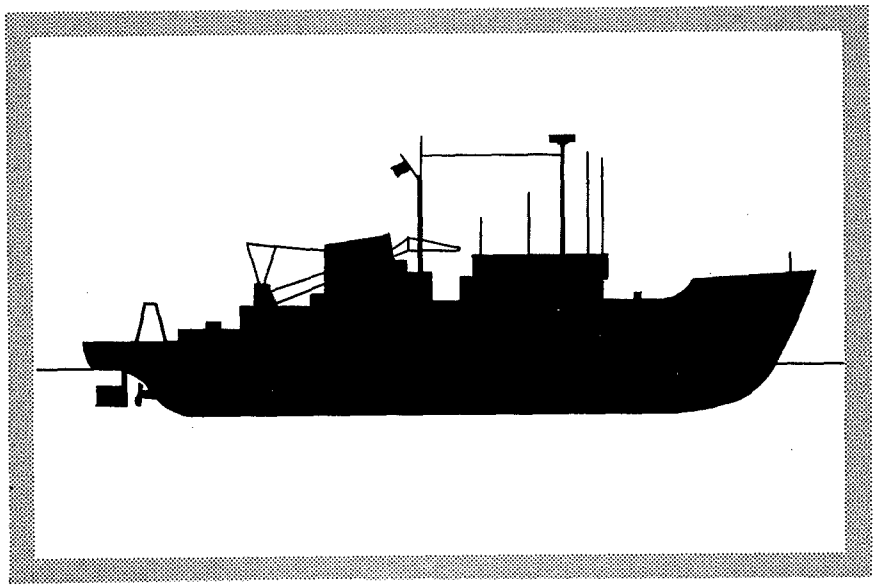
IR No. 70-25

INFORMAL REPORT

A BIBLIOGRAPHY OF REPORTS, ARTICLES, AND DATA REFERENCES RESULTING FROM SCIENTIFIC OPERATIONS ABOARD THE NAVY POOL (T-AGOR) SHIPS: 1963 THROUGH 1969



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NAVAL OCEANOGRAPHIC OFFICE
WASHINGTON, D. C. 20390

INFORMAL REPORT

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ABSTRACT

This report has compiled the titles of the reports, articles, and papers about data collected aboard the Navy Pool (T-AGOR) ships. Data which have been inserted into the National Oceanographic Data Center, the Department of Defense Bathymetry Library, and the Department of Defense Magnetics Library have also been listed.

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This Manuscript has been reviewed and is approved for release as an UNCLASSIFIED Informal Report.

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Director,
Developmental Surveys Division

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INTRODUCTION

The U. S. Naval Oceanographic Office has been coordinating and supporting scientific operations on the T-AGOR 3 class of oceanographic research vessels since the USNS JAMES M. GILLISS (T-AGOR 4) became operational in 1963. The user laboratories (see list) retained much of the data which were collected. It soon became evident that a large amount of information was being obtained on which this Office could not report. However, the user laboratories could and did make use of the data in preparing reports and articles. An effort has been made to include as many of these reports and articles, as possible, in this bibliography. When they were available, abstracts were also included. The probability that some publications were omitted led to the inclusion of a perforated correction sheet in the back of the report. Corrections and additions (including abstracts) will be used to update the present bibliography.

Each of the bibliographic entries is keyed to the survey or operation with which it is concerned. The six-digit key is the AGOR cruise number consisting of; 1) a two-digit ship indicator, 2) a two-digit year indicator, and 3) a two-digit assigned consecutive number. The following ships have operated or are presently operating as 'Navy Pool' ships:

USNS JAMES M. GILLISS (T-AGOR 4)
USNS CHARLES H. DAVIS (T-AGOR 5)
USNS SANDS (T-AGOR 6)
USNS WILLIAM F. LYNCH (T-AGOR 7)
USNS DE STEIGUER (T-AGOR 12)
USNS BARTLETT (T-AGOR 13)

The 'Navy Pool' of user laboratories which have utilized the T-AGOR class ships, their oceanographic equipment, and the services of assigned oceanographic and instrumentation personnel are listed below:

Applied Physics Laboratory-University of Washington
David Taylor Model Basin
Naval Air Development Center
Naval Ammunition Depot-Crane, Indiana
Naval Applied Science Laboratory
Naval Civil Engineering Laboratory
Naval Electronics Laboratory
Naval Marine Engineering Laboratory
Naval Mine Defense Laboratory
Naval Oceanographic Office
Naval Ordnance Laboratory
Naval Ordnance Test Station-China Lake, California
Naval Ordnance Test Station-Pasadena, California
Naval Post Graduate School
Naval Radiological Defense Laboratory
Naval Research Laboratory
Naval Ship Research and Development Center
Naval Ship Research and Development Laboratory-Annapolis, Maryland
Naval Ship Research and Development Laboratory-Panama City, Florida
Naval Undersea Research and Development Center-Pasadena, California
Naval Undersea Research and Development Center-San Diego, California

Naval Undersea Warfare Center-Pasadena, California
Naval Underwater Ordnance Station
Naval Underwater Weapons Research and Engineering Station
Naval Weapons Center-China Lake, California
Navy Underwater Sound Laboratory
Office of Naval Research
Ordnance Research Laboratory-University of Pennsylvania

In addition, universities and laboratories with Navy contracts have used the T-AGOR ships through the auspices of the Office of Naval Research:

Columbia University-Lamont Geological Laboratory
Florida State University-Department of Oceanography
Massachusetts Institute of Technology
Oregon State University-Department of Oceanography
Smithsonian Institution
Southwest Center for Advanced Studies
U. S. Geological Survey
University of California-Scripps Institution of Oceanography
University of California at Los Angeles
University of Southern California-Department of Geology

The tabulations of data are included so that interested readers can obtain copies of data which have been turned over to the National Oceanographic Data Center and the Department of Defense Bathymetry and Magnetics Libraries.

Achstetter, E. V., Hill, D. S., Hulseman, J., Knoop, J. W., Whitney, S. G. & Williams, V. L., A SUMMARY OF ENGINEERING PROPERTIES, SEDIMENT SIZE AND COMPOSITION ANALYSES OF CORES FOR PROJECT BESP; May-June 1967. (USNS SANDS), NAVOCEANO Lab. Item 314, February 1968. 066706

Adams, R. L. CONTROL AND RECEIVING EQUIPMENT FOR SONAR STUDIES, NEL Tech. Memo. #701, 23 June 1964. -

Adams, R. L. & Gardner, R. R., COMPUTER PROCESSING OF ACOUSTIC DATA AT SEA, Acoustical Society of America, Vol. 39, Pp. 757-759, May 1966. -

Allen, W. B., Zarnowitz, R. M. & Johnson, E. C., FASOR I ONE WAY TRANSMISSION PSEUDORANDOM SIGNAL CORRELATION MEASUREMENTS, NEL Report #1380, June 6, 1966, CONFIDENTIAL. 056413

Andersen, N. R. & Morris, R. E. DEPTH RECORDING OF LARGE-VOLUME SAMPLING OF SEAWATER, Limnology and Oceanography, Vol. 12, No. 4. Pp. 712-714, October 1967. 066603

Anderson, E. & Pedersen, M. A., OCEANOMETRIC AND ACOUSTIC PREDICTIONS FOR FASOR I EXPERIMENTS, Journal of Underwater Acoustics, USN, Vol. 15, No. 2, April 1965, CONFIDENTIAL. 056413

Andersen, N. R. & Morris, R. E. ACCURATE DEPTH RECORDING OF LARGE-VOLUME SAMPLING OF SEA WATER, NAVOCEANO IM 66-6, 11 Pp., August 1966. 066603

This publication describes an extensive evaluation of the application of a pressure sensing device used to indicate apparatus closing on large volume sea water sampling.

Applied Physics Laboratory, SELF-PROPELLED UNDERWATER RESEARCH VEHICLE, UWA-1-i, Applied Physics Laboratory, University of Washington, APL - UW6705, 1967, CONFIDENTIAL. -

Audet, J. J., Jr., Jadamac, J. R., Morris, R. E., Martin, W. T. & Riel, G. K., PRELIMINARY FIELD REPORT - RADIOISOTOPIC SAMPLING AND IN-SITU GAMMA MEASUREMENTS - TOTO, NAVOCEANO, 1966. 066603

Batzler, W. E., FASOR II PRELIMINARY REPORT, NEL Letter Report #142, 9 September 1966. 056603 to 056607

Batzler, W. E., & Hale, F. E., HIGHLIGHTS FROM THE FASOR II CRUISE, Proc. of the 24th Navy Symposium on UW Acoustics, Paper 2A3, December 1966, CONFIDENTIAL. 056603 to 056607

Batzler, W. E. & Vent, R. J., UNDERWATER SCATTERING AT 3KC/S., Paper presented at the Navy Symposium on UW Acoustics, December 1963. -

Batzler, W. E., & Yee, G. S., FASOR I - BASIC LONG - RANGE ACTIVE SONAR STUDIES IN WESTERN PACIFIC AREAS, U. S. Navy Journal of Underwater Acoustics, Vol. 15, Pp. 897-922, October 1965, CONFIDENTIAL, 056413

Beardsley, G. T. Jr., Hodgson, K. T., Zanevold, J. R. V., & Smith, R. L., JOHNSTON ISLAND SCATTERING AND TRANSMISSION DATA, Ore. St. Univ. Data Report No. 31, August 1968. -

Beckman Instruments Inc., MINOS DISSOLVED OXYGEN MONITOR, Advanced Technology Operations, Tech. Memo ATO-1019B, 29 Pp., 15 December 1969. 056905

Blackman, A., & Anderson, R. S. DESCRIPTION OF A DUAL CORER FOR OBTAINING PAIRED PISTON OR GRAVITY CORES, NAVOCEANO IR 68-97, October 1968. 056807

A simple method of obtaining paired cores spaced 3 meters apart with known relative azimuth is described. The instrument has been used successfully in water depths of 4000 meters.

Bloch, R. E., Morris, R. E., & Nelson, B. H., OCEANOGRAPHIC CRUISE SUMMARY: NORTH ATLANTIC OCEAN: EDGE OF GULF STREAM: JULY - AUGUST 1968, NAVOCEANO IR 69-34, 11 Pp., 1969. 076807

This informal report is a summary of an oceanographic survey in an area 200 miles south of Nova Scotia during July and August 1968. Scientists from NAVOCEANO collected physical and chemical data from USNS LYNCH (T-AGOR 7).

A series of 25 Nansen stations were occupied and two expendable BT grids were accomplished. This data will be used to investigate volume transport, heat budget and advection along the northern boundary of the Gulf Stream.

Bockman, P., Grimes, A., & Hill, D., A SUMMARY OF SEDIMENT SIZE AND COMPOSITION OF CORES FROM USNS GILLISS (AGOR 4); DEC. 1962, NAVOCEANO Lab. Item No. 183, March 1966. 046201

Bockman, P., Hill, D., & Williams, V., A SUMMARY OF SEDIMENT SIZE AND COMPOSITION ANALYSES OF CORES FOR THE SHAKEDOWN CRUISE OF THE USNS LYNCH; JANUARY 1966, NAVOCEANO Lab. Item No. 281, November 1966. 076601

Bracey, D. R., GEOMAGNETIC MEASUREMENT IN THE PACIFIC OCEAN, NAVOCEANO IR H-4-66, 1964. 056413

Magnetic and bathymetric data were collected aboard USNS CHARLES H. DAVIS in the Pacific Ocean during the period May-September 1964. Contour charts for five detailed survey areas and profile charts for 13,500 miles of magnetic and bathymetric survey track are presented.

Bucker, H. P., & Hamilton, E. L., SEDIMENT ANALYSIS FOR ACOUSTIC PURPOSES, NEL Tech. Memo. #802, 19 May 1965. -

Buffington, E. C., Hughes, K. H., & Muerdter, D. W., PRACTICAL EXPERIENCE WITH SATELLITE NAVIGATION ABOARD USNS CHARLES H. DAVIS (T-AGOR 5). 056808 to 056905

Since July 1968, oceanographers aboard USNS CHARLES H. DAVIS (T-AGOR 5) have been utilizing Navy TRANSIT satellites and the ITTFL 4007AB satellite receiver with a PDP-8/S general purpose computer to acquire position data at sea. The system has been operated without a specially trained technician, and with a high degree of reliability. The authors, with no formal background, and only modest practical experience in computer technology and electronics, have been able to acquire excellent navigational data to support their scientific programs.

Bulletin, The, OCEANOGRAPHERS TEST FAST-RESPONSE OXYGEN SENSOR, NAVOCEANO, No. 2-70, 23 January 1970. 056905

Bulletin, The SCIENTISTS PROBE ATLANTIC FOR WARM EDDY, NAVOCEANO, No. 16-69, 29 July 1969. 046904

Bulletin, The, FIVE FUTURE SCIENTISTS AWARDED CRUISE ON USNS LYNCH, NAVOCEANO, No. 13-67, 15 August 1969. 076711

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Bulletin, The, YOUTH CRUISE WITH NAVOCEANO, NAVOCEANO, No. 17-68, 13 September 1968. 076806

Bulletin, The, OCEANOGRAPHY IS WHERE IT'S AT, NAVOCEANO, No.21-69, 17 October 1969. 076906

Bulletin, The, NAVOCEANO SCIENTISTS DEVELOP NEW SEARCH AND IDENTIFY VEHICLE, NAVOCEANO, No. 23-60, 14 November 1969. 126902

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Carlson, Q. H. SEISMIC PROFILER TESTS CONDUCTED ABOARD USNS LYNCH (T-AGOR 7) IN THE BAHAMAS AND PUERTO RICO TRENCH DURING MARCH 1967, NAVOCEANO IR 68-66, August 1968. 076706

Seismic profiler tests were conducted aboard USNS LYNCH with EG&G's AGOR II Marine Profiling System. Shipboard recording and processing techniques are described and profiles are presented across Straits of Florida, at the exit of Northeast Providence Channel, east of San Salvador and over the Puerto Rico Trench.

Carlson, Q. H. & Merrifield, R., SOUND VELOCITY SYSTEM IN USE ABOARD OCEANOGRAPHIC RESEARCH SHIPS OF THE NAVAL OCEANOGRAPHIC OFFICE, U. S. Navy Journal of Underwater Acoustics, Vol. 16, No. 4, Pp. 665-676, October 1966. 046421

The Sound Velocity System aboard NAVOCEANO's AGOR ships consists of the sensor package which measures sound velocity, pressure, and temperature. The FM signals from these sensors are mixed and sent to the surface via electrical cable where the signals are separted and demodulated for analog XY plotting. The FM signals are also sent to individual counters for processing and digitizing to be scanned and recorded on punched paper tape, later to be digitally plotted by shore-based computer. Comparisons of Nansen cast data taken on the same wire with the analog and digital data are good.

Carman, D., COMPARISON OF U. S. NAVAL OCEANOGRAPHIC OFFICE SEA SURFACE TEMPERATURE CHARTS WITH USNS GILLISS SURVEY DATA, 2-5 MARCH 1964, NAVOCEANO IMR 0-65-64, 6 Pp., January 1965. 046404

This report continues a series of synoptic oceanographic evaluation studies being conducted by the U. S. Naval Oceanographic Office in conjunction with the Antisubmarine Warfare Environmental Prediction System.

Cranert, W., A COMPARISON OF SOUND VELOCITY USING A VELOCIMETER AND COMPUTED VELOCITIES, Term Paper submitted to Dept. of Geol., University of Southern California, Los Angles, Calif., 11 Pp., 2 June 1965. 056420

Carroll, J. C. & Walczak, J. E., A DEEP TOWED MAGNETOMETER SYSTEM, NAVOCEANO IMR M-2-64, June 1964. 046311

Chase, L., Anderson, N. R., Russin, E. M., & Sullivan J.P., SIMULTANEOUS NEAR REAL-TIME EVALUATION OF AUTOMATIC EQUIPMENT AND MANUAL METHODS FOR DETERMINING SEVERAL NUTRIENT CONCENTRATIONS OF SEAWATER, Instrument Society of America, Preprint # 68-905, 12 Pp., 13 figs., 7 tables, Presented at the 1968 ISA Annual Conference and Exhibit, Oct. 28-31 1968, New York. 066801 & 076716

Colby, Chester H., SOUND SURVEY MEASUREMENTS MADE ON THE USNS CHARLES H. DAVIS (AGOR 5). USN/USL Final Report No. 640, Vol. 1, December 1964. --

Commercial Fisheries Review, PROBE WARM EDDY NEAR GULF STREAM, Vol. 31, Nos. 8-9, August-September 1969. 046904

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Evans, R. G., Attaway, D. H., & Adams, W. H., PRELIMINARY FIELD REPORT - RADIOISOTOPIC OCEANOGRAPHY, NAVOCEANO, 1964. 046421

Evans R. G., & Cummings, D., PRELIMINARY FIELD REPORT II - RADIOISOTOPIC OCEANOGRAPHY, NAVOCEANO, 1964. 046410 046411

Evans, R. G., & Hawkins, L. K., OCEANOGRAPHIC DATA - AGOR CRUISE 046608 (MILOC-66) - USNS JAMES M. GILLISS (T-AGOR 4), NAVOCEANO IR 68-38, 1968. 046608

Oceanographic data taken during July, 1966 in the vicinity of Ocean Weather Station JULIET (20°N, 52°30'W) are presented. Nansen cast, bathythermograph, and sea surface temperature data were taken in support of the NATO Oceanographic Month 1966 (MILOC-66).

Evans, R. G., & Riel, G. K., PRELIMINARY FIELD REPORT-RADIOISOTOPIC OCEANOGRAPHY, NAVOCEANO, 1964. 046408

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Fagot, M. G., & Oser, R. K., DEEP-TOWED BATHYMETRIC SYSTEM, NAVOCEANO IM 67-12, February 1967. 056611

A low cost deep-towed bathymetric system that will give micro-bathymetric and sub-bottom profiling is described. A vehicle containing transducer, power supplies, and an amplifier is towed at constant depth within about 30 fathoms of the bottom with the return transducer signals being telemetered up the armored coaxial tow cable for recording at the surface. The results appear to be better than those obtained with conventional shipboard bathymetric systems.

Flaherty, L. M. & Shapiro, D. L., A SYSTEM APPROACH TO OCEANOGRAPHIC SHIPS, Sperry-Rand Engineering Review, Vol.21, No. 3, Pp.9-14, 1968. --

Gardner, R. R., AUTOMATIC REDUCTION OF ACOUSTIC SCATTERING DATA AT SEA, NEL Tech. Memo. #807, 28 May 1965. -

Glover, L. K., Hill, D. S., Knoop, J. W., & Ross, C. M., A SUMMARY OF SEDIMENT SIZE AND COMPOSITION ANALYSES OF CORES AND GRABS OF SAN CLEMENTE ISLAND, JULY 1967, NAVOCEANO Lab. Item No. 318, August 1967. 056711

Gowdy, R. W., LONG RANGE SONAR COMMUNICATION IN FASOR II PROGRAM, NEL Tech. Memo. #1413, 10 November 1966, SECRET. 056603 to 056607

Gray, K. O., ENVIRONMENT OF DEEP OCEAN TEST SITES (NOMINAL DEPTH, 6000') LATITUDE 33°46'N., LONGITUDE 120° 37'W, NCEL Tech. Note N-657, February 1965. 056311 056401 056405

NCEL has exposed specimens of a large number of construction materials on Submersible Test Units (STU) in 5300 and 5800 feet of water. The purpose is to determine what materials are most suitable to withstand the effects of this environment. The environmental factors considered significant are presented.

The sea water at these sites is uncontaminated and "normal" for this part of the Pacific Ocean. The particular depth at which the STUs are located places them in an environment with a relatively low dissolved oxygen concentration. In this area, the oxygen minimum zone is located at a depth between 1800 and 2800 feet with dissolved oxygen values as low as 0.20 milliliters per liter. Measurements averaging from 1.26 to 1.50 milliliters of dissolved oxygen per liter of sea water 2.53 to 2.40° for temperature, and 34.56 to 34.59 parts per thousand for salinity were obtained from the near bottom waters at these two depths (5300 and 5800 feet).

Gogos, C. M., Steele, D. W., & Malme, C. I., (Title Classified), Bolt, Beranek and Newman Report 1338, 17 Pp., 8 Figs., 4 Appendices, 1 April 1966, CONFIDENTIAL. 066506

Hale, F. E., FASOR TONE PULSE PROPAGATION AND ECHO RANGING TESTS WITH EMPHASIS ON THE RESULTS OF BOTTOM BOUNCE ECHO RANGING IN AREAS BETWEEN HAWAII AND FORMOSA, Oral Report for USW Planning Council, 28 January 1965. 056413

Hale, F. E., THE NEL PACIFIC FASOR CRUISES AND THEIR IMPLICATIONS FOR MGS, U. S. Journal of Underwater Acoustics, Vol. 17, No. 1, Pp. 123-143, January 1967. 056413 056603 to 056607

Hale, F. E., Anderson, E., & Pedersen, M. A., APPLICATION OF MODERN ANALYTICAL TECHNIQUES TO PREDICTION OF SONAR PERFORMANCE, Navy Tech. Forum, Fall of 1965. -

Hale, F. E., & Yee, G. S., FASOR TONE PULSE PROPAGATION AND ECHO RANGING TESTS - PRELIMINARY RESULTS, Paper for 22nd U/W Sound Symposium, October 1964, CONFIDENTIAL. -

Hamilton, E. L. ACOUSTIC REFLECTION RECONNAISSANCE IN THE GULF OF ALASKA. Paper for the 11th Pacific Science Congress, August 1966, CONFIDENTIAL. -

Hamilton, E. L., FASOR I; SEA FLOOR STUDIES, NEL Tech. Memo. #1398, August 1966, CONFIDENTIAL. 056413

Hill, D. S., Knoop, J. W., Whitney, S. G., & Williams., V. L., A SUMMARY OF SEDIMENT SIZE, COMPOSITION AND SPECIFIC GRAVITIES OF GRABS FROM CRUISE 076802, JANUARY 1968, (USNS LYNCH), NAVOCEANO Lab. Item 327, April 1968. 076802

Hill, D. S., Newton, H., & Williams, V., A SUMMARY OF ENGINEERING PROPERTIES, SEDIMENT SIZE AND COMPOSITION ANALYSES OF CORES FROM THE GULF OF MAINE, NAVOCEANO Lab. Item No. 297, May 1966. 066604

Hill, D. S., Whitney, S. G., & Williams, V. L., A SUMMARY OF ENGINEERING PROPERTIES, SEDIMENT SIZE AND COMPOSITION ANALYSES OF CORES FROM CRUISE 066802, FEBRUARY 1968, (USNS SANDS), NAVOCEANO Lab. Item 326, April 1968. 066802

Heiner, W. R., A GEOLOGICAL AND MAGNETIC SURVEY OF OSBORN BANK CALIFORNIA, DECEMBER 1967, Masters Thesis, June 1969. 056723

Hull, D. A., SCATTERING LAYER OBSERVATIONS MADE DURING PROJECT EARS CRUISE I - 28 OCTOBER TO 13 DECEMBER 1966, USL Tech. Memo. No. 2211-106-67, 18 September 1967. 066611

This is the fourth in a series of technical memoranda dealing with environmental data obtained during Project EARS Cruise I (28 October-13 December 1966). This memorandum deals specifically with the observations of scattering layers made during the cruise at 12,0 KHz with the standard ship's fathometer.

Hamilton, E. L., & von Huene, R. E., KODIAK SEAMOUNT NOT FLAT-TOPPED, Science, Vol. 154, No. 3754, Pp. 1323-1325, December 1966. 056509

Earlier surveys in the Aleutian Trench southeast of Kodiak Island, Alaska indicated that Kodiak Seamount had a flat top and was a tablemount or guyot. This seamount is of special significance because it has been supposed that its surface was eroded at the same time as those of a line of guyots to the southeast. If so, its present position in the axis of the Aleutian Trench indicates that the line of guyots was formed before the trench. A two-part survey in 1965 showed that Kodiak Seamount is not flat-topped, and should be eliminated from the category of guyots. Reflection profiling records indicate that the seamount was formed before the adjacent sediments were deposited, and that the small trough, or moat, on the south side is a depositional feature probably formed by a scouring effect or by the acceleration of turbidity currents around the base of the mount.

Hawkins, L. K., & Wright, R. C. OCEANOGRAPHIC CRUISE SUMMARY: BLOCK ISLAND/FISHER ISLAND SURVEY: USNS SANDS (T-AGOR 6): 19 JULY - 14 AUGUST 1967, NAVOCEANO IR 69-30, 1969. 066709

This informal report is a summary of oceanographic support given the U. S. Naval Underwater Sound Laboratory aboard the USNS SANDS (T-AGOR 6) in the Block Island - Fishers Island acoustic range. Physical, chemical and geological oceanographic data were collected in the area.

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Idyll, C. P., (editor) EXPLORING THE OCEAN WORLD: A HISTORY OF OCEANOGRAPHY, Thomas Y. Crowell Co. Inc., New York 280 Pp., 1969. 066603 076708

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Jones, E. N. & Bender, T. A., BATHYTHERMOGRAPH TRACES FROM PARKA, USL Tech. Memo No. 2213-118-69, 20 May 1968. 066804

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Krause, D. C., TECTONICS, MARINE GEOLOGY, AND BATHYMETRY OF THE CELEBES SEA - SULU SEA REGION, Geol. Soc. of Amer. Bulletin, Vol. 77, Pp. 813-832, 1966. 056413

Contoured bathymetric charts of the Celebes Sea-Sulu Sea region form the primary basis for a geologic interpretation of the region. The large ridges and basins show an abundant evidence of active tectonism in the form of scarps, recent troughs, warping, large vertical displacements, and volcanoes. Terraces below the 1000-fathom depth in the basins of both seas are an enigma. Turbidity - current deposition has flattened the floors of the basins, while Pleistocene lowering of sea levels caused the cutting of wide marine shelves on the ridges. Deep channels were cut in the shelves by intensive marine currents. Deep erosional features are evidence of local and regional subsidence. Published evidence regarding tectonism and geologic history combined with the marine data reveal that: (1) the left lateral strike-slip Philippine fault extends south of the Talaud Islands and may have at least 110 km of horizontal displacement; (2) no land existed prior to Cretaceous time; (3) much spilitic lava was extruded in late Cretaceous and early Tertiary time; (4) a major orogeny occurred in late Miocene time and that another, still active, began in late Pliocene and Quaternary times.

-K-

Kammer, C. G., PROTOTYPE FAIRED HOUSING CONSTRUCTED FOR SHIP-BOARD CABLE-TOWED OCEANOGRAPHIC INSTRUMENTATION, NAVOCEANO IMR 0-51-63, 10 Pp., May 1963. --

This report describes the concepts, design, construction and experiments with the new instrument.

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Littrell, W. H., LETTER REPORT ON FASOR II, NEL Letter Report #3150D-041-66, August 1966. 056603 to 056607

Littrell, W. H., & Kulhman, V. D., PSEUDORANDOM NOISE ECHO RANGING TESTS DURING FASOR I. A STATISTICAL STUDY OF RESULTS, NEL Report #1423, January 1967, CONFIDENTIAL. 056413

Lackie, K. W., PROJECT NAVADO - A MODEL IN INTERNATIONAL COOPERATION, Naval Oceanographic Newsletter Vol. VII, No. 2, Pp. 7-8, April 1968. 046511

Lohner R. C., MARINE MAGNETIC AND BATHYMETRIC PROFILES IN THE GULF OF CALIFORNIA, NAVOCEANO IR 69-31, 15 Pp., 1969. 056720

Marine Magnetic and bathymetric data were recorded over 2300 nautical miles in the Gulf of California by the USNS CHARLES H. DAVIS (T-AGOR 5). These records, presented in profile form, reveal several distinctive magnetic features. The geological significance of these features is discussed.

Labyak, P. S., AN OCEANOGRAPHIC SURVEY OF THE COASTAL WATERS BETWEEN SAN FRANCISCO BAY AND MONTEREY BAY, CALIFORNIA, Naval Postgradute School Thesis, October 1969. 126901D

MacDonald, R. B., VELOCITY PROFILES FROM PROJECT EARS, CRUISE I (28 OCTOBER - 13 DECEMBER 1966), USL Tech. Memo No. 2211-58-67, 15 May 1967. 066611 & 076609

This is the first in a series of technical memoranda dealing with environmental data obtained during Project EARS, Cruise 1 in the period 28 October - 13 December 1966. The velocity profiles included in this memorandum are presented for the purpose of documentation and reference.

Mazeika, P. A., CIRCULATION AND PHYSICAL ENVIRONMENT EAST OF LESSER ANTILLES IN AUTUMN 1967, NAVOCEANO, April 1969, (In Prep.). 076715

Miller, M. R., & Batzler, W. E., BOTTOM WATER PHYSICAL PROPERTIES AND CORRECTIONS TO ECHO SOUNDER DEPTHS IN FASOR I AREAS, NEL Report # 1375, 22 April 1966, CONFIDENTIAL. 056413

Muraoka, James S., DEEP-OCEAN BIODETERIORATION OF MATERIALS - PART II. SIX MONTHS AT 2,340 FEET, NCEL Tech. Report TR-R-393, 48 Pp., August 1965. ---

Muraoka, James S., DEEP-OCEAN BIODETERIORATION OF MATERIALS - PART III. THREE YEARS AT 5,300 FEET, NCEL Tech. Report TR-428, 53 Pp., Feb. 1966. ---

Murphy, S. R., & Lord, G. E., THERMAL AND SOUND VELOCITY MICRO-STRUCTURE DATA TAKEN WITH AN UNMANNED RESEARCH VEHICLE, APL - UW - 6523, 14 Pp., June 1965. ---

For the past several years the Applied Physics Laboratory, University of Washington, has operated torpedo-like research vehicles in a series of investigations of thermal microstructure. Readings have been taken with thermistor probes and a sound velocimeter for isobaric trajectories of 6 to 20 nautical miles in length. The depth of the measurements range from 50 m down to 2500 m. Cruises have been to areas several hundred miles west of San Diego, and near Oahu, Hawaii.

Murphy, S. R., and Lord G. E. Continued.

These data have been subjected to several statistical treatments. The root-mean-square deviation from the mean, autocorrelation and cross-correlation functions for temperature and sound velocity, and power spectra have all been computed. Digital filtering has been employed to enhance portions of the spectra. It has been essential for the interpretation of the results of these analyses to determine carefully the control characteristics of the vehicle and the limitations of the data system in order to determine the "noise" level of the measurements. Preliminary results show temperature deviations of the order of 0.3° C at 50 m falling to 0/02° C at 1500 m with correlation lengths of several thousand feet. Likewise, horizontal gradients are of the order of 0.1° C/nautical mile near the surface and 0.001° C/nautical mile at 2000 m.

Morris, R. E., & Sower, L. A., OCEANOGRAPHIC CRUISE SUMMARY: SEISMIC PROFILING IN WILMINGTON CANYON, NAVOCEANO IR 69-33, 12 Pp., 1969. 076805

This informal report is a summary of a seismic survey of the Wilmington Canyon area during July 1968. Seismic reflection data were collected along two tracks totaling approximately 108 nautical miles in and around Wilmington Canyon.

Mooney, A. R. & Oser, R. K., OCEANOGRAPHIC DATA REPORT, SAN CLEMENTE ISLAND AREA JULY & AUGUST 1967., NAVOCEANO IR 68-20, 43 Pp., March 1968. 056711 & 056715

This report presents oceanographic data collected during July and August 1967 aboard the USNS DAVIS (T-AGOR 5) in the San Clecmente Island Deep Submergence Rescue Vehicle Test Range and SEA LAB III areas. The Deep-Towed Profiler records show two small valleys in the SEA LAB III area. The bottom's surface was predominately sand at the sites sampled. Nansen cast data show that the water column temperature decreases almost linearly below the thermocline. Although current speeds of 0.5 knots were recorded at the 100 and 260 fathom sites, the predominant current speeds varied from 0.0 to 0.2 knots. The near bottom current at the 42 fathom site reached 0.7 knots with the mean speed of 0.5 knots. The current direction at the sites sampled reverses along an axis parallel to San Clemente Island. Bottom photographs show that the bottom is alternately smooth and flat, steep, and boulder strewn.

-M-

Morris, H. E., & Bucker, H. P., BOTTOM REFLECTION LOSSES FOR FORWARD AREA SONAR RESEARCH, FASOR I, NEL Report #1360, 7 March 1966, CONFIDENTAL. 056413

Morris, H. E. & Bucker, H. P., PREDICTED BOTTOM REFLECTION LOSSES, FASOR III 1966, NEL, 29 April 1966. 056603 to 056607

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Newsome, K. R., WARNING DEVICE TO REDUCE INSTRUMENT LOSS, NAVOCEANO Newsletter, Vol. IV, No.1, February 1965. ----

-O-

Orr, James F., INSTRUMENTATION AND MEASUREMENT TECHNIQUES FOR THE DETECTION OF EXTREMELY LOW FREQUENCY ELECTRO-MAGNETIC ENERGY IN THE SEA, USN/USL Research Report USL-672, 17Pp., June 1965. 046419

Oser, R. K., Coleman, J., Achstetter, E. V., Hill, D. S., Johnson, W. R., Ross, C. M., Knoop, J. W., & Williams, V. L., A SUMMARY OF ENGINEERING PROPERTIES, SEDIMENT SIZE, AND COMPOSITION ANALYSES OF CORES FROM THE CONTINENTAL BORDERLAND NEAR SAN CLEMENTE ISLAND; OCTOBER 1966 - DECEMBER 1966, DEEP SUBMERGENCE SYSTEM PROJECT, NAVOCEANO Lab. Item 303, March 1967. 056611

Oser, R. K., & Freeman, L. J., OCEANOGRAPHIC CRUISE SUMMARY - VIEQUES ISLAND, PUERTO RICO AREA - DECEMBER 1968 - MARCH 1969, NAVOCEANO IR No. 69-66, August 1969. 046815

This informal report is a summary of an oceanographic and geophysical survey in the proposed Deep Oceanographic Survey Vehicles (DOSV) Test and Evaluation (TEV) site southwest of Vieques Island, Puerto Rico. Included in the survey were Nansen casts, bathymetry, sub-bottom profiling, current measurements, marine fouling studies, bottom photography, geomagnetic measurements, and sediment sampling.

Oser, R. K., Berger, J. L., & Franc, L. J., OCEANOGRAPHIC DATA REPORT SAN CLEMENTE ISLAND AREA OCTOBER TO DECEMBER 1966, NAVOCEANO IR 67-77, September 1967. 056611

This report presents sediment, deep towed profiler, physical oceanography, visibility, and current data collected in the San Clemente Island Test Range from October to December 1966 aboard the USNS DAVIS (T-AGOR 5). The sediments vary in size from clays to sand and the bearing strength ranges from 0.8 g/cm^2 near the tops of several cores to 58.7 g/cm^2 for near the bottom of one of the longer cores (80-87 cm interval). The deep towed profiler traces show hillocks six feet in height and subbottom reflecting layers from 3 to 50 feet below the sediment surface. Sea water temperature values range from 18.5°C at the surface to 2.85°C at 1483 meters depth in San Clemente Basin. Minimum sound velocity values for the area occur between 700 and 800 meters depth. Alpha values for the water column range from 0.03 ln/m (150-200 meters depth) to 0.28 ln/m (30-40 meters depth). This represents visibility ranges from about 130 meters to 14 meters respectively. Tidal forces appear to exert an influence on the current regime to the greatest depth measured (1829 meters). Current speeds for the water column range from zero to 1.5 knots with rotary direction vectors. Instrumentation development pertinent to the survey is also discussed. Conclusions reached in this report are tentative based on the limited amount of survey data available. More seasonal investigations of the currents, temperature, and visibility, and more detailed measurements of sea floor topography and sediments are essential in order to clearly define the oceanographic environment.

Oser, R. K., & Fagot, M. G., DESIGN AND USE OF A BOTTOM ENVIRONMENTAL SENSING SYSTEM, NAVOCEANO IR 67-74, October 1967. 056715

The design of a Bottom Environmental Sensing System (BESS) is described. The BESS has been designed to measure the current speed and direction, water temperature, in-situ sediment strength, and minimum/maximum visibility periods of the near-bottom oceanic environment. The results of the first deployment of the system appear to be highly satisfactory.

-O-

Oser, R. K., BOTTOM ENVIRONMENTAL OCEANOGRAPHIC DATA REPORT HUDSON CANYON AREA, SPRING 1967, NAVOCEANO IR 69-8, February 1969. 046709 066706 076711

An ocean bottom survey of an 8 X 30 mile area encompassing portions of the continental shelf and slope northeast of Hudson Canyon has been conducted. Included in the investigation were ocean floor mapping, sub-bottom reflection studies, bottom photography, and near-bottom ocean current and temperature measurements.

Ocean Echo Magazine, PICTURES FROM THE DEEP, MSTSPAC, Vol. 1, No. 7, Pp. 8-9, November 1969. 126902

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Palmer, H. D., GEOLOGIC SIGNIFICANCE OF DAVIS SEAKNOLL, ARGUELLO PLATEAU, CALIFORNIA, Bulletin of Geological Society of America, Vol. 76, March 1965. 056403

Davis Seaknoll is a small volcanic cone at the extreme outer margin of Arguello Plateau off Point Conception, California. If the deep, relatively flat plateau is a foundered erosional surface, the seaknoll must postdate the period of truncation. Acoustic-reflection studies have disclosed a broad, nearly level surface beneath a relatively thin (80-m) veneer of unconsolidated sediments. Correlation of Davis Seaknoll with near-by Rodriguez Seamount suggests that the outer Arguello Plateau was a bank prior to subsidence which began in prelate Miocene time.

Pedrick, R. A., Evans, R. G., Attaway, D. H., & Adams, W.H., PRELIMINARY FIELD REPORT - RADIOISOTOPIC OCEANOGRAPHY, NAVOCEANO, 1964. 046420

Pickwell, G. V., GAS AND BUBBLE PRODUCTION BY SIPHONOPHORES, USN-UWC, July 1967. ---

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Perry, K. B., A DISCUSSION OF NANSEN CAST TEMPERATURE DEPTH DETERMINATIONS AND DATA PROCESSING TECHNIQUES, NAVOCEANO IMR 0-57-64, 30 Pp., October 1964. 046402

This report discusses oceanographic Nansen Cast Survey and data processing techniques. Several new methods of recording and processing data were tested during portions of the February 1964 oceanographic survey aboard the USNS JAMES M. GILLISS (T-AGOR 4).

-R-

Regan, M. C., Yee, G. S., & Keir, R. L., FASOR I ACOUSTIC BOTTOM REFLECTION LOSSES USING EXPLOSIVES AS A SOUND SOURCE, PRELIMINARY RESULTS, NEL Memo. #785, 12 April 1965, CONFIDENTIAL. 056413

Riel, G. K., Pedrick, R. A., Attaway, D. H., & Audet, J. J. Jr., RUTHENIUM 106, ZIRCONIUM 95 AND POTASSIUM 40 AT SELECTED OCEAN STATIONS (1960-1965), NOL Tech. Report 65-118, 30 August 1965. 046420 046421 046504

The concentrations of Potassium 40, Ruthenium-Rhodium 106, and Zirconium-Niobium 95 in the ocean have been measured by insitu gamma spectrometry at several Western North Atlantic and a few Eastern North Pacific sites between 1960 and 1965. The concentration of natural K^{40} is proportional to salinity and close to reported average values. The Zr^{95} activity is due to fallout from nuclear weapons and decreased markedly after the test ban tready. The RU^{106} concentration reported is too high to be entirely due to nuclear tests, and shows no rational pattern with time or depth.

Riel, G. K., Simons, D. G., & Converse, P. V., DUNC "THRESHER RADIATION SURVEY", NOL Tech. Report 64-21, February 1964. 046302

A radiation survey was made in the area of the THRESHER sinking using the DUNC underwater gamma spectrometer. Any release of fission products added less than 3% to the normal radioactivity of the water. Other, less sensitive gamma spectrometers were used to survey larger areas and to test points on the bottom. No fission products were found.

Spiess, F. N., & Maxwell, A. E., SEARCH FOR THE THRESHER, Science, Vol. 145, No. 3630, Pp. 349-355, 24 July 1964. 046302 to 046313

Sealift Magazine, AIR, LAND AND SEA... PROJECT BOMEX COMPLETED; ANALYZED, MSTS, Vol. XX, No.1, January 1970. 046905

Sealift Magazine, SOUND-SCATTERERS OF THE DEEP BEING STUDIED BY OCEANOGRAPHERS, MSTS, VOL. XVIII, No. 9, September 1968. 056806

Sealift Magazine, GIRL SCIENTISTS TAKE TO SEA ABOARD GILLISS, MSTS, Vol. XIV, No. 6, Pp. 11-13, June 1964. 046405

Sentell, F. N., & Gouzie, M. W., RADIATED-NOISE SURVEY OF THE USNS JAMES M. GILLISS (T-AGOR 4), USN/USL Report No. 947, 86 Pp., 20 February 1969, CONFIDENTIAL. -----

Shaefer, G. V., Van Atta, W. W., & Dorey, S. W., OCEANOGRAPHIC OBSERVATIONS IN THE EASTERN TROPICAL PACIFIC, MARCH 1967, NAVOCEANO IR 68-84, 1968. 056706

Oceanographic data were collected along the 85th meridian in the Eastern Tropical Pacific during March 1967. Temperature, salinity, dissolved oxygen, phosphate and silicate concentrations are presented graphically. Geostrophic calculations correlate well with the described circulation in the literature of this area. An easterly flowing South Equatorial Countercurrent between 4°S and 8°S was evidenced as far east as 85°W. This current had previously been described as extending only to 95°W.

Schneider, H. K., SHIPBOARD MAGNETIC SURVEY OF AN AREA NORTH-WEST OF BERMUDA, NAVOCEANO IR H-6-66, 1966. 046422

The U. S. Naval Oceanographic Office conducted a geomagnetic survey of a 30,000 square-mile area northwest of Bermuda in 1964 aboard USNS GILLISS (T-AGOR 4). The resulting contoured data, based on a 30-mile survey track spacing, provide only a general representation of the magnetic field, but show a series of northeast trending elongate magnetic anomalies.

Scholl, D. W., Buffington, E. C., & Hopkins, D. M., EXPOSURE OF BASEMENT ROCK ON THE CONTINENTAL SLOPE OF THE BERING SEA, Science, Vol. 153, No. 3739, Pp. 992-994, 26 August 1966. 056509

Profiles of repetitive seismic reflections reveal that the Bering continental slope, outer shelf, and rise overlay an acoustically reflective "basement" which extends at least 750 kilometers parallel to the trend of the slope. This acoustic basement is usually covered by several hundred meters of stratified sediments at the top and bottom of the slope; however, it is exposed in submarine canyons and flanking spurs along the main part of the slope for a distance of at least 550 kilometers northwest of the Pribilof Islands. The lithologic composition and the age of the rocks of the acoustic basement are not known. However, its probable seismic velocity of 3.1 to 3.7 kilometers per second suggests that it is composed of volcanic rocks or lithified sedimentary rocks or both. The regional geology suggests that the acoustic basement is the upper surface of folded late Mesozoic rocks which were locally intruded by granite and serpentine. The structure of the Bering slope, as deduced from the acoustic profiles, suggests that the surface of the basement has been monoclinically flexed and faulted between the shelf edge and the deep Aleutian Basin.

Scholl, D. W., Buffington, E. C., & Hopkins, D. M., GENERAL HISTORY OF CONTINENTAL MARGIN OF NORTH AMERICA IN THE BERING SEA, Marine Geology, (In. prep.). 056509

Shaefer, G. V., A MARINE MAGNETIC-TOPOGRAPHIC SURVEY, SAN DIEGO CALIFORNIA TO THE EQUATOR, NAVOCEANO IR 68-83, 1968. 056706

Approximately 5,250 km. (2,835 nautical miles) of magnetic and bathymetric data were recorded by the USNS CHARLES H. DAVIS (T-AGOR 5) between San Diego, California and the equator. The DAVIS crossed several distinct geologic provinces and in several areas a relationship between topography and magnetic data is evident. The magnetic data in other areas indicates the location of the crest of the East Pacific rise is farther to the south and that the fault zone marked by the Cocos Ridge is much wider than previously theorized.

Sealift Magazine, UNDERWATER SOUND RESEARCH SHIP TOWED OUT TO SEA AND DUNKED, MSTS Vol. XVI, No. 8, Pp. 19-21, August 1966. 076604

Seahorse, The, "RED" DAUGHERTY DESCRIBES NAVY TEST OF TELEPROBE ABOARD DE STEIGUER, Hydro Products, Vol. IV, No. 1, February 1970. 126902

Sealift Magazine, NEW UNDERWATER PROBE CAMERA EVALUATED, MSTS, Vol. XX, No. 2, P. 4, February 1970. 126902

Sealift Magazine, PROJECT BOMEX COMPLETED, MSTS, Vol. XX, No. 1, Pp. 4-5, January 1970. 046905

Sealift Magazine, DRIFTING IN THE GULF STREAM, MSTS, Vol. XIX, No.11, December 1969. 076906

Steinneck, P. L., COARSE FRACTION ANALYSIS AND STRATIGRAPHY OF A CHTHONIC BROWN-CLAY CORE FROM THE PACIFIC OCEAN, Term Paper, University of Southern California, 10 January 1967. ---

The coarse-fraction (>62 microns) of a deep-sea brown clay core has been analyzed for its content of micro-manganese nodules, quartz grains, radiolarians and foraminiferal tests. The appearance of radiolarians and a drop in quartz percentage at approximately 75 cms is taken as the Pliocene-Pleistocene boundary. A drop in quartz percentage in samples 16-18 (150-170 cms) indicates a major climactic change during the Late Tertiary, possibly an incipient glaciation. Rates of sedimentation for the Pacific Ocean during the Tertiary are shown to be considerably less than at present.

Strauss, L., LORAD ECHO REPEATER/TRANSPONDER STUDY, NEL Tech. Memo #919, 18 March 1966. ---

Smith, R. E., Gassaway, J. D., & Giles, H.N., IRON-MANGANESE NODULES FROM NARES ABYSSAL PLAIN: GEOCHEMISTRY AND MINERALOGY, Science, Vol. 161, Pp. 780-781, 23 August 1968. 076708

Three nodules from a core taken north of Puerto Rico are composed chiefly of an X-ray amorphous, hydrated, iron-manganese oxide, with secondary goethite, and minor detrital silicates incorporated during growth of the nodules. No primary manganese mineral is apparent. The nodules are enriched in iron and depleted in manganese relative to Atlantic Ocean averages. The formation of these nodules appears to have been contemporary with sedimentation and related to volcanic activity.

Sproull, R. F., DEVELOPMENT OF AN IN-SITU DISSOLVED OXYGEN SENSOR, NAVOCEANO IMR 0-43-65, October 1965. 066504

This report present a study of the methods and problems involved in order to fabricate an in-situ dissolved oxygen sensor.

Shaefer, G. V., GEOLOGIC CONSIDERATIONS FOR THE EMPLACEMENT OF SEALAB II, MST Journal, January 1969. 056505

Studies conducted at the Sealab I site off Bermuda proved men could survive in the hostile marine enviroment. The "Man-in-the-Sea" program of the U. S. Navy selected the site location for Sealab II on the south flank of Scripps Canyon at a water depth of 205 feet. A sediment sampling program collected several samples that were analyzed for engineering properties, primarily sediment bearing capabilities and for standard grain size determinations. Results indicated the sediments in the vicinity of the site were very fine sands and they were capable of supporting a load of approximately 560 P.S.F. After emplacement of Sealab II, settling measurements of the laboratory made during the 45-day period it remained on the sea floor indicated all settling occurred soon after impact with the bottom. As future manned habitants go deeper, the geologic character of the sea floor must be determined to safeguard these laboratories.

Shearer, L. W., OXYGEN CONSUMPTION AND BODY WEIGHT IN THE MARINE AMPHIPOD, Parathemisto guadichaudi (Guerin), NAVOCEANO IR 69-83, 13 Pp., Sept. 1969. 046713

Oxygen consumption was determined micro-volumetrically for specimens of Parathemisto guadichaudi (Guerin) taken in a six foot Issacs-Kidd midwater trawl several stations in the Norweigian sea and the North Atlantic Ocean during the summer of 1967.

The average weight-specific rates as determined in this study, 411.6mm^3/gram wet weight/hour at 15°C, and 367.8mm^3/gram wet weight/hour, at 20°C, are some what higher than the reported average rate of 325 mm^3/gram/hour for another marine species, Pherusa fucicola at 21.5°C, and somewhat less than the average of 553mm^3/gram/hour for the brackish water species Gammarus locusta at 21.5°C.

Based on evidence obtained from this study, it is suspected that the lethal temperature for this species lies between 21.44°C and 25°C.

Thomas, R. W., BATHYMETRIC MAGNETIC FIELD INVESTIGATION: SOUTHERN PORTION, SAN JUAN SEAMOUNT, NAVOCEANO IR 67-39, June 1967. 056704

Detailed bathymetric and total intensity magnetic field charts covering the southern portion of San Juan Seamount are presented. A comparison of data collected on AGOR Cruise #056704 and that of Shepard and Emery (1941) reveal major topographic differences. Magnetic data indicate the shoreward presence of a magmatic source. The requirement of further work in the area to delineate the topographic features and the geophysical characteristics is demonstrated.

Thomas, R. W., & Dorey, S. W., PROTECTED OCEANOGRAPHIC REVERSING THERMOMETER COMPARISON STUDY, Limology and Oceanography, Vol. 12, No. 2, Pp. 361-363, April 1967. 056704

Thorp. W. H., COMPARATIVE MEASUREMENTS OF LOW-FREQUENCY ATTENUATION IN THE DEEP OCEAN EMPLOYING SINUSOIDAL AND EXPLOSIVE SOURCES, USL Tech. Memo. No. 2211-49-67, 28 November 1967. 066611 & 076609

Comparative Measurements of Low-Frequency Attenuation in the Deep Ocean Employing Sinusoidal and Explosive Sources. This paper describes a deep-water propagation experiment involving the use of both explosive sources and towed sine wave projectors in the Sofar channel of the North Atlantic. It was conducted with the objective of narrowing the list of potential causes put forth to explain the well-documented but unexpectedly large attenuation coefficients which have been reported by determining whether the observed anomalies stem from fundamental differences in the sources employed or from mechanisms associated with the medium. The study initially considers the conformity of coefficients in the 354 to 354Hz region for the impulsive measurements in this instance with previously reported values. Thereafter results of the present regression analysis are compared with an identical treatment of simultaneous single-frequency data at 1900 and 3800Hz, and the relative agreement is discussed in terms of the statistical confidence limits of each.

Talbot, E. J. (ed.), MEANDERS IN GULF STREAM, Soc. of Am. Mil. Eng., No. 397, P. 371, The Military Engineer, Sept-Oct. 1968. 076807

Thomas, Mrs. Clare, OCEANOGRAPHERS PROBE CARIBBEAN FOR DATA, Naval Oceanographic Newsletter, Vol. VIII, No. 2, Pp. 3-5, April 1969. 046815

Tooma, S. G., & Iredale, H., OCEANOGRAPHY IN THE CHANNEL ISLANDS AREA OFF SOUTHERN CALIFORNIA SEPTEMBER AND OCTOBER 1965, NAVOCEANO TR-203, 50 Pp., June 1968. 056512

The Naval Oceanographic Office conducted an oceanographic survey in the Channel Islands area aboard USNS DAVIS (T-AGOR 5) during September and October 1965. The survey was a detailed environmental study with major emphasis on currents, sound velocity structure, and bottom composition. Physical, chemical, geological, and biological data were collected.

Seaward decreases in surface temperature and salinity depicted the influence of the cold, low salinity California Current on the survey area. The sound channel was bottom bounded due to the shallow depths, and the sound velocity axis occurred at a depth of 850 meters (2800 feet). Surface duct development was weak and usually restricted to the upper 10 meters (30 feet).

Data from repeated Nansen casts at anchor stations revealed temperature, salinity, and sound velocity to oscillate in a sinusoidal manner throughout a day. This oscillation is attributed to a combination of internal waves. tidal forces, and the earth's rotational forces.

Current data from parachute current drogues, current meters, and computed dynamics showed the San Nicolas Basin to be the center of a counterclockwise gyre. Maximum current speeds of about 25 cm/sec occurred around the basin periphery. Lesser speeds existed towards the center of the basin and with increasing depth. Current meters, planted 2 miles northeast of San Nicolas Island, indicated a clockwise rotational water movement produced by the tides.

Both bottom sediment analyses and bottom photographs showed the survey area to have the same general characteristics as have been observed in previous studies. Fine-grained, green-gray muds of high organic contents were found in depressions, and somewhat coarser materials were found on elevations.

From one plankton collection in September and several in October, a study of the abundance of various planktters suggested that the autumnal decline occurred between 23 September and the second week of October.

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Tuttell, J. J., COMPARISON OF U. S. NAVAL OCEANOGRAPHIC OFFICE TEMPERATURE AND LAYER DEPTH CHARTS WITH USNS DAVIS SURVEY DATA, NAVOCEANO IMR 0-54-63, 16 Pp., June 1963. 056301

This report evaluates U. S. Naval Oceanographic Office (NAVOCEANO)sea surface temperature and layer depth values interpolated from synoptic facsimile charts by comparison with USNS DAVIS survey data collected during the shakedown cruise of the vessel.

Treadwell, Capt. T. K., OCEANOGRAPHY NEEDS MORE PRACTICAL GOALS, Undersea Technology, Vol. 10, No. 1, Pp. 40, 41, 50 & 52, January 1969. 046806

Technical Photography Magazine, STEREO-CAMERA FOR OCEAN RESEARCH, July 1969. 046903

Thomas, R. W. & Amstutz, D. K., OCEANOGRAPHIC STATION DATA AGOR CRUISE 056510, USNS CHARLES H. DAVIS (T-AGOR 5), AUGUST 1965, NAVOCEANO IR 66-2, August 1965. 056510

Oceanographic station data summary from USNS CHARLES H. DAVIS (T-AGOR 5) Cruise No. #056510 of August 1965.

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U. S. Naval Oceanographic Office, CATALOG OF PUBLICATIONS: 1969, NAVOCEANO Pub. No. 1-P, 75 Pp.,1969. ---

This catalog was compiled so that references to these publications can be readily made by those who are interested in these fields of endeavor.

U. S. Naval Oceanographic Office, CATALOG OF INFORMAL REPORTS, 1968, NAVOCEANO Pub. No. 1-IR, 104 Pp., 1968. ---

This publication is a listing of current informal reports. These reports are used to disseminate information on subjects which do not have sufficient interest to warrant wide distribution as formal publications.

Undersea Technology, ASWEPS UNDERGOES TESTS, Vol. 5, No. 1, January 1964. 056305

U. S. Naval Photographic Center, MOVIE: CAREERS IN OCEANOGRAPHY, Project MN 10063, 1965. 066505

U. S. Naval Undersea Warfare Center, NAVAL UNDERSEA WARFARE CENTER TECHNICAL HISTORY 1968, NUWC TP 140, 238 Pp., July 1968, CONFIDENTIAL. 056413, 056603 to 056607, 056711, 056715 & 056903

This publication, which records the establishment of the Naval Undersea Warfare Center and the progress of its technical programs during Fiscal Year 1968, comprises the following chapters: (1) Summary, outlining NUWC organization, planning, management, and facilities, in addition to the technical highlights of the year; (2) Exploratory Research, including oceanography, marine geology and biology, underwater and atmospheric acoustics, guidance and control, drag reduction, research in hydrodynamics and materials; (3) Weapon Development, including the Torpedo Mk 46 and ASROC; (4) Ocean Technology, including CURV, SEA-LAB III, deep-sea optics, submersibles, and diving aids; (5) Systems Development, including experimental weapon systems, sensors and sonar systems; and (6) Facilities and Testing, including descriptions of ranges, test equipment, and simulation capabilities. (U)

U. S. Naval Civil Engineering Laboratory, OCEANOGRAPHIC DATA REPORT - NCEL CRUISE A-711-1, 11-17 NOVEMBER 1967, NCEL, December 1967. 056721

This data presented in this report was collected aboard the U. S. NAVAL SHIP, CHARLES H. DAVIS(T-AGOR 5) of the U. S. Naval Oceanographic Office by personnel of the U. S. Naval Civil Engineering Laboratory during Cruise A-711-1 extending from 12 to 17 November 1967 in the vicinity of the San Juan Seamount approximately 130 miles off the Southern California Coast.

U. S. Naval Oceanographic Office, NOTICE TO MARINERS, NAVOCEANO, No. 36/1968, Pp. 27, 7 September 1968. 066801 & 076804

U. S. Naval Oceanographic Office, THE WATER PLANET - 1969, USGPO, 49 Pp., 1969. 066704 & 076602

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U. S. Naval Oceanographic Office, OCEANOGRAPHY - ANNUAL REPORT OF THE COMMANDER, NAVOCEANO, started with FY 62. ---

U. S. Naval Oceanographic Office, OCEANOGRAPHIC SURVEYS, FISCAL YEAR 1966, OCEANOGRAPHIC SURVEYS DEPARTMENT, NAVOCEANO, 19 Pp., January 1967. ---

U. S. Naval Oceanographic Office, OCEANOGRAPHIC SURVEYS, ANNUAL FISCAL YEAR REPORT, OCEANOGRAPHIC SURVEYS DEPARTMENT, NAVOCEANO SP-122, 33 Pp., June 1968. ---

This report describes and locates all the unclassified oceanographic surveys done by or contracted for the U. S. Naval Oceanographic Office during the period 1 July 1966 thru 30 June 1967.

U. S. Naval Oceanographic Office, U. S. NAVAL OCEANOGRAPHIC OFFICE GEOMAGNETIC SURVEYS 1953 - 1965, Magnetics Division, NAVOCEANO Brochure No. 3, 80 Pp., 1966. 056413 046311 & 046422

Since 1953, the U. S. Naval Oceanographic Office has conducted geomagnetic surveys over various ocean areas of the world. Information on survey locations, dates, navigational control, track patterns, data format, and availability of geomagnetic technical reports, charts, and other publications is presented.

U. S. Naval Oceanographic Office, OCEANOGRAPHIC SURVEYS FISCAL YEAR 68, NAVOCEANO SP-125, 54 Pp., June 1969. ---

This report describes and locates all the unclassified oceanographic surveys done by or contracted for the U. S. Naval Oceanographic Office during the period 1 July 1967 thru 30 June 1968.

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Vent, R. J., & Batzler, W. E., VOLUME SCATTERING MEASUREMENTS AT 12 KC/S IN THE WESTERN PACIFIC, Acoustical Society of America, Vol. 41, Pp. 154-157, January 1967. ---

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Warden, J., CALCOMP PLOTTER MANUAL, NAVOCEANO IR Misc. 1-65, May 1965. 056416

Whitney, J. A., FASOR I SHALLOW WATER ACOUSTICS, NEL Report #1388, 6 July 1966, CONFIDENTIAL. 056413

Whitney, J. A., & Bucker, H. P., COMPARISONS OF SHALLOW WATER PROPAGATION RESULTS AND NORMAL MODE INTENSITY CALCULATIONS, ONR Symposium Report ACR-115, Pp. 83-88, 30 November - 2 December 1965, CONFIDENTIAL. ---

Williams, R. G., REPORT ON CRUISE OF USNS SANDS - BLOCK ISLAND SOUND - 22 JULY TO 10 AUGUST 1967, USL Tech. Memo. 2213-184-67, 15 November 1967. 066709

Waters, RADM O. D., Jr., THE OCEAN SCIENCES AND THE NAVY, U. S. Naval Institute, Naval Review, Pp. 236-251, 1969. ---

Wooster, W. S., THE OCEAN AND MAN, Scientific American, Vol. 221, No. 3, Pp. 218-234, September 1969. 056706

Williams, R. G., Azarovitz, T., and Lamoureaux, J. E., SEASONAL FLUCTUATIONS OF TEMPERATURE AND SOUND VELOCITY IN BLOCK ISLAND SOUND, USN/USL Report No. 927, (in prep.). 066709

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Yee, G. S., SONAR DATA REDUCTION AND ANALYSIS IN REAL TIME AT SEA, NEL Report #1363, 11 March 1966, CONFIDENTIAL. ---

Yee, G. S., FASOR I PROPAGATION LOSSES AND ECHO RANGING RESULTS, NEL Report #1370, 19 April 1966, CONFIDENTIAL. 056413

TABLE I

LIST OF NATIONAL OCEANOGRAPHIC DATA
CENTER (NODC) REFERENCE NUMBERS
IDENTIFYING DATA OBTAINED ON T-AGOR SHIPS

STATION DATA:

Ref. No.	Ship Name	Survey Dates	No. of Sta.
31185	GILLISS	5-25 Feb. 1964	65
31192	GILLISS	17 Mar. - 9 Apr. 1964	11
31203	DAVIS	21 Apr. - 1 May 1964	53
31217	GILLISS	20 Nov. - 12 Dec. 1964	29
31239	GILLISS	17 Mar. - 18 Nov. 1964	75
31305	DAVIS	30 Sep. - 15 Oct. 1964	24
31361	GILLISS	28 Sep. - 2 Oct. 1964	7
31408	GILLISS	13 Mar. - 2 Apr. 1965	1
31425	SANDS	1-24 Apr. 1965	8
31486	GILLISS	18-29 Jan. 1965	49
31489	DAVIS	5-24 Apr. 1965	60
31490	DAVIS	1-19 Mar. 1965	23
31498	GILLISS	30 June - 30 July 1965	77
31537	SANDS	15 June - 3 July 1965	60
31589	DAVIS	13 May - 4 Aug. 1965	12
31594	GILLISS	15 Sep. - 6 Oct. 1965	9
31597	SANDS	11 July - 3 Aug. 1965	4
31614	LYNCH	10-17 Nov. 1965	3
31622	GILLISS	20 Oct. - 2 Nov. 1965	5
31692	DAVIS	1 Feb. - 26 July 1966	25
31708	DAVIS	5-27 Aug. 1965	32
31717	LYNCH	2-8 Jan. 1966	2
31735	SANDS	11 July - 1 Aug. 1966	17
31745	DAVIS	6 June - 11 July 1966	24
31759	GILLISS	28 June - 1 Aug. 1966	56
31763	LYNCH	1 Sep. - 20 Oct. 1966	2
31778	LYNCH	12 Mar. - 1 Apr. 1966	2
31791	LYNCH	8 Apr. - 11 May 1966	2
31808	GILLISS	24 Oct. - 18 Nov. 1964	4
31812	SANDS	1-24 Apr. 1965	8
31832	GILLISS	10 Nov. - 14 Dec. 1966	8
31854	DAVIS	23-27 Feb. 1967	2
31874	DAVIS	9 Mar. - 1 Apr. 1967	16
31891	DAVIS	5 Nov. 1963 - 20 Dec. 66	54

STATION DATA (cont.):

Ref. No.	Ship Name	Survey Dates	No. of Sta.
31903	DAVIS	18-28 Jan. 1967	4
31904	SANDS	9-28 Jan. 1967	3
31935	DAVIS	14 Sep. - 15 Oct. 1965	50
31949	GILLISS	16 Jan. - 5 Feb. 1966	3
31950	SANDS	20 Jan. - 6 Feb. 1966	3
31988	SANDS	19 Mar. - 25 Apr. 1966	15
311060	SANDS	15 May - 7 June 1967	8
311088	DAVIS	26 June - 16 July 1967	12
311122	GILLISS	12 June - 24 July 1967	37
311136	LYNCH	24 Aug. - 7 Sep. 1967	10
311137	SANDS	18 Sep. - 13 Oct. 1967	16
311188	GILLISS	3-26 Jan. 1968	8
311190	LYNCH	10-25 Jan. 1968	9
311256	GILLISS	11-21 June 1968	2
311257	LYNCH	19 July - 19 Aug. 1968	25
311258	LYNCH	14 Mar. - 5 Apr. 1968	8
311352	GILLISS	10-23 Dec. 1968	4
311476	LYNCH	24 Sep. - 11 Oct. 1969	3
311497	DAVIS	16 Sep. - 9 Oct. 1968	88
311505	DE STEIGUER	2-6 June 1969	22
311509	DAVIS	1-24 Oct. 1969	11
311516	DAVIS	11 Feb. - 31 Aug. 1969	25
311568	DE STEIGUER	26 Oct. - 13 Nov. 1969	10

BATHYTHERMOGRAPH (BT) DATA:

Ref. No.	Ship Name	Survey Dates	No. of Sta.
05985	GILLISS	5-25 Feb. 1964	65
06098	GILLISS	8-14 June 1964	339
06307	GILLISS	3-8 Oct. 1964	10
06309	GILLISS	24 Oct. - 18 Nov. 1964	7
06323	GILLISS	29 July - 22 Aug. 1964	188
06325	GILLISS	17 Mar. - 9 Apr. 1964	37
06326	GILLISS	1-5 June 1964	16
06328	GILLISS	26 Apr. - 14 May 1964	96
06343	GILLISS	20 Nov. - 12 Dec. 1964	629
06422	DAVIS	5-24 Apr. 1965	115

BATHYTHERMOGRAPH (BT) DATA (cont.)

Ref. No.	Ship Name	Survey Dates	No. of Obs.
06450	SANDS	11 July - 3 Aug. 1965	142
06460	GILLISS	30 June - 30 July 1965	463
06462	SANDS	12 June - 3 July 1965	120
06484	GILLISS	15 Sep. - 6 Oct. 1965	27
06506	DAVIS	14 Sep. - 15 Oct. 1965	24
06509	GILLISS	30 July - 14 Sep. 1965	67
06593	GILLISS	20 Oct. - 2 Nov. 1965	20
06594	DAVIS	5-27 Aug. 1965	100
06806	GILLISS	16 Jan. - 5 Feb. 1966	294
06807	SANDS	20 Jan. - 6 Feb. 1966	206
06827	GILLISS	15 Feb. - 15 Mar. 1966	211
06829	GILLISS	19 Mar. - 19 Apr. 1966	131
06843	SANDS	14 Feb. - 14 Mar. 1966	428
06844	SANDS	21 Nov. - 11 Dec. 1965	
06845	SANDS	19 Mar. - 25 Apr. 1966	
06846	GILLISS	25-30 Apr. 1966	12
06847	LYNCH	12 Mar. - 1 Apr. 1966	
06855	LYNCH	8 Apr. - 11 May 1966	171
06859	LYNCH	19-26 May 1966	10
06860	SANDS	29 Apr. - 7 June 1966	
06874	LYNCH	13 June - 8 July 1966	
06875	GILLISS	5 May - 23 June 1966	200
06880	GILLISS	28 June - 1 Aug. 1966	794
06882	DAVIS	14-26 July 1966	
06886	DAVIS	30 July - 13 Aug. 1966	368
06898	LYNCH	1 Sep. - 20 Oct. 1966	92
06899	SANDS	2 Sep. - 20 Oct. 1966	115
08005	GILLISS	17 Oct. - 2 Nov. 1966	13
08159	SANDS	5 July - 1 Aug. 1966	221
08160	GILLISS	10 Nov. - 14 Dec. 1966	423
08329	SANDS	28 Oct. - 13 Dec. 1966	8
08375	LYNCH	13 June 1966 - 28 Jan. 1967	12
08394	SANDS	9-28 Jan. 1967	62
08395	GILLISS	4 Jan. - 6 Feb. 1967	246
08589	LYNCH	17-26 Feb. 1967	8
08590	SANDS	29 Apr. - 7 June 1966	10
08607	DAVIS	9-16 Feb. 1967	35
08698	SANDS	22 Mar. - 8 Apr. 1967	29
08841	LYNCH	12-30 May 1967	7
08859	SANDS	15 May - 7 June 1967	110

BATHYTHERMOGRAPH (BT) DATA (cont.):

Ref. No.	Ship Name	Survey Dates	No. of Obs.
08901	SANDS	15 May - 7 June 1967	
08929	LYNCH	16-27 June 1967	4
14597	DAVIS	4 May - 15 Sep. 1964	542
14854	DAVIS	14-26 July 1966	
21079	GILLISS	12 June - 24 July 1967	133
21083	LYNCH	1-8 July 1967	
21209	LYNCH	24 Aug. - 7 Sep. 1967	53
21296	GILLISS	18-26 May 1967	3
21353	DAVIS	15 Oct. - 17 Nov. 1967	24
21455	DAVIS	4 Apr. - 31 May 1967	51
21469	SANDS	5-17 July 1967	25
21501	LYNCH	18 Sep. - 8 Oct. 1967	98
21539	GILLISS	3 Aug. - 18 Sep. 1967	163
21627	GILLISS	20 Aug. - 8 Sep. 1966	506
21635	GILLISS	8-27 Sep. 1966	203
21645	GILLISS	6-21 Dec. 1967	19
21650	DAVIS	11-16 Dec. 1967	8
21737	SANDS	19 Oct. - 8 Nov. 1967	40
21738	LYNCH	10-25 Jan. 1968	56
21781	SANDS	4-29 Jan. 1968	69
21841	GILLISS	12-22 Feb. 1968	11
21913	DAVIS	9 Jan. - 5 Feb. 1968	11
21916	DAVIS	14 Feb. - 14 Mar. 1968	20
22029	DAVIS	26-30 June 1967	16
22030	DAVIS	14 Feb. - 14 Mar. 1968	13
22082	LYNCH	14 Mar. - 5 Apr. 1968	8
22301	GILLISS	3-26 Jan. 1968	31
22451	DAVIS	27 Mar. - 16 June 1968	
22526	GILLISS	23 Feb. - 24 Mar. 1967	45
22533	GILLISS	3-6 July 1968	92
22534	GILLISS	3-6 July 1968	20
22604	GILLISS	9-14 Sep. 1968	12
22605	LYNCH	8-15 July 1968	2
22624	GILLISS	11-28 Oct. 1968	10
22628	GILLISS	22 Aug. - 6 Sep. 1968	6
22640	GILLISS	16 Oct. - 12 Nov. 1967	322
22646	SANDS	1 July - 26 Nov. 1968	152
22648	LYNCH	25 Nov. - 4 Dec. 1968	6
22678	GILLISS	2-11 Jan. 1969	47

BATHYTHERMOGRAPH (BT) DATA (cont.):

Ref. No.	Ship Name	Survey Dates	No. of Obs.
22679	GILLISS	13 Jan. - 22 Feb 1969	76
22700	LYNCH	20 Jan. - 22 Feb. 1969	100
22703	GILLISS	13 Jan - 22 Feb. 1969	
22704	GILLISS	23 Feb. - 4 Mar. 1969	48
22705	LYNCH	5-21 Mar. 1969	2
22711	GILLISS	5-20 Mar. 1969	15
22714	GILLISS	27 Mar. - 4 Apr. 1969	14
22800	LYNCH	31 May - 25 June 1969	8
22802	SANDS	June - July 1969	37
22840	LYNCH	22 Aug. - 12 Sep. 1969	15

SOUND VELOCITY DATA:

Ref. No.	Ship Name	Survey Dates	No. of Sta.
31V021	DAVIS	30 July - 13 Aug. 1966	86
31V024	DAVIS	9 Mar. - 1 Apr. 1967	55
31V027	SANDS	19 July - 14 Aug. 1967	300
31V047	SANDS	16-27 June 1967	1
31V048	GILLISS	8-14 Mar. 1964	3
31V049	GILLISS	8-21 Nov. 1968	1
31V050	SANDS	5-11 Feb. 1968	2
31V051	SANDS	5-17 July 1967	5
31V052	LYNCH	15-18 July 1968	1
31V053	LYNCH	10-25 Jan. 1968	28
31V054	SANDS	19 Oct. - 8 Nov. 1967	5
31V061	DAVIS	9-21 Nov. 1964	2
31V062	DAVIS	18-28 Jan. 1967	2
31V063	SANDS	13 Aug. - 24 Sep. 1965	6
31V065	DAVIS	10 Oct. - 10 Dec. 1966	35
31V067	DAVIS	26 Oct. - 7 Nov. 1964	20
31V068	GILLISS	13 Mar. - 2 Apr. 1965	2
31V069	DAVIS	14 Sep. - 15 Oct. 1965	40
31V102	DE STEIGUER	9-18 May 1968	51
	DE STEIGUER	2-6 June 1969	19
	BARTLETT	20-28 Nov. 1969	8
31V143	BARTLETT	9-12 Jan. 1970	4

ACCESSED BATHYTHERMOGRAPH DATA:

Ref. No.	Ship Name	Survey Dates	No. of Obs.
Acc # 64-1015	GILLISS	18 Jan. - 3 Mar. 1965	BT's
Acc # 64-1018	GILLISS	27 Aug. - 4 Sep. 1964	144 BT's
Acc # 65-1011	GILLISS	3-8 Mar. 1965	4 BT's
Acc # 65-1018	GILLISS	18 Jan. - 3 Mar. 1965	BT's
Acc # 68-0059	GILLISS	13-30 Mar. 1968	9 XBT's
Acc # 68-0105	LYNCH	11-27 Oct. 1968	9 XBT's
Acc # 68-0107	GILLISS	11-28 Oct. 1968	15 XBT's
Acc # 68-0203	LYNCH	8-20 Nov. 1968	4 XBT's
Acc # 68-0226	GILLISS	16 Oct. - 12 Nov. 1967	663 XBT's
Acc # 69-0050	GILLISS	29 Nov. - 11 Dec. 1968	7 XBT's
Acc # 69-0190	LYNCH	11-18 Jan. 1969	21 XBT's
Acc # 69-0594	LYNCH	27 June - 7 July 1969	23 XBT's
	GILLISS	3-6 July 1968	20 XBT's
	LYNCH	13 July - 16 Aug. 1969	9 XBT's
	GILLISS	10-28 Aug. 1969	15 XBT's
	LYNCH	17-28 Oct. 1969	20 XBT's
	LYNCH	8-19 Nov. 1969	7 XBT's

GEOLOGY DATA:

Ref. No.	Ship Name	Survey Dates	No. of Samples
Acc # 121367-1	DAVIS	25-30 Aug. 1967	88
Acc # 022168-1	SANDS	5-11 Feb. 1968	6
Acc # 69-0056	SANDS	15 May - 7 June 1967	27
	DAVIS	9-18 May 1968	2

MISCELLANEOUS DATA:

Ref. No.	Ship Name	Survey Dates	No. of Records
31112	GILLISS	10-23 Dec. 1968	2 Current Sta. 60 mi. Seismic

TABLE II

LIST OF DEPARTMENT OF DEFENSE
BATHYMETRY LIBRARY DOCUMENT NUMBERS
IDENTIFYING DATA OBTAINED ON T-AGOR SHIPS

Doc. No.	Ship Name	Survey Dates	Miles of Obs.
59164	DAVIS	4 May - 15 Sep. 1964	16,600
34065	DAVIS		14,000
47365	GILLISS		3,700
49865	SANDS	13 Aug - 24 Sep. 1965	2,400
71065	GILLISS	30 July - 14 Sep. 1965	315
04466	GILLISS	30 July - 14 Sep. 1965	11,180
34266	SANDS	13 Aug. - 24 Sep. 1965	1,310
36266	DAVIS		16,300
58366	SANDS	19 Mar. - 25 Apr. 1966	430
11667	LYNCH		10
17067	GILLISS	4 Jan - 6 Feb. 1967	2,200
32967	DAVIS	10 Oct. - 10 Dec. 1966	45
39867	GILLISS	12 June - 24 July 1967	1,700
66267	DAVIS	6 June - 13 Aug. 1966	9,600
72967	SANDS		25
09368	DAVIS	11-16 Dec. 1967	52
13068	GILLISS	13-30 Mar. 1968	780
34768	GILLISS	12-25 Apr. 1963	40
36268	LYNCH	14 Mar. - 5 Apr. 1968	20
37168	LYNCH	18 Sep. - 8 Oct. 1967	1,170
37368	GILLISS	24 Oct. - 18 Nov. 1964	600
39668	LYNCH	16-22 Dec. 1965	150
40968	SANDS	9-28 Jan. 1967	600
41668	SANDS	4-29 Jan. 1968	2,220
51468	SANDS	19 Oct. - 8 Nov. 1967	5,000
88468	DAVIS	9-16 Feb. 1967	132
03569	DAVIS	23-27 Feb. 1967	300
13369	LYNCH	11-18 Jan. 1969	200
31469	GILLISS	13 Jan. - 4 Mar 1969	2,522
54769	GILLISS	10-28 Aug. 1969	300
	DAVIS	26-30 June 1967	420
	DAVIS	5-9 July 1967	70
	LYNCH	10-25 Jan. 1968	100

TABLE III

LIST OF DEPARTMENT OF DEFENSE
MAGNETICS LIBRARY DOCUMENT NUMBERS
IDENTIFYING DATA OBTAINED ON T-AGOR SHIPS

Doc. No.	Ship Name	Survey Dates	Miles of Obs.
	GILLISS	24 Oct. - 18 Nov. 1964	700
	GILLISS	20 Nov. - 12 Dec. 1964	3,060
	DAVIS	18-28 Jan. 1967	650
	DAVIS	9-16 Feb. 1967	100
	DAVIS	23-27 Feb. 1967	650
	DAVIS	26-30 June 1967	420
	DAVIS	5-9 July 1967	70
	DAVIS	11-16 Dec. 1967	150

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13. ABSTRACT

This report has compiled the titles of the reports, articles and papers about data collected aboard the Navy Pool (T-AGOR) ships. Data which have been inserted into the National Oceanographic Data Center, the Department of Defense Bathymetry Library, and the Department of Defense Magnetics Library have also been listed.

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