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December 26, 2001 OPG: #3292

Jeffrey Simmen Technical Representative Office of Naval Research Ballston Centre Tower One 800 North Quincy Street Arlington, VA 22217-5660

Re: Award #N00014-01-M-0074 Final Report

Mr. Simmen:

We enclose two (2) copies of the final report for the above referenced award.

If you have any questions, please feel free to contact me at (212) 854-6851

Thank you for your support.

Sincerely, Sincerely, Minanda Helly

Miranda Helly Assistant Projects Officer

Enclosure

cc: Office of Naval Research Regional Office Boston Office of Naval Research ONR 00CC Defense Technical Information Center Naval Research Laboratory



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FINAL REPORT - Grant N00014-01-M-0074

XBP Systems

R. D. Stoll Professor Emeritus and Special Research Scientist Lamon-Doherty Earth Observatory of Columbia University

December 1, 2001

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Abstract:

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XBP is an expendable sea bed penetrometer that may be launched from a moving ship. The deceleration of the probe is measured as it impacts the sea floor and the resulting signal is interpreted to obtain certain geoacoustic and geotechnical properties of the bottom. The system was developed by Lamont-Doherty Earth Observatory and NATO, Saclant Undersea Research Center, LaSpezia, Italy. This Grant covers the cost of supplying the Naval Oceanographic Office, Stennis Space Center, with eight (8) XBP systems.

Work Completed under the Grant:

Eight (8) XBP systems were supplied to the Naval Oceanographic Office, Stennis Space Center. Each system was composed of the following components:

IOTech Daqbook Model 216 PC-Based Data Acquisition System

Custom Electronics Interface Card to drive and receive data from the XBP

User-friendly software (DOS version) to receive and interpret data from the XBP

User's Manual for XBP System

The development and use of the XBP system is completely described in the User's Manual and in an article in Sea Technology 1 .

Reference:

1. Stoll, R. D. and T. Akal (1999) "XBP - Tool for Rapid Assessment of Seabed Sediment Properties," Sea Technology, 40, No. 2, 47-51.