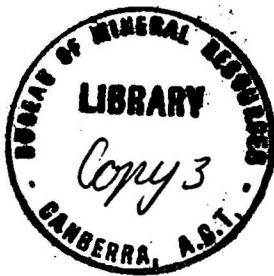


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COMMONWEALTH OF AUSTRALIA

DEPARTMENT OF NATIONAL DEVELOPMENT

BUREAU OF MINERAL RESOURCES,
GEOLOGY AND GEOPHYSICS.



RECORDS

1956, No.81

REPORT ON VIBRATION TEST AT MERRI CREEK QUARRY,
NORTHCOTE, VICTORIA.

by

E.J. POLAK

In response to an application from the Victorian Mines Department, measurements of ground movement were made at a residence near Merri Creek Quarry, Northcote, during blasting operations at the quarry. The purpose of the investigation was to determine whether certain damage sustained by the residence could be caused by the blasting.

A Leet 3-component vibrograph was set up on a concrete path (flagstones) in the front garden of the house at 18, Winneford Street, Northcote, about 300 yards from the quarry face. Attached is a copy of the record taken with the vibrograph during a blast at the quarry on 2nd December, 1955.

The vibrograph gives a record of three mutually perpendicular components of the ground movement with a magnification of 50. The scale of the record is such that 0.02 inches of ground movement is represented by a movement of one inch on the record. The record shows a vibration with a frequency of about 13 cycles per second and a ground amplitude (resultant of the three components) of 0.001 inches.

Comparison of these results with data given in U.S. Bureau of Mines Bulletin 442 regarding the possibility of damage being caused by ground vibrations of such amplitude and frequency, indicates that this shot, which was of similar size to that normally used, should not cause damage to this residence or any residence built to normal specifications.

LONGITUDINAL
VERTICAL
TRANSVERSE

MERRI CREEK QUARRY
NORTHCOTE

Record of Vibration taken on 2/12/55 with
LEET 3-Component Vibrograph at
Nº 18 Winneford Street, Northcote
(300 yards from the shot approx.)