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December 1, 1966

Grant No.: AF-AFOSR-1140-66

Project Title: Seismic Field Operations and Analysis of 1966 Lake Superior Experiment

ARPA Order No.: 292 AMND, 32

ARPA Project Code No.: 8652

Date Grant Starts: 10 March 1966

Date Grant Terminates: 9 March 1967

Amount of Grant: \$87,000

Project Scientist's Name and Telephone No.: Dr. John C. Reed
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ARCTIC INSTITUTE OF NORTH AMERICA

GRANT NO. AF-AFOSR-1140-66

FINAL REPORT - December 1, 1966

SEISMIC FIELD OPERATIONS AND ANALYSIS
OF 1966 LAKE SUPERIOR EXPERIMENT

This will constitute the final report on the above project "Seismic field operations and analysis of 1966 Lake Superior Experiment."

Four Canadian universities participated in the experiment and recorded the explosions at the following approximate locations:

- | | |
|---|---|
| University of Alberta | - Yorktown, Saskatchewan, through Edmonton to Whitecourt in western Alberta (1100 to 2000 kilometer range) also along a 400 kilometer arc from Cold Lake to Bow Island, Alberta. Linked up with University of Manitoba profile. |
| University of Manitoba | - Southeastern Manitoba and southwestern Ontario. |
| University of Toronto and University of Western Ontario | - Southwest of Lake Nipigon to Lake Nyanilini, northwest of Fort Churchill and east of Lake Superior. |

Preliminary scientific reports from all the Canadian participants have been submitted to the Crustal Studies Branch, U.S. Geological Survey, on various dates between November 4 and 30. These reports included, but were not restricted to the following data:

- (a) Co-ordinates of recording units for each shot.
- (b) First arrival times
- (c) Amplitudes of first arrivals
- (d) Reproductions of first arrivals
- (e) Description of recording instruments and calibration information.

An informal meeting of the participants and a number of people from the Canadian Government's Seismology Division was held in Ottawa on October 27 to discuss and coordinate various aspects of their respective programmes. Two university representatives also attended the Project Early Rise data analysis meeting at Menlo Park, California, sponsored by the U.S. Geological Survey on November 1.

Detailed analysis of the data is proceeding in accordance with the original proposal to the U.S. Air Force.

K de la Barre

Kenneth de la Barre
Executive Officer
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KDLB:lb