

GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF CONTRACT ADMINISTRATION
SPONSORED PROJECT INITIATION

Date: 6/16/77

Project Title: *Microearthquake Instrumentation & Analysis at Carter's Dam Georgia*

Project No: *G-35-629*

Project Director: *Dr. L. T. Long*

Sponsor: *U. S. Army Corps of Engineers; Mobile District; Mobile, Alabama 36628*

Agreement Period: From 4/8/77 Until 4/8/78 (Contract Term)

Type Agreement: *Contract No. DACW01-77-C-0069 (Fixed Price)*

Amount: *\$4,271.00*

Reports Required: *Annual Summary Report*

Sponsor Contact Person (s):

Technical Matters

Contractual Matters

(thru OCA)

*U. S. Army Corps of Engineers
Mobile District
P.O. Box 2238
Mobile, AL 36628*

Defense Priority Rating: *None*

Assigned to: *School of Geophysical Science* (School/Laboratory)

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Project Code (GTRI)
Other _____

GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF CONTRACT ADMINISTRATION
SPONSORED PROJECT TERMINATION

10
25/6
10
0/11

Date: May 17, 1978

Project Title: Microearthquake Instrumentation & Analysis at Carter's
Dam, Georgia
Project No: G-35-629
Project Director: Dr. L. T. Long
Sponsor: U. S. Army Corps of Engineers; Mobile District; Mobile, Alabama 36628

Effective Termination Date: 4/8/78 (Contract Expiration)

Clearance of Accounting Charges: N/A - Fixed Price

Grant/Contract Closeout Actions Remaining:

TERMINATED

- Final Invoice ~~and Closing Documents~~ (Fixed Price Balance)
- Final Fiscal Report
- Final Report of Inventions
- Govt. Property Inventory & Related Certificate
- Classified Material Certificate
- Other _____

NOTE: Follow-on contract under negotiation.

Assigned to: Geophysical Sciences (School/Laboratory)

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G-35-629

GEORGIA INSTITUTE OF TECHNOLOGY
SCHOOL OF GEOPHYSICAL SCIENCES

Atlanta, Georgia 30332
(404) 894-2857

March 31, 1978

U.S. Army Corps of Engineers
Mobile District
P.O. Box 2288
Mobile, Alabama 36628

Subject: Annual Summary Report covering period of 1 January 1977 to
1 April 1978

Reference: Contract DACW01-77-C-0069 "Microearthquake instrumentation
and analysis at Carters Dam, Ga."

Dear Sirs:

Microearthquake monitoring for the period of 1 January 1977 to 23 February 1978 was achieved with the existing ink-writing helical drum recorder at the Carters Dam Resource Managers Office. Records were changed by Corps of Engineers personnel during regular work days. Because records are not changed during weekends or during vacation days, the maximum coverage is about 75% of the total available time. During the period from 1 January 1977 to 19 March 1978 the noise-free seismic coverage amounted to 34 percent of the total available time or about half of the maximum possible coverage. The percent coverage is plotted monthly on the attached figure.

During the recording period over 150 quarry blasts were recorded in the 16 to 250 km distance range from Carters Dam. The Carters Dam station also recorded numerous teleseisms. Arrival times for these events have been cataloged and are available if desired.


No earthquakes of natural origin have been detected within 10 km of the Carters Dam seismic station.

On 23 February 1978 seismic telemetry equipment consisting of a Mark products L4-C geophone, Georgia Tech designed amplifier and voltage controlled oscillator were installed near the old seismometer location. The old seismic system has been removed. On 7 March 1978 the radio communication link to Georgia Tech was complete and recording at Georgia Tech was initiated. Since 7 March 1978, nearly 100% coverage has been obtained. As in the old system, the recorded data are passed through a low-pass filter which is 6 db down at 15 Hertz. This filter attenuates high-frequency noise in the 30 to 60 Hertz range.

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U.S. Army Corps of Engineers
March 31, 1978
Page Two

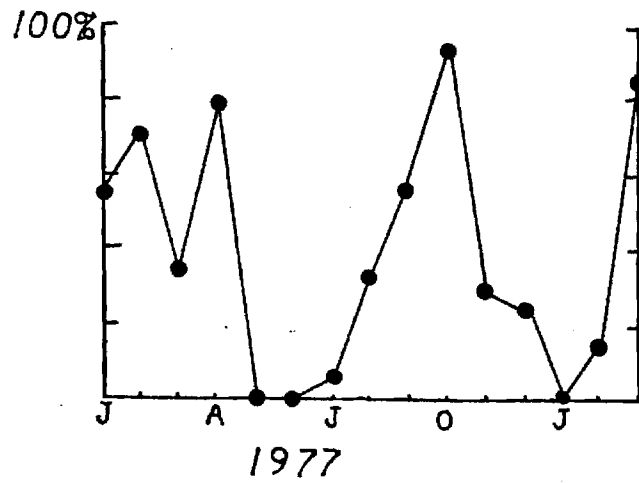
Since initiating telemetry recording, sequences of very impulsive disturbances were detected. These have decreased in activity level with time and they are currently believed to be related to the installation of the new system and settlement of the ground near the geophone. These signals were observed with the old system and were noted in previous reports. They do not have the consistent character usually associated with small microearthquakes.

Respectfully submitted. 

Leland Timothy Long
Associate professor of Geophysics

Attachment

LTL/gh



PERCENT COVERAGE AT CARTERS DAM