

UNIVERSITY - NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

UNOLS COUNCIL MEETING

SUMMARY REPORT

September 19, 1994

**National Science Foundation, Room 310
4201 Wilson Boulevard
Arlington, VA**



SUMMARY REPORT

UNOLS COUNCIL MEETING

19 September 1994

NATIONAL SCIENCE FOUNDATION
4201 WILSON BOULEVARD, Room 310
ARLINGTON, VA

The UNOLS Council met on 19 September 1994 at the National Science Foundation Building at 4201 Wilson Boulevard, Arlington, VA. The meeting was called to order by Garry Brass, UNOLS Chair, at 0830 hrs. The participants are listed in *Appendix I* and the meeting agenda is included as *Appendix II*. These minutes reflect the order in which items were addressed.

APPENDICES

- I. Attendance List
- II. Agenda
- III. OCEANIC Brochure
- IV. KNORR Conversion Drawings
- V. HBOI Ship Rate Structure

Council Minutes: The minutes of the July 1994 Council meeting were accepted as written.

COMMITTEE REPORTS

RESEARCH VESSEL OPERATORS COMMITTEE - Mike Prince, RVOC Chair, gave the RVOC report. RVOC will have its annual meeting in Savannah, GA 25-27 October. This meeting should have more of an international flavor with attendance expected from research vessel operators of Mexico, UK, both coasts of Canada, Chile and the NATO vessel ALLIANCE based in La Spezia, Italy. There will be a presentation on lessons learned from the ISELIN grounding. Representatives of Maritime Health Service will discuss medical standards and fleet physicals. There will be a discussion on the American Disabilities Act and its affect on research vessels. Workshops are planned on budgets, Oil Spill Response plans, Ship use and Medical Standards. A discussion and demonstration will be held on new safety and fire fighting equipment.

DEEP SUBMERGENCE SCIENCE COMMITTEE - The DESSC report was presented by Jeff Fox, DESSC Chair. He reported that ALVIN had completed 131 dives to date this year with only two lost to mechanical problems. A total of 177 dives are scheduled for 1994. ATLANTIS II has now been equipped with the P-Code GPS which should significantly improve its navigation accuracy. ALVIN has been fitted out with a new three chip camera and new lighting. Three new pilots have been qualified for ALVIN. The sub has been certified for 4500 meters (from 4000) and the rock drill has been certified for use on ALVIN. The towed ARGO HMS system is scheduled for a 30 day dive series on the Mid Atlantic Ridge. The 1994 HURL/NURP science program has been delayed until the K-O-K has completed its conversion to a submersible handling ship. The Navy's TURTLE will be conducting 40 operating days of science dives in a cooperative program with NOAA.

In 1995 ALVIN has been funded for 168 dives which represent 316 operating days for AII. NSF is funding 155 of these dives, 10 are funded by NOAA and 3 are engineering dives. ONR is not scheduled to fund any science dives in 1995. The 1995 operating year will continue in the traditional areas of the Mid Atlantic Ridge, northern EPR, San Diego area and the Juan de Fuca area. No programs have been funded for the towed systems in 1995.

The year of 1996 is expected to be pivotal for ALVIN. Significant proposal pressure is anticipated for submersible use with two programs already funded for the southern EPR. ALVIN will undergo its three year overhaul then return to operations aboard the converted KNORR. The ship and sub should be ready for operation in mid summer and will first operate in the Atlantic then transiting to the Pacific for the southern EPR work. The schedule beyond this point will be driven by proposal pressure. The December DESSC meeting will be used to focus community support for improvements to ALVIN. The towed systems will be available during the time that ALVIN is in overhaul and KNORR is under conversion to a submersible handling ship.

HURL/NURP plans to roll its 1994 science program into 1995 with its first year or two of operations to remain close to home. This will be used to develop a strong track record with the science community before looking at operations farther afield. Gene Smith has been named the liaison from the National Office for HURL. DESSC will try to strengthen and formalize its relationship with the HURL operation.

FLEET IMPROVEMENT COMMITTEE - Marcus Langseth, FIC Chair, provided the Council with a report of the Fleet Improvement Committee. The Coastal Report is at the printers and will be distributed in the near future. The Arctic Research Vessel Report has been printed and distributed. Mark reported that two new replacements have been named to the FIC. These are Suzanne Strom from Western Washington University and Bob Detrick from WHOI. A new chairman, Chris Mooers from Miami has been presented to the UNOLS Chair for confirmation.

Continuing activity of the FIC includes the development of Science Mission Requirements for a Coastal Research Vessel. This effort could lead to a conceptual

design study. The subcommittee of FIC and DESSC members continue to be active on the KNORR conversion plans. The Arctic Research Subcommittee is still formed, however, is presently dormant awaiting the funding decision for construction of an Arctic research vessel. GAO has a study underway looking at the different ways to fund an Arctic research vessel. They have expanded their study to include looking at Arctic science and the available facilities to address this science. This study was due this fall but has been delayed. FIC continues in its effort to put together a compendium of small research vessels.

A recommendation of the Fleet Improvement Plan is to find a way to develop better projections for ship needs. It is felt by the FIC that possibly the Subcommittee on Federal Oceanographic Fleet Coordination (SFOFC) or its replacement would be the appropriate body to do this.

Garry Brass commended Mark for service as Chairman of FIC which was followed by an applause of the Council.

SHIP SCHEDULING COMMITTEE - The Ship Scheduling report was provided by the SSC Chairman, Ken Palfrey. Ken informed the committee that the UNOLS fleet operated about 4300 days in 1994 at a cost of approximately \$46M. The SEWARD JOHNSON was picking up the remainder of the ISELIN schedule while ISELIN is in the shipyard. In 1995 the large ships will be operating with full schedules of well over 300 days each. This is primarily caused by the needs in the Indian Ocean. The intermediate ships are showing less than optimum schedules with ISELIN not operating in 1995 and at least one other east coast intermediate with a light schedule. WECOMA will also be operating well under 200 days. The 1995 schedules, as presented at the Ship Scheduling Meeting, cost out at \$49.9M which represents a shortfall but not near what we have seen in previous years. Ken attributes this to earlier funding decisions by the Agencies.

The Ship Scheduling Committee did not meet in June of this year as was the previous procedure. The scheduling was done electronically with the Schedule Review Group meeting to evaluate the schedules presented. This seemed to have worked well and saved travel money. It is planned to continue with this procedure next year.

Ken reported that the Nominating Committee presented the names of Don Moller and Robert Hinton as Chair and Vice Chair of the Ship Scheduling Committee. No other nominations were offered. These names were presented to the UNOLS Chair for confirmation. Don Moller and Robert Hinton were confirmed by the Chair with concurrence of the Council.

The Council commended Ken for his work as Chair of the Ship Scheduling Committee. Ken will be retiring at the end of this year.

RESEARCH VESSEL TECHNICAL ENHANCEMENT COMMITTEE - The RVTEC report was provided by the Chair, Rich Findley. RVTEC is having their

annual meeting in Miami, FL 19-21 October. The first day will include reports of the standing subcommittees on Database Service, Technician Exchange and Data Standards. A tour of the General Oceanics Facilities is planned for the afternoon. On the second day there will be a guest speaker on NetCDF and another on Satellite Imaging Display. A presentation on CHIRP Sonar Systems will be given by John Freitag. Another guest speaker will discuss Salinity followed by a round table discussion. The Committee will discuss the replacement for Omnet and the criteria for use of 20 foot shipping containers. An election or re-election of a chairperson is also on the agenda. A busy three days are expected.

AGENCY REPORTS

NATIONAL SCIENCE FOUNDATION - Dolly Dieter provided the NSF report. She reported that a search would be underway shortly for the replacement of Grant Gross who will be retiring at the end of September. Dolly said that the University of Miami is proposing three possible futures for COLUMBUS ISELIN which is presently at Atlantic Drydock in Jacksonville, FL. Option one is to refit the ship as a coastal research vessel. This would require monies in addition to the insurance money. The second option would be to refit it to its previous configuration. Only insurance money would be used. The third option is to retire and scrap the ship. When these proposal options are received by NSF a special panel will be formed for evaluation and review.

Dolly reported that Don Heinrichs intends to ask the Ocean Studies Board to review the proposal for funding the Arctic Research Vessel. Such a review is necessary to compete for funds in the NSF budget for major facility expenditure (over \$25M).

Dick West said there was a short fall in money received for the UNOLS Office support for 1994. MMS will not provide support this year and amounts less than the assessments for ONR and NOAA are expected.

Dolly announced that Katherine Bouton from the University of Delaware has been expanding the capability of the computer program "OCEANIC" which provides ship schedules and ship characteristics on Internet. A brochure for OCEANIC is included as *Appendix III*. She provided a demonstration at the Ship Schedulers' meeting and would be available to provide further demonstrations. The University of Delaware is interested in expanding the capability of OCEANIC and needs the cooperation of the community to make the service useful. Jack Bash suggested that UNOLS could share its booth with the University of Delaware Oceanic people at AGU this December to better publicize its usefulness.

Dolly concluded by saying there was nothing new with the NSF budget to report.

OFFICE OF NAVAL RESEARCH - Jim Andrews provided the ONR report. Jim reported that the \$900M Department of Defense research budget cut discussed at the

last meeting was met with considerable community outcry. It appears that the \$900M figure has now been reduced to \$200M which will still be difficult to manage.

Annette DeSilva continued by reporting that Keith Kaulum had retired 26 August. Annette is filling in for six months while a replacement is being sought. Pat Dennis will be working half time for ONR.

Annette further reported that NAVSEA is dedicated to resolving the AGOR thruster gear problems. It was determined that the MELVILLE gears had insufficient case hardening. Investigation of the THOMPSON gear failures has been inconclusive. The THOMPSON thruster units were repaired by installing the gears that were manufactured for AGOR 24. This will not impact the construction schedule of AGOR 24. KNORR Z-drive gears were inspected in August. No evidence of surface cracks was identified. Overall, testing has not been definitive to identify one specific cause to the gear failures. A meeting will be held with NAVSEA, ONR, ABS, the thruster manufacturer, and AGOR operators to discuss potential preventive measures.

To encourage greater use of UNOLS vessels by NRL, an arrangement is in place for ONR and NRL to share the ship time cost for NRL science programs. ONR will subsidize NRL ship time costs up to an annual ceiling of \$500K. This arrangement is being well received by NRL, and as a result the ceiling has been reached for programs in 1995.

As a final note, Annette reported that the ONR Research Facilities Program has been essentially level funded for FY95.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION - The NOAA report was presented by Captain Martin Mulhern. Marty reported that the NOAA AGOR contract has been let and the keel laying is expected in the near future. They are planning a 1997 delivery date on this ship. An RFP is out for the conversion of the first of NOAA's TAGOS ship. This conversion is expected to be completed in time to have the ship in service by January 1996. The RFP for a Repair to Extend (RTE) on the DELAWARE II is out. A contract award is expected soon.

Marty reported that the National Performance Review encouraged NOAA to investigate alternate methods for their ship needs. NOAA is presently seeking bids for a charting task in Long Island Sound. They are also writing a contract for a back-fill ship for DELAWARE II while that ship is in overhaul. Three short contracts are being investigated for NOAA's GLOBEC work. Marty reported that Rear Admiral Bill Stubblefield will be attending the International Ship Operator's meeting.

BALDRIGE is scheduled for deployment to the Indian Ocean in 1995. NOAA will be coordinating with UNOLS for possible work on the way home. NOAA has also been cooperating with UNOLS in the GLOBEC work which is truly a joint program. Marty reported that the Director of the Office of NOAA Corps Operations, Rear Admiral

Sigmund Petersen, will be retiring in October and that no replacement has been named to date.

On the budget picture NOAA is down-sizing its personnel by about 2000. This will be done over the next five years with a portion of the cuts coming from the Office of NOAA Corps Operations.

NOAA has established a group comprised of civilian managers from NOAA's line and program offices to review the issues raised in the recent Marine Board Study, and to develop a NOAA implementation plan. Marty has no detailed information because this group is midway through their review. He reported that the group's work should be completed in the spring.

NOAA's Gene Smith reported on the NOAA/NURP program. Gene reported that the NOAA/NAVY coordinated operation with TURTLE/ATV was now underway in the Juan de Fuca area. Early reports are that the cruise is going well. In October the Navy's NR-1 will be operating on the US East Coast and Gulf. Gene further reported that NOAA made a contribution to the Navy's SCICEX 95. An MOU has been signed for five additional expeditions on USN nuclear submarines, one per year. The 1995 funding for NURP has not yet been sorted out however they are looking for level funding. Mike Ledbetter has left NOAA for NSF.

UNITED STATES COAST GUARD - Captain Alan Summy provided the U.S. Coast Guard report. He informed the Council that POLAR SEA had completed a successful Arctic cruise this past summer. They entered the Arctic via the Bering Strait and departed into the North Atlantic. This will be the last funded Arctic science cruise for the next two years. Captain Summy reported that their new icebreaker HEALY is in the final stages of design and will begin construction soon. It is expected to be delivered in the spring or summer of 1998. Science upgrades are in progress for both Polar class ships. Each ship will receive \$17M and the work will be completed over the next three years with about 10 months allotted for each overhaul. The Polar Class is available for science at a day rate of \$19K.

UNITED STATES DEPARTMENT OF STATE - The State Department report was provided by Tom Cocks. Tom reported that a Marine Science Working Group met with Mexico to work out clearance problems with that country. Tom is optimistic that there will be an improvement in clearance processing. Both Russia and Brazil have been problem areas, however, Brazil seems to be becoming more flexible. Tom repeated a plea for clearance requests to be submitted as soon as possible. He would rather cancel a project that did not get funded than work with a late request. The new NSF panel dates should help provide the funding status in a more timely fashion. Tom reported that the Law of the Sea Treaty will be coming into force, however, he sees little change in the way we do business.

UNOLS ISSUES

SCIENTIFIC OPPORTUNITIES ON NUCLEAR SUBMARINES - Garry Brass reported that the follow-on program from the PARGO cruise is well underway. Planning meetings for the first of five yearly cruises have been held and the 1995 submarine has been designated. In other nuclear submarine activities Garry informed the Council that UNOLS will be assisting in a workshop of scientists that will be investigating the scientific opportunities that might be attained on a nuclear submarine if that submarine could be dedicated to science and operate in the oceans of the world. The concept is to convert an attack submarine, that is scheduled for decommissioning by the Navy, into a science platform. The workshop is scheduled for 21-22 September and the report from this workshop will be published by UNOLS.

KNORR CONVERSION - Dick Pittenger provided an update on the plans for the KNORR conversion to a support ship for submersibles and ROVs. Dick's overheads are included as *Appendix IV*. The KNORR conversion is tied to the schedule of Atlantis II. Both ships are scheduled to return to Woods Hole in early 1996. ALVIN will commence a six month overhaul and ATLANTIS II will off load for cross decking certain handling gear such as the stern A frame. For personnel reasons the delivery of AGOR 25 is also part of the matrix. This ship is scheduled for delivery in early 1997.

Conversion plans call for an off-set hangar on KNORR (to retain deck space for general oceanography). Also included will be a Dynacon traction winch and vans for a machine shop and electrical shop. They are looking at increasing the berthing capacity by 4 bunks. The ship will be equipped with P-Code GPS and dynamic positioning. ATLANTIS II remains up for sale with no serious prospects at this time.

NEW FUNDING PARADIGM FOR SUPPORT OF NATIONAL DEEP SUBMERGENCE ASSETS - Jeff Fox reported that there has been no movement on developing a new funding paradigm for deep submergence science. Jeff suggested that a vigorous effort would be made later this year.

RADIO OFFICER/GPS - Dick Pittenger reported that Congress was still working on several versions of a bill that addressed the Radio Officer issue and that the final language would be settled in conference. He was not hopeful that the need for Radio Officers would be rescinded, at least this year.

P-Code GPS is up and running on KNORR and ATLANTIS II. Both ships are very pleased with the result of the increased precision provided to navigation. The ships are able to dynamic position on the signals they receive. The process to get the P-Code on these ships has been slow and laborious. The University of Washington is progressing slowly for use on THOMPSON and Scripps will be starting soon. Dick suggested that it would take a while before other ships in the UNOLS fleet could avail themselves of the P-Code. DOD will have to be comfortable with the process and operation at the first three institutions before expansion would be possible.

HAWAII UPDATE - Brian Taylor provided the Council with an update on where the University of Hawaii stands on a replacement ship for MOANA WAVE. First Brian explained the \$9.2M of ARPA money that is going to build a SLICE design ship has nothing to do with the University of Hawaii but is a commercial effort. UH is working on a design study for a class I replacement vessel, which may be a large SWATH ship. They are also working on possible funding avenues. Garry Brass reiterated the UNOLS position of support for a blue-water ship for Hawaii and that the K-O-K is not an acceptable ship to replace MOANA WAVE.

Brian explained that the State of Hawaii wants to use Snug Harbor and Sand Island and would like to move the University of Hawaii operation to Pier 38. This location would be fine for the University's operation but would not allow room for NOAA's vessels.

SHIP REFITS/CONSTRUCTION - Annette DeSilva reported that the construction of both AGOR 24 and 25 are well underway at Halter Marine Shipyard. All modules for AGOR 24 are under construction and at the shipyard. Launch is planned for February 1995 with delivery in Spring 1996. The keel laying ceremony for AGOR 25 was held on August 16th. Dr. Fred Saalfeld, Technical Director of ONR, and Dr. Robert Gogosian, Director of Woods Hole, signed the keel. Progress is on schedule with ten modules under construction. Delivery is scheduled for spring 1997.

HBOI SHIP RATE SCHEDULE - Harbor Branch Oceanographic Institution had recently published a new rate schedule for its ships that provided a reduced rate for contracts utilizing more ship time. *Appendix V* is a copy of this rate structure. This accounting procedure differs from that used by the other UNOLS members. Considerable discussion followed concerning whether or not this conforms with the OMB rules of requiring that all federal contracts get the lowest and best rate. It was concluded that this needed more investigation.

UNOLS COUNCIL SLATE - Dick Pittenger presented the UNOLS Council slate of the nominating committee which included Dick, David Karl and Bob Wall. Ken Johnson was the sole nominee for Council Chair; Peter Betzer and Tom Malone, Vice Chair; Bob Knox and Rick Jahnke, at-large candidate; Denny Hayes and Dennis Hansell, Operating representative; Greg Cutter and Cindy Lee, Non-operating representative. The slate was approved to move forward to the Annual meeting for voting.

CALENDAR FOR UNOLS MEETINGS - It was decided that the spring UNOLS Council meeting should be held in Monterey, CA the month of April.

The meeting was adjourned at 1630 hrs.

APPENDIX I

<u>NAME</u>	<u>AFFILIATION</u>	<u>INTERNET ADDRESS</u>
Jim Andrews	ONR	andrewj@onrhq.onr.navy.mil
Tim Askew	HBOI	OMNET: HBOI.SHIPS
Rodger Baier	NSF	rbaier@nsf.gov
John Bash	UNOLS	unols@gsosun1.gso.uri.edu
Peter Betzer	U of So Florida	OMNET: P.BETZER
Garry Brass	Arctic Research Commission	OMNET: G.BRASS
Larry Clark	NSF	
Tom Cocke	Department of State	
Mary D'Andrea	UNOLS	unols@gsosun1.gso.uri.edu
J. Paul Dauphin	NSF	jdauphin@nsf.gov
Annette DeSilva	ONR	desilva@onrhq.onr.navy.mil
Dolly Dieter	NSF	edieter@nsf.gov
Rich Findley	U of Miami	rfindley@rsmas.miami.edu
Jeff Fox	U of Rhode Island	jfox@gsosun1.gso.uri.edu
Gary Greene	MLML	greene@mlml.calstate.edu
Dennis Hayes	LDEO	deph@lamont.ldeo.columbia.edu
Larry Jendro	USCG	l.jendro/g-nio@cgsmt.comdt.uscg.mil
Ken Johnson	MLML	johnson@mlml.calstate.edu
David Karl	U of Hawaii	dkarl@soest.hawaii.edu
Marcus Langseth	LDEO	langs@ldeo.columbia.edu
Bruce Malfait	NSF	bmalfait@nsf.gov
Marty Mulhern	NOAA	mmulhern@rdc.noaa.gov
Charles Nittrouer	SUNY, Stony Brook	cnittrou@ccmail.sunysb.edu
Ken Palfrey	OSU	kpalfrey@orst.oce.edu
Dick Pittenger	WHOI	rpittenger@whoi.edu
David Powell	U of Miami	
Mike Prince	MLML	prince@mlml.calstate.edu
Lisa Rom	NSF	erom@nsf.gov
Tom Royer	U of Alaska	royer@ims.alaska.edu
Eugene Smith	NOAA/NURP	OMNET: G.SMITH.GENE
Alan Summy	USCG	
Brian Taylor	U of Hawaii	
Robert Wall	U of Maine	
Dick West	NSF	rwest@nsf.gov

APPENDIX II

TENTATIVE AGENDA
UNOLS COUNCIL MEETING
8:30 a.m. - September 19, 1994
National Science Foundation, Room 310
4201 Wilson Boulevard
Arlington, VA

Call the Meeting: Garry Brass, UNOLS Chair, will call the meeting to order at 0830 September 19, 1994.

Accept Minutes of July, 1994 Council Meeting.

COMMITTEE REPORTS

Research Vessel Operators Committee - Mike Prince, Chair, will provide an update summary of the plans for the 1994 meeting in Savannah, GA.

DEep Submergence Science Committee - Jeff Fox, Chair, will report on the updated status of the 1994 ALVIN operations along with a brief review of the DESSC Meetings held in May and June. This includes the status of the DESSC report *The Global Abyss: An assessment of Deep Submergence Science in the United States*.

Fleet Improvement Committee - Marcus Langseth, Chair, will report on an update of the Fleet Improvement Committee activities. These include the status of the Coastal Workshop Report, Science Mission Requirements for a Coastal Vessel, and the Arctic Research Vessel design status.

Ship Scheduling Committee - Ken Palfrey, Chair, will update the Council on the ship scheduling status for 1995 resulting from the 15 September Scheduling meeting and the follow-on Schedule Review.

Research Vessel Technical Enhancement Committee - Rich Findley will report on the updated plans for the 1994 RVTEC meeting to be held in Miami, FL.

AGENCY REPORTS: Reports from representatives of NSF (D.Heinrichs), ONR (J. Andrews & A. DeSilva), NOAA (W. Stubblefield), NURP (D. Duane) and USCG (Capt. A. Summy) on funding outlooks and special projects. The State Department (T. Cocke) will provide an update on foreign clearance problems. Pat Dennis of the Oceanographer of the Navy Office will report on OON matters.

UNOLS ISSUES

Scientific Opportunities on Nuclear Submarines - Garry Brass will report on plans for the "White Submarine Workshop" to be held at the AGU Building, Washington, DC, 21-22 Sep 1994.

New Funding Paradigm for Support of National Deep Submergence Assets - Jeff Fox will report on the subcommittee's (Fox, Karl, and Wall) efforts to formulate views on developing a new funding paradigm for support of national deep submergence assets.

KNORR Conversion - Dick Pittenger will provide an update on the plans for the KNORR conversion to support ship for submersibles and ROVs.

Radio Operator/GPS - Dick Pittenger will update the Council on the status of the Radio Operator problem and the progress of introducing P-Code GPS to the UNOLS Fleet.

UNOLS Vessel at Hawaii - A discussion on the status of the University of Hawaii's efforts to find a replacement for MOANA WAVE.

Ship Refits/Construction - Annette DeSilva and Dick Pittenger will report on the progress of the construction of AGOR 24 and AGOR 25.

SeaNet Update - Garry Brass will provide an update on the status of the proposal to install SeaNet on UNOLS Vessels.

UNOLS Council Membership: Garry Brass, Nominating Committee Chair, will review the slate of candidates to replace those Council members completing terms. The terms of Garry Brass, Chair; Peter Betzer, Vice Chair; Dennis Hayes; Richard Jahnke; and Chuck Nittrouer are expiring. Betzer, Hayes, Jahnke and Nittrouer are eligible for second terms.

Annual Meeting - Garry Brass will briefly discuss plans for the UNOLS Annual Meeting scheduled for September 20th.

Calendar for UNOLS Meetings

Meeting Schedule:

MEETING	LOCATION	DATES
UNOLS Council	Arlington, VA	Sep 19, 1994
UNOLS Annual	Arlington, VA	Sep 20, 1994
FIC	Palisades, NY	Oct 3-4, 1994
RVTEC	Miami, FL	Oct 19-21, 1994
RVOC	Savannah, GA	Oct 25-27, 1994
DESSC	San Francisco, CA	Dec 4, 1994

Adjournment

APPENDIX III

Public Gopher Sites*

Telnet to:	IP Number	Log in as:	Menu selections to reach OCEANIC:	Area
gopher.msu.edu	35.8.2.61	gopher	Network & Database Resources-> Internet Resources by Type -> Gopher Servers -> North America -> USA -> Delaware -> OCEANIC	North America
gopher.ebone.net	192.36.125.2	gopher	Other Gopher & Info Servers -> USA -> Delaware -> OCEANIC	Europe
info.anu.edu.au	150.203.84.20	info	Worldwide Networked Info Servers -> Search for Gophers by Name or Internet Address: OCEANIC, Univ of Delaware	Australia
tolten.puc.cl	146.155.1.16	gopher	Otros servidores de Gopher en el mundo -> North America -> USA -> Delaware -> OCEANIC	South America
gan.ncc.go.jp	160.190.10.1	gopher	Other Gophers etc-> World wide gopher list (mirror)-> North America -> USA -> Delaware -> OCEANIC	Japan

Oceanic

Ocean Information Center

An on-line information system



Public World Wide Web Sites*

Telnet to:	Log in as:	Menu selections to reach OCEANIC:	Area
info.cern.ch	www	Places to Start Exploring (3) -> By Subject (1)-> Oceanography (71)-> The Ocean Information Center, Delaware (19)	Europe
ukanaix.cc.ukans.edu	www	By Subject -> Oceanography -> WWW -> The Ocean Information Center, Delaware	North America
www.njit.edu	www	Once signed on select Go and enter the following address: http://www.cms.udel.edu/ .	North America
vms.huji.ac.il	www	Easy To use -> Information By Subject (2) -> WWW Subject Catalog (9) -> Oceanography (71) -> WWW (3) -> The Ocean Information Center, Delaware (19)	Israel

Operated by the

Ocean Information Center
College of Marine Studies
University of Delaware
Lewes, DE 19958

Phone: 302-645-4278

Fax: 302-645-4007

Internet: oceanic@diu.cms.udel.edu

Omnet: WOCE.DIU

* These public sites and menu selections are subject to change.

July 1994

About OCEANIC

OCEANIC, the on-line information system of the Ocean Information Center, supports the data management of several global change programs, including the World Ocean Circulation Experiment (WOCE) and the Tropical Ocean Global Atmosphere Coupled Ocean-Atmosphere Response Experiment (TOGA COARE). It also includes information about related oceanographic datasets and a research ship information and schedule database.

OCEANIC currently exists in three different versions. The original system focuses on WOCE and the research ship database. Two other systems, a Gopher system and a version based on World Wide Web were added in Spring 1994. These new versions contain information about TOGA COARE and links to other sources of ocean data and information. Additionally, the Gopher and Web systems have expanded graphics capability.

OCEANIC includes:

WOCE Information

- WOCE science and program information
- Field program maps, cruise tracks, cruise reports
- Data assembly center information and data holdings
- Searchable address directory of WOCE scientists
- WOCE calendar of events

TOGA COARE Information

- Searchable catalog of data information and status
- Links to COARE inventories
- Atmospheric and oceanographic browse products

Research Ship Information

- Research vessels from over 45 countries
- Searchable database of ship schedules & information
- Graphical deck layouts and photographs

Links to Oceanographic Sites

- FTP, Gopher, and World Wide Web sites
- Ability to easily download and mail information

Access to OCEANIC

Gopher OCEANIC

- Gopher access for users with Gopher software**
If you have Gopher software on your computer, type `gopher gopher.cms.udel.edu`.

We recommend using gopher software on your own computer rather than accessing one of the public Gopher sites (see below). This allows you to use features of your local computer and should yield better response.

- Gopher access for users without Gopher software**
If you do not have Gopher available you may use one of the public Gopher systems listed on the back. Telnet to the public Gopher site closest to you, using the login name given in the table. These may be somewhat restricted in function, but will provide the basic functions. Each public Gopher site's menu is slightly different, but most have a similar menu path to reach OCEANIC. Look for a reference to "other Gophers" or "other internet resources" and work your way through the geographic hierarchy (e.g. Gopher servers /North America/USA/Delaware) to link to OCEANIC.

World Wide Web (WWW) OCEANIC

- WWW access for users with a WWW browser**
If you have World Wide Web browsing software (such as Mosaic, Lynx, Cello) on your computer, use the Uniform Resource Locator (URL) `http://www.cms.udel.edu/` to reach OCEANIC. How to do this depends on the software you are using. For example, with Mosaic, select **File/Open URL** and enter `http://www.cms.udel.edu/` at the prompt.

We recommend using a World Wide Web browser on your computer rather than accessing one of the public sites. This allows you to use features of your local computer and should yield better response.

- WWW access for users without a WWW browser**
If you do not have a World Wide Web browsing software, you may use one of the public sites listed on the back. Telnet to the public web site closest to you, using the login name given in the table. (Note that these sites require a minimum of VT100 compatibility). These may be somewhat restricted in function but will provide you the basic links to move through the Web. As with Gopher, each public site's menu structure differs slightly, but most have a similar menu path to access OCEANIC at the University of Delaware.

Original ASCII OCEANIC

Although we recommend the use of our Gopher or World Wide Web systems, you can reach the original OCEANIC over the Internet, over SPAN, via Omnet or by modem access (direct dial).

Via Internet:

```
telnet delocn.udel.edu
(or telnet 128.175.24.1)
Username: INFO
No password is required.
```

Via SPAN:

```
set host DELOCN
Username: INFO
No password is required.
```

Via Omnet:

```
Log on to your Omnet account.
Select Backdoor.
Choose OCEANIC from the menu.
No password is required.
```

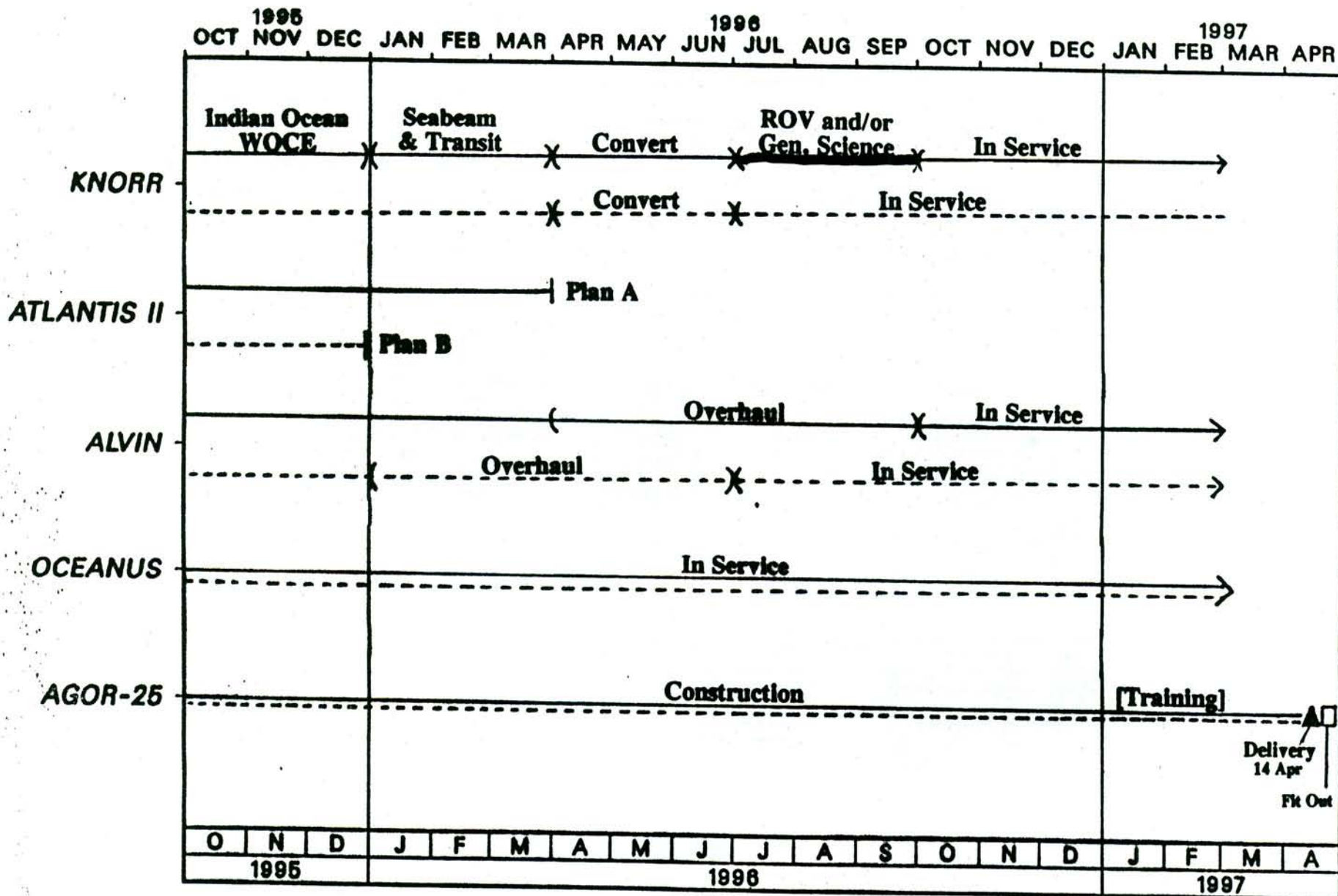
Via Modem (Direct Dial):

```
dial: (302) 831-6435 (6150, 6152)
(up to 14.4K bps, set at 8,1,N)
When the connection is established:
UDelnet> delocn
Username: INFO
No password is required.
```

APPENDIX IV

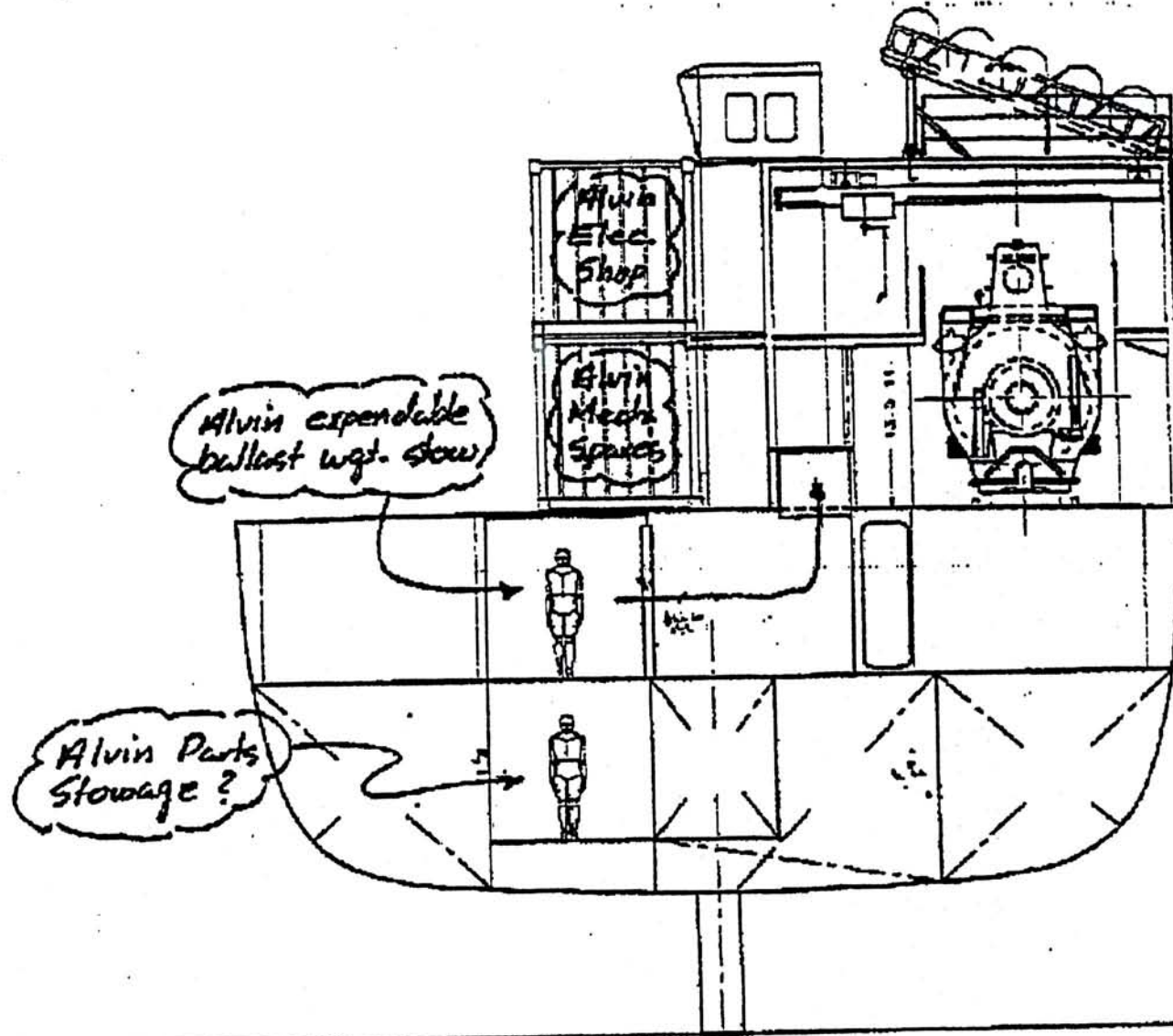
WHOI Ships

Schedule Options for 1995-1997

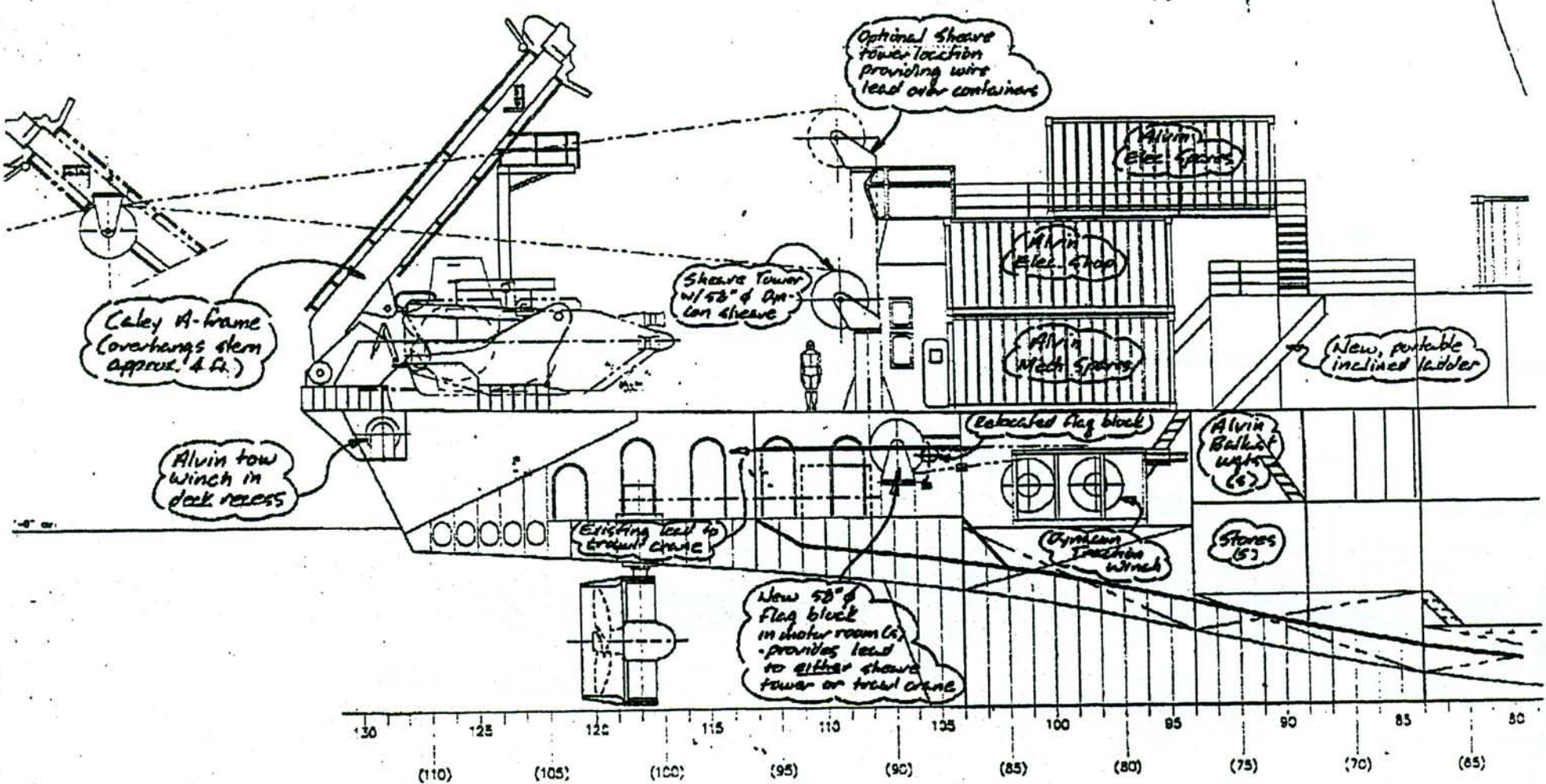


Plan A (Normal A-II Retirement)

Section at approx. W. 72



08/25/94 14:48



THE CLOSTEN ASSOCIATES, INC.
 300 MUTUAL LIFE BUILDING
 1ST FIRST AVENUE
 SEATTLE, WA 98104-2224
 DPK

FOR REVIEW ONLY

AUG 22 1994

APPENDIX V

**HARBOR BRANCH
OCEANOGRAPHIC INSTITUTION, INC.**

MARINE OPERATIONS

5600 OLD DIXIE HIGHWAY
FORT PIERCE, FLORIDA 34946

August 4, 1994

(407) 465-2400
(407) 567-7196
TELEX 52-2886
FAX (407) 465-2116

Jack Bash
UNOLS Office
P.O. Box 392
Saunderstown, RI 02874

Dear Jack:

The cost information for Harbor Branch Ships and Submersibles for 1995 is enclosed. This is a new format providing incentives based on usage. Examples of various combinations of ships and submersibles are provided.

R/V SEWARD JOHNSON is presently undergoing a major refit to increase deck, lab, and storage space by adding a 28 foot midbody section. Berthing has also been increased to a total of 40 allowing for 22 scientists with a submersible or 30 scientists without a submersible. A new gallows frame located on the starboard side will allow for CTD/water sampling and over-the-side deployment of large oceanographic devices such as piston/gravity cores. In addition, a Robertson Dynamic Positioning System will enhance station-keeping accuracy. New information sheets will be available soon.

Please feel free to distribute this cost information and if you have any questions, please do not hesitate to contact the Marine Operations office at the above number, ext. 262/271.

Sincerely,



Tim Askew
Director, Marine Operations

TA:pk

RECEIVED
AUG 10 1994
UNOLS OFFICE

HARBOR BRANCH OCEANOGRAPHIC INSTITUTION, INC.
SHIP/SUBMERSIBLE "PER DAY" RATE SHEET
1995

Vessel

R/V SEWARD JOHNSON (LOA 204')

Accommodations for 40 including 10 ships crew, 8 sub crew if required,
22 scientists with submersible or 30 without.

-----Total days per grant/contract-----

	<u>1-30</u>	<u>31-60</u>	<u>61-99</u>	<u>100+</u>
-Ops/transit, fully found	\$9,500	\$9,000	\$8,000	7,000
-Ops/transit, plus fuel & lube (75 gal/hr)	9,000	8,500	7,500	6,500
-Port (24 hr. minimum)	8,500	8,000	7,000	6,000
-Mob/Demob/Standby at HBOI	4,750	4,500	4,000	3,500

R/V EDWIN LINK (LOA 168')

Accommodations for 31 including 10 ships crew, 7 sub crew if required,
14 scientists with submersible or 21 without.

	<u>1-30</u>	<u>31-60</u>	<u>61-99</u>	<u>100+</u>
-Ops/transit, fully found	\$8,000	\$7,500	\$6,500	6,000
-Ops/transit, plus fuel & lube (85 gal/hr)	7,500	7,000	6,000	5,500
-Port (24 hr. minimum)	7,000	6,500	5,500	5,000
-Mob/Demob/Standby at HBOI	4,000	3,750	3,250	3,000

R/V SEA DIVER (LOA 113')

Accommodations for 18 including 5-7 ships crew, 5 sub crew if required,
8 scientists with submersible or 11 without.

	<u>1-30</u>	<u>31-60</u>	<u>61-99</u>	<u>100+</u>
-Ops/transit, fully found	\$4,000	\$3,700	\$3,400	3,000
-Ops/transit, plus fuel & lube (40 gal/hr)	3,700	3,400	3,100	2,700
-Port (2400 hr. minimum)	3,500	3,200	2,900	2,500
-Mob/Demob/Standby at HBOI	2,000	1,850	1,700	1,500

R/V SKIMMER (42') / PUKA KAI (32')

Maximum of 8 persons

-Day boats only	\$ 500	450	400	300
-----------------	--------	-----	-----	-----

Submersibles:

	<u>1-30</u>	<u>31-60</u>	<u>61-99</u>	<u>100+</u>
<i>JOHNSON-SEA-LINK I & II (Max. depth 3,000 fsw)</i>	\$5,000	4,500	3,800	3,000
Must be used with R/V SEWARD JOHNSON or EDWIN LINK				

<i>CLELIA (Max. depth 1,000 fsw)</i>	\$4,000	3,500	2,800	2,000
Can be used with R/V SEWARD JOHNSON, EDWIN LINK or SEA DIVER				

Examples

Ops/Transit Rate

	-----Total days per grant/contract-----			
	<u>1-30</u>	<u>31-60</u>	<u>61-99</u>	<u>100+</u>
SEWARD JOHNSON & J-S-L	14,500	13,500	11,800	10,000
SEWARD JOHNSON & CLELIA	13,500	12,500	10,800	9,000
EDWIN LINK & J-S-L	13,000	12,000	10,300	9,000
EDWIN LINK & CLELIA	12,000	11,000	9,300	8,000
SEA DIVER & CLELIA	8,000	7,200	6,200	5,000

Ops/Transit Rate, Plus Fuel and Lube

	-Total days per grant/contract/other-			
	<u>1-30</u>	<u>31-60</u>	<u>61-99</u>	<u>100+</u>
SEWARD JOHNSON & J-S-L	14,000	13,000	11,300	9,500
SEWARD JOHNSON & CLELIA	13,000	12,000	10,300	8,500
EDWIN LINK & J-S-L	12,500	11,500	9,800	8,500
EDWIN LINK & CLELIA	11,500	10,500	8,800	7,500
SEA DIVER & CLELIA	7,700	6,900	5,900	4,700

Port (other than HBOI) Rate:
(Minimum 24 hr. stay required)

	-Total days per grant/contract/other-			
	<u>1-30</u>	<u>31-60</u>	<u>61-99</u>	<u>100+</u>
SEWARD JOHNSON & J-S-L	13,500	12,500	10,800	9,000
SEWARD JOHNSON & CLELIA	12,500	11,500	9,800	8,000
EDWIN LINK & J-S-L	12,000	11,000	9,300	8,000
EDWIN LINK & CLELIA	11,000	10,000	8,300	7,000
SEA DIVER & CLELIA	7,500	6,700	5,700	4,500