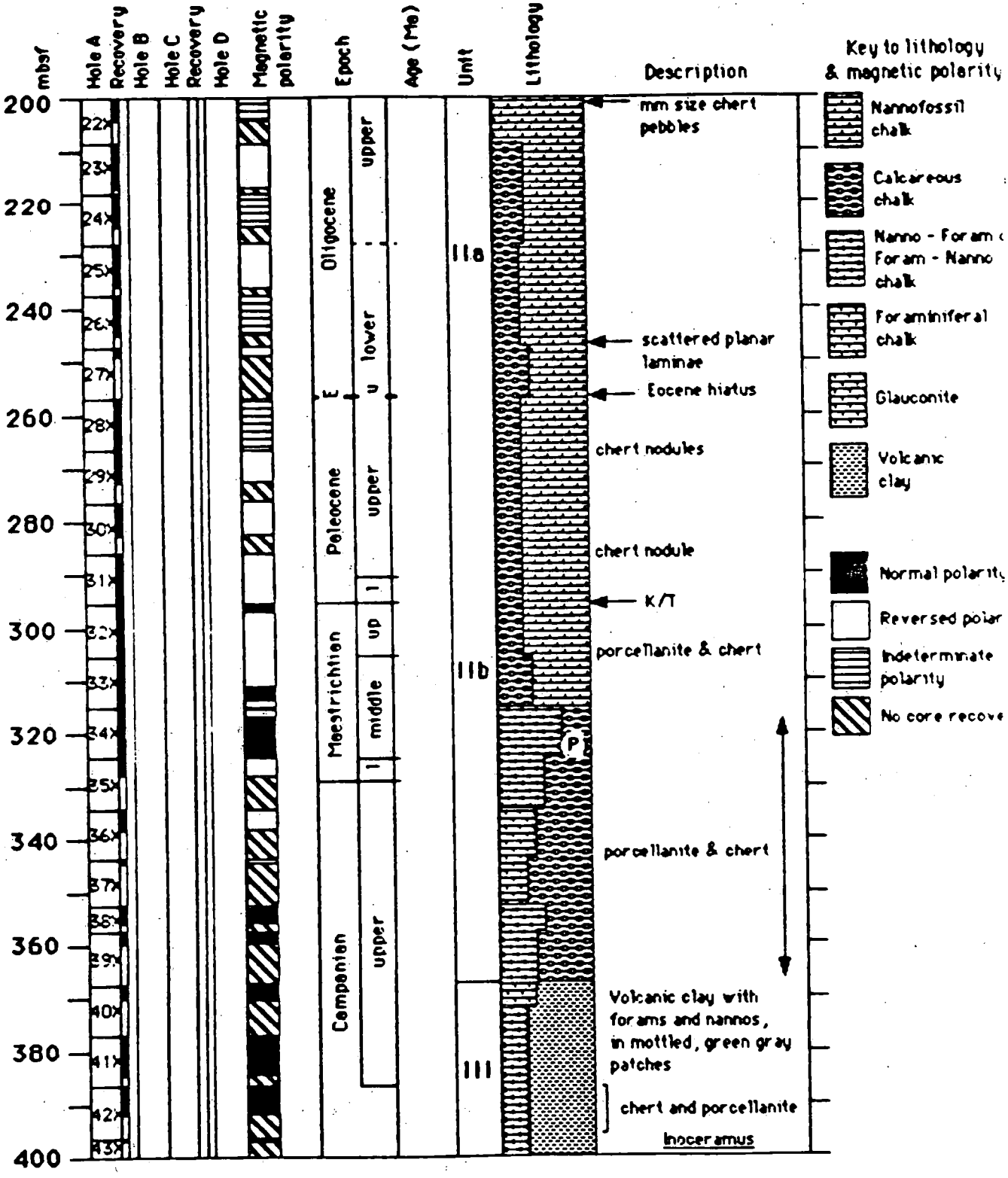
All other accounts used less than 2 hours of CPU time during Leg 121

APPENDIX 2: An example of PICSURE output used by the Paleomagnetic group on Leg 121.



APPENDIX 3: An example of the MACDRAFT output generated by the Sedimentologists on Leg 121, a graphic image that is difficult to create with PICSURE.

ODP LEG 121 GRAPHIC CORE SUMMARY: SITE 758



ATTACHMENT VI

Summary of Publications Activities, January-August 1988
(Prepared 1 August 1988 for Information Handling Panel meeting)

1. Continued preparation and publication of ODP Proceedings volumes (see Attachments 1 and 2).

2. Concerning Editorial Review Board:

a. Added limited copy-edit function to manuscript flow chart to apply where appropriate (Attachment 3), per PCOM request.

b. Prepared cover letter and accompanying information packet for Editorial Review Board members. Packet includes (1) flow chart mentioned in item a (above), (2) explanation of makeup and workings of Board, (3) review forms for manuscripts and Data Reports, (4) updated edition of "Instructions for Contributors," (5) booklet entitled "Guidelines for Reviewers of Geological Manuscripts" (AGI), (6) checklist for Board members, (7) table of contents for volume, and (8) form for listing Board member's pertinent expenses for reimbursement up to $500. Board members are now instructed to see that each Data Report is reviewed by at least one specialist to ensure that methods description and data presentation are accurate and complete.

c. Audrey Meyer, Manager of Science Operations, in cooperation with Russ Merrill, prepared document for co-chief scientists to sign enumerating their pre-cruise, cruise, and post-cruise responsibilities (Attachment 4). Latter deal specifically with Editorial Review Board and other publication obligations.

d. Prepared two model listings of Board members for title page of SR Vol. 107 (Attachment 5). Also prepared alphabetical listing of reviewers who didn't request anonymity for SR Vol. 101 (see Attachment 6). These are for IHP discussion.

e. Norman Stewart, Chief Editor, prepared summary and critique of Leg 107 Editorial Review Board meeting (Attachment 7).

3. Prepared, printed, and distributed updated version of "Instructions for Contributors to the Proceedings of the Ocean Drilling Program" to current and past shipboard parties and associated scientists.

4. Reviewed Proceedings publications concepts and, following approval from IHP, renamed and revamped Part A to Initial Reports only, and Part B to Scientific Results only, dropping reference to Parts A and B. Decided to change color of SR covers to pale blue, retaining familiar maroon bands.

5. Prepared comprehensive list of optional author charges, based on actual printing costs, including those for color frontispieces, color plates, black and white plates numbering more than five, back-pocket charts and maps, and chapter offprints (Attachment 8). Expect approval of these charges from JOI momentarily. See Attachment 9 for recent correspondence and history of charges for offprints and excess plates.

(Continued on reverse side)

6. DSDP index:

   a. Have received complete electronic index.

   b. Anticipate receiving typeset copy by early fall; will paginate it and send to U.S. Government Printing Office for publication.

7. Subcontracts:

   a. Typesetting and page makeup: Extended present contract with Design Service for 4 more years. Also sending out RFPs for second source of electronic typesetting with automatic page-makeup capabilities, initially to accommodate overflow periods.

   b. Printing, binding, and distribution: Plan shortly to execute new 3-year contract with our current printer, Edwards Brothers.

   c. Microfilming: Plan to have 3-year contract in place in August for routine microfilming of Proceedings volumes and for Data Base Group's routine needs as well as for any specialized needs Science Services or Program as a whole might have.

   d. Indexing: Executed 3-year contract with Richardson Associates for preparation of Proceedings indexes, which will cover both IR and SR volumes but which will be published only in SR volumes.

8. Worked out agreement with our printer to have IR Vols. 101/102, 103, and 105 re-covered and re-bound free of charge to replace discolored covers now evident. Whole process to be completed by early fall.

9. Proceeding with plans to prepare video discs for archiving of core photographs. May update cumulative sets biennially.

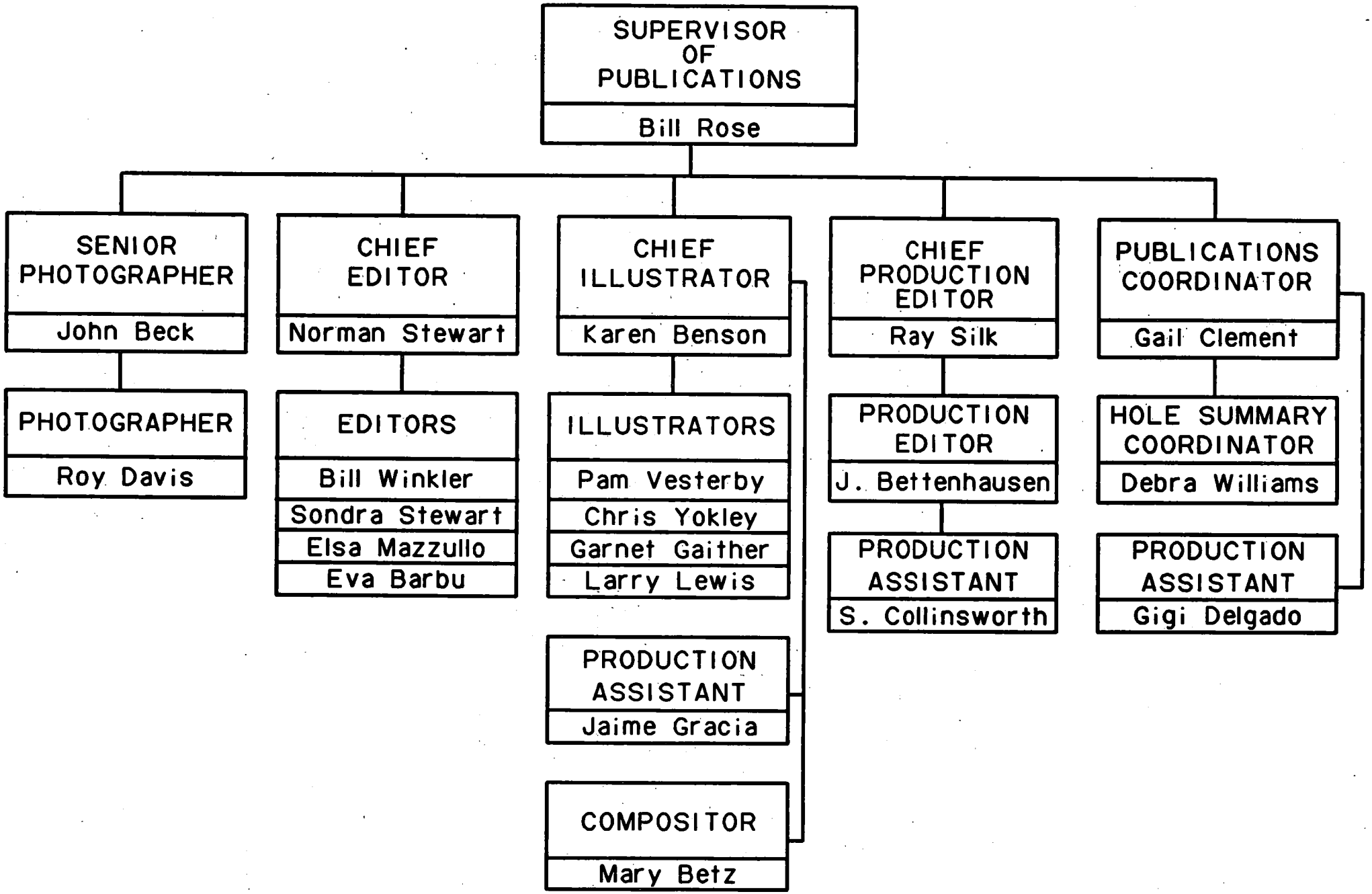
10. Programming by Computer Services Group of electronic version of Manuscript Tracking System now getting under way.

11. Non-Performers: Cooperated with members of Curatorial Group and Borehole Research Group of LDGO in making initial identification of apparent non-performers from Legs 103, 104, and 105. Conducted thorough investigation of each case, including examination of all pertinent evidence such as correspondence, notes from telephone conversations, etc., before compiling final lists for presentation to IHP. Names are omitted from lists in cases of reasonable extenuating circumstances and for other valid reasons. Fabiola Byrne is spearheading this project.

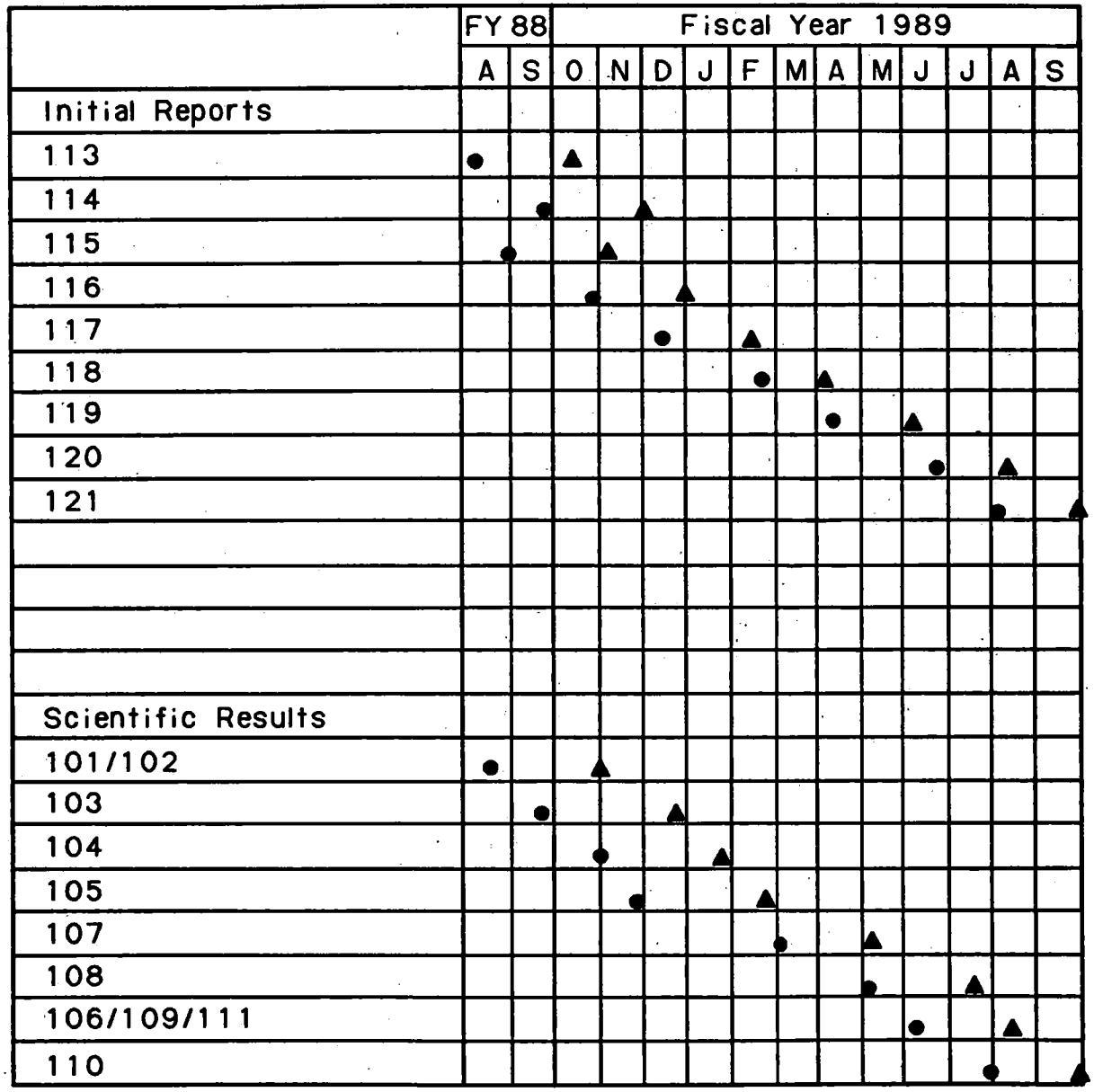
12. At Tom Pyle's request, prepared detailed analysis of FY89 budget with respect to calculating effects of cost reductions in producing IR volumes. Analysis was predicated on targeted budget cuts of 5%, 10%, 20%, and 33-1/3%, and their subsequent effects, such as eliminating core photos and "barrel sheets" and reductions in personnel. Also calculated were effects of possible increases of 5% and 10%, which would help us catch up in our publication schedule. (See Attachment 10.)

Attachments

TABLE OF ORGANIZATION
ODP PUBLICATIONS GROUP



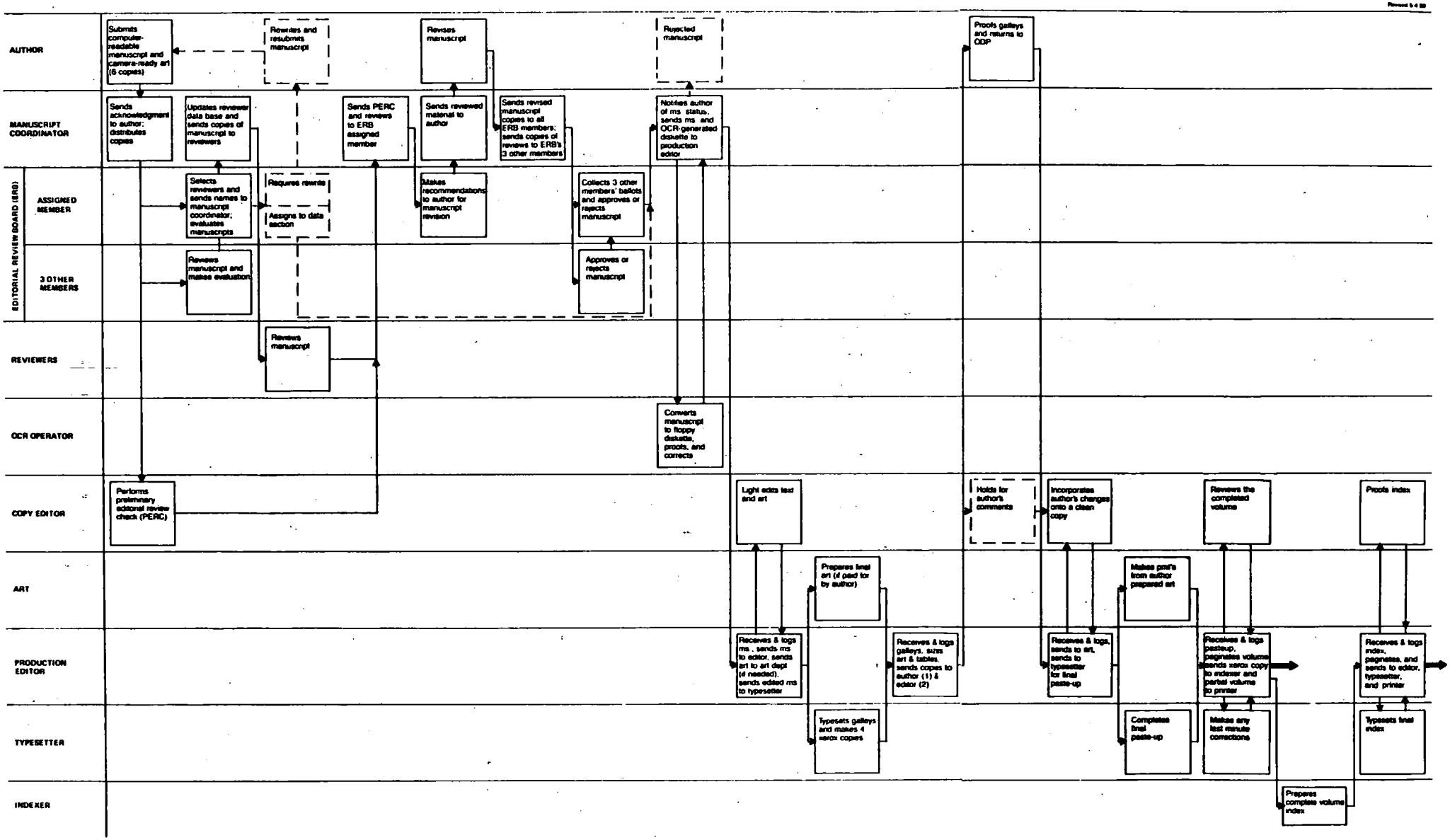
TENTATIVE FISCAL YEAR 1989
PRODUCTION SCHEDULE OF ODP PROCEEDINGS



● To Printer
▲ Published

Attachment 3

ODP *PROCEEDINGS* FLOW CHART—SCIENTIFIC RESULTS VOLUME



2/88

CO-CHIEF SCIENTIST AGREEMENT

Co-Chief Scientists bear a large part of the responsibility for the scientific success of the ODP Leg which they lead. Their duties extend from the time they accept the Co-Chief position (nominally 1 year pre-cruise) until the Proceedings "Final Report" from that cruise is published (nominally 3 years post-cruise). Specific Co-Chief responsibilities that must be fulfilled are outlined below. By recommendation of the JOIDES Information Handling Panel and the Planning Committee, one who accepts the position of Co-Chief Scientist and fails to fulfill these responsibilities may not be recommended for future ODP participation in such a leadership role. Your signature on this document will signify your agreement to assume the responsibilities of Co-Chief Scientist. Please return it in the self-addressed envelope for our files.

Pre-Cruise Responsibilities

1. To aid ODP staff in refining scientific objectives of cruise, taking account of operational constraints, and to ensure that the necessary geologic, geophysical, oceanographic, and meteorological data are assembled.

2. To aid ODP Site Survey Databank personnel as necessary in preparation of safety package for formal review by JOIDES Pollution Prevention and Safety Panel.

3. To review scientists' applications for participation on the cruise, and make recommendations to the ODP Manager of Science Operations for selection of participants.

4. To participate in Co-Chief Scientists' pre-cruise meeting in order to finalize cruise planning and meet ODP personnel. This is usually scheduled about 4 months pre-cruise.

5. To prepare cruise scientific prospectus in ODP format for distribution to cruise participants and JOIDES community about 3 months pre-cruise.

6. To review requests for samples from the cruise and to complete cruise sampling plan by two weeks pre-cruise.

Cruise Responsibilities

1. To direct and coordinate the shipboard science activities toward attaining cruise objectives set by the JOIDES Planning Committee.

2. To supervise implementation of cruise sampling plan agreed to prior to sailing, and to see that all shipboard scientists help in its completion.

3. To share with the Operations Superintendent the responsibility for avoiding hydrocarbon accumulations by ensuring that all hydrocarbon monitoring procedures are carried out as outlined in the "ODP Guidelines for Pollution Prevention and Safety" (JOIDES Journal, v. XII, Spec. Issue No. 5) and the "Shipboard Scientists' Handbook". To also ensure that recommendations of the JOIDES Pollution Prevention and Safety Panel are followed during the cruise.

4. To determine when and what types of underway geophysical data are collected while underway between sites and to and from ports.

5. To provide ODP with a concise report of the scientific results obtained at each site immediately upon its completion (Site Summary) and to provide a weekly science progress summary when sites are occupied for extended times.

6. To report information generated during the cruise in: (a) a cruise Preliminary Report; (b) a cruise Press Release; (c) a Geotimes article; (d) a Nature article; (e) cruise Hole Summary reports. These reports must be completed prior to docking at the end of the cruise.

7. To complete a Cruise Evaluation Form, or otherwise provide written assessment of performance of equipment, procedures, and ODP and SEDCO personnel.

Post-Cruise Responsibilities

1. To coordinate post-cruise studies by shipboard and shorebased researchers so that their results can be reported in the ODP Proceedings volumes.

2. To review post-cruise sample requests from shipboard and shorebased scientists until 1-year post-cruise moratorium has passed.

3. To participate in post-cruise meeting (nominally 5-7 months post-cruise) during which chapters for "Initial Report" are completed and tentative table of contents for "Final Report" volume is drawn up.

4. To nominate scientists for ODP's selection as the external member of the "Final Report" editorial board.

5. To serve on editorial board for "Final Report" volume. Duties of an editorial board member include: (a) reviewing all manuscripts submitted for the "Final Report" volume; (b) obtaining at least two rigorous and thorough peer reviews from qualified specialists for the manuscripts for which he/she is directly responsible (nominally 25% of the volume); (c) evaluating reviews and communicating with authors as necessary regarding revision of manuscripts; (d) identifying manuscripts that need partial or total rewriting, either because of English-language problems or other problems, such as poor organization. Co-Chief Scientist must perform these tasks, identify someone else to do them, or assist the ODP Editor in their completion; (e) participating in an editorial board meeting to review manuscripts and plan course of action for handling problem manuscripts (nominally held 20 months post-cruise at ODP Headquarters).

_____

Co-Chief Signature

Please return signed document to:

Dr. Audrey Meyer
Manager of Science Operations
Ocean Drilling Program
1000 Discovery Drive
College Station, Texas 77840
USA

PROCEEDINGS OF THE OCEAN DRILLING PROGRAM

VOLUME 107
SCIENTIFIC RESULTS
TYRRHENIAN SEA

covering Leg 107 of the cruises of the Drilling Vessel *JOIDES Resolution*,
Malaga, Spain, to Marseille, France, Sites 650–656,
26 December 1985–18 February 1986

Kim A. Kastens, Jean Mascle, Christian Auroux, Enrico Bonatti,
Cristina Broglia, James Channell, Pietro Curzi, Kay-Christian Emeis
Georgette Glaçon, Shiro Hasegawa, Werner Hieke,
Floyd McCoy, Judith McKenzie, Georges Mascle, James Mendelson,
Carla Müller, Jean-Pierre Réhault, Alastair Robertson,
Renzo Sartori, Rodolfo Sprovieri, and Masayuki Torii
Participating Scientists

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Shipboard Staff Scientist

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Editor

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Editorial Review Board

Prepared by the
OCEAN DRILLING PROGRAM
Texas A&M University
In cooperation with the
NATIONAL SCIENCE FOUNDATION
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Attachment 6
Sample Listing of Reviewers for
Front Matter of Proceedings

PEER REVIEWERS FOR THIS VOLUME

Paul A. Baker
Jack Baldauf
Richard Bennett
Jim Bergen
Bill Berggren
Richard Buffler
David Bukry
Henry Chafetz
Ronald C. Chaney
Thomas Cronin
Steven L. Dorobek
Wayne Dunlap
Dean A. Dunn
W. Ehrmann
M. H. Engel
W. R. Evitt
Thomas J. Freeman
Joris Gieskes
Roland Goldring
Paul M. Harris
William W. Hay
J. E. Hazel
D. Heling
Noel James
Christopher Kendall
Lynton S. Land
F. M. Maurrasse
M. Moullade
Greg Mountain
H. J. Oertli
Larry C. Peterson
John Pickett
Lisa M. Pratt
A. Rosenfeld
Dale S. Sawyer
G. Shanmugam
Robert Sheridan
William G. Siesser
M. A. Simms
John Steinmetz
Elliott Taylor
Fritz Theyer
Dave Twitchell
Dick Van Harten
Bruce Wilkinson
G. L. Williams
Lori Williams
Jim Wright

Leg 107 Editorial Review Board Notes

The first Editorial Review Board (ERB) to deal with publication of the Scientific Results portion of the Proceedings of the Ocean Drilling Program met at Lamont-Doherty Geological Observatory on 6-8 July 1988.

Background. The panel is aware of the evolution of the review-board concept, particularly with regard to the notion of rigorous external review. The review-board idea was "retrofitted" into the publications scheme and only now can be subject to initial evaluation. Leg 107 was an unusually apt voyage for the first ERB event. The Shipboard Scientific Party and their shore-based colleagues were especially well represented by a European component (not all of whom wrote idiomatically in English, the mandated language).

In addition, the after-the-fact requirement for the extensive co-chief participation in the reviewer selection, review evaluation, and manuscript handling can understandably be seen as meeting with some hesitance, amounting to reluctance in some instances, on the part of co-chiefs for several of the affected legs.

Leg 107 ERB composition. Each board is made up of the co-chiefs, an ODP staff scientist, an outside scientist, and an ODP editor. The members of this Board are Kim Kastens (co-chief), Jean Mascle (co-chief), Floyd McCoy (for the staff scientist), Maria Cita (outside scientist), and Norman Stewart (editor). In addition, Russell Merrill (chief of ODP Science Services) attended the convening of the meeting.

Activity of the Board. The agenda recognized that Leg 107 was behind schedule and focused on the elements most necessary to salvage lost time. The Board strove to (1) find reviewers for all articles, (2) identify papers in trouble, (3) set schedules (deadlines) for nonsynthesis and synthesis papers, and (4) alert authors of "non-idiomatic English" reports to seek help in revisions.

The Board assigned or suggested reviewers for all the papers submitted, and a member was assigned as the contact for each paper. Certain reports were designated by the Board members or the reviewers as needing more or less revision; in some cases, it was agreed that a third external review could be advantageous in deciding to accept or reject a paper. (Papers are also subject to rejection by the Board with or without review.) The Board set rigid schedules for final submission of revised manuscripts. Reports exhibiting English-language problems will be editorially improved at ODP after acceptance and before typesetting.

A number of procedural imperfections were noted by the Board members and the ODP manuscript coordinators. These were mostly omissions in receiving confirmations of reviewers' acceptance or declination of the review task, failure of Board members or reviewers to comply fully with paperwork or logging necessary to track manuscript flow, and sending papers directly to reviewers without informing ODP.

Some philosophical questions arose out of the meeting (as well as before and after). Principal among these was the knotty problem of sending manuscripts to other authors; this was decided in favor of doing so on the grounds that the shore-based investigators were by definition members (though after the fact) of the Shipboard Scientific Party, and subject to the same co-mingling. Papers suggested after the post-cruise meeting were also perceived as a problem. It was decided to make approval by the co-chiefs a condition of acceptance of such reports.

Guidelines for designating and processing "Data Reports" were also considered; specifics of handling such papers are now being generated at ODP and will call for the review of methods only by a single reviewer.

Conclusions were reached concerning several general items: (1) do not overuse individual reviewers, (2) use fast-response communication modes (first-class mail is the last choice), and (3) the ODP publications coordinator will make a monthly report to all Board members showing the status of each paper so as to pinpoint needed actions.

The editor views participation in the meeting as an opportunity to gain added background in the science for that leg, to help restate Board members' discussion points, and to help obtain consensus.

For Leg 107, 83 titles were proposed, of which 25 were withdrawn. From those remaining, 47 were received and 11 have not been received. The co-chiefs estimate that 35-40 papers will actually result. The initial deadline for receipt of manuscripts was 30 November 1987; this deadline later was extended to 30 June 1988, and closure letters have now been sent.

For comparison purposes, an account of how manuscript processing is proceeding for Legs 106/109 and 108 might be of interest.

For Legs 106/109, 55 titles were proposed, of which 5 have been withdrawn. From those remaining, 23 were received, and 27 have not been received. The initial deadline for receipt of manuscripts was 31 December 1987; this deadline later was extended to 31 August 1988.

For Leg 108, 57 titles were proposed, of which 24 have been withdrawn. From those remaining, 28 were received, and 5 have not been received. The initial deadline for receipt of manuscripts was 1 January 1988; this deadline later was extended to 21 July 1988, and closure letters now have been sent.

Norman J. Stewart
1 August 1988

ADDITIONAL CHARGES PRICE LIST FOR ODP PROCEEDINGS VOLUMES EFFECTIVE AUGUST 1, 1988

The following items are available for inclusion in both parts of the Proceedings volumes but only if paid for by the requestor.

COLOR FRONTISPIECE - Price is for 1,800 copies.

	PRINTING	NEGATIVES	TOTAL
Printed One Side	1,332.00	345.00	$1,677.00
Printed Two Sides	2,260.00	690.00	$2,950.00

COLOR PALEO PLATES - Price is for 1,800 copies.

	PRINTING	NEGATIVES	TOTAL
4-Page Signature	962.00	1,380.00	$2,342.00
8-Page Signature	1,480.00	2,760.00	$4,240.00
16-Page Signature	2,598.00	5,520.00	$8,118.00
32-Page Signature	5,196.00	11,040.00	$16,236.00

BACK POCKET CHARTS AND MAPS - One black ink only allowed at no cost. Price is for 1800 copies.

	BLACK INK ONLY	PRINTED 2-COLORS
Printed One Side (41"X54")	$1,571.00	$2,162.00
Printed Two Sides (41"x54")	$1,612.00	$2,578.00

OFFPRINTS - are only available if paid for by the requestor and applies to both Initial Reports and Scientific Results volumes.

	UNCOATED PAPER		COATED PAPER	
PAGES IN CHAPTER	50 COPIES	ADD'L. 25	50 COPIES	ADD'L. 25
First four pages	$162.00	$2.15	$164.00	$2.30
Per add'l. 4 pages	4.20	2.15	4.50	2.30
Per add'l. 8 pages	4.50	2.30	6.20	3.10
Per add'l. 16 pages	7.35	3.70	10.80	5.40
Per add'l. 32 pages	17.60	8.75	19.85	9.90

EXAMPLE: A 20 page chapter x 50 copies (uncoated paper) would cost:

$162.00 (first four pages)
7.35 (add'l. 16 pages)

$169.35 TOTAL COST

A 20 page chapter x 75 copies (uncoated paper) would cost:

$164.15 (first four pages 162.00 + 2.15)
11.05 (add'l. 16 pages 7.35 + 3.70)

$175.20 TOTAL COST

ADDITIONAL PALEO PLATES - Five plates are allowed at no cost.

Each additional plate $75.00

ARTWORK - Charges apply only to Scientific Results volumes.

Per hour $20.00

MANUSCRIPT REWORK - Charges apply only to Scientific Results volumes and are to cover any pages not acceptable by ODP's scanning equipment.

Per final typeset page $20.00

Attachment 9
NSF-JOI-Merrill Correspondence
on Offprint and Plate Charges

JOI

Joint Oceanographic Institutions
INCORPORATED

Suite 800
1755 Massachusetts Ave., N.W.
Washington, D.C. 20036 USA

Telephone (202) 232-3900
Telemail: JOI.INC
Telex 257828

12 July 1988

Dr. Bruce Malfait
Ocean Drilling Program
National Science Foundation
1800 G Street, NW
Washington, DC 20550

Dear Bruce:

In response to your letter of July 5, 1988 regarding publication policy of ODP, I enclose a letter from Russ Merrill which provides a nice summary of how the policy developed. Some of it goes back further than I was aware.

The only thing Russ has left out regards paying for reprints. At its November 30 - December 4, 1987 meeting in Sunriver, Oregon, PCOM recommended

> "Fifty reprints per manuscript in the ODP Proceedings Part B should be available to authors, to be funded through a reprogramming of the remaining publication budget for FY 88."

Because this occurred immediately after I had outlined the excessive number of changes made in Publication's budget, policy and personnel within the last two years and had specifically asked PCOM not to make any more changes, I thanked PCOM for this advice and told TAMU to ignore it until we had gone through a period of some stability in Publications. I did not think that yet another reprogramming of the Publication budget at that time was a wise move and still don't. Of course, everything is always open for discussion in the future and we could bring it up to BCOM again; however, given BCOM's views on our current "lean and mean" budget and our plan budgets which exceed targets, I don't see how we can accomodate fifty free reprints per manuscript at this time unless we cut out something else.

If you have further thoughts on this matter or more questions, please call me.

Sincerely,

Tom

Thomas E. Pyle
Vice President and Director,
Ocean Drilling Programs

Enclosure

cc: L. Garrison
R. Merrill
E. Kappel
R. Smith

TO:[T.PYLE/OMNET] MAIL/USA

11 July 1988

Dr. Tom Pyle
Joint Oceanographic Institutions, Inc.
1755 Massachusetts Ave, N.W., Suite 800
Washington, D.C. 20036

Dear Tom:

In reply to your telefax of 8 July, enclosing Bruce Malfait's inquiry of 5 July, I can offer the following historical insights:

1. Limit on number of free plates.

The limit of 5 free plates was first proposed by John Saunders during the IHP meeting of 6-8 June 1984, as the panel was discussing ways of improving the professional image of the ODP publication (relative to DSDP). Saunders had conducted a survey of Swiss scientists, one of whom made this suggestion. There was no limit during DSDP days, which led to considerable abuse of the system. One author, for example, published 89 plates (178 pages, including captions) in a paper which contained 45 pages of text. Volume 71 included 234 paleontological plates in an 1190 page volume. These numbers vastly exceed those which would be allowed by other professional journals, unless the author paid publication costs. Many of the plates were viewed (by the paleontologists on IHP) as having been unnecessary at best, and extravagant at worst. They also felt that DSDP's apparent willingness to publish unnecessary plates detracted from the perceived quality of the Initial Reports.

Following lengthy discussion, the IHP settled on the 5 plate limit, with additional plates to cost $75.00 apiece. The $75.00 fee was selected because it largely reimburses the Program for the cost of the plate; however, it was hoped that the price would be high enough to discourage publication of extraneous plates.

This limit was part of the proposed publications format which was forwarded to PCOM for approval in Hawaii, September, 1984. I can find no written record of a PCOM discussion of this topic, but PCOM discussed, modified, and approved the entire scheme during that meeting, so that is when the plate limit must have been approved formally.

The subject of the plate limit was reconsidered by IHP during their meeting of July 10-12, 1986, by which time participants in early legs had encountered the new rule and were complaining. The entire concept was re-examined, and then endorsed without change. Further, IHP recommended that ODP/TAMU should not permit any exceptions to the rule, saying that "any exceptions would open the floodgates. Experience with the Initial Reports of DSDP had shown the necessity for this limit. The paleontologists on the Panel felt that they could live with the rule as it stands. Therefore, the Panel reasserts the 5-plate limit on free plates without exceptions..." (panel minutes, July 10-12, 1986).

To my knowledge, this was the last time JOIDES discussed this issue in any venue. I have found that very few authors have any real problem with the plate limit, and suspect that the early complaints reflected the distress of those who had become accustomed to using the DSDP publication as a cheap (free) place to publish plates which would be expensive to publish elsewhere.

Please note that there is no limit (as yet) on the number of figures that can be published in the Proceedings, but only upon the number of photographic plates, which are very expensive to publish, and which some authors tend to overuse.

2. Charging for Offprints.

This change was one of the economies proposed by the Information Handling Panel during their August, 1987 meeting, in response to instructions from PCOM and EXCOM that they reduce the cost of publishing the Proceedings by $171K. The change ranked fourth highest in IHP's list of

eleven proposed cuts. IHP's report was forwarded to PCOM and was accepted at the August, 1987 meeting (see p. 35 of October, 1987, JOIDES Journal).

IHP recommended this change in part because of the desire expressed by the PCOM and EXCOM Committees to see that "some of the production costs for Volume B ... be transferred to the contributors and users of this program." (see p. 39 of the October, 1987, JOIDES Journal.)

ODP/TAMU has implemented both this change and the budget realignments, so a decision to revert to providing free offprints would require that additional funds be found.

I hope that this information fills your need. If I can answer any further questions, please let me know.

Best regards,

Russell B. Merrill
Curator & Manager of Science Services
Ocean Drilling Program
Texas A&M University

Attachment 10
Budget-Reduction Analysis
(for Tom Pyle)

14 July 1988

Dr. Thomas Pyle
Joint Oceanographic Institutions, Inc.
1755 Massachusetts Ave, N.W.
Suite 800
Washington, D.C. 20036

Dear Tom:

I am enclosing the detailed analysis of possible cuts in cost of publishing Part A which you requested in your letter of 15 April to Phil Rabinowitz. Also, we have pointed out what we could do with a little more money, instead of a bit less.

Please note that we have attempted to be exhaustive in our analysis, going well beyond what I would expect the community to endorse (for example, publishing the present hole summary volume as Part A immediately after the cruise, without allowing the shipboard party a chance to revise it, or providing any editorial or art assistance post-cruise); however, I hoped that an exhaustive analysis now might serve to preclude repetition.

Bill Rose and Ray Silk should receive a great deal of credit for the many hours of work they spent assembling and disassembling these numbers as the analysis evolved.

If you have additional questions, please let me know.

Best regards,

Russell B. Merrill

cc: P. Rabinowitz, T. Moore
W. Rose, R. Silk (w/o enclosure)

Ocean Drilling Program
Dr. Russell B. Merrill, Curator
and Manager of Science Services
Texas A&M University Research Park
1000 Discovery Drive
College Station, Texas 77840 USA
(409) 845-9324
Telex Number: 792779 ODP TAMU
or Easylink Number: 62760290

IR Costs Based on FY89 Publications Budget Summary by Task
(On the basis of six volumes)

1. FY89 Publications budget summary by task (from Program Plan):

01	Direct Labor and Fringe		$ 772,762
02	Direct Material		35,750
03	Other Direct Costs		836,755
	o Shipping	80,000	
	o Services	46,050	
	o Publications/Printing	450,000	
	o Typesetting	155,000	
	o Indexing	25,000	
	o Microfilming	13,000	
	o Communications	13,250	
	o Maintenance/Repair	31,379	
	o Programming	12,000	
	o Miscellaneous	11,076	
04	Consultants		5,500
06	Travel		16,400
07	Equipment		20,250
	Total budget:		$1,687,417*

2. Estimated IR costs based on FY89 budget summary by task:

01	Direct Labor and Fringe		$ 321,000
	o Editors (2)	68,000	
	o Production Editor (1)	34,000	
	o Illustrators (4)	116,000	
	o Production Assistants (2)	40,000	
	o Hole Summary Coordinator	20,000	
	o Merrill (part)	15,000	
	o Beck (part)	10,000	
	o Students (3)	18,000	
02	Direct Material		23,595
03	Other Direct Costs		347,405
	o Shipping	24,000	
	o Services	15,000	
	o Publications/Printing	200,928	
	o Typesetting	65,490	
	o Indexing	12,500	
	o Microfilming	6,500	
	o Communications	.3,500	
	o Maintenance/Repair	12,000	
	o Programming	2,000	
	o Miscellaneous	5,487	
04	Consultants		0
06	Travel		2,000
07	Equipment		4,000
			$ 698,000

*Estimated costs for six SR volumes:	814,907
Estimated costs for other publications and miscellaneous Program services (includes informal report series and miscellaneous reports; includes photolab and expenses of Manager of Science Services office):	174,510
Total budget:	$1,687,417

Scenarios to Address Possible 5% and 10% Budget Increases
(Based on current costs for six IR volumes of $698,000)

The percentage increases, like the percentage decreases, are based on our identified savings of 2% up front because of the savings made possible by the high-quality laser printing system, the improvement in the Slides program to enable us to provide camera-ready copy for the smear-slide data, and the elimination of approximately 4 pages per volume by printing the list of panel members and the Sample-Distribution Policy in 8-point rather than 9-point type. Therefore, we have reduced the percentage points by 2 for each of the following categories.

1. 3% increase (an additional $20,940):

   In addition to maintaining our present program, this will allow us to utilize extra editorial assistance to reduce the backlog of IR volumes and publish them in a more timely manner.

2. 8% increase (an additional $55,840):

   In addition to the above augmentation to our program, we can utilize additional help with artwork to further expedite publication of IR volumes.

Scenarios to Address Tom Pyle's Budget-Reduction Requests
(Based on current costs for six IR volumes of $698,000)

We have already instituted several cost-saving measures in Publications, which are described as follows.

1. We are purchasing a laser printing system that will enable us to produce publication-quality type for "barrel sheets" and illustrations. We can save at least $6000 a year in typesetting costs, and by having in-house capability, we can cut down on turnaround time.

2. In a related effort, we are working with the Computer Services Group to perfect a software program called "Slides" to enable us to print out smear-slide data in camera-ready format for publication on "barrel sheets."

3. To save an average of 4 pages a volume, we will now print the list of panel members and the Sample-Distribution Policy in 8-point rather than 9-point type.

These cost savings, estimated at $14,000/year, make up about 2% of the estimated cost of producing six Initial Reports (IR) volumes a year of the ODP Proceedings. Therefore, we have reduced the target percentage points by 2 for each of the categories addressed in Tom Pyle's budget-reduction requests (letter of 15 April 1988):

1. 3% reduction (cut of $20,940):
   Reduce number of figures for site chapters by 20%:*

Printing savings:	$ 9,818
Direct Material savings:	2,500
Personnel reductions:	
Production Assistant (1):	20,000
Student (1):	6,000

Total reduction: $ 38,318

*This requires instituting strict limits on numbers of figures submitted. For example, ODP site chapters contain an average of 38 figures, whereas DSDP site chapters average 16 figures. This proposal would reduce the average number of figures per site chapter from 38 to 30.

2. 8% reduction (cut of $55,840):
Reduce number of figures for site chapters by 20%:
$38,318

Eliminate site-survey chapters:			
Typesetting savings:		630	
Printing savings:		2,945	
Direct Material savings		500	
	Subtotal	4,075	(average to date)
Eliminate underway-geophysics chapters:			
Typesetting savings:		950	
Printing savings:		8,100	
Direct Material savings:		500	
	Subtotal	9,550	(average to date)
Eliminate indexing:		12,500	

Total reduction: $ 64,443

3. 18% reduction (cut of $125,640):
   Eliminate core photos:
   - Printing savings: 46,647
   - Direct Material savings: 1,000
   - Personnel reductions:
     - Illustrator (1): 29,000
     - Production Assistants (2): 40,000
     - Students (2): 12,000

   Subtotal 128,647

   Eliminate site-survey chapters: 4,075 (average to date)

   Eliminate underway-geophysics chapters: 9,550 (average to date)

   Total reduction: $142,272

   (Core photos may be made available on video disc at cost.)

   Additional costs:
   - Manufacture of master disc (biennially): 8,000

   Sales options:
   a. Sell at nominal cost ($15 per disc)
   b. Sell at cost-recovery cost ($80 to apply to cost of master disc plus $15 for copy, or $95/disc), assuming 100 sales

   Net reduction:
   Sales option a: $134,272
   Sales option b: 142,272

4. 31-1/3% reduction (cut of $218,684):
   Reduce number of figures for site chapters by 20%:
   $ 38,318

   Eliminate core photos: 128,647

   Eliminate site-survey chapters: 4,075

   Eliminate underway-geophysics chapters:
   9,550

   Eliminate indexing: 12,500

   Eliminate fund for future technological improvements:
   4,000

   Total reduction: $197,090

   (Core photos may be made available on video disc at cost.)

   Additional costs:
   Manufacture of master disc (biennially):
   8,000

   Sales options:
   a. Sell at nominal cost ($15 per disc)
   b. Sell at cost-recovery cost ($80 to apply to cost of master disc plus $15 for copy, or $95/disc), assuming 100 sales

   Net reduction:
   Sales option a: $189,090
   Sales option b: 197,090

The previously described scenarios are predicated on publication of a hardbound, typeset IR volume similar to current IR volumes. The following scenarios are predicated on even more drastic budget reductions, which would necessitate an alternative type of publication. Note that the purpose of the post-cruise meeting (if it occurs) would be to coordinate the SR volume only.

1. Publish and distribute a soft-cover IR book similar in format to the Initial Core Descriptions of the Deep Sea Drilling Project. This book would contain "barrel sheets" and core photos. Unlike the ICDs, it would also contain site chapters. It would undergo no editing or art preparation. Distribution could be 6-8 months post-cruise.

   Savings would include the following:

Personnel reductions:		
Editors (2):		$ 68,000
Production Editor (1):		34,000
	Subtotal	$102,000
Additional reductions:		
Typesetting:		$ 65,490
Printing (Edwards Brothers):		200,928
Microfilming:		6,500
Indexing:		12,500
Direct Material:		15,000
Fund for future technological improvements:		4,000
Shipping:		12,000
	Subtotal	$316,418
Additional costs:		
Printing (local shop):		$125,000
	Net reduction:	$293,418 (42%)

2. Publish a similar ICD type of book that would contain "barrel sheets" and site chapters but no core photos. It likewise would undergo no editing or art preparation.

Savings would include the following:

Personnel reductions:	
Editors (2):	$ 68,000
Production Editor (1):	34,000
Illustrator (1):	29,000
Production Assistants (2):	40,000
Students (2):	12,000
Subtotal	$183,000
Additional reductions:	
Typesetting:	65,490
Printing (Edwards Brothers):	200,928
Microfilming:	6,500
Indexing:	12,500
Direct Material:	20,000
Equipment:	4,000
Shipping:	18,000
Subtotal	$327,418
Additional costs:	
Printing (local shop):	$100,000

(Core photos may be made available on video disc at cost.)

Additional video costs:
Manufacture of master disc (biennially): 8,000

Sales options:
a. Sell at nominal cost ($15 per disc)
b. Sell at cost-recovery cost ($80 to apply to cost of master disc plus $15 for copy, or $95/disc), assuming 100 sales

Net reduction:	
Sales option a:	$402,418 (58%)
Sales option b:	410,418 (59%)

3. Publish and distribute Preliminary Summary of Drilling Results (Hole Summary) as it comes from the ship, with no editing and with author-prepared art. "Barrel sheets" would be as prepared on the ship, without subsequent modification.

Personnel reductions:	
Editors (2):	$ 68,000
Production Editor (1):	34,000
Illustrators (4):	116,000
Production Assistants (2):	40,000
Students (3):	18,000
Subtotal	$276,000
Additional reductions:	
Typesetting:	$ 65,490
Printing (Edwards Brothers):	200,928
Microfilming:	6,500
Indexing:	12,500
Direct Material:	23,595
Services:	15,000
Equipment:	4,000
Subtotal	$328,013
Additional costs:	
Shipping:	$ 12,000
Printing (local shop):	100,000
Total	$112,000

(Core photos may be made available on video disc at cost.)

Additional video costs:
Manufacture of master disc (biennially): 8,000

Sales options:
a. Sell at nominal cost ($15 per disc)
b. Sell at cost-recovery cost ($80 to apply to cost of master disc plus $15 for copy, or $95/disc), assuming 100 sales

Net reduction:	
Sales option a:	$484,013 (69%)
Sales option b:	492,013 (70%)