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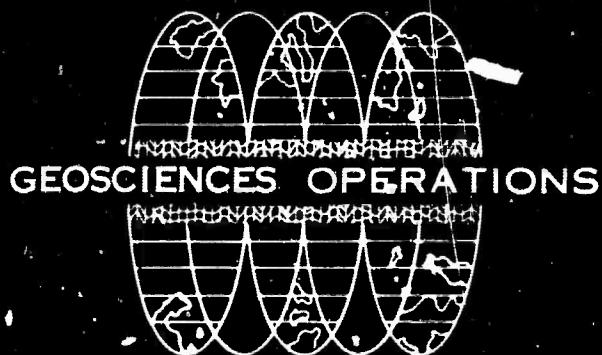
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TEXAS INSTRUMENTS
INCORPORATED
SCIENCE SERVICES DIVISION

6010 LEMMON AVENUE
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MULTIPLE ARRAY PROCESSOR

QUARTERLY REPORT NO. 3

Covering the Period

1 April 1965 through 30 June 1965

by

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FL7-5411, Ext 441

TEXAS INSTRUMENTS INCORPORATED

P. O. Box 5621
Dallas, Texas 75222

Contract AF 33(657)-13904

Beginning 1 October 1964

Terminating 31 July 1965

Total Estimated Cost

\$305,605.00

Sponsored by

ADVANCED RESEARCH PROJECTS AGENCY

Nuclear Test Detection Office

Prepared for

AIR FORCE TECHNICAL APPLICATIONS CENTER

Washington, D. C.

ARPA Order No. 104

Project Code No. 8100

July 25, 1965

MULTIPLE ARRAY PROCESSOR

A. INTRODUCTION

The two previous quarterly reports have included a rather extensive introduction into the requirements and concepts of the contract.

B. DEVELOPMENT AND ANALYSIS

A decision was made, in consultation with the contract monitor, to install the 19-channel MCF at UBSO instead of at TFSO due to both the high velocity character of the ambient noise field and the shortage of suitable recorded noise data.

This system will be operated using various combinations of buried seismometers. One MCF output will extract infinite velocity signals by operating on 10 elements of the shallow buried array.

A second MCF output will extract signals by operating on six deeply buried seismometers. A third MCF will operate on six deeply buried seismometers and 10 shallow buried seismometers. The remaining four outputs will separate up-traveling from down-traveling waves by operating on deeply buried seismometers, three at a time.

All of these MCF systems have been developed and are being evaluated.

C. ENGINEERING

Construction of both processors has been completed, and checkout is in progress.