

Department of Mines and Resources
Surveys and Engineering Branch

....

Dominion Observatory

....

SEISMIC RESEARCH PROGRAM
ROCK BURST PROBLEM
LAKE SHORE MINES

Intensive Seismic Program
Report No. 4
July, 1945

66

Ernest A. Hodgson

RESERVE/RÉSERVÉ

NOT TO BE TAKEN FROM THE ROOM
POUR LA CONSULTATION SUR PLACE

O'TTAWA

TN
317
R4
4
ocgre

This document was produced
by scanning the original publication.

Ce document est le produit d'une
numérisation par balayage
de la publication originale.

Department of Mines and Resources
Surveys and Engineering Branch

....

Dominion Observatory

....

SEISMIC RESEARCH PROGRAM
ROCK BURST PROBLEM
LAKE SHORE MINES

Intensive Seismic Program
Report No. 4
July, 1945

00

Ernest A. Hodgson

•

OTTAWA

INTENSIVE SEISMIC PROGRAM
LAKE SHORE MINES, KIRKLAND LAKE

4702E - 4802E

Nos. 86 - 115 : July 1 - July 31, 1945

The program, as described in the first report of this special series, has been continued throughout July. Again, there has been nothing of outstanding interest to report. A severe electric storm on July 24 is of interest in that the static made a characteristic record on Pl. 110. During the period of afternoon recording on July 24 there was a violent wind storm which unroofed a house in Kirkland Lake and up-rooted many trees.

N O T E S

.....

1. The main fuse at 4700 station blew about 5:47 a.m. July 2. There was no recording subsequent to that until F.J.H. arrived at 6 a.m. July 3.
2. There is no Pl. 88. The number was inadvertently omitted.
3. There was increased activity in the listening program in the early morning of July 4 but very little of it shows on Pl. 89. The drilling (in some other mine) shows up only on some geophones though it can be heard over them all. The blasting round was fired about 6:10 (see just to right of the number 65917).
4. The extra-wide black interspaces on plates 90-92 are due to the cull rolls of overwidth Teledeltos paper which had to be trimmed for use while waiting for the delayed shipment reported in June.
5. There was trouble with the switch on 4800 on July 4-5 so only H94 recorded. The switch was repaired by F.J.H. on July 5 (see Pl. 90).
6. There was a marked increase in recorded activity

N O T E S (Continued)
.....

in the P.M. records for July 5 (see Pl. 91). This was due, no doubt, to the heavy blast in 4802E3-1. By the A.M. listening period the counts were up but the snaps were too faint to register. There was no burst. The activity seemed to have its origin in the hanging wall of 4702E2 to 4702E3. The activity continued over the week end till July 8 (see Pls. 92-93).

7. A small strain burst, which was not located, occurred about 5:25 a.m. July 9 (see Pl. 94 just to the right of the number 66415).
8. The power was off for 3h52^m prior to the recording on Pl. 97 (July 11-12). Note the blasting and mining activity registered during shift hours. The time switches were corrected at 5:45 a.m. July 12.
9. Activity again growing but not pronounced on Pl. 98. Seems to originate in the South wall in 4702E2. Geo-phone 94 becoming weak.
10. The trouble showing on Pl. 100 is due to the continued oscillations of a microphonic tube. It was replaced. The new tube shows trouble for awhile on Pl. 103.
11. Note the very quiet record on Pl. 104 (July 18-19).
12. E.A.H. began listening program again on returning to Kirkland Lake. See Pl. 108, July 23.
13. Numerous rock runs in the stope 4701E3 in the early morning July 23. See Pl. 109.
14. On July 24 there was a severe thunder storm and destructive wind. Note the static picked up underground on Pl. 110. The power was off about 28^m due to storm.
15. The recording set 3AB was calibrated by F.J.H. on July 27.

N O T E S (Continued)

.....9

16. On July 28 began practice of making a complete set of standard tapper tests on an excerpted piece of the record. The set is kept at the recorder and used to check tapper tests each day to detect decaying geophones. The set of tests is renewed every week or two.

Dominion Observatory,
Ottawa, Canada,
September 6, 1945.

E. A. H.

