

COMMONWEALTH OF AUSTRALIA
 NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES
 MORESBY GEOPHYSICAL OBSERVATORY
 STANDARD SEISMIC STATION PMG
 Preliminary Earthquake Phases 1/63.

Copied 198.

1st Jan. '63.

Zs 01 53 57.1 Raref. Deep.
 Aftershocks of 'quake 18 18 16 on
 20th continue. Principal ones only
 included.

iP Zs 02 05 42.0 Comp.*
 Es Zs 03 54 32.5 Comp.
 55 16
 iP Zs 04 47 02.2 Raref.*
 eP Zs 06 30 03
 eP Zs 07 45 10
 iP Zs 12 19 48.5 Comp.
 iS EsNs 21 35.5 $M_L 6\frac{3}{4}$
 eP Zs 15 13 46
 Es 15 (15)
 eP Zs 15 32 51.5
 eS Ns 34 (18)
 iP Zs 16 34 44.2 Deep.
 i(S) N1 42 18
 eP Zs 17 30 03
 eS Ns 31 32
 eP Zs 19 46 38
 iS E1N1 55 32
 eP Zs 19 55 02
 iS Ns 56 34
 iP Zs 23 51 10.7 Comp.
 iS Ns 00 01 09
 M Z1 (18.5)

2nd Jan. '63.

(eP) Zs 00 55 43
 iS Ns 56 46
 eP Zs 02 22 35
 eS Ns 24 15
 iP Zs 03 24 46.2 Raref.
 iS Ns 25 41 $M_L 5\frac{1}{4}$
 iP Zs 03 33 54 Aftershock.
 iP Zs 04 44 07.0 Raref.
 iS EsNs 44 52
 iP Zs 04 48 17.0 Raref.
 iS Ns 49 47
 iP Zs 07 39 56.0 Raref.
 iS Es 40 36
 eP Zs 07 42 46
 iS Es 44 17
 iP Zs 09 25 53.0 Raref.
 iS Es 26 48
 eP Zs 14 59 08
 iS E1 15 01 50
 i(P) Zs 16 11 49 Raref.
 eS Es 14 (06)
 iP Zs 18 02 41.0 Raref.
 iS E1 05 21
 eP Zs 20 33 36
 S 35 (03)

2nd Jan. '63 (Cont'd.)

iP Zs 21 00 45.5
 iS Es 01 11

3rd Jan. '63.

eP Zs 03 12 48
 eP Zs 03 51 35
 eS EsNs 53 05
 iP Zs 05 12 21.5 Comp.
 iS EsNs 12 59 $\frac{1}{2}$
 eP Zs 05 36 19
 eS Ns 36 (57)
 eP Zs 06 59 45
 eS Es 07 00 (50)
 e(P) Zs 07 18 28
 iP Zs 09 41 13.1 Raref.
 iS S 42 26 $M_L 6\frac{1}{2}$
 e EsNs 55 40
 eP Zs 12 29 54
 eP Zs 12 58 32
 eS EsNs 59 13
 eP Zs 13 58 34
 eS EsNs 14 00 11 $M_L 5\frac{3}{4}$
 eP Zs 17 06 48 Near.
 e(P) Zs 17 15 22
 eP Zs 17 30 17
 eP Zs 18 47 10
 e Zs 47 48
 iP Zs 19 14 52.9 Raref.
 eS EsNs 16 25 $M_L 5\frac{3}{4}$
 eP Zs 19 50 18
 eP Zs 20 06 30
 eP Zs 20 21 57
 iS Ns 23 25
 eP Zs 21 22 02
 eS EsNs 22 56
 e(P) Zs 21 33 10
 e(P) Zs 21 45 (16)
 eP Zs 22 32 59
 eS Ns 23 28
 eP Zs 23 12 08 Near.
 S lost at record change.

4th Jan. '63.

eP Zs 00 44 02
 e Zs 44 09
 e Zs 49 08
 eP Zs 01 45 05
 iP Zs 02 20 18.1 Comp.
 eS Ns 21 47
 eP Zs 02 46 12 Near.
 iP Zs 05 34 42.7 Raref.
 iS EsNs 36 13 $M_L 5\frac{1}{2}$
 eP Zs 05 50 (00)

4th Jan. '63 (Cont'd.)

eP Zs 06 45 56

i(P) Zs 06 46 22.5 Comp.) Two

iP Zs 06 51 05.4 Comp.) Shocks?

eP Zs 06 52 09

eS Ns 53 35

iP Zs 08 55 04.0 Raref.

eP Zs 11 23 24

eS Ns 24 51

iP Zs 12 18 37.1 Raref.

iS Ns 20 06 $M_L 6\frac{1}{4}$

Followed by numerous aftershocks.
Largest only listed and marked by *.

eP Zs 16 19 (08)

eP Zs 16 19 25 *

eP Zs 16 29 54

eP Zs 16 45 47 *

eP Zs 17 01 17 *

eP Zs 17 25 47

iP Zs 17 34 02.5 *

iP Zs 18 23 02.5 Raref.

eP Zs 19 18 11

iP Zs 20 00 43.5 Raref.

iS EsNs 01 01 $M_L 4$

eP Zs 20 49 30 *

eP Zs 22 16 35

eP Zs 22 51 59

eP Zs 23 49 17

5th Jan. '63.

eP Zs 00 25 20

iP Zs 03 11 04.2 * Raref.

iP Zs 03 24 02.0 Comp.

iP Zs 03 38 48.4 Raref.

eP Zs 06 05 35 * $M_L 5\frac{1}{4}$

iP Zs 07 27 46.0 * Comp.

eP Zs 08 44 29 *

eP Zs 09 59 40

eP Zs 12 36 02

e(S) EsNs 38 05

eP Zs 13 09 38 $M 5 - 5\frac{1}{2}$

eS El 13 38

eP Zs 13 21 44

S in coda of preceding $M 5\frac{1}{2} - 6$

iP Zs 14 45 05.4 Comp.

eP Zs 15 10 03

eP Zs 15 14 24

eP Zs 15 59 38

eP Zs 17 13 38

eP Zs 18 01 (47)

iP Zs 18 04 38.2 Raref.

e(P) Zs 18 25 50

e Zs 26 08

5th Jan. '63. (Cont'd.)

iP Zs 20 23 31.9 * Raref.

eP Zs 22 14 08

6th Jan. '63.

eP Zs 00 46 27

eS EsNs 47 (56)

iP Zs 00 51 49.5 Raref.

iS EsNs 52 30 $M_L 5$

iP Zs 01 32 43.5 Comp.

eP Zs 02 49 42) Double

e Zs 50 03) Shock?

i(P) Zs 50 05.8)

eP Zs 03 04 23

iP Zs 03 24 23.0 Comp.?

e(S) NsNL 28 50

eP Zs 03 47 43 Near.

iP Zs 04 45 14.5 Raref. Deep?

eP Zs 06 59 52

eS Ns 07 01 19

eP Zs 07 22 25

eS EsNs 23 12

eP Zs 07 55 27 Near.

eP Zs 09 04 02

eS Es 05 30

eP Zs 13 47 57 Near.

eP Zs 14 23 19

eS EsNs 24 50

iP Zs 15 26 43.0 Raref.

iS Ns 28 14 $M_L 5\frac{1}{4} - 5\frac{3}{4}$

eP Zs 16 09 44

eP Zs 16 10 32

eS Ns 11 48

eP Zs 16 25 55

eP Zs 16 37 11

eS EsNs 38 27

eP Zs 17 06 25

e(P) Zs 17 11 06

eP Zs 17 34 26

eP Zs 17 59 20

eP Zs 19 46 17 Near.

eP Zs 19 52 03

eP Zs 21 43 54 Near.

eP Zs 22 53 08 $M_L 3\frac{1}{2}$

eS EsNs 53 27

7th Jan. '63.

iP Zs 00 05 38.3 Comp.?

e(S) Ns 07 (05)

eP Zs 01 37 46

eS EsNs 39 (16)

eP Zs 02 51 53

eS EsNs 53 (23)

eP Zs 02 28 18

eS EsNs 29 47

iP Zs 03 02 57.0 Comp.?

7th Jan. '63 (Cont'd.)

eP Zs 03 25 38 Near.
iP Zs 04 26 06.0 Raref.
eS Ns 27 (35) M_L 4 $\frac{3}{4}$
iP Zs 06 26 45.6 Raref.
iS EsNs 28 (22) M_L 5 $\frac{1}{2}$ - 6
eP Zs 08 19 17
eS Ns 20 (45)
iP Zs 08 50 36.7 Raref. Deep.
iP Zs 09 30 05.5 Comp. Near.
iP Zs 11 53 26.1 Comp.
iS N1 57 34 M 5 $\frac{1}{2}$
iP Zs 13 46 58.8 Comp. Near.
eP Zs 15 49 18
eP Zs 16 03 28
eS EsNs 04 (59)
eP Zs 17 09 27
e Zs 09 39
eP Zs 19 24 25
eS E1N1 28 (30)
eP Zs 19 43 43
eS Ns 44 05
eP Zs 21 08 (55) Near.

8th Jan. '63.

eP Zs 01 46 09 Near.
eP Zs 01 48 18 Near.
eP Zs 02 14 29
eP Zs 03 01 15
eP Zs 03 12 49
eP Zs 03 37 (45)
eP Zs 03 58 34
eS EsNs 59 (47)
eP Zs 05 06 29
eS EsNs 06 52
eP Zs 09 19 58
Increased Microseismic noise.
08-14 GMT.
eP Zs 15 54 33
e Zs 55 12
eS Ns 00 (44)
iP Zs 16 05 41.0 Comp.
eS Ns 06 (31)
iP Zs 19 08 30.1 Raref.

9th Jan. '63.

eP Zs 02 09 46
eS Es 11 15
eP Zs 03 18 57
i Zs 18 59.5 Comp.
eS Es 23 27
eP Zs 06 58 (33)
eP Zs 07 49 (35)
e Zs 49 41
e Zs 49 52
eP Zs 09 40 28 Near.
eP Zs 10 53 23
eS Es 54 52

9th Jan. '63 (Cont'd.)

eP Zs 11 48 (47)
eP Zs 13 57 (25)
eP Zs 14 03 52
eS Ns 05 (19)
eP Zs 14 32 32 Near?
eP Zs 15 28 39
eS Es 29 54 M_L 5
eP Zs 17 51 22 Near?
e Zs 51 26
eP Zs 21 20 20
iP Zs 21 44 21.0 Raref.
iP Zs 23 51 04.9 Raref.
eS Ns 51 (45)

(J.A. BROOKS)
Observer-in-Charge.

COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES
PORT MORESBY GEOPHYSICAL OBSERVATORY
STANDARD SEISMIC STATION PMG
Preliminary Earthquake Phases - 2/63.

JAN 1963

10th Jan. '63.

12th Jan. '63.

eP Zs 02 44 31
iS EsNs 45 16 $\frac{1}{2}$
iP Zs 03 44 40.6 Comp.
iS EsNs 45 20
eP Zs 05 03 51
iP Zs 07 51 26.5 Raref.
iS Ns 52 11
iP Zs 10 49 58.0 Comp.
eS Es 52 (04)
eP Zs 13 33 44
iS Ns 34 25
iP Zs 16 17 38.2 Raref.
eS Ns 18 (50)
iP Zs 17 02 06.6 Comp.
iS Ns 02 44 $\frac{1}{2}$
eP Zs 17 38 23
eP Zs 17 43 21
iP Zs 18 59 39.5 Raref.
eS Nl 19 03 40
iP Zs 20 20 43.0 Raref.

eP Zs 02 24 19
iS Ns 24 45
iP Zs 04 22 13.8 Raref.
iS Ns 22 32
eP Zs 05 49 17 Near.
iP Zs 06 29 44.0 (Raref) Near
eP Zs 08 11 10.9 Comp. Near
iP Zs 09 17 42.2 Raref.
iS Nl 21 34
iP Zs 09 25 12.3
iS Es 25 33
eP Zs 10 54 56
iS Es 56 14
iP Zs 11 41 55.5
iP Zs 16 07 05
eP Zs 18 00 17
iS Ns 01 49
eP Zs 19 32 (25)
iS Ns 33 25
iP Zs 19 35 28.5 Comp. Deep.
iP Zs 20 11 02.5 Raref. M_L 4 $\frac{1}{2}$
iS Ns 11 26
iP Zs 23 27 28.2 Comp.
eS Nl 33 (32)

11th Jan. '63.

13th Jan. '63.

iP Zs 01 17 55.4 Comp.
iP Zs 03 25 00.1 Comp.
eS Es 26 28 $\frac{1}{2}$
i(P) Zs 03 40 02.8 Raref.
iP Zs 04 42 45.0 Raref.
iS EsNs 44 16 $\frac{1}{2}$
eP Zs 04 55 08.0
eP Zs 05 31 37
eP Zs 08 06 06
eS Es 06 39
iP Zs 10 57 08.9 Comp.
iP Zs 11 55 53
eS EsNs 57 23
eP Zs 12 13 46
iS Es 15 21
eP Zs 12 31 14
eS Nl 41 18
iSS Nl 47 49
e(P) Zs 16 16 52
eP Zs 16 35 58
eS Es 36 37
iP Zs 17 12 37
iP! Zs 17 14 51.0 Raref. Deep.
e Zs 18 18
eP Zs 18 24 23
eP Zs 20 01 53
eS Ns 03 20
iP Zs 20 46 49.7 Raref.
eP Zs 23 41 17
iS Es 42 (17) Confused
by Cal. pulses.

iP Zs 04 09 50.6 Comp.
iS Es 10 22
eP Zs 04 23 43
i(S) Nl 31 50
eP Zs 07 37 32
eP Zs 07 58 07
eP Zs 08 07 48
eP Zs 11 18 24
iS Es 19 08
eP Zs 12 43 19 $\frac{1}{2}$
eS Es 44 50
iP Zs 12 50 26.2 Comp. M_L 5 $\frac{1}{4}$ - $\frac{3}{4}$
iS S E 51 10
iP Zs 13 48 14.0 Comp.
eP Zs 14 44 (24)
eS Es 44 (45)
iP Zs 16 29 08
iS ElNl 35 32
eP Zs 17 38 50
iS Ns 39 27 $\frac{1}{2}$
eP Zs 17 55 09
iS Es 55 53
eP Zs 18 11 (44)
iS Ns 28
eP Zs 20 28 06
eS Es 28 45

13th Jan.'63 (Cont'd.)

eP Zs 21 05 56

eP Zs 23 29 59

iS Es 30 44

14th Jan.'63.

iP Zs 01 23 25.5 Comp.

iS Es 24 53

iP Zs 01 40 31.3

iP Zs 02 42 12 Comp. Near.

iP Zs 03 20 50.0 Comp.

iP Zs 08 59 39.5 Comp. Near.

eP Zs 09 45 16

e Es 45 48

eP Zs 09 54 38

eS Ns 58 16

iP Zs 11 25 05.0 Raref.

eS Nl 29 30

i(P) Zs 11 31 00.3 Comp. in coda of preceding.

eP Zs 12 57 40

eS Es 58 41

eP Zs 15 48 51

eS Ns 49 29

eP Zs 17 47 32

15th Jan.'63.

eP Zs 00 46 31 Near.

eP Zs 01 56 51

i(P) Zs 02 05 33.2 Raref.

iP Zs 02 37 34.3 Raref.

iS Es 41 33

eP Zs 03 16 18

eP Zs 07 40 49

eP Zs 08 02 00

eS Ns 03 32

eP Zs 09 51 44

iS El 55 04

eP Zs 10 19 39

iS Es 20 27

eP Zs 12 51 44

iS Ns 53 15

i(P) Zs 13 16 45.0 Comp.

eP Zs 16 51 35

iS Ns 52 01

eP Zs 17 04 08

iS Es 04 48

eP Zs 17 17 40

iS EsNs 18 25

eP Zs 17 45 34

i! Zs 46 00

iS Nl 51 07

iP Zs 19 32 49.8 Raref.

iPcP Zs 35 05.5

e(S) EsNs 37 45

iP Zs 21 35 08.0 Raref.

eP Zs 22 16 51

eS Es 19 16

15th Jan.'63 (Cont'd.)

iP Zs 23 09 48.8 Comp.?

iS Es 11 19

e(P) Zs 23 39 03

iS Es 40 16

16th Jan.'63.

iP Zs 03 25 52.0 Comp.?

e(P) Zs 06 54 50

eP Zs 09 05 17

eS EsNs 06 03

i(P) Zs 12 54 50

iP Zs 14 52 34.8 Comp.

iS EsNs 53 15

eP Zs 14 55 53

iS Ns 56 59

eP Zs 20 04 10

eS Ns 05 18

eP Zs 21 15 (20)

iP Zs 22 22 20.7 Comp.

iS Es 23 38

eP Zs 22 36 40

iS Es 37 36

eP Zs 22 44 56

iS Es 45 58

Component Nomenclature:

S	Wood Anderson North South Component.
W	" " East West "
Z	Wilson Lamison Vertical "
Es	Benioff Short Period East West Component.
Ns	" " " North South "
Zs	" " Vertical Component.
El	Sprengnether Long Period East West Component.
Nl	" " " North South "
Zl	" " " Vertical "

ASSIGNMENT OF EARTHQUAKE MAGNITUDES

Earthquake magnitudes listed in Port Moresby (PMG) Bulletins are assigned on the following basis:

- (1) Near Earthquakes.
Magnitudes " M_L " of Gutenberg & Richter, are determined from Wood Anderson torsion seismometer maximum amplitudes, following the procedure recommended by Gutenberg & Richter (1942), and are assigned only to shocks within approximately 10° .
- (2) Teleseisms.
Magnitudes designated "M" are those determined either from amplitudes of surface waves of 20 sec. period, M_s of Gutenberg & Richter (1955); or from amplitudes of body waves P and S in the case of shocks having a focal depth greater than normal. The latter procedure determines m_b of Gutenberg & Richter which is then transposed to M_s .

All magnitudes are assigned to the nearest $\frac{1}{4}$ unit.

References:

Gutenberg B., and Richter C.F.

1942 "Earthquake Magnitude, Intensity, Energy and Acceleration", Bull.Seis.Soc.Amer. Vol.32 pp. 163-191.

1955 "Magnitude and Energy of Earthquakes", Annali di Geofisica Vol.IX No.1, 1956 pp. 1-15.

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COMMONWEALTH OF AUSTRALIA
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STANDARD SEISMIC STATION PMG
Preliminary Earthquake Phases - 3/63.

17th Jan. '63.

eP Zs 01 22 52
eS Ns 23 22
iP Zs 04 44 08.8 Dil.
iS Ns 45 12.9
eP Zs 05 45 10
eS Ns 45 57 $M_L = 5.0$
i Zs 06 03 30.0
eP Zs 06 16 57
eS Ns 18 04
eP Zs 10 08 03
eS Ns 08 41
e Zs 11 28 28
eP Zs 14 32 03
eP Zs 14 46 37
eP Zs 16 52 03
eS Ns 52 37
iP Zs 20 48 43.5 Comp.
i(P) Zs 50 43.6
e(S) EL 55 (20)
eP Zs 23 01 42
iS Es 02 08.0

18th Jan. '63.

eP Zs 01 22 12
i Zs 03 19 31.5
eP Zs 05 47 08
eP Zs 05 54 03
eS Ns 55 28 $M_L = 5\frac{1}{4}$
eP Zs 06 57 16
eS Ns 57 51
eP Zs 07 14 49
iP Zs 10 39 29.4 Dil.
iS Ns 40 29.1 $M_L = 5\frac{1}{4}$
eP Zs 11 34 11
eS Es 34 51
iP Zs 12 20 53.7 Comp.
iS Ns 21 34.3
eP Zs 14 11 00
iS Ns 11 21.7
iP Zs 14 21 59.5 Dil.
eP Zs 15 02 45
e Zs 15 11 22
eP Zs 21 21 12

19th Jan. '63.

eP Zs 00 47 14
eS Ns 18 07
iP Zs 00 54 07.4 Comp.
eS Es 54 52
e Zs 02 40 38
iP Zs 03 27 11.6 Comp.
eS Ns 28 43
iP Zs 03 59 09.9 Comp.

19th Jan. '63 (Cont'd.)

eP Zs 05 00 24
iS Es 00 58.1
eP Zs 06 51 24
eS Es 52 09
eP Zs 07 06 46
eP Zs 07 50 47
iP Zs 09 24 58.5 Dil.
iS Es 25 39.0 $M_L = 4\frac{3}{4}$
iP Zs 10 47 44.0 Dil.
iS Es 48 25.7 $M_L = 5\frac{1}{4}$
eP Zs 12 04 28
iS Es 05 14.7
eP Zs 17 19 43
eP Zs 21 46 05
eP Zs 23 01 22

20th Jan. '63.

i Zs 00 25 05.0
eP Zs 02 40 37
eS Es 41 23
eP Zs 03 09 11
eP Zs 05 53 38
eS Es 54 22
iP Zs 13 08 39.0 Dil.
eS Ns 08 54
eP Zs 17 41 49
eS Ns 42 28
eP Zs 19 06 14
i Zs 06 18.3
eP Zs 20 02 03
eP Zs 22 42 06
eP Zs 23 32 26
eS Es 32 59

21st Jan. '63.

eP Zs 04 00 16
i Zs 04 55 10.3
eP Zs 05 28 54
iS Ns 29 21.8
iP Zs 05 49 07.1 Comp.
iS Es 49 55.4 $M_L = 5\frac{1}{2}$
eP Zs 06 45 00
eP Zs 08 24 14
iP Zs 10 38 37.2 Dil.
i Zs 39 14.5
eS Ns 40 57
eP Zs 11 58 02
iP Zs 16 12 40.7 Dil.
iS Es 13 24.7
iP Zs 18 58 34.7 Dil.
eS EsNs 59 54.9
eP Zs 20 03 59
iS Ns 04 45.2 $M_L = 5\frac{1}{2}$

22nd Jan. '63.

eP	Zs	05 03 08
eS	Ns	03 53
eP	Zs	10 28 51
eS	Ns	29 34
eP	Zs	12 22 55
eS	EsNs	24 00
iP	Zs	15 33 41.4 Comp.
i	Zs	18 34 39.4
iP	Zs	20 25 24.3 Comp.
eS	Es	26 05
iP	Zs	23 09 51.2 (Dil.?)
iS	Es	10 23.5 $M_L = 5\frac{1}{4}$

23rd Jan. '63.

eP	Zs	03 43 03
iP	Zs	07 44 53.9 Comp.
iS	Ns	45 32.4

Record missing 08h 36m to after commencement
of Greenwich day 24th Jan. '63.

(J.A. BROOKS)
Observer-in-Charge.

JAN 1963

Jan 24 to 30

COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES
PORT MORESBY GEOPHYSICAL OBSERVATORY
STANDARD SEISMIC STATION PMG
Preliminary Earthquake Phases - 4/63.

24th Jan. '63.

eP Zs 06 33 55
eP Zs 07 00 08
eP Zs 09 23 41
eS Es 25 39
e? Zs 09 35 09
iP Zs 35 18.1 Raref. Deep.
iPcP Zs 37 38.5
iPPP Zs 38 39
iS EsNs 40 02
iScP Zs 40 26
eP Zs 10 18 (06)
eP Zs 12 16 25
eP Zs 14 07 14 Near.
iP Zs 19 00 03.8 Comp. Deep.
iS Es 02 42
iP Zs 21 05 35.1 Raref.
iS Es 06 38
iP Zs 21 25 39.6 Raref? Near.
iP Zs 22 33 06.1 Raref.
e(P) Zs 22 49 (58)

25th Jan. '63.

iP Zs 00 21 12.2 Raref.
eP Zs 00 57 03
iS Ns 57 48
eP Zs 04 09 38
i(S) Es 10 12
iP Zs 07 48 50.7 Raref.
iS Es 49 35.1
iP Zs 08 44 25.0 Raref.
iS S, W 45 09
iP Zs 12 55 41.2 Raref.
i(S) ELN1 13 00 24
iS Es 00 29
i Zs 01 56
iP Zs 13 27 25.5 Raref.
iS Es 28 17.1
iP Zs 13 48 07.5 Raref? Near.
iS Es 48 46
eP Zs 14 33 12
i! Zs 27.4 Raref.
iS Es 34 11.1
iP Zs 15 57 07.8 Comp.
iP Zs 16 20 16.2 Comp.
eP Zs 17 03 15
eP Zs 18 50 48
iS Es 51 57
eP Zs 20 20 40
eP Zs 20 28 50
iS EL 35 16

26th Jan. '63.

eP Zs 07 48 05
i! Zs 48 06.2 Raref.
iS Ns 48 31

26th Jan. '63 (Cont'd.)

eP Zs 13 10 44
iS Es 11 42
i(P) Zs 14 36 14.2 Comp.
eP Zs 18 47 26
eS Ns 48 03
eP Zs 19 19 23
iP Zs 23 09 16.2 Comp.
iS EsNs 10 03

27th Jan. '63.

eP Zs 00 10 (21)
iS Ns 10 53
e(P) Zs 02 33 12
eP Zs 02 57 28
iS Ns 58 57
eP Zs 08 51 22
iS Ns 52 02
eP Zs 11 59 (54)
eP Zs 15 59 05
iS Ns 59 41
eP Zs 16 46 10
iS Es 46 39
iP Zs 16 56 40.1 Comp.
eP Zs 17 56 48
iS Es 58 01
i(P) Zs 19 48 04.1 Comp.
eP Zs 22 42 50

28th Jan. '63.

eP Zs 00 29 34
e(S) Ns 30 15
eP Zs 01 53 00
iS Es 53 43
eP Zs 02 21 15
iS Ns 22 17
i(P) Zs 02 31 17 Comp.
i(P) Zs 04 15 03.8 Comp.
eP Zs 07 20 54 Near.
eP Zs 08 24 07
iP Zs 10 44 23.8 Comp.
eP Zs 11 16 28
iS Ns 17 57
iP Zs 12 14 07.7 Comp.
iS EL 15 28 ML= 6.1
eP Zs 12 26 50
iP Zs 13 12 40.0 Comp.
in coda of preceding.
iP Zs 13 56 34.6 Raref. Deep.
iP Zs 15 06 21.2 Raref. Near.
eP Zs 15 32 11
eS Es 33 (08)
e(P) Zs 16 14 45
i Zs 14 47.5
i Zs 14 49.7

28th Jan.'63 (Cont'd.)

eP Zs 22 08 05
iS EsNs 08 33

29th Jan.'63.

iP Zs 01 37 49.7 Raref.

iP Zs 02 49 47.0 Raref.

iS Es 50 28

eP Zs 03 34 33

iS Es 35 36

iP Zs 04 08 59.3 Comp.?

iS Es 09 47

eP Zs 07 27 41 Deep.

iS Es 29 11

iP Zs 09 24 29.8

iS Ns 25 06

iP Zs 09 31 04.4 Raref.

iS El 39 03

eP Zs 10 05 07

iS Es 05 50 $\frac{1}{2}$

eP Zs 15 23 (27)

eP Zs 17 56 55

iS Ns 57 36

iP Zs 18 19 26.8 Deep.

iS Es 20 08

eP Zs 18 55 33

eS Ns 56 (59)

eP Zs 20 09 55

iP Zs 21 12 44.9 Raref.

iS ElNl 16 42

eP Zs 22 14 40

iS Ns 15 20

eP Zs 22 31 (34)

eP Zs 23 28 06

30th Jan.'63.

eP Zs 03 59 16

iS EsNs 59 49 $\frac{1}{2}$

iP Zs 05 51 12.7 Raref.

iP Zs 06 13 51.0 Raref.

iP! Zs 07 09 31.0 Comp.Deep.

iS Ns 10 09

eP Zs 09 04 (46)

iS El 06 18

i(P) Zl 10 25 (07)

e(PKIKP) Zs 28 42

i(PP) Zl 29 50

i(PS) Nl 39 30

i(SS) El 45 45

iP Zs 10 45 38.0 Comp.

iP Zs 13 59 01.1 Comp.Near.

iP Zs 14 42 30.0 Raref.

iS Es 43 14

eP Zs 18 20 41

iS Es 21 26

iP Zs 20 13 49.3 Raref.

eP Zs 22 11 43

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Jan 30 - FEB 6

FEB 1963

COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES
PORT MORESBY GEOPHYSICAL OBSERVATORY
STANDARD SEISMIC STATION PMG
Preliminary Earthquake Phases - 5/63

30th Jan.'63.

iP Zs 23 39 06.6 Raref.

31st Jan.'63.

iP Zs 05 14 27.2 Raref.

i Zs 16 26.7

e(S) EsNs 20 43

Long Period system not operating fully.

eP Zs 06 45 48

eP Zs 10 31 14

iP Zs 11 30 05.4 Comp.

eP Zs 11 33 51

eS Es 35 16

eP Zs 11 53 47

eP Zs 15 14 10

iP Zs 16 28 17.9 Raref.

eP Zs 18 50 20

eS Es 51 08

iP Zs 20 35 56.2 Comp.

1st Feb.'63.

eP Zs 02 04 07

eP Zs 03 40 48

eS EsNs 41 36

eP Zs 08 19 40

eS Ns 21 08

eP Zs 08 38 31

iP Zs 08 46 14.3 Dil.

iS EsNs 47 00 $M_L = 4\frac{3}{4}$

eP Zs 09 33 10

eS Es 33 47

eP Zs 09 47 50

iP Zs 10 20 35.1 Comp.

i Zs 20 49.2

eP Zs 12 09 55

eP Zs 13 22 31

eS Ns 23 08

eP Zs 16 10 15

eS Ns 10 53

eP Zs 16 46 02

iP Zs 22 48 51.5 Raref.

eP Zs 23 40 31

i Zs 40 39.2

eS Es 42 01

eP Zs 23 54 52

2nd Feb.'63.

iP Zs 00 13 51.0 Raref.

i Zs 14 48.7

e(S) Es 15 09

eP Zs 01 51 17

eS Ns 51 46

eP Zs 04 22 25

eS Ns 23 05

2nd Feb.'63 (Cont'd.)

eP Zs 07 56 21

eP Zs 11 21 13

eS Ns 22 00

iP Zs 11 55 33.8 Comp.

eP Zs 14 57 11

e Zs 57 46

eS EsNs 58 09

eP Zs 16 24 25

eS Ns 24 51

eP Zs 16 40 52

eS Es 42 29

eP Zs 18 19 58

eS Es 20 45

3rd Feb.'63.

iP Zs 01 54 07.5 Raref.

eP Zs 02 46 20

eP Zs 03 09 26

eP Zs 09 01 19

eS Es 02 58

eP Zs 09 45 37

eP Zs 09 46 43

eS Es 47 47

eP Zs 12 03 27

iP Zs 14 59 11.9 Raref.

eS EsNs 59 57

iP Zs 16 55 45.5

eS Es 56 08

eP Zs 20 20 46

eS Es 21 22

iP Zs 21 14 05.7 Comp.

eS Ns 14 42 $M_L = 4\frac{1}{4}$

4th Feb.'63.

iP Zs 01 17 58.3 Comp.

iS S, W 18 40 $M_L = 5\frac{3}{4}$

iP Zs 01 26 49.8 Comp.

iS Es 27 30 $M_L = 4\frac{3}{4}$

in coda of preceding.

eP Zs 01 35 33

iS Es 36 16

eP Zs 02 01 42

iS Ns 02 26

iP Zs 06 21 14.7 Comp.

eS Es 21 54 $M_L = 5.0$

iP Zs 09 23 20.3 Raref.

eP Zs 10 37 45

eS Ns 38 20

eP Zs 10 31 48

eS Es 32 17

iP Zs 12 04 56.2 Raref.

eS Es 05 37

eP Zs 12 31 46

eS Ns 32 22

4th Feb.'63 (Cont'd.)

iP Zs 14 02 59.2 Raref.
eS Ns 03 43
iP Zs 14 04 41.0 Comp.
eS Es 05 21
iP Zs 14 35 07.5 Raref.
iS Ns 35 51
eP Zs 15 08 56
eS El 12 58
eP Zs 16 58 08
iP Zs 17 13 40.3 Comp.
eS Ns 14 24
eP Zs 17 58 40

5th Feb.'63.

iP Zs 01 53 01.1 Raref.
iP Zs 05 09 55.3 Comp.
eP Zs 07 05 42
eS Ns 06 18
eP Zs 11 11 03
eP Zs 15 16 59
eS Es 17 41
iP Zs 16 01 04.8 Raref.
eS Ns 01 22
eP Zs 17 13 59
eS Ns 14 36
eP Zs 17 23 43
eS Es 24 27
eP Zs 18 25 45
eS EsNs 26 35
iP Zs 19 36 48.1 Comp.
ePP Zl 20 59 30
eSKS Nl 21 05 00
ePS NlZl 09 13
eSS Nl 16 08
e(G) El 29.3

6th Feb.'63.

eP Zs 02 01 14
iP Zs 02 35 33.8 Comp.
iP Zs 05 42 29.1 Comp.
iS EsNs 43 19 $M_L = 5\frac{3}{4}$
iP Zs 06 00 02.8 Raref.
eP Zs 10 21 54
e(S) ElNl 23 00
i! 23 20 $M_L = 5\frac{3}{4}$
eP Zs 11 35 42
iP Zs 12 49 29.1 Raref.
eS Es 50 13
iP Zs 12 51 56.1 Comp.
eP Zs 13 48 53
eS Ns 49 26
iP Zs 14 14 25.0 Comp.
iS Es 15 06 $M_L = 4\frac{1}{2}$
eP Zs 14 25 31
eS EsNs 26 15

6th Feb.'63 (Cont'd.)

iP Zs 17 40 59.1 Comp.
eP Zs 18 28 00
eP Zs 19 05 41
eS Es 06 30
eP Zs 19 14 17
eS Es 15 40
eP Zs 20 12 12
eS Es 13 06
iP Zs 20 17 44.0 Comp.
eS EsNs 19 12
eP Zs 20 59 12
eS Es 21 00 18
iP Zs 22 02 31.0 Comp.

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COMMONWEALTH OF AUSTRALIA
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STANDARD SEISMIC STATION PMG
Preliminary Earthquake Phases 6/63.

7th Feb. '63.

iP Zs 02 42 20.0
eP Zs 03 08 39
iS Ns 09 34
iP Zs 03 38 35.0 Comp.
eP Zs 03 50 28
eP Zs 05 34 19
iS Es 34 39½
eP Zs 07 06 50
iS EsNs 07 07 34
eP Zs 08 45 31
iS Ns 46 28
eP Zs 11 10 21
eP Zs 13 50 13
eS Es 50 57
iP Zs 15 32 10.1 Comp.
eP Zs 16 59 27
iP Zs 17 15 38.2 Raref.
e Nl 23 20
iP Zs 17 43 43.3 Raref?
iP Zs 18 35 25.2 Comp.
iP Zs 20 12 46.8 Raref.
iS Ns 13 34½
eP Zs 20 19 59
eP Zs 21 58 51
eP Zs 23 23 24
eS Ns 24 (09)

8th Feb. '63.

iP Zs 02 36 03.9 Comp.
e(P) Zs 05 25 16
eP Zs 06 44 55
eP Zs 08 41 16
iS Ns 42 19
eP Zs 09 38 42
eP Zs 09 44 43
iS Ns 45 45
iP Zs 11 10 02.4 Raref.
iS Ns 10 25½
eP Zs 14 12 23
iS Ns 12 41
eP Zs 16 03 (14)
iP Zs 17 07 42.0 Raref.
iS Ns 09 13
eP Zs 18 30 42
iP Zs 20 38 34.7
iS EsNs 39 03

9th Feb. '63.

eP Zs 04 13 21
i(S) Ns 13 52
eP Zs 05 53 (49)
eP Zs 06 31 13
iS Ns 31 50

9th Feb. '63 (Cont'd.)

iP Zs 08 40 56.0 Comp.
iS EsEl 44 42
iP Zs 08 30 37.8 Raref.
eP Zs 10 23 53
i(S) Es 24 19
eP Zs 13 07 57
iS Es 08 55
iP Zs 16 14 20.2 Comp.
iP Zs 17 02 10.2 Comp.
eS Nl 08 (06)
iP Zs 17 13 57.7 Raref.
iP Zs 19 56 40.5 Comp.
i(S) Es 57 24
iP Zs 21 48 16.1 Raref.
iS Es 48 57½
iP Zs 23 08 20.1 Comp.

10th Feb. '63.

eP Zs 02 05 48
iP Zs 02 51 39.5 Raref.
iP Zs 08 32 46.0 Comp.
iS Ns 33 30½
iP Zs 09 09 42.3 Raref.
iP Zs 09 44 23.0 Comp.
iS Ns 45 07
eP Zs 12 04 49
eS Ns 06 (10)
eP Zs 12 11 50
iS EsNs 12 26
i(P) Zs 16 55 45.0 Raref.
iP Zs 21 45 05.0 Raref.

11th Feb. '63.

eP Zs 01 31 19
iS Es 32 33
iP Zs 05 34 08.2 Raref.
iS EsNs 37 40
eP Zs 06 25 41
iS Es 28 32
iP Zs 07 22 27.4 Raref.
iP Zs 09 55 47.7 Comp.
iP Zs 11 02 32.4 Raref. Deep.
eP Zs 11 52 46
eP Zs 12 29 39
eS El 35 31
iP Zs 14 48 00.5 Raref. Near.
eP Zs 16 32 42
eS Ns 33 54

12th Feb. '63.

eP Zs 02 35 39
iS Ns 36 42
iP Zs 03 11 38.3 (Comp.)
eP Zs 03 51 50
eS Ns 52 (31)

12th Feb. '63 (Cont'd.)

iP Zs 04 27 05.5 Comp. Near.
eP Zs 07 25 28
i(P) Zs 10 36 39.5 Raref.
eP Zs 12 50 03
i(S) Es 51 13
eP Zs 13 40 51 Probably 2 shocks
superimposed. Interpretation difficult.

iP Zs 14 23 00.7 Comp.
iS EsNs 23 46
iP! Zs 17 44 41.0 Comp.
iS S W 45 13½
iP Zs 17 59 27.8 Raref.
iS Ns 00 17
iP Zs 19 12 43.2 Raref.
iS Ns 12 58½
eP Zs 22 07 52
iP Zs 23 13 31.6 Raref.
iS Es 18 21
iP Zs 23 18 26.3 Raref.
iS Ns 19 04

13th Feb. '63.

~~iP Zs 02 30 49.7 Raref.~~
iP Zs 08 57 49.5 Raref.
i(ScP) Zs 03 32
iS N1 04 02
i(P) Zs 09 17 14.8 Raref.
e(P) Zs 12 25 11½
i(P) Zs 13 07 25.7 Raref.
eP Zs 13 54 29
iS EsNs 55 24
i(P) Zs 14 21 46.5 Raref.
iP Zs 18 17 08.2 Raref.
iS EsNs 19 54
i(P) Zs 19 09 54.8 Comp.
iP S W Zs 21 24 59.8 Raref.
Zs 17 59 27.8 Raref.
Ns 00 17
Zs 19 12 43.2 Raref.
Ns 12 58½
Zs 22 07 52
Zs 23 13 31.6 Raref.
Es 18 21
Zs 23 18 26.3 Raref.
Es 19 04

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13th Feb. '63.

~~iP Zs 02 30 49.7 Raref.~~
iP Zs 08 57 49.5 Raref.
i(ScP) Zs 03 32
iS N1 04 02
i(P) Zs 09 17 14.8 Raref.
e(P) Zs 12 25 11½
i(P) Zs 13 07 25.7 Raref.
eP Zs 13 54 29
iS EsNs 55 24
i(P) Zs 14 21 46.5 Raref.
iP Zs 18 17 08.2 Raref.
iS EsNs 19 54
i(P) Zs 19 09 54.8 Comp.
iP S W Zs 21 24 59.8 Raref.
Zs 17 59 27.8 Raref.
Ns 00 17
Zs 19 12 43.2 Raref.
Ns 12 58½
Zs 22 07 52
Zs 23 13 31.6 Raref.
Es 18 21
Zs 23 18 26.3 Raref.
Es 19 04

COMMONWEALTH OF AUSTRALIA
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STANDARD SEISMIC STATION PMG
Preliminary Earthquake Phases 7/63.

NOTE: Possible Timing System un-
certainty of between -3.5 from
start 14th to -0.5 sec. 15th 0355.
Times listed are correct to nearest
second as far as known.

14th Feb.'63.

eP	Zs	01	42	(05)	
eS	Es		42	(45)	
eP	Zs	01	45	(40)	
eP	Zs	03	21	(10)	
eS	EsNs		21	(30)	
eP	Zs	06	51	(35)	
e(S)	Es		54	(19)	
iP	Zs	07	08	(46)	Comp.
eP	Zs	07	43	(45)	
iP	Zs	07	51	(05)	Raref.
iS	Es		51	(49)	
iP	Zs	10	43	(43)	Comp.
iS	EsNs		44	(27)	
eP	Zs	11	11	(07)	
eS	EsNs		11	(38)	
eP'	Zs	12	29	(24)	
iP	Zs	12	30	(04)	Raref.
eS	EsNs		30	(46)	
e(P)	Zs	12	41	(00)	
eP	Zs	12	48	(21)	
eP	Zs	13	27	(11)	
eS	EsNs		28	(22)	
eP	Zs	13	44	(15)	
eP	Zs	13	54	(43)	
eP	Zs	14	12	(00)	
eP	Zs	14	43	(20)	
eP	Zs	14	47	(40)	
eP	Zs	15	33	(12)	
eP	Zs	17	27	(46)	Near.
eP	Zs	21	04	(37)	
eS	Es		05	(16)	
eP	Zs	21	56	(41)	
iP	Zs	22	09	(08)	Comp.Near.
eP	Zs	22	28	(54)	
eP	Zs	22	45	(10)	
eP	Zs	22	56	(09)	Near.
eP	Zs	23	13	(14)	
eS	EsNs		14	(00)	

15th Feb.'63.

iP	Zs	00	56	(15)	Raref.
eP	Zs	01	46	(41)	
eP	Zs	03	13	(48)	
eP	Zs	03	25	(15)	Near.
iP	Zs	03	32	(10)	Raref.

15th Feb.'63 (Cont'd.)

iP	Zs	03	46	(57)	Raref.
eS	EsNs		47	(52)	
eP	Zs	03	54	(51)	
eS	EsNs		55	(21)	
eP	Zs	05	45	22	
iP	Zs	07	00	30.4	Raref.
iP	Zs	07	20	56.3	Raref.
iP	Zs	10	56	28.5	Raref.
eS	Es		57	26	
eP	Zs	15	06	32	Raref.Near.
iP	Zs	16	38	31.9	Comp.
i	Zs		38	46	
iP	Zs	17	59	18.2	Comp.
eP	Zs	18	29	03	
eS	Ns		30	02	
eP	Zs	18	33	52	
eS	EsNs		34	26	
iP	Zs	18	37	44.2	Comp.
eP	Zs	20	01	30	Near.
eP	Zs	20	07	45	
eS	EsNs		08	08	
eP	Zs	21	01	31	
eP	Zs	22	46	16	
eS	EsNs		47	29	

16th Feb.'63.

eP	Zs	01	02	48	
eS	EsNs		03	45	
eP	Zs	05	49	44	
iP	Zs	06	23	11.5	Comp.Near.
iP	Zs	08	37	20.6	Comp.
iP	Zs	08	41	20	
eS	EsNs		42	01	
eP	Zs	10	51	44	
i	Zs		54	31	
e	EsNs		55	58	
e	Zs		57	15	
e	Ns		11	01	14
eP	Zs	11	15	49	
iP	Zs	12	14	47.0	Comp.
i	Zs		14	53	
iP	Zs	13	28	21.1	Raref.
eP	Zs	15	10	37	Near.
iP	Zs	18	00	43.9	Raref.
eP	Zs	22	32	31	
iP	Zs	23	38	20.6	Comp.
iS	EsNs		39	17	

17th Feb.'63.

eP	Zs	00	23	14	
eP	Zs	00	29	(16)	
eP	Zs	01	29	56	
eS	Ns		30	42	

17th Feb.'63 (Cont'd.)

eP Zs 02 39 24
i Zs 39 39.2
eP Zs 04 21 40
iP Zs 06 54 40.0 Comp.
iS Ns 55 36
iP Zs 07 18 23.7 Raref.
eP Zs 07 30 41 Near.
eP Zs 07 53 12.9 Raref.
eP Zs 14 01 (02)
iP Zs 16 00 25.0 Raref.
eP Zs 17 17 31
iP Zs 19 32 36.9 Raref.

18th Feb.'63.

eP Zs 11 11 07
eS EsNs 11 (47)
iP Zs 12 18 07.0 Raref.
eS EsNs 19 12
eP Zs 15 45 18
i Zs 45 44.6
e Zs 46 00
eP Zs 15 59 15
eP Zs 16 49 (23)
e(S) EsNs 50 03
iP Zs 19 38 55.3 Raref.
iS EsNs 39 43
eP Zs 20 12 56
eS EsNs 13 20

19th Feb.'63.

eP Zs 07 38 46
eS Es 39 54
eP Zs 08 20 25
eS EsNs 21 35
eP Zs 08 35 22
eS Ns 36 (17)
iP Zs 12 04 52.3 Raref.
iP Zs 12 27 12.0 Comp.
eS Ns 27 38
eP Zs 12 54 21
eP Zs 13 13 (16)
e(P) Zs 13 13 51.0 Raref. } Superimposed
eS Ns 14 22 } Near
eP Zs 15 32 18 } Shocks?
eP Zs 21 04 31
eS EsNs 05 14
iP Zs 22 35 50.4 Raref.
iP Zs 23 52 58.0 Raref.

20th Feb.'63.

eP Zs 00 41 56
eS EsNs 43 03
eP Zs 04 31 33
iP Zs 06 52 20.6 Raref.
eS EsNs 57 10
e(ScP) Zs 57 24
iP Zs 07 43 10.8 Raref.
iS Ns 44 34

20th Feb.'63. (Cont'd.)

eP Zs 08 17 11
eP Zs 08 22 15
iP Zs 08 49 32.0 Raref.
eP Zs 12 20 31
eP Zs 14 20 38
eP Zs 15 26 14
eS EsNs 27 02
iP Zs 15 30 04.7 Raref.
eS Es 30 53
eP Zs 18 21 (33)
eS EsNs 22 14
eP Zs 19 48 17

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FEB 1963

COMMONWEALTH OF AUSTRALIA
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PORT MORESBY GEOPHYSICAL OBSERVATORY
STANDARD SEISMIC STATION PMG
Preliminary Earthquake Phases - 8/63.

21st Feb. '63.

iP Zs 02 41 20.1 Comp.
iP Zs 06 33 52.0 Comp.
eP Zs 13 06 45
iP Zs 14 35 53.2 Comp.
iS Elnl 41 57
i(P) Zs 15 49 25.8 Comp.
eP Zs 17 20 32
iS EsNs 21 34
i(P) Zs 19 51 26.2 Comp.
iP Zs 20 00 02.8 Raref.

22nd Feb. '63.

iP Zs 00 59 36.0 Raref.
iP Zs 08 04 59.1 Comp.
iP Zs 10 11 33.8 Comp.
eP Zs 10 59 11
iS Es 11 00 33
i(P) Zs 11 15 04.2 Comp.
iP Zs 15 57 06.7 Raref.
iS EsNs 57 17
iP Zs 19 17 12.8 Raref.
iS Ns 17 36
iP Zs 20 27 12.7 Comp.
eP Zs 21 09 15
i(S) EsNs 09 37

23rd Feb. '63.

eP Zs 05 13 55
iS Es 14 22
eP Zs 12 38 20
i(S) EsNs 39 19
eP Zs 12 46 08
iS EsNs 46 18
eP Zs 13 14 29
eP Zs 16 06 37
eP Zs 19 13 43
eP Zs 23 15 02
iS EsNs 16 24

24th Feb. '63.

eP Zs 00 43 51
iS Es 44 21
eP Zs 04 01 48
iS EsNs 02 28
iP Zs 06 42 26.0 Raref.
iP Zs 06 59 50.5 Raref.
iS Es 07 00 30
eP Zs 12 26 33
iS Ns 26 52
eP Zs 12 58 03
eP Zs 13 14 21

Zs trace lamp blown 13 23

24th Feb. '63 (Cont'd.)

eP Ns 21 30 (04)
iS EsNs 30 37

25th Feb. '63.

iP Zs 02 51 05.5 Raref.
iS Ns 51 54
eP Zs 06 09 36
eP Zs 06 43 11
i Zs 08 30 55
iP Zs 12 38 09.3 Raref.
iS Ns 38 39
eP Zs 15 24 58
iS Ns 25 39
iP Zs 17 18 42.0
i Zs 18 57
iS Elnl 24 50
iP Zs 18 37 38.5 Raref.
eP Zs 23 08 37
iS Ns 09 05

26th Feb. '63.

eP Zs 05 40 (05)
iS Ns 40 37
eP Zs 10 13 15 Near.
eP Zs 11 14 (52)
e(P) Zs 13 15 43
eP Zs 18 56 38
iP Zs 20 14 46.5 Comp. Very Large.
iP Zs 21 35 10.0 Comp.
i(P) Zs 21 53 25 Comp.

27th Feb. '63.

iP Zs 01 57 17.0 Comp.
iS Es 57 46
iP Zs 04 31 02.5 Raref. Very Large.
iS Nl 31 49

Many aftershocks of shocks 26/2014 and 27/0431. Several in coda of this principal one. Largest only are listed.

iP Zs 05 15 53.1 Raref.
iS EsNs 16 35
iP Zs 05 47 19.2 Comp.
iS Es 47 48
iP Zs 07 45 58.7 (Raref.)
iS Ns 46 43
iP Zs 07 58 41.5 Comp.
iS Es 59 22
iP Zs 11 54 46.5 Raref.
iS Es 55 31
iP Zs 15 29 05.4 Raref.
iS Ns 29 50

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27th Feb.'63 (Cont'd.)

iP		Zs	17	27	13.0	Raref.
iS	Ns		27	56		2nd shock superimposed.
iP		Zs	20	30	21.3	Comp.
iS	Es		31	45		
iP		Zs	21	42	12.9	Comp.
iS	Ns		42	55		
iP		Zs	22	46	16.0	Comp.
iS	Es		46	25		
iP		Zs	23	02	20.4	Comp.
iS	Ns		02	53		
iP		Zs	23	11	35.4	Raref.
iS	Es		12	(19)		

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PORT MORESBY GEOPHYSICAL OBSERVATORY
STANDARD SEISMIC STATION PMG
Preliminary Earthquake Phases - 9/63.

28th Feb. '63.

eP	Zs	01	42	02
iP	Zs	02	40	01.8 Comp.
iS	Ns		40	44½
iP	Zs	03	00	57.8 Comp.
eS	Es		01	42
eP	Zs	03	47	35
eP	Zs	04	17	37
eP	Zs	05	15	03
eS	Ns		15	58
eP	Zs	06	34	28
eS	Es		35	15
eP	Zs	09	30	01
eS	Ns		30	46
eP	Zs	09	53	19
iP	Zs	11	52	51.7 Comp.
eS	Ns		53	33
eP	Zs	12	02	18
eP	Zs	12	58	49
eP	Zs	13	51	35
iP	Zs	13	51	54.5 Comp.
iS	Ns		52	37
iP	Zs	14	56	02.3 Raref.
eS	Es		56	46
eP	Zs	15	01	05
eS	Ns		01	47
eP	Zs	15	32	18
eS	Es		32	58
eP	Zs	15	56	54.0 Comp.
iS	Es		57	40½
iP	Zs	16	54	49.4 Comp.
eS	Ns		55	34
eP	Zs	17	50	40

1st Mar. '63.

iP	Zs	02	05	36 Raref.
iP	Zs	04	37	13.0 Comp.
i	Zs		37	18.0
i	Ns		40	25
i	Zs	04	45	41.9 Raref.
in coda of preceding.				
eP	Zs	05	35	33
eP	Zs	05	51	25
iP	Zs	08	28	10.0 Comp.
eS	Ns		28	50
eP	Zs	10	44	13
e(P)	Zs	10	54	51
iP	Zs	12	16	29.0 Comp.
eS	Es		17	25
eP	Zs	14	42	32
eS	Es		42	54

1st Mar. '63 (Cont'd.)

eP	Zs	16	18	57
eS	Es		20	07
iP	Zs	19	14	42.6 Comp.
iS	EsNs		15	22½
eP	Zs	19	18	04
eS	Ns		18	59
in coda of preceding.				
iP	Zs	20	08	06.1 Comp.
iS	Ns		09	13½

2nd Mar. '63.

iP	Zs	00	21	49.1 Comp.
eS	Ns		22	45
eP	Zs	01	38	23
eP	Zs	04	19	49
High microseisms to end of day.				
eP	Zs	05	41	07
eP	Zs	05	52	20
eP	Zs	10	17	03
iP	Zs	20	12	38.7 Raref.
iS	Ns		13	17

3rd Mar. '63.

High microseisms all day.				
iP	Zs	07	55	22.5 Comp.
eS	Ns		56	06
eP	Zs	09	00	21
eP	Zs	13	50	20
iP	Zs	14	46	08.9 Comp.
iP	Zs	15	25	37.8 Comp.
iS	Es		26	20
eP	Zs	16	00	28
eP	Zs	21	37	40
eS	Es		38	24
eP	Zs	22	18	47
eS	Es		19	45
eP	Zs	23	59	11
eS	Es		59	58

4th Mar. '63.

iP	Zs	03	02	41.1 Raref.
eP	Zs	03	05	38
eS	Es		06	02
eP	Zs	05	03	36
eS	Ns		03	55
eP	Zs	08	43	45
eS	Es		44	25
iP	Zs	12	15	22.1 Comp.
eS	Es		16	53
iP	Zs	13	46	31.0 Comp.
eS	Nl		52	44
eG	Nl		55	53
iP	Zs	15	57	09.0 Raref.
iP	Zs	19	09	14.1 Comp.
eS	El		13	51

5th Mar. '63

eP		Zs	04	59	42	
e P		Zs	07	24	10	
iP		Zs	09	18	22.0	Raref.
eP		Zs	12	51	44	
eS	Ns		52	29		
eP		Zs	13	29	47	
eS	Ns		30	11		
eP		Zs	16	05	16	
eS	Ns		05	39		
iP		Zs	18	08	42.9	Comp.
eS	EsNs		09	22		
iP		Zs	19	06	32.0	Raref.
iS	EsNs		07	12		
eP		Zs	19	31	42	
eP		Zs	19	59	24	
eS	Ns		20	00	23	
eP		Zs	21	18	42	
eS	Es		19	25		
iP		Zs	23	28	37.9	Raref.
eS	S W		29	17		
iP		Zs	23	40	56.0	Comp.
eS	EsNs		41	38		

6th Mar. '63.

eP		Zs	03	18	48	
iP		Zs	06	20	56.9	Raref.
eS	Ns		21	36		
eP		Zs	07	40	31	
iP		Zs	11	34	34.6	Comp.
eS	Es		35	18		
eP		Zs	19	52	03	
eS	El		54	05		
eP		Zs	20	27	24	
eS	Ns		28	08		
iP		Zs	20	41	01.9	Comp.
iS	EsNs		41	46 $\frac{1}{2}$		

(J.A. BROOKS)
Observer-in-Charge.

MAR 1963

COMMONWEALTH OF AUSTRALIA.
DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES.
PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 10/63.

7th March, 1963.

eP Zs 01 49 18
Es 49 53
i(P) Zs 01 54 17.0Comp.
iP Zs 03 45 32.7 Comp.
iS El 49 32
iP Zs 05 08 56.9Raref.
iS Ns 09 39
eP Zs 08 27 10
iP Zs 10 55 53.2Raref. Deep.
eP Zs 10 58 04
eP Zs 12 16 18
iS Ns 17 03
iP Zs 13 03 54.4Raref.
iS Ns 04 39
iP Zs 15 28 20.9Comp.
iS Ns 28 42
iP Zs 19 07 21.6Comp.
iS Ns 08 04
eP Zs 19 46 32
iP Zs 20 33 52.2Comp.
iS Ns 34 59½
iP Zs 22 02 14.1Comp.

8th March, 1963.

eP Zs 01 08 30
iP Zs 02 49 44.2Raref. Deep.
iS El 54 08
iP Zs 03 30 05.8Comp.
iS El 34 35
iP Zs 03 38 15.0Raref.
iP Zs 08 38 37.9Raref.
iS EsNs 39 20½
eP Zs 11 23 09
iS Es 24 06
i(P) Zs 14 06 39.4
i Zs 07 26
eP Zs 14 48 07
iP Zs 16 10 10.8Comp. Deep.
eP Zs 21 59 25

9th March, 1963.

eP Zs 00 38 12
iS Ns 38 49
eP Zs 04 04 51 near.
eP Zs 06 45 01
iS Es 48 38
i(P) Zs 07 14 33.5
eP Zs 08 44 50
i(P) Zs 13 11 24.6 Raref.
eP Zs 13 24 00
iS Ns 24 19

9th March (Cont'd.)

iP Zs 16 25 14.0
i(S) Nl 26 20
eP Zs 18 30 08
eP Zs 18 41 46½
iP Zs 18 57 17.1Raref.
iS ElNl 58 30
i(P) Zs 19 19 04.9(Comp).
iP Zs 19 23 46.9
i(S) Ns 25 29½
i Es 26 05½
eP Zs 21 20 17
iS El 21 28
iP Zs 21 27 13.3Comp.
iP Zs 21 59 13.1Comp.
iS Ns 00 25
iP Zs 22 49 58.4Raref.
eP Zs 22 53 55

10th March, 1963.

eP Zs 01 24 06½
iS El 27 55
iP Zs 01 32 51.2Raref. Deep.
iP Zs 02 22 09.5Raref.
iS Es 22 55
iP Zs 03 01 22.2Comp.
iS Nl 07 37
iP Zs 03 11 19.6Comp.
In coda of preceding.
iP Zs 03 24 45.7Raref.
iS Ns 25 28
iP Zs 03 42 11.0Comp.
iS Ns 42 54
iP Zs 03 50 42.2Raref.
i(P) Zs 07 24 50.0 Raref.
eP Zs 07 38 32
iS Es 39 19
iP Zs 08 17 41.8Raref.
i(P) Zs 09 43 40
eP Zs 12 02 05
iP Zs 13 56 09.2 Comp.
iP Zs 21 09 49.6 Comp.
eP Zs 22 14 55
iS EsNs 15 18

11th March, 1963.

i(P) Zs 02 33 08.9 Raref.
iP Zs 04 16 01.2 Raref.
iS EsNs 16 44
eP Zs 05 48 55
e(P) Zs 07 24 31

11th March (Cont'd.)

iP		Zs 09 08 41.3 Raref.	eP
eP		Zs 09 47 14	iS
iP		Zs 13 45 38.6 Comp.	i(P)
iS	Es	46 35	iS
eP		Zs 17 38 36	eP
iP		Zs 21 10 11.5	iS
iS	ElNl	13 47	iP
iP		Zs 22 59 38.6 Comp.	iS
iS	Ns	59 51	iP

12th March, 1963.

eP		Zs 02 01 20.4
eP		Zs 02 47 32
iS	Ns	48 34
eP		Zs 06 43 54
iS	Ns	44 40
eP		Zs 11 21 43
iS	Ns	22 22
eP		Zs 13 26 59
iS	EsNs	27 41½
eP		Zs 16 34 05 near.
iP		Zs 16 47 35.8
iS	Ns	48 03
iP		Zs 18 29 02.5 Raref.
iS	EsNs	29 30
i(P)		Zs 18 43 50.9 Comp.

12th March (Cont'd.)

	Zs 19 00 00
Ns	00 23
	Zs 20 19 44.5 Raref.
El	23 (44)
	Zs 20 37 47
Ns	38 38
	Zs 20 42 21.9 Comp.
EsNs	44 08
	Zs 23 59 24.8 Comp.
eP	Zs 12 20 (10)
eP	Zs 13 50 (15)
iS	Ns 50 35
eP	Zs 14 05 (17)
eP	Zs 15 11 40
iS	Es 12 17
eP	Zs 19 44 45
iS	Es 45 50½

Microseism level high on 13th.

(J.A. BROOKS).
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MAR 1963

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DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES.
PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 11/63.

14th March, 1963.

17th March (Cont'd.)

eP Zs 08 07 35
eS Nl 13 34
iP Zs 11 55 16.6 Comp.
iS Ns 55 52
eP Zs 14 57 31
eP Zs 15 15 50
eS Es 16 45
iP Zs 16 29 26.4 Comp.
eP Zs 18 51 43
eS Es 53 02
eP Zs 19 37 10
eS Ns 37 44
iP Zs 23 16 25.0 Raref.
eS Ns 17 03

eP Zs 05 09 10
iP Zs 12 35 58.0 Raref.
eS W 36(54)
eP Zs 13 11 59
eP Zs 19 33 26
eS Ns 34 02
eP Zs 20 16 11
eS Es 17 12
iP Zs 22 05 12.7 Raref.
eS Es 05 48
eP Zs 22 26 31
eS Es 27 12

15th March, 1963.

18th March, 1963.

iP Zs 00 07 52.3 Raref.
i! Zs 07 56.0
iS Ns 11 15
eP Zs 00 21 31
e(S) Ns 26 25
eP Zs 00 48 39
eP Zs 03 19 42
eS Ns 20 27
iP Zs 03 41 00.0 Comp.
eP Zs 06 42 07
eP Zs 11 01 08
eP Zs 15 02 27
eS Ns 03 31
iP Zs 16 58 18.4 Comp.
eS Ns 59 09

iP Zs 03 48 50.9 Comp.
iS Es 49 33
eP Zs 03 56 09
iS Es 57 29
eP Zs 04 09 32
iS Ns 10 56
eP Zs 05 47 51
iS Ns 48 32
iP Zs 13 36 52.0 Comp.
eS Ns 37 55
eP Zs 16 11 25
iS Ns 11 43
eP Zs 17 26 32
eS Ns 27 08
iP Zs 23 43 00.9 Raref.

16th March, 1963.

19th March, 1963.

eP Zs 02 21 49
eS Ns 22 20
eP Zs 03 45 32
eS Es 46 41
iP Zs 08 54 27.7 Raref.
ipP Zs 54 39.7
iS Nl 09 02 16
iSS Nl 06(06)
eP Zs 11 25 39
eS Ns 26 18
eP Zs 13 25 43
eP Zs 13 55 55
eS Ns 56 18
iP Zs 15 11 24.3 Comp.
iS Es 12 14
iP Zs 19 47 07.3 Comp.
iS EsNs 47 36
Zs 21 47 32

eP Zs 05 52 19
eP Zs 09 25 13
eP Zs 11 45 03
eS Es 45 47
eP Zs 13 18 54
eP Zs 14 47 35
eP Zs 17 26 48
iP Zs 17 46 52.5 Raref.
i! Zs 46 58.1
eS Es 47 36
eP Zs 18 16 17
eP Zs 20 51 03
eP Zs 23 07 33
eP Zs 23 50 19
eP Zs 23 58 54
eS Ns 59 16

17th March, 1963.

20th March, 1963.

eP Zs 03 13 58
eP Zs 03 17 48

iP 1 Zs 04 49 08.3 Raref.
iP 2 Zs 51 43.6 Raref.
eS 1 Ns 53 51
eS 2 Ns 56 26 Superimposed shocks.

20th March, 1963 (Cont'd.)

eP		Zs	07 08 35
eP		Zs	07 13 58
eP		Zs	09 04 36
iP		Zs	14 42 46.7 Comp.
eP		Zs	14 51 42
✓ eP		Zs	16 41 32
eS	El		44 08
iP		Zs	17 44 36.2 Comp.
eS	Ns		45 20
eP		Zs	21 37 48
iP		Zs	22 15 35.2 Raref.
i		Zs	15 40.4
eS	Es		16 07

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COMMONWEALTH OF AUSTRALIA.
DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES.
GEOPHYSICAL OBSERVATORY - PORT MORESBY.
STANDARD SEISMIC STATION PMG.

Preliminary Earthquake Phases 12/63.

2 - MAR 1963

21st March, 1963.

eP Zs 01 19 55
iP Zs 04 08 42.3 Comp.
iP Zs 04 35 26.5 Comp.
iS EsNs 36 36
iP Zs 10 20 12.9 Raref.
eS EsNs 21 23
e(P) Zs 13 50 39
eS EsNs 51 45
eP Zs 14 05 18

22nd March, 1963.

iP Zs 09 56 53.8 Raref.
iS Es 56 39
eP Zs 12 01 (31)
eP Zs 13 07 31 Near.
eP Zs 14 07 52
iP Zs 16 20 01.0 Raref.

23rd March, 1963.

iP Zs 01 16 47.4 Comp.
iP Zs 02 32 37.0 Raref.
eS EsNs 33 (23)
iP Zs 08 52 55.4 Raref.
iS EsNs 53 53
eP Zs 13 01 56
eS EsNs 02 53
eP Zs 13 32 47 Near.
iP Zs 14 29 42.2 Raref.
iS Es 30 23
iP Zs 21 17 48.7
e Zs 21 19 05
eP Zs 21 26 29
eP Zs 21 41 09
eP Zs 22 15 10
iS Ns 16 06

24th March, 1963.

eP Zs 01 37 41
eS EsNs 38 39
eP Zs 02 12 47
iS El 17 06
iP Zs 09 33 19.0 Raref.
eP Zs 09 49 (08) In coda
of preceding.
eP Zs 09 57 33
eS Ns 58 54
eP Zs 11 03 10
eS Es 03 54
iP Zs 14 29 13.4 Raref.
eS EsNs 30 24
eP Zs 15 44 30
eP Zs 18 27 31

24th March (Cont'd.)

iP Zs 18 33 01.9 Raref.
iS Es 33 45
eP Zs 20 29 43
iP Zs 21 46 17.3 Comp.
eP Zs 22 14 40

Note: PMG Standard Seismographs
inoperative as from 00 hours March
25th during modification and relocation
of recording systems.

Readings temporarily from emergency
instruments in Lawes Road Office.

Lat. 09° 28' 3S Long. 147° 09' 2E
Wilson Lamison SPZ Z
Wood Anderson North-South N
" " East-West E

25th March, 1963.

iP Z 01 29 37
eS EN 30 02
e(P) Z 02 49 53 Near.
i(P) Z 02 50 26
eP Z 03 26 24
iP Z 05 49 44 Near.
iP Z 08 16 10
eP Z 12 58 45
iP Z 20 25 39
iP Z 22 55 22
i Z 55 32

26th March, 1963.

iP Z 05 59 46
eP Z 08 52 34 Near.
eP Z 09 55 40
eP Z 13 32 24
eP Z 14 39 09
eP Z 21 43 05
eP Z 23 26 30
eP Z 23 56 02

27th March, 1963.

iP Z 11 23 00
eP Z 12 39 45 Near.
iP Z 19 31 52
iP Z 19 42 38

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PORT MORESBY GEOPHYSICAL OBSERVATORY

STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 13/63.

28th March, 1963.

1st April (Cont'd.)

iP Z 11 19 48 $\frac{1}{2}$ Raref.

iP Z 03 11 09

29th March, 1963.

iP Z 03 54 01

iP Z 06 09 55 $\frac{1}{2}$ Raref.

iP Z 19 08 10 Comp.
iS NE 08 59

eP Z 11 27 41

iS N 28 09

eP Z 22 04 04

iS NE 05 03

2nd April, 1963.

iP Z 04 59 30 Raref.

iS NE 05 00 12

30th March, 1963.

iP Z 01 58 22 Raref.

iP Z 16 30 02 $\frac{1}{2}$ Raref. Deep

iS N 02 02 24

3rd April, 1963.

iP Z 03 50 51 $\frac{1}{2}$ Raref.

iP Z 01 38 58

iP Z 12 34 16

iP Z 12 04 27

iS NE 34 28

eS E 05(23)

eP Z 17 01 15

eP Z 14 59 51

Microseismic level high 28th-30th.

iP Z 15 19 34 Raref.

iS N 20 16

31st March, 1963.

iP Z 05 38 10 Raref.

iP Z 19 05 48

iP Z 07 08 36 Raref.

iS NE 09(20)

Several aftershocks superimposed,
in coda of preceding.

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iP NE 07 17(11)

iS E 17 56

iP NE 07 19 25

iS NE 20(07)

iP Z 07 34 29 Comp.

iP Z 07 39 59

iS NE 40 49

iP Z 12 10 12

eS NE 10 52

eP Z 14 10(31)

eS NE 11(11)

iP Z 15 59 44 Raref.

iS NE 16 00 15

eP Z 17 26 41

iP Z 17 37 59

eP Z 19 07(29)

iP Z 19 30(14)

1st April, 1963.

iP Z 02 20 56 Raref.

iS NE 21 39

iP Z 02 28 27

iS NE 03 00 09

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PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 14/63.

4th April, 1963.

iP Zs 06 01 04.7 Raref.
eS Ns 01 58
eP Zs 10 48 13
eS Ns 48 53
eP Zs 19 04 52
eS Ns 05 32
eP Zs 21 07 29
eS Ns 08 15
iP Zs 23 29 35.0 Comp.
eS Es 30 04

5th April, 1963.

Standard records faulty.

iP Z 06 01 35.6 Raref.
eS N 03 09
eP Z 07 49 16
eS E N 50 14
iP Z 08 26 54.0 Comp.
eP Z 11 46 48
iP Z 21 28 46.0 Comp.
iS E 29 29

6th April, 1963.

Standard records faulty.

iP Z 02 40 37.9 Comp.
iP Z 02 52 54.6 Comp. $M_L = 6.0$
iS E N 53 43
iP Z 07 09 09.0 Raref.
eP Z 11 32 02
iP Z 21 36 26.7 Raref. $M_L = 5.9$
iS E N

7th April, 1963.

Standard Long Period Records faulty.

eP Z 04 19 34
eP Zs 10 25 26
eS Es 26 11
eP Zs 12 25 49
iP Zs 13 46 49.3 Comp.
eS Es 47 43
eP Zs 15 15 01
iP Zs 15 39 08.0 Raref.
eP Zs 16 26 32
eP Zs 20 50 42
iP Zs 22 44 03.5 Comp.
eS Ns 50 27

8th April, 1963.

iP Zs 06 28 52.5 Raref.
iS Ns 31 48
iP Zs 08 01 50.6 Comp.
eS E1 N1 06 00
eP Zs 11 55 06
eS Ns 56 21

8th April (Cont'd.)

eP Zs 17 42 42
iP Zs 19 36 44.7 Raref.
iS Ns 37 49
** eP Zs 20 54 20
eP Zs 21 58 46
eP Zs 22 39 10
iP Zs 22 43 43.2 Raref.
iP Zs 23 22 29.3 Comp.

9th April, 1963.

Short period vertical component record faulty (Zs).

eP Ns 00 51 52
eS Ns 52 20
iP Ns Z 02 08 28.7 Raref.
iPcP Z 10 44
iS EsNs 13 16
iPcS EsNs 14 36
iP Z 03 25 47.4 Raref.
eP Z 04 37 12
eP Ns 12 22 02
eS Ns 23 06
eP Ns 12 41 40
iP Ns Z 13 49 20.8 Comp.
iS EsNs 50 04
iP Ns Z 14 55 41.2 Raref.
iS E1 56 52

Component Nomenclature:

S - Wood Anderson North South Comp.
W - " " East West "
Z - Wilson Lamison Vertical "
Es - Benioff S.P. East West Comp.
Ns - " S.P. North South "
Zs - " Short Vert. Component.
E1 - Sprengnether L.P. East West Comp.
N1 - " L.P. Nth. South "
Z1 - " L.P. Vertical "

Note: PMG Standard Seismographs resumed operation at 0547 hours on the 4th April, were inoperative on the 5th and 6th and resumed again on the 7th April, 1963.

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** 8th April.

eP Zs 20 10 02
eS Ns 11 07
eP Zs 20 39 08

APR 1963

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PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 15/63.

10th April, 1963.

SPZ record faulty to 1020 GMT.

eP Ns 03 20 17
iP (Zs)Ns,Z 07 55 22.8 Raref.
iS Ns 59 13
eP Zs 11 42 09
iP Zs 12 33 45.7 Raref.
eP Zs 13 44 12
eP Zs 17 25 37

11th April, 1963.

Zs component U/S.

eP Es 03 03 36
eP Es 09 39 25
eP Es 15 17 04
eP Es 16 30 06
iS Es 30 54

12th April, 1963.

Zs component U/S until 1800

iP Ns 00 53 20.2
eP Es 07 50 28
eP Ns 08 49 17
iP Ns 14 33 32.3
iS Es 33 49
eP Zs 20 06 58
iS Es 07 44
eP Zs 20 55 46

13th April, 1963.

eP Zs 02 01 26
iP Zs 02 33 51.5(Comp).
i Zs 35 34.6 Raref.
e(PKIKP) Zs 02 40 02
e Zs 40 35
e Zs 43 18
e El 44 08
e Zs 44 20
e Zs 44 31
e El 49 17
e Zs 52 34
e Zl 54 26
e El 03 00.6
e El 01 38
M_R Zl 26
eP Zs 03 27 30
iP Zs 14 34 24.1 Comp.
iP Zs 15 43 30.2 Raref.
eP Zs 16 19 01
iP Zs 17 38 32.2 Raref.

14th April, 1963.

eP Zs 01 28 17
iP Zs 04 08 20.3 Comp.
eS EsNs 09 01

14th April (Cont'd.)

eP Zs 05 40 01
e Zs 40 11
i(P) Zs 05 42 09
iP Zs 09 18 04.4 Comp.
iS Es 18 44
eP Zs 13 16 17.0 Raref.
eS Ns 17 47
iP Zs 20 57 52.4 Raref.
eP Zs 21 00 47
eS Es 01 27

15th April, 1963.

eP Zs 02 48 12
eP Zs 12 56 26
eP Zs 13 41 47
eS Ns 42 52
eP Zs 15 05 38
eP Zs 20 24 05
eP Zs 23 46 54

16th April, 1963.

iP Zs 01 33 56.8 Comp.
iP Zs 01 44 51.3 Comp.
iP Zs 03 37 05.6 Raref.
eP Zs 03 51 17.7 Raref.
eP Zs 04 14 48
iP Zs 06 32 32.9 Raref.
eP Zs 07 45 31
eP Zs 07 50 13
iP Zs 07 56 54.6 Raref.
iS EsNs 57 41
iP Zs 09 15 04.6 Comp.
iP Zs 11 37 22.2 Comp.near.
eP Zs 12 08 31
eS ElNl 12 21
iP Zs 14 48 15.6 Raref.
eP Zs 20 05 15

17th April, 1963.

iP Zs 02 17 51.0 Comp.
iP Zs 04 07 45.0 Comp.
eP Zs 08 30 44
iP Zs 13 05 39.4 Raref.
iS Ns 06 23
eP Zs 17 06 08
iP Zs 23 50 23.0 Comp.
iS Ns 50 56

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STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 16/63.

18th April, 1963.

iP ✓ Zs 01 58 08.8
eP Zs 02 15 10
iP Zs 02 41 52.0 Raref.
eP Zs 02 53 48
iP Zs 05 09 08.9 Comp.
eS Es 09 49
eP Zs 07 11 48
e(P) Zs 13 22 02
iP Zs 19 15 22.4 Comp.
i(P) Zs 22 05 40.5 Raref.
e Zs 22 07 50

19th April, 1963.

iP Zs 00 37 41.0 Comp.
iS Ns 38 01½
eP Zs 01 47 03
iS Es 48 05½
i(P) Zs 03 52 58.5 Comp.
e(P) Zs 05 50 55
iP Zs 06 54 56.3 Raref.
iS EsNs 55 52½
✓iP Zs 07 46 02.3 Comp.
iS Nl 54 48
e(P) Zs 09 16 58
eP Zs 09 26 42
iS Es 27 12½
eP Zs 14 09 18
iP Zs 15 08 03.9 Raref.
iS Es 09 30
✓iP Zs 16 33 22 Comp.
iS Nl 37 06
eP Zs 19 52 53
iS Ns 53 45½
iP Zs 20 46 06.5 Comp.
eS Nl 54 (08)

20th April, 1963.

eP Zs 01 12 30
iS El 16 10
eP Zs 02 00 (54)
eP Zs 03 48 16
i Es 49 05
i Zl 51 20
eP Zs 11 52 27
iS EsNs 52 44½
eP Zs 12 18 35
iP Zs 23 27 19.0 Raref.

21st April, 1963.

eP Zs 01 26 54
iS Ns 27 36
eP Zs 02 11 21

21st April (Cont'd.)

iP Zs 04 46 05.0 Raref.
iS El 52 26
iP Zs 10 39 58.5 Comp.
iS El 41 09
iP Zs 10 50 45.8 Raref.
eP X Zs 10 55 45
eP Zs 11 04 18
eP Zs 14 17 30
iS Es 18 13
iP Zs 15 04 30.5 Raref.
iS Es 05 15
eP Zs 20 59 (55)
eP Zs 21 22 40
iP Zs 23 21 22.2 Raref.

22nd April, 1963.

eP Es 00 29 34 loss of Z trace.
eP Zs 01 12 05½
eP Zs 01 52 11
iP Zs 04 41 28.2 Comp.
iS Es 41 56
iP Zs 04 56 14.4 Raref. near
eP Zs 07 52 42
iP Zs 08 32 27.6 Comp.
iS Ns 34 01
iP Zs 09 38 03.2 Comp. near.
eP Zs 10 59 20
eS EsNs 11 00 24
iP Zs 15 14 05.7 Comp.
eP Zs 21 59 32

23rd April, 1963.

eP Zs 03 13 51
iS Ns 15 (20)
eP Zs 06 03 12
iS Es 03 56
iP Zs 12 13 11.6 Comp.
iS Es 13 45
i(P) Zs 15 38 53.6
eP Zs 15 47 19
eP Zs 17 36 35
iP Zs 18 53 29.5 Raref.
iS EsNs 54 17½
iP Zs 19 56 01.4 Raref.
iP Zs 20 03 35.0 Raref.
iS Es 04 19
eP Zs 22 26 (43)

Preliminary Earthquake Phases 16/63 (Cont'd.)

Page 2.

24th April, 1963.

eP		Zs	03	56	10	
eP		Zs	05	56	35	
eP	X	Zs	13	49	40	
eP		Zs	17	13	41	} Possibly superimposed shocks.
i		Zs		15	21	
i		Zs		15	31	
iS	Es Ns			15	54	
eP		Zs	19	32	45	
eS	Ns			33	30	
iP		Zs	21	48	50.4	Raref. Deep.
eS	El			56	45	
eP		Zs	22	53	28	

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Preliminary Earthquake Phases 17/63.

25th April, 1963.

27th April (Cont'd.)

iP Zs 01 37 16.3 Comp?
iS EsNs 37 48
eP Zs 04 34 14 $\frac{1}{2}$
iS EsNs 34 55
iP Zs 06 44 08.2 Comp.
eP Zs 07 42 03
iP Zs 07 47 50.0 Comp.
iP Zs 08 18 02.0 Comp.
i Zs 18 19 $\frac{1}{2}$
i(PcP) Zs 23 43
iP Zs 08 58 47.0 Comp.
i(P) Zs 58 56.5
iS Ns 59 44
iP Zs 09 48 03.7 Comp.
iS Es 48 48
i(P) Zs 12 04 01.8 Comp.
iP Zs 13 49 48.5 Raref.
iS Ns 50 44
iP Zs 16 40 27 Raref.
iS N1 44 10
iP Zs 17 56 50.5 Raref.
Deep?
iP Zs 19 29 09.1 Comp.
iS Es 29 27
eP Zs 22 41 37
iS Es 42 23
iP Zs 23 08 12.5 Comp.
iS EsNs 08 59

26th April, 1963.

eP Zs 00 47 57
eS Es 48 38
iP Zs 01 46 52.5 Raref.
iS Ns 47 36
eP Zs 05 44 19
iP Zs 06 50 40.8 Raref.
iS EsNs 51 24 $\frac{1}{2}$
eP Zs 07 34 31
eP Zs 08 25 35
iP Zs 08 51 09.0 Comp.
iS Es 51 56
eP Zs 09 25 52
eP Zs 15 40 50
iP Zs 23 25 07.8 Comp.
iS Ns 25 51
eP Zs 23 50 32
iP Zs 23 52 43.2 Raref.
i Zs 52 55.5

27th April, 1963.

eP Zs 01 37 00
eS EsNs 37 19

iP Zs 03 38 00.4 Raref.
iP Zs 07 56 35.5 Raref.
iS Ns 56 47
eP Zs 08 21 03
eS EsNs 21 13
eP Zs 08 40 58
eP Zs 08 47 35
eS E1N1 51 24
iP Zs 09 11 03.7 Raref.
eS Es 12 11
eP Zs 10 30 14
iP Zs 11 15 24.4 Raref.
iP Zs 14 03 12.1 Raref.
iS Ns 04 20
iP Zs 15 06 19.0 Comp.
eP Zs 16 48 58
eS Ns 49 35
eP Zs 17 22 12
eP Zs 23 19 00
iP Zs 23 24 24.5 Comp.
eS Ns 25 08

28th April, 1963.

eP Zs 01 36 51
eS Es 37 43
eP Zs 01 55 44
eS E1 59 29
eP Zs 02 14 30
eP Zs 02 35 27
eP Zs 04 40 40
eP Zs 06 09 17
eP Zs 07 10 54
eP Zs 13 25 27
eS Ns 26 40
eP Zs 14 22 11
eP Zs 14 27 28
eP Zs 15 47 49
iP Zs 17 02 22.3 Raref.
iS Ns 03 01
eP Zs 17 32 56
eP Zs 17 45 11
eP Zs 18 16 38
eP Zs 19 48 35
eP Zs 22 57 58
eS Ns 23 00 57
iP Zs 23 48 17.8 Raref.
eS Es 49 04

29th April, 1963.

eP Zs 04 44 51
iP Zs 05 11 14.1 Comp.

29th April, 1963 (Cont'd.)

1st May, 1963.

eP Zs 05 44 50
eP Zs 06 07 25
eP Zs 07 47 42
eP Zs 08 38 23
eP Zs 08 56 37
eS Ns 56 53
eP Zs 09 41 18
iP Zs 09 49 46.5Raref.
eP Zs 12 44 13
eS Ns 44 48
eP Zs 13 40 30
iP Zs 15 01 22.1Raref.
eS Nl 09 10
e(SS) Nl 12 58
iP Zs 18 55 07.9Raref.
iS Es 55 51
eP Zs 21 10 16
eS Es 10 36
eP Zs 21 55 01
eS El 22 03 48
eG El 11 00
eP Zs 21 59 51
eS Es 22 00 19
eP Zs 22 23 35

eP Zs 00 21 02
eS Es 21 28
eP Zs 00 30 11.1
eS Es 31 38½
eP Zs 02 54 37
eS Ns 55 51
eP Zs 02 58 27
iP ✓ Zs 10 08 14.7
eP Zs 16 12 41
eS Ns 13 33
iP Zs 20 46 14.1Raref.
eS Ns 46 52
eP Zs 20 53 38
eS Ns 53 58
iP Zs 22 53 16.3 Comp.
eS Ns 53 47

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30th April, 1963.

iP Zs 01 02 49.0Raref.
e Ns 03 45
e(S) Ns 06 57
eP Zs 01 32 18 in coda of
preceding.
eP Zs 02 24 16
iP Zs 02 40 28.7Raref.
eP Zs 03 24 17
eS Es 25 02
eP Zs 03 36 48
eP Zs 04 53 07
eS Es 53 29
eP Zs 04 54 48
eP Zs 07 18 38
eP Zs 07 48 22
eP Zs 10 01 07
eS Es 01 34
eP Zs 10 30 33
eP Zs 11 58 15
eP Zs 14 04 45
eP Zs 16 20 16

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Preliminary Earthquake Phases 18/63.

Standard Seismograph Magnification Factors.

SP : 50,000 at 1 sec.
LP : 3,000 at 30 secs.

2nd May, 1963.

iP		Zs	01	59	44.1 Comp.
iS	Es		02	00	42
eP		Zs	03	33	(16)
eS	EsNs		03	34	00
eP		Zs	04	00	14
eP		Zs	04	16	33
eS	Ns		17	14	
iP		Zs	06	47	29.3 Comp.
iP		Zs	09	26	24.1 Comp.
iP		Zs	10	22	02.5 Comp.
iS	Ns		22	46	
iP		Zs	10	51	(47)
eS	Es		53	10	
eP		Zs	14	20	51
eS	Es Ns		21	39	
iP		Zs	16	55	04.5 Raref.
iS	Es		55	25	
eP		Zs	18	50	03
eP		Zs	21	25	30
eS	Es		26	39	

3rd May, 1963.

iP		Zs	07	35	32.3 Raref.
iS	Ns		07	36	19
eP		Zs	11	02	09
eS	El		08	(20)	
eP		Ns	16	36	11
iS	Ns		36	(55)	

4th May, 1963.

eP		Zs	02	32	45
eS	Es			33	30
eP		Zs	03	23	47
eS	Ns		24	07	
iP		Zs	08	46	35.3 Comp.
iS	Es			47	21
iP		Zs	13	23	17.0 Comp.
iS	EsNs		23	32	

5th May, 1963.

iP		Zs	01	41	38.8 Comp.
iS	Es			42	18
eP		Zs	02	12	(27)
iS	Es		13	12	
eP		Zs	12	15	57
eS	EsNs		16	40	
eP		Zs	17	19	13
iP		Zs	20	14	02.6 Comp.
iS	Es		14	43	

6th May, 1963.

iP		Zs	05	56	02.3 Comp.
iP		Zs	08	45	13.0 Raref.
iP		Zs	19	26	01.5 Raref.
eS	Ns		27	13	

7th May, 1963.

eP		Zs	05	06	36
eP		Zs	07	21	02
iS	Es			21	23
iP		Zs	09	08	28.2 Raref.
iS	Es			09	12
eP		Zs	11	58	57
iS	EsNs			59	58
eP		Zs	13	16	(49)
iS	EsNs			18	02

8th May, 1963.

iP		Zs	02	35	38.7 Raref.
iS	EsNs			36	18
eP		Zs	06	24	15
eS	Es			24	34
iP		Zs	09	02	35.0 Comp.
eP		Zl	10	30	38 P superimpos-
iS	Nl		37	06	ed on small
					near shock on
					Zs record.
iP		Zs	15	29	28.0 Comp.
iS	El			33	(55)
i(ScP)		Zs		36	31
i(PcS)		Zs		36	55
eP		Zs	18	17	(50) Near.
eP		Zs	22	11	(00)
iS	Ns			11	46

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PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 19/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 3,000 at 30 secs. through May 13th.
1,500 at 30 secs. from May 14th.

9th May, 1963.

iP	Zs	02	02	35.4	Raref.
eP	Zs	03	27	20	Near.
i(P)	Zs	04	38	16.0	Raref.
eP	Zs	07	26	06	
eP	Zs	23	10	29	
eS	Es		11	09	

10th May, 1963.

eP	Zs	01	55	31	
iS	Es		56	32	
✓ iP	Zs	04	33	45.3	
✓ iS	Zl		38	21	
eP	Zs	08	59	01	Near.
eP	Zs	09	18	21	Near.
iP	Zs	10	35	51.6	Comp.
iP	Zs	14	39	02.2	Raref.
eP	Zs	16	10	59	
iS	Ns		11	46	
✓ iP	Zs	22	42	02.5	Raref.
✓ iS	El		44	31	

11th May, 1963.

eP	Zs	02	18	38	Near.
iP	Zs	03	31	00.5	Near.
eP	Zs	03	51	31	
iS	Es		52	12½	
✓ i(P)	Zs	04	50	48.6	Raref.
eP	Zs	05	11	53	
eP	Zs	07	03	56	
iP	Zs	07	55	48.8	Comp.
eP	Zs	10	45	23	
iP	Zs	11	51	27.0	Comp.
eP	Zs	14	48	32	
✓ iP	Zs	17	57	25.3	Comp.
✓ iS	El		18	03	42

12th May, 1963.

eP	Zs	06	18	25	
✓ iP	Zs	09	51	42.1	Comp. Deep.
✓ iPoP	Zs		54	53	
eS	Nl		58	(48)	
eP	Zs	10	22	18	
iS	Ns		23	05	
iP	Zs	16	08	32.2	Raref. Near.
iP	Zs	19	23	59.0	Raref.
✓ iP	Zs	20	20	55.0	Raref.
✓ i(P)	Zs	20	48	19.7	Raref.
eP	Zs	22	25	09	

13th May, 1963.

i(P)	Zs	02	06	32.8	Comp.
eP	Zs	06	44	45	near.
iX	Zs	07	16	52.2	Comp.
eP	Zs	11	07	35	
✓ iP	Zs	14	12	44.3	Raref.
eP	Zs	15	14	50	Near.
iP	Zs	16	23	21.8	Comp?
iS	Ns		24	08½	
iP	Zs	17	37	45.2	Comp.
eP	Zs	21	44	39	
iP	Zs	22	49	11.0	Raref.
iS	Es		50	(01)	

14th May, 1963.

i(P)	Zs	12	08	49.9	Comp.
eP	Zs	12	46	30	
iP	Zs	13	18	21.7	Comp.
iS	Ns		19	01½	
iP	Zs	15	12	47.9	Raref.
eP	Zs	20	59	34	
eP	Zs	23	16	40	
iS	Es Ns		18	05	

15th May, 1963.

eP	Zs	01	10	17	
iP	Zs	02	02	47.6	Raref.
iS	Ns		03	22	
✓ iP	Zs	02	54	07.6	Raref.
✓ iS	Ns		55	28	
eP	Zs	03	01	49½	in coda of preceding.
eP	Zs	04	58	51	
iS	Ns		59	26	
i(P)		05	04	12.4	
eP	Zs	05	40	40	
eS	Es		41	27	
eP	Zs	05	51	30	
✓ iP	Zs	06	50	45.0	Comp.
i(P)	Zs	08	46	20	
✓ iP	Zs	12	28	01.1	Raref.
i(PKIKP)	Zs	17	05	17.2	Comp.
eP	Zs	20	34	52	
iP	Zs	21	53	15.5	Raref.
iS	Es		54	04	

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STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 20/63.

Standard Seismigraph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 1,500 at 30 secs.

16th May, 1963.

eP Zs 01 31 02
iS Es 31 47

eP Zs 01 36 56
eP Zs 02 01 19
eS Es 01 54

eP Zs 07 32 02
iS Es 33 00

iP Zs 10 02 59.8 Comp.
iS Es 03 24

eP Zs 12 11 49

iP Zs 13 09 15.6 Comp.
iS Es 10 09

eP Zs 14 23 40

✓ eP Zs 15 56 50 Comp.
iS N1 16 00 35

eP Zs 16 05 42

✓ eP Zs 16 22 32
e(S) N1 26 22

iP Zs 19 26 12.6 Raref.

eP Zs 22 45 16

iP Zs 23 17 53.8 Raref.
iS Ns 18 32

17th May, 1963.

eP Zs 00 52 55
eS Es Ns 53 19

✓ eP Zs 06 16 13
eS N1 22 24

eP Zs 11 32 (14)

eP Zs 11 43 05
iS Ns 43 20

eP Zs 13 09 21
iS Ns 09 42

eP Zs 13 24 15
eS Ns 24 49

iP Zs 17 20 56.0 Comp.

eP Zs 20 03 40
iS Es 04 47

eP Zs 21 35 32 Raref.

17th May (Cont'd.)

iP Zs 22 27 36.7 Raref.
iS Es Ns 28 19

✓ iP Zs 22 47 11.5 Raref.
eS El N1 55 (48)

18th May, 1963.

iP Zs 02 04 02.0 Raref.

eP Zs 04 28 (32)

iP Zs 11 46 37.7 Comp.
eP Es 47 18

✓ e(P) Zs 12 26 08
e(S) N1 31 49

✓ e(P) Zs 13 09 42

iP Zs 14 11 24.3 Raref.
iS Es 12 06

eP Zs 17 32 28
eS Es 32 44

eP Zs 21 58 01
eS Es 59 31

eP Zs 23 45 48
eS Ns 46 52

19th May, 1963.

✓ ePKIKP Z1 01 22 16
i(PF) Zs Z1 22 26
eSKS N1 28 (34)
iPS N1 Z1 32 04
eSS N1 38 24

eP Zs 03 55 02
eS Es 55 52

eP Zs 05 50 01
eS Es 50 41

eP Zs 06 29 58
iS Es Ns 31 20

✓ eP Zs 19 26 02

✓ ePKP Zs Z1 21 55 56
ePP Zs Z1 22 00 22

iP Zs 22 12 44.2 Raref.
iS Es 13 28.5

20th May, 1963.

iP Zs 03 39 37.7 Comp.

eP Zs 03 55 48
eS Ns 57 15

...../2

STANDARD SEISMIC STATION PMG.

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20th May, 1963.

eP		Zs	04	50	10	
eS	Ns			50	52	
iP		Zs	05	17	44.4	Raref.
eP		Zs	05	34	48	
eS	Es			35	12	
iP		Zs	10	24	31.9	
eS	Es			25	16	
iP		Zs	11	45	23.9	Comp.
ipP		Zl		46	20	
i(PF)		Zl		47	13	
eS	El			51	16	
G	Nl			54	20	
eP		Zs	13	46	14	
i		Zs		47	50	

in coda of preceding.

eP		Zs	21	09	39	
e(S)	El			13	43	
iP		Zs	23	44	36.9	
iS	Es Ns			45	20	

21st May, 1963.

eP		Zs	03	57	51	
eS	Es			58	28	
iP		Zs	05	33	15.2	Raref.
eP		Zs	09	50	05	
eP		Zs	15	19	48	
e(S)	El			23	20	
i		Zs		23	32.2	
e	Es			23	33	
iP		Zs	17	34	00.9	Comp.
iS	El Nl			37	02	
iP		Zs	17	53	12.0	Raref.
eS	Ns			53	50	

in coda of preceding.

eP in coda of preceding.

21st May, 1963 (Cont'd.)

eP		Zs	20	24	53	
eP		Zs	21	38	12	
eS	Es Ns			38	43	
eP		Zs	22	38	03	
eS	Ns			38	33	

22nd May, 1963.

eP		Zs	00	07	25	
iP		Zs	Zl	02	31	36.0 Raref.
eS	Nl			34	42	
eP		Zs	10	22	16	
e(S)	Es			26	11	
eP		Zs	11	10	02	
eS	Es			10	(32)	
iP		Zs	12	17	55.6	Comp.
eS	Es Ns			18	(27)	
iP		Zs	Zl	14	06	37.7 Comp.
eS	El			14	27	
iP		Zs	15	47	55.1	Raref.
i(S)	El Nl			52	02	
eP		Zs	Zl	21	59	18
eS	Nl			22	04	14
eP		Zs	22	16	48	

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GEOPHYSICAL OBSERVATORY - PORT MORESBY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 22/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 1,500 at 30 secs.

30th May, 1963.

31st May (Cont'd).

eP Zs 05 05 (37) Near.
iS Ns 05 39

iP Zs 05 41 01.0 Raref.
eS Es 46 36

iP Zs 05 58 40.5 Raref.
eS Es 06 00 (25)

✓ eP ZL Zs 07 04 24
iS EL NL 11 04
i(S) EL 14 34

eP Zs 07 25 (34)
eS Es Ns 25 48

eP Zs 07 59 (06)
eS Ns 59 24

eP Zs 08 10 16
iS Es Ns 10 58

iP Zs 10 16 24.3 Raref.
eS Es 16 53

eP Zs 13 44 (56)

iP Zs 20 37 39.5 Raref.

eP Zs 21 53 32
eS Ns 54 56

31st May, 1963.

eP Zs 00 25 00
iS Ns 25 21

eP Zs 00 50 (07)

eP Zs 03 45 47

eP Zs 05 56 12

✓ eP Zs ZL 06 11 02
e(S) EL ZL 17 18
e EL ZL 20 40
M ZL 23.3

✓ eP Zs 06 16 05

eP Zs 07 00 (06)

eP Zs 10 47 12
eS Es Ns 47 59

iP Zs 11 02 31.0 Comp.
iS Es Ns 02 39

eP Zs 11 58 31

iP Zs 12 07 28.0 Comp.

eP Zs 13 55 (32)
eS Es Ns 56 07

eP Zs 15 19 22

eP Zs 15 49 19

1st June, 1963.

✓ eP Zs 00 06 14
e EL NL 12 23
i EL NL 15 40

iP Zs 01 04 30.0 Comp.

eS Es Ns 01 05 13

eP Zs 01 12 11
eS Ns 13 02

eP Zs 01 55 14

eP Zs 05 23 (15)

eP Zs 07 51 53

eP Zs 08 01 11
eS Es Ns 01 33

eP Zs 09 30 (25)

✓ iP Zs 11 02 47.0

eP Zs 11 17 18

eP Zs 15 30 (09)
eS Ns 30 29

eP Zs 16 58 13
eS Es 59 32

eP Zs 20 15 35
e(P) Zs 21 13 40
e(S) NL 18 14

✓ iP Zs 21 21 18.2 Comp.
eS Es Ns 27 (34)
i(SS) NL 30 41
i(LQ) Es Ns 31 06

2nd June, 1963.

eP Zs 07 12 40
eS Es 13 23

2nd June, 1963 (Cont'd.)

iP		Zs	10	01	53.8
iS	El N1			03	28
iIR	El	Z1		04	05
M		Z1		06.5	
eP		Zs	15	22	42
iP		Zs	16	17	46.4 Comp.
eS	Es Ns		18	51	
iP		Zs	17	23	28.9
eS	Es Ns		23	48	
iP		Zs	17	54	21.0
eS	Es Ns		55	05	
iP		Zs	21	14	34.2 Comp.
e(PF)		Z1	21	23	28
e(PFF)		Z1		25	44
e(S)	N1			33	00
e(PS)	El N1			39	07

4th June, (Cont'd.)

eP		Zs	03	19	43
iP		Zs	07	19	22.6 Comp.
iX		Zs		19	25.7
eP		Zs	07	24	(20)
iP		Zs	09	31	27.0 Comp.
iS	Es Ns		32	06	
iP		Z1 Zs	12	01	32.6 Raref.
i(PcP)		Z1		03	13
e(PcS)	El N1			07	06
eS	El			08	07
eLQ	El N1			10	32
eP	N1 Z1			12	49
M	Z1			17.5	

e(P)		Zs	13	13	(20)
eP		Zs	14	01	(24)
eS	Es Ns		01	57	
iP		Zs	14	48	02.0 Raref.
eS	Es		51	(20)	
e(P)		Zs	18	05	14
eP		Zs	18	34	33
eS	Es		35	41	
iP		Z1 Zs	19	27	39.6
eS	Es El N1		32	15	
eP		Zs	19	45	14
eS	Es Ns		50	00	
iP		Zs	19	53	49.8
eS	Ns		54	28	
eP		Z1 Zs	21	09	27
iS	El		13	20	

3rd June, 1963.

eP		Zs	00	06	01
eS	Es Ns		06	30	
eP		Zs	07	12	47
iS	Ns		13	04	
iP		Zs	07	25	19.6 (Raref.)
iP		Zs	07	37	03.7 (Raref.)
eS	Ns		38	12	
iP		Zs	07	44	03.1 Raref.
eS	El N1		50	22	
iP		Zs	14	21	42.3 Raref.
eP		Zs	14	50	59
eP		Zs	15	54	(22)
iS	Es Ns		54	48	
iP		Zs	18	57	19.7 Comp.
eP		Zs	19	48	(21)
iS	Es Ns		48	46	
eP		Zs	22	03	47
eS	Es Ns		04	46	

4th June, 1963.

eP		Zs	00	04	21
e(PF)		Zs		04	38.2
eP		Zs	00	27	42
eS	Es		28	05	
iP		Zs	01	14	12.0 Raref.
eS	Es		14	55	
eP		Zs	02	47	11
eS	Es Ns		48	37	

5th June, 1963.

Time marks unreliable 01-04 hours.

eP		Zs	05	42	48
eP		Zs	07	37	25
eS	Ns		37	45	
iP		Zs	08	01	29.9 Comp.
i		Zs	08	56	33.1
eP		Zs	09	19	27
eP		Zs	10	16	41
eS	El		20	(24)	
eP		Zs	11	21	41
i	El		22	49	
eP		Zs	12	34	31

STANDARD SEISMIC STATION PMG.

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5th June (Cont'd.)

eP		Zs	12	58	31
iS	Es Ns			59	09

eP		Zs	14	14	(37)
iS	El			20	20

eP		Zs	15	39	56
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eP		Zs	17	17	59
iS	Ns			18	39

eP		Zs	17	54	54
----	--	----	----	----	----

iP		Zs	22	08	15.6 Reref.
iS	Ns			08	54½

eP		Zs	22	33	46
eS	Ns			35	07

iP		Zs	22	46	48.8 Reref.
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iP		Zs	23	00	08.0 Reref.Deep.
iS	Nl			03	14

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COMMONWEALTH OF AUSTRALIA.
DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES.
GEOPHYSICAL OBSERVATORY - PORT MORESBY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 23/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 1,500 at 30 secs.

6th June, 1963.

7th June (Cont'd.)

iP ✓ Zs 05 26 20.0 Comp.
eS ✓ N1 32 19
eP Zs 05 44 45
eS Es 45 17
iP Zs 06 24 07.8 Comp.
iS Ns 24 45½
eP Zs 06 29 47
iP Zs 08 30 40.2 Comp.
eP Zs 12 15 12
eS ✓ N1 24 14
iP ✓ Zs 17 47 12.4 Comp.
eS ✓ Es 50 54
eP Zs 18 23 35
eS Es 24 18
eP Zs 18 44 24
eS Ns 45 10
eP Zs 18 56 26
eP Zs 20 54 42
eP Zs 22 47 28
iP Zs 23 49 38.1 Comp.

7th June, 1963.

eP Zs 03 21 10
eS Ns 21 26
eP Zs 04 48 02
eS Ns 48 46
iP Zs 05 01 08.4 Raref.
iS Ns 01 26
eP Zs 05 04 01
iS Ns 04 45
iP Zs 05 47 23.7 Comp.
iS Ns 47 59½
iP Zs 05 51 49.9 Raref.
iS Ns 52 29
iP Zs 06 00 13.1 Raref.
iP Zs 09 28 53.0 Comp.
iS Ns 29 16
eP Zs 09 48 50
eP Zs 10 44 27

eP Zs 11 00 13
eP Zs 15 41 26
eS El 46 54
eP Zs 15 57 09
eS ✓ Ns 16 03 (14)
iP Zs 16 20 15.0 Comp.
eP Zs 17 10 17
eS Ns 11 20
eP Zs 21 36 25
eS Ns 37 50
eP Zs 22 39 22
eP Zs 22 44 58
eS El 51 12

8th June, 1963.

eP Zs 01 09 20
eS El 15 40
eP Zs 02 06 12
iP Zs 05 35 06.0 Raref.
iS Es Ns 36 04
eP Zs 06 35 06
eS Ns 35 56
eP Zs 06 50 23
eP Zs 12 41 13
eS Es 41 46
eP Zs 14 33 36

9th June, 1963.

eP Zs 00 17 24
eS Es 18 02
eP Zs 01 37 48
eP Zs 02 38 05
eP Zs 03 19 17
eP Zs 04 02 48
eP Zs 05 01 42
iS Es 02 08½
eP Zs 09 07 49

STANDARD SEISMIC STATION FMG.

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9th June, 1963. (Cont'd.)

eP Zs 14 55 26
eS Es 56 44

eP Zs 16 52 27
eS Es 53 36

10th June, 1963.

iP Zs 00 12 22.6 Raref.
iS Ns 13 03

iP Zs 04 24 58.9 Raref.
eS El 31 47

iP Zs 06 47 26.2 Raref.
eS El 54 14

eP Zs 08 02 03
iS Es 02 43½

iP Zs 12 21 33.0 Comp.
iS Ns 22 49.5

iP Zs 13 45 48.5 Raref.
eS Ns 46 35

eP Zs 15 53 09

iP Zs 16 08 28.7 Comp.
iS Ns 09 16

iP Zs 18 43 37.6 Raref.
iS Ns 44 41½

eP Zs 20 38 52
eS Ns 39 53

11th June, 1963.

iP Zs 00 00 31.7 Comp.
eS S, W 01 53.7

eP Zs 11 16 51
eS Ns 17 46

iP Zs 17 19 15.0 Raref.

iP Zs 17 19 40.1 Raref.

e Zs 21 10 27

eP Zs 21 40 11

12th June, 1963.

eP Zs 02 31 06

iP Zs 02 33 14.0 Raref.

iP Zs 05 27 35.9 Comp.
eS Ns 28 18

iP Zs 14 50 01.4 Comp.
eS Ns 50 41

iP Zs 15 24 00.1 Comp.
iS Ns 25 04½

eP Zs 21 04 46
eS Ns 05 34

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COMMONWEALTH OF AUSTRALIA.
NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES.
PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 24/63.

Standard Seismograph Magnification Factors.

SP - 50,000 at 1 sec.
LP - 1,500 at 30 secs.

13th June, 1963.

iP	Zs	01	28	30.5	Raref.
iS	Ns		29	27½	
eP	Zs	03	41	18	
iS	Ns		42	24	
eP	Zs	10	00	38	
iS	Ns		00	48	
iP	Zs	10	38	43.5	Comp.
i(S)	Ns		41	41	
iP	Zs	16	12	32	
iS	Ns		13	17½	
iP	Zs	17	28	31	Comp.
iS	EsEl		29	54½	
iP	Zs	19	31	46	
i(S)	Es		32	23	

14th June, 1963.

eP	Zs	12	19	05	
e(P)	Zs	14	51	(25)	
iS	Ns		52	06	
i(P)	Zs	15	58	23.2	Comp.
iP	Zs	16	36	47.8	Raref.
iP	Zs	21	42	50.0	Comp.
iS	Ns		46	55	
iP	Zs	22	52	17.3	
iS	Ns		52	37	

15th June, 1963.

iP	Zs	01	13	21.0	(Raref)
eP	Zs	02	06	40	
iS	Es		07	19	
iP	Zs	05	08	13.5	Comp. Deep?
eP	Zs	10	11	18	
iS	Ns		12	10	
eP	Zs	10	54	(31)	
iS	Ns		54	56	
eP	Zs	13	59	15	
iS	Es	14	00	(09)	
eP	Zs	21	16	35	
iS	Es		17	39	
iP	Zs	23	15	52.1	Comp.
iS	Ns		16	59	

16th June, 1963.

iP	Zs	05	08	19.7	Raref.
iS	Es		09	(48)	
eP	Zs	13	11	29	Near.
eP	Zs	13	17	34	
iS	Es		17	55½	

16th June (Cont'd.)

iP	Zs	13	50	50.0	Raref.
iS	Ns		52	11	
eP	Zs	13	56	(20)	
iS	Es		56	48	
eP	Zs	16	59	14	
iS	EsNs	17	00	10	
eP	Zs	18	51	17	
iS	Es		51	59	

17th June, 1963.

iP	Zs	02	12	59.1	Raref. Deep?
eP	Zs	07	06	47	Near.
iP	Zs	17	43	40.3	Comp. Deep.
iP	Zs	18	41	04.9	Comp.
iS	El		49	30	
iP	Zs	20	16	00	Raref.
iP	Zs	23	10	14.9	Comp.
iS	Ns		16	47	

18th June, 1963.

iP	Zs	01	17	41.0	Raref.
iS	Es		18	51	
eP	Zs	01	38	(38)	Near.
e(P)	Zs	04	10	22	

19th June, 1963.

iP	Zs	00	20	40.8	Raref
iS	Ns		21	19	
eP	Zs	01	32	34	
iS	Ns		33	43	
eP	Zs	08	39	17	
iS	Es		39	49	
i(P)	Zs	09	14	18	(Raref.)
iS	Nl		18	33	
iP	Zs	10	58	07.7	Raref.
e(P)	Zs	12	01	47	
iS	El		04	13	
iP	Zs	18	24	12.8	Raref.
iS	Es		25	49	
eP	Zs	20	47	16	
iS	Ns		47	58	

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COMMONWEALTH OF AUSTRALIA.
DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES.
PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 25/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 1,500 at 30 secs.

20th June, 1963.

iP Zs 03 17 51.6 Comp.
iS Ns 18 44
iP Zs 06 42 24.7 Reref.
eS EsNs 43 10
eP Zs 18 09 13
iP Zs 19 26 33.9 Reref.
eS EsNs 27 16
eP Zs 22 53 40

21st June, 1963.

eP Zs 03 53 58
eS EsNs 54 06
eP Zs 07 40 35
eS EsNs 41 15
eP Zs 12 57 05
eS EsNs 57(42)
iP Zs 14 14 27.9 Reref.
eP Zs 14 34 53.0 Reref.
iP Zs 15 06 45.7 Reref.
iP Zs 15 37 12.1 Comp.
eP Zs 17 04 (24)
eS EsNs 05 07
eP Zs 21 05 24
eS Es 06 (00)

22nd June, 1963.

eP Zs 02 16 50
eS EsNs 18 19
iP Zs 04 39 14.5 Comp.
eP EsNs 40 45
iP Zs 06 43 18.0 Reref.
iP Zs 06 51 25.7 Reref.
eP Zs 12 01 50
iS Ns 02 32
iP Zs 16 18 11.0 Reref.
eP Zs 20 03 18
iS EsNs 04 15
iP Zs 20 12 23.8 Reref.
iS Es 13 21
eP Zs 21 16 56
iS EsNs 17 53
iP Zs 21 37 42.1 Comp.
iS Ns 38 48

23rd June, 1963.

eP Zs 03 56 53
eP Zs 08 48 55
eS EsNs 49 52

23rd June (Cont'd.)

iP Zs 08 54 01.0 Reref.
eP Zs 14 33 31
iS Es 34 07
eP Zs 16 28 09
iS Ns 28 29
iP Zs 18 32 08.0 Reref.

24th June, 1963.

iP Zs 03 03 01.0 Comp.
iP Zs 04 39 03.0 Comp.
i(pP) NsZs 39 12
iPP NsZs 42 21
i EsEl 49 26
i NsNl 49 33 S&SKS?
eSS Nl 55.0
iP Zs 05 53 39.9 Comp.
iP Zs 13 25 09.2 Comp.
i Zs 25 22
iP Zs 15 58 48.9 Reref.
eP Zs 16 28 31
eS ElNl 37 45
e(P) Zs 22 29 48
iP Zs 23 32 01.8 Comp.
eS EsNs 32 42

25th June, 1963.

iP Zs 02 35 47.2 Comp.
iP Zs 02 48 56.0 Comp.
iP Zs 10 33 21.9 Comp.
i(P) Zs 10 33 35.5 Comp.
eP Zs 11 35 05
eS EsNs 36 15
e(P) Zs 12 22 25
iP Zs 14 39 46.1
iP Zs 16 11 05.3 Comp.
eP Zs 23 29 23
eS EsNs 30 02
eP Zs 23 41 18
eS EsNs 42 41

26th June, 1963.

eP Zs 03 00 16
iS EsNs 01 36
eP Zs 05 39 44
eS EsNs 40 29
eP Zs 07 40 28

STANDARD SEISMIC STATION PMG.

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26th June, 1963 (Cont'd.)

eP	Zs	08	00	24	
/ eP	Zs	09	46	52	
/ iP	Zs	14	21	21.7	Raref.
i	Zs		21	49	
iP	Zs	16	58	50.1	Comp.
iP	Zs	22	10	33.8	Comp.
iS	Es	Ns	11	07	

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COMMONWEALTH OF AUSTRALIA.
DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES.
PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 26/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 1,500 at 30 sec.

30th June, 1963.

27th June, 1963.

eP Zs 03 51 17
iS Es 52 09
iP Zs 07 29 54.5 Comp.
eP Zs 11 07 10
iS Es 08 06
eP Zs 12 50 36
iS Es 51 37
iP Zs 15 42 42.2 Comp.
iP Zs 18 32 41.0 Raref.
iS EsNs 33 28
iP Zs 20 14 26.3
iS Ns 15 38

28th June, 1963.

iP Zs 02 40 49.4 Comp.
eP Zs 03 32 40
eS Ns 33 21
eP Zs 10 46 12 Near.
iP Zs 13 56 44.4 Comp.
iP Zs 17 11 34.3 Raref.
iS Es 12 14
iP Zs 22 05 18.8 Raref.
iS ELNL 13 04
i(ScS) EL 14 40
i(SSS) EL 18(40)
iP Zs 23 18 14.8 Comp.
iS Es 19 11

29th June, 1963.

Time correction doubtful within 1 sec.

eP Zs 01 51 (33)
eS Es 52 (28)
eP Zs 02 12 (16)
eS Es 13 (07)
eP Zs 05 21 (12)
eS EsNs 21 (49)
iP Zs 12 48 (32.9) Raref.
iP Zs 13 09 (09.3) Raref.
eP Zs 13 19 (30)
iP Zs 13 23 (49.2) Raref.
iP Zs 13 52 (09.2) Comp.
eP Zs 17 41 (49)
iP Zs 20 20 (26.9) Raref.
iS Es 21 (03)
iP Zs 23 07 (41.9) Raref.
eP Zs 23 31 (35)

iP Zs 01 44 51.7 Raref.
iP Zs 02 10 03.9 Comp.
eP Zs 04 10 07
eS Es 10 51
iP Zs 04 24 37.5 Comp.
eP Zs 13 47 34
eS Es 48 34

1st July, 1963.

iP Zs 00 40 50.5 Raref.
iS EsNs 41 34
iP Zs 00 51 12.8 Comp.
iP Zs 01 07 34.9 Raref.
iS EsNs 08 15
eP Zs 04 08 18
iP Zs 06 37 27.7 Comp.
iP Zs 12 01 18.6 Raref.
eP Zs 12 28 43
i Zs 28 47.1
iP Zs 14 46 05.2 Comp.
iS EsNs 46 53
eP Zs 15 29 07
eS Es 29 45
eP Zs 16 16 14
eS Ns 16 27
eP Zs 17 58 31
e(P) Zs 19 59 55
eP Zs 20 27 36
e(P) Zs 21 14 55
iP Zs 21 21 18.1 Raref.

2nd July, 1963.

eP Zs 02 40 08
eS Ns 41 31
eP Zs 03 02 33 Near.
e(P) Zs 03 04 11
iP Zs 04 00 14.1 Raref.
eP Zs 05 01 08
eP Zs 05 20 49
eS EsNs 22 20
iP Zs 08 18 23.0 Raref.
iS EsNs 19 11
iP Zs 09 38 44.9 Raref.
eP Zs 09 53 42
iP Zs 09 59 18.0 Comp.
eS 10 00 11

2nd July, 1963 (Cont'd.)

eP	Zs	12	43	09
eS	EsNs		43	32
eP	Zs	12	44	52
eP	Zs	12	48	14
eS	EsNs		48	35
eP	Zs	13	02	(32)
eS	EsNs		03	01
cP	Zs	14	11	45
eP	Zs	18	26	45
eS	Es		28	08
eP	Zs	18	41	41
eP	Zs	18	47	49
eP	Zs	21	33	50
eP	Zs	22	02	37

3rd July, 1963.

eP	Zs	10	43	29
eS	Ns		43	54
eP	Zs	12	06	13
iP	Zs	12	51	26.2 Comp.
eS	EsNs		52	16
eP	Zs	15	24	22
eP	Zs	18	43	38
eP	Zs	19	23	02
iP	Zs	20	38	26.1 Comp.
eP	Zs	22	50	03

(J.A. BROOKS).
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COMMONWEALTH OF AUSTRALIA.
DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES.
PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 27/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 1,500 at 30 secs.

4th July, 1963.

iP		Zs	04	05	27.0	Raref.
iP		Zs	04	37	55.0	Raref.
iS	Es		38	54		
eP		Zs	06	08	55	
e(P)		Zs	06	56	13	
eP		Zs	07	02	54	
e		Zs		02	58	
iP		Zs	11	05	10.1	Raref.
ipP		Zs		06	00	
i(sP)		Zl		06	10	
i(S)	Nl			10	40	
i(sS)	ElNl			11	48	
iScS	EsNs			15	09	
eP		Zs	11	58	34	
eS	Es			59	48	
iP		Zs	14	24	10.0	Raref.
i		Zs		24	22	
e		Zs		26	25	
eP		Zs	14	43	29	Near.
eP		Zs	16	44	43	
eS	Es			45	34	
eP		Zs	17	29	31	
eS	Ns			30	09	
iP		Zs	21	51	20.1	Comp.
e		Zs		51	44	
eP		Zs	23	15	54	
i		Zs		16	02	
i		Zs		16	07	

5th July, 1963.

eP		Zs	01	32	19	
eP		Zs	02	59	09	
iP		Zs	04	51	14.0	Comp.
eP		Zs	06	07	20	
e(P)		Zs	06	10	43	
eP		Zs	06	33	34	
eP		Zs	10	56	(35)	
iP		Zs	14	27	12.9	Raref.
eS	Ns			28	(07)	
eP		Zs	16	55	48	
eS	Es			56	(27)	
eP		Zs	20	30	51	

6th July, 1963.

eP		Zs	01	11	36	
e		Zs		11	40	
iP		Zs	01	28	51	
eS	Ns			30	(16)	

6th July (Cont'd.)

eP		Zs	13	25	45	
eS	Ns			26	02	
eP		Zs	12	45	42	
eP		Zs	13	47	38	
eP		Zs	17	18	21	
iP		Zs	17	54	41.0	Raref.
eP		Zs	18	21	34	
eS	EsNs			22	20	

7th July, 1963.

iP		Zs	00	11	43.8	Comp.
eP		Zs	05	57	17	
eS	Es			57	57	
eP		Zs	08	10	41	
eS	Es			11	21	
iP		Zs	08	34	31.1	Comp.
eP		Zs	08	40	(15)	
eS	EsNs			40	(52)	
iP		Zs	10	22	56.0	Raref.
eP		Zs	10	54	10	
eP		Zs	10	57	42	
i		Zs		57	47	
iP		Zs	11	46	40.0	Raref.
iS	Es			47	15	
iP		Zs	12	57	10.0	Comp.
iS	EsNs			57	26	
iP		Zs	16	19	22.4	Raref.
iS	EsNs			20	13	
eP		Zs	16	22	47	
iS	EsNs			23	31	
eP		Zs	23	25	54	
eS	EsNs			26	23	

8th July, 1963.

eP		Zs	01	21	28	
iP		Zs	11	46	12.0	Comp.
eP		Zs	13	57	54	
eS	Ns			58	(16)	
eP		Zs	18	24	31	

9th July, 1963.

iP		Zs	00	48	28.2	Comp.
iP		Zs	01	26	04.0	Raref.
iP		Zs	01	23	08.8	Comp.
iP		Zs	03	18	37.4	Comp.
eP		Zs	05	24	26	
eP		Zs	06	22	27	

STANDARD SEISMIC STATION PMG.

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9th July (cont'd.)

iP		Zs 08 02 20.0 Comp.
eP		Zs 12 40 14
iS	Es	41 04
eP		Zs 12 47 39
eS	EsNs	48 29
eP		Zs 13 02 11
eS	Ns	02 48
eP		Zs 15 54 39
eP		Zs 17 42 16
iP		Zs 19 15 25.3 Raref.
eS	EsNs	15 47
iP		Zs 22 00 32.1 Comp.
iP		Zs 22 44 14.9 Raref.
iS	EsNs	44 54
iP		Zs 22 16 58.1 Comp.
e(P)		Zs 22 18 (16)
iP		Zs 23 11 33.3 Comp.
eS	Ns	11 43
eP		Zs 23 28 35

10th July, 1963.

eP		Zs 05 32 31
eS	El	40 22
iP		Zs 06 05 09.3 Raref.
iS	EsNs	05 54
iP		Zs 17 28 49.0 Comp.
iP		Zs 19 57 59.0 Comp.
iP		Zs 20 04 34.1 Raref.

11th July, 1963.

iP		Zs 00 26 14.0 Raref.
eS	Ns	27 05

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COMMONWEALTH OF AUSTRALIA.
DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES.
PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 28/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 1,500 at 30 secs.

11th July, 1963.

eP	Zs	05	06	55
eP	Zs	17	53	24
iP	Zs	20	59	01.9
iS	Es		59	26
eP	Zs	21	08	26.1
eP	Zs	22	14	11
eP	Zs	23	44	00
eS	Ns		45	12

12th July, 1963.

iP	Zs	02	53	05.9	Raref.
iS	Es		53	55	
iP	Zs	05	45	41.9	Comp.
iP	Zs	06	00	53.3	
iS	Es		01	37	
eP	Zs	06	30	00	
eP	Zs	08	01	08	
eP	Zs	08	49	13	
eP	Zs	11	04	26.2	
eP	Zs	23	52	59	
iS	Es		54	22	
eP	Zs	23	59	04	
in coda of preceding.					

13th July, 1963.

eP	Zs	00	10	45	
eS	Ns		11	18	
eP	Zs	01	22	03	
eS	Ns		22	37	
eP	Zs	08	56	46	
iP	Zs	12	22	34.8	Raref.
i	Zs		22	40.9	
iS	Ns		23	14	
eP	Zs	14	14	06	
eS	Nl		20	17	
iP	Zs	15	45	50	Raref.
iS	Es		46	28½	
eP	Zs	18	59	42	
eP	Zs	20	51	24	
eP	Zs	20	53	50	
eP	Zs	22	12	02	

14th July, 1963.

eP	Zs	00	09	49	
e(PcP)	Zs		11	57	
eS	Es		15	41	
eP	Zs	01	11	45	
eS	Ns		12	05	

14th July (Cont'd.)

eP	Zs	02	21	59	
eS	Ns		22	37	
eP	Zs	04	06	35	
eP	Zs	04	14	32	
eP	Zs	04	43	35	
eS	Ns		44	59	
eP	Zs	06	01	29	
eP	Zs	07	06	43	
eP	Zs	07	33	21	
eS	Ns		33	44	
eP	Zs	14	35	36	
iP	Zs	17	13	48.1	Comp.
eS	EsNs		19	37	
iP	Zs	18	22	19.2	
eS	Ns		22	39	
iP	Zs	19	23	17.3	
eS	Nl		27	04	
eP	Zs	20	23	03	
eP	Zs	22	57	19	

15th July, 1963.

eP	Zs	00	28	29	
i	Zs		28	33.0	
eS	Ns		29	04	
iP	Zs	03	10	48.0	Comp.
iS	Es		11	25	
iP	Zs	04	28	41.1	Raref.
eP	Zs	05	18	19	
eS	Ns		19	43	
eP	Zs	05	24	11	
eS	Ns		25	09	
iP	Zs	08	51	48.9	Raref.
eP	Zs	10	26	50	
iP	Zs	13	37	26.2	Raref.
iS	Ns		38	09	
eP	Zs	14	44	22	
iP	Zs	19	21	25.5	Comp.
iP	Zs	21	31	19.5	
eS	Ns		32	06	
eP	Zs	23	33	37	

16th July, 1963.

eP	Zs	08	33	28	
eS	Ns		33	55	
eP	Zs	13	07	08	
eS	Ns		07	23	

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STANDARD SEISMIC STATION PMG.PAGE 2.16th July (Cont'd.)

eP		Zs	13	43	27
eP		Zs	15	11	03
iP		Zs	17	24	01.8 Reref.
eP		Zs	18	43	47
eP		Zs	19	15	43
e		Zs		17	37
eP		Zs	22	50	08
eS	Es			50	30

17th July, 1963.

iP		Zs	07	09	26.0 Reref.
iP		Zs	19	09	47.8 Comp.
eP		Zs	21	03	24
eS	N1			04	28

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DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES.
PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 29/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 1,500 at 30 secs.

18th July, 1963.

iP	Zs 03 40 32.0 Raref.
e(P) ✓	Zs 05 13 (45)
eP	Zs 05 21 (22)
eP	Zs 09 26 25
iP	Zs 10 28 02.0 Raref.
iS	Es 28 53
eP	Zs 22 17 04 Near.
eP	Zs 22 57 34
iS	Ns 58 (20)
eP	Zs 23 13 26

19th July, 1963.

eP	Zs 02 28 33 Near.
iP ✓	Zs 06 05 16.0 Comp.
iP	Zs 08 53 43.1 Raref. Deep
eP	Zs 10 27 32
iS	Ns 28 31
eP	Zs 12 17 59 Near.
eP	Zs 17 28 45
iS	Ns 29 (31)
eP	Zs 18 39 18 Near.

20th July, 1963.

eP	Zs 01 45 57 Near.
iP ✓	Zs 06 44 49.8 Comp.
iS	Nl 51 42
eP	Zs 10 10 15
iS	Ns 10 53
iP	Zs 19 50 08.0 Raref.
iS	Es 51 04

21st July, 1963.

eP	Zs 00 20 15
iS	Ns 20 58
iP	Zs 01 50 29.8 Raref.
iS	Ns 51 15
eP	Zs 04 46 04
iS	Ns 46 31
eP	Zs 07 18 31 Near.
iP	Zs 09 08 39.4 Comp.
iS	Ns 09 (22)
eP	Zs 18 31 07
iS	Ns 31 25

22nd July, 1963.

iP	Zs 00 00 59.4 Comp.
iS	Es 01 40
iP ✓	Zs 00 30 11.5 Raref.
iP	Zs 01 01 47.0 Raref.
iS	Es 02 (29)
iP	Zs 05 04 02.9 Comp.
iS	Es 04 45½
iP	Zs 10 38 08.7 Comp.
iS	Ns 38 52
iP	Zs 22 01 42.0 Comp.
iS	Es 02 25

23rd July, 1963.

eP	Zs 08 38 28
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24th July, 1963.

iP	Zs 07 50 16.5 Comp. near.
iP	Zs 09 29 07.5 Comp.
iS	Ns 30 06.
iP ✓	Zs 11 40 07.3 Comp.
iP	Zs 16 47 24.3 Raref. large
iS	Nl 47 59 trace
iP	Zs 17 01 08 amplitude.
iP	Zs 19 07 09
eS	El 10 (25)
iP	Zs 20 09 05.3 Comp.
iP	Zs 21 49 43.0 Raref.
iS	ElNl 51 09

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PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 30/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 1,500 at 30 secs.

25th July, 1963.

iP Zs 08 12 02.3 Comp.
eS Ns 12 42
eP Zs 09 57 03
eS Es 57 20
iP Zs 16 56 42.3 Raref.
iS Es 57 26 $\frac{1}{2}$
eP Zs 18 48 10
eS Ns 48 46
iP Zs 19 36 02.3 Raref.

26th July, 1963.

eP Zs 03 23 19
eS Es 24 12
eP Zs 03 25 49
eS Ns 26 38
i(P) Zs 05 31 15.9 Comp.
iP Zs 15 35 11.2 Raref.
eS Zs 36 01
iP Zs 17 50 16.1 Raref.
eS Zs 50 59

27th July, 1963.

iP Zs 13 42 04.2 Comp.
iS Es 42 42 $\frac{1}{2}$
iP Zs 17 55 58.7 Comp.
eS Es 56 54

28th July, 1963.

eP Zs 03 56 12
eS Es 56 54
✓ eP ✓ Zs 07 23 07
eP Zs 07 46 03
✓ eP ✓ Zs 08 02 13
eP Zs 10 59 03
iP Zs 16 34 08.0 Raref.
iS Ns 35 26 $\frac{1}{2}$
iP Zs 18 44 53.8
eP Zs 19 12 49
eS Ns 13 14
eP Zs 19 20 44
eS Es 21 08
eP Zs 19 39 16
eS Es 40 06
eP Zs 19 44 46
eS Ns 45 11
eP Zs 19 51 37
eS Es 52 01

29th July, 1963.

eP Zs 02 16 04
eS Ns 16 12
eP Zs 04 39 24
iP Zs 07 15 21.8 Raref.
eS Ns 16 06
eP Zs 07 37 48
eS Es 38 34
eP Zs 08 44 38
iP Zs 20 21 33 Raref.
e(P) Zs 23 13
e(S) Nl 27 58
eG El 31 17
eP Zs 22 40 10
eS Es 40 26
eP Zs 23 43 47
eS Ns 46 32

30th July, 1963.

iP Zs 00 31 28.9 Raref.
iS Es 32 18 $\frac{1}{2}$
iP Zs 05 19 37.7 Raref.
eP Zs 05 53 17
ePP Zl 54 59
e(PcP) Zs 55 39
eS ElZl 59 05
eP Zs 14 11 42
iP Zs 23 35 03.9 Comp.
eS Ns 38 16

31st July, 1963.

✓ eP ✓ Zs 01 51 35
eP Zs 02 13 29
iP Zs 22 10 02.9 Raref.
eS Es 10 30

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COMMONWEALTH OF AUSTRALIA.
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PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 31/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 1,500 at 30 secs.

1st August, 1963.

iP Zs 04 39 46.7 Comp.
iS Es 40 18½
iP Zs 06 27 25.4 Raref.
iS Es 28 16
eP Zs 12 07 25
eP Zs 19 57 23
eS Es 58 34

2nd August, 1963.

iP Zs 03 25 36.4 Comp.
iS Es 26 12
eP Zs 10 27 30
eP Zs 19 31 58
eP Zs 23 43 34

3rd August, 1963.

iP Zs 03 50 24.0 Comp.
iS ELNL 52 16
eP Zs 03 56 19
eS Es 57 05
iP Zs 06 28 44.9 Comp.
iS S 29 18
eP Zs 08 53 50
eS Ns 54 56
eP Zs 10 41 44
ePP Zs 43 29
eP Zs 19 49 35
eS Es 49 57
eP Zs 20 33 26
eS N 39 56
eP Zs 21 55 49
eS Es 56 58

4th August, 1963.

eP Zs 07 15 06
eP Zs 09 58 06
eP Zs 11 26 21
eS Ns 26 39
iP Zs 15 13 43.5 Comp.
eS Ns 14 58
eP Zs 21 41 58
eS S 42 50

5th August, 1963.

iP Zs 00 00 15.5 Comp.
eS NL 05 03
G Zl 08 16
eP Zs 06 34 26
eP Zs 11 14 50
eS Ns 15 14

5th August (Cont'd.)

eP Zs 15 48 08
eS NL - 55.17
El 16 01.2
Zl 03.4
iP Zs 17 48 59.8 Comp.
eS Ns 49 07

6th August, 1963.

eP Zs 04 26 52
eS Es 28 13
iP Zs 07 28 28.9 Comp.
iP Zs 09 41 43.1 Raref.
eS Es 43 09
eP Zs 20 43 44
eS EsNs 44 28

7th August, 1963.

iP Zs 11 21 11.3 Raref.
iP Zs 11 22 53.1 Raref.
eP Zs 14 44 01
eS Es 44 41
iP Zs 15 45 27.0 Comp.
eP Zs 16 43 45
eP Zs 18 08 43
eS Es 09 04

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13th August (Cont'd.)

e(P _n)		Zs	08	37	19	
i(p)		Zs		37	24 $\frac{1}{2}$	
iS	Es Ns			37	56	
iP		Zs	15	03	26.3	Comp.
eP		Zs	19	04	(57)	
eS	Es Ns			05	21	
eP		Zs	19	40	(09)	
eS	Es Ns			40	47	
iP		Zs	22	00	02.5	Raref.
iS	El Nl			06	36	
eP		Zs	23	07	06	
eS	Ns			07	28	
eP		Zs	23	28	(06)	
eS	Es			28	39	
iP		Zs	23	29	04.5	

14th August, 1963.

eP		Zs	02	00	06	
eP		Zs	02	08	(46)	
eS	Ns			08	48 $\frac{1}{2}$	
eP		Zs	03	16	(48)	
eS	Ns			16	51	
iP		Zl Zs	03	34	13.3	Raref.
iS	El Nl			35	24	
iP		Zs	04	15	10.1	Raref.
iS	Es Ns			15	51	
iP		Zs	06	46	31.8	Raref.
eP		Zs	07	06	20	
eP		Zl Zs	08	30	(09)	
iS	Nl			32	01	
iP		Zs	08	48	12.9	
iP		Zs	16	26	02.0	Comp.
eP		Zs	17	03	(31)	
eS	Es Ns			03	(43)	
iP		Zl Zs	18	47	00.4	Comp.
iPP	Zl			47	19	
iS	Es Ns			49	38	

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COMMONWEALTH OF AUSTRALIA.
DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES.
PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 32/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 1,500 at 30 secs. (To 12th August).
3,000 at 30 secs. (From 13th August).

8th August, 1963.

iP ✓ Zs 02 25 39.0 Comp.
eP Zs 02 34 (10) near.
eP Zs 02 52 (09) near.
eP Zs 05 47 10
eS Es 47 35
iP Zs 06 42 26.0 Reref.
eP Zs 07 17 57
eP Zs 07 27 38
eS Ns 28 58
eP Zs 07 34 28
eS EsNs 35 30
eP Zs 10 06 48
eS Es 07 (24)
iP ✓ ZlZs 11 17 29.4 Reref.
eS S,W 18 29
eP Zs 12 02 04
eS Es 02 38
iP Zs 12 13 07.0 Comp.
eS EsNs 14 (00)
iP Zs 14 43 28.0 Reref.
eS Es 44 14
eP Zs 15 50 44
eS EsNs 51 40
eP Zs 17 10 50
iP Zs 21 01 32.7 Comp.
iS Es 02 49
iP Zs 21 44 41.1 Comp.
eS Es 45 29½
iP Zs 22 22 35.4 Comp.
eS Es 24 (00)
iP Zs 22 55 05.9 Comp.
eS Es 55 19

9th August, 1963.

El and Nl Seismographs inoperative.

eP Zs 02 35 05
iP Zs 06 54 12.0 Reref.
eS Es Ns 55 50
iP Zs 12 20 05.4 Comp.
eP Zs 13 59 44
eS Es 59 54
iP ✓ ZlZs 14 43 53.0 Comp.
M Zl 58.5
iP Zs 15 14 53.4 Reref.
iP in coda of preceding.
eS Zs 22 22 16.5 Comp.
EsNs 22 43

10th August, 1963.

eP Zs 00 38 40
eP Zs 12 14 24
eS EsNs 14 42
iP Zs 13 24 27.4 Comp.
eP ZlZs 17 53 (37)
e(S) Nl 56 (04)
M Zl 58.8
eP Zs 18 07 49
eS EsNs 08 00
eP Zs 21 18 28
eS EsNs 18 36

11th August, 1963.

iP Zs 01 43 26.2 Reref.
iS Nl 50 47
eLQ El 55.5
eLR NlZl 57.8
eP Zs 08 09 08
eP Zs 09 18 (03)
eS Ns 18 49
iP Zs 13 13 01.7 Reref.
eS EsNs 13 56
eP Zs 14 38 07
eS EsNs 38 29
iP Zs 16 42 05.6 Reref.
eS EsNs 42 48

12th August, 1963.

iP Zs 01 00 07.2
e Zs 00 11½
eS EsNs 00 40
iP Zs 10 13 53.8 Reref.
eS EsNs 16 (41)
iP Zs 17 43 39.7 Comp. near
iP Zs 19 19 16.0 Reref.
iS EsNs 19 57½
iP Zs 21 53 03.1 Comp.
eS EsNs 53 32

13th August, 1963.

iP Zs 04 58 19.1 Comp.
iS Es 05 01 49
iP Zs 05 09 17.9 Comp.
iS EsNs 09 36½
iP Zs 06 35 25.4 Reref.
iP Zs 06 59 32.0 Reref.
eP Zs 08 02 (38)
eS Ns 02 49

COMMONWEALTH OF AUSTRALIA.
DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES.
PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 33/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 3,000 at 30 secs.

14th August, 1963.

eP Zs 23 56 38

15th August, 1963.

iP ✓ Zs 02 23 54.3 Raref.

eP ✓ Zs 06 20 01

eS ✓ Nl 26 47

eP Zs 06 24 39

eS Ns 25 27

in coda of preceding.

eP Zs 13 52 42

eS Ns 53 04

eP Zs 14 10 32

eS Es 11 23

iP Zs 15 06 12.8 Raref.

eS Ns 07 33

eP Zs 15 14 30

eP Zs 16 45 50

eP ✓ Zs 17 43 18

i ✓ Zs 43 28

eS S 46 25

eP Zs 18 37 53

eP Zs 19 23 58

iP Zs 22 35 48.0 Comp.

eP Zs 22 58 31

eS Ns 59 15

eP Zs 23 55 22

eS Ns 56 01

16th August, 1963.

eP Zs 02 42 29

iP Zs 03 04 22.1 Raref.

iP Zs 05 58 24.4 Raref.

eS Es 59 09

eP Zs 07 24 31

eS Ns 25 20

iP Zs 21 46 01.9 Comp.

eS Es 46 47

eP Zs 22 58 36

17th August, 1963.

iP Zs 03 16 45.2 Comp.

iS Es 17 16

iP Zs 04 29 11.2 Comp.

iS Ns 29 57½

eP Zs 05 41 04

eP ✓ Zs 11 20 36

eS ✓ Nl 26 59

iP Zs 11 21 01.2 Raref.

iS Es 21 39

17th August (Cont'd.)

iP Zs 20 02 04.8 Comp.

iS Es 02 37

18th August, 1963.

iP Zs 03 01 48.3 Raref.

iS Ns 02 02

eP Zs 03 18 10

iP Zs 14 47 12.9 Raref.

eS Es 48 27

eP Zs 18 46 14

iP ✓ Zs 18 54 12.1 Comp.

eS ✓ Nl 19 03 04

eP Zs 19 30 35

eS Es 31 49

iP Zs 20 01 24.5 Raref.

iS Es 01 31½

iP Zs 20 25 50.2 Raref.

eP ✓ Zl 20 35 09

19th August, 1963.

eP Zs 08 00 04

eS Ns 00 44

eP Zs 09 43 47

eP Zs 19 13 40

eS Ns 16 26

20th August, 1963.

iP Zs 06 40 55.3 Raref.

eS W 41 47

eP Zs 10 47 45

eP Zs 16 51 59

iP Zs 21 28 55.0 Comp.

iS Es 29 25

eP Zs 21 59 15

eS Es 59 31

eP Zs 22 27 26

21st August, 1963.

iP Zs 02 42 32.3 Raref.

iS Es 43 16

ePn Zs 06 31 13

iP Zs 31 15.1

iS Es 32 08

eP Zs 12 29 36

eS Ns 30 03

eP Zs 12 31 52

eP Zs 12 43 48

eS Es 44 30

eP Zs 20 23 19

eS Es 24 17

eP Zs 20 25 57 in coda of

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COMMONWEALTH OF AUSTRALIA.
DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES.
PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 34/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 1,500 at 30 secs.

25th August (Cont'd).

22nd August, 1963.

Time marks unreliable - No analysis.

23rd August, 1963.

eP Zs 00 48 (36)
eP Zs 02 03 43
iS Ns 04 02
eP Zs 15 19 (55)
eS EsNs 19 58½
iP Zs 19 28 01.5 Raref.
eS EsNs 28 42
eP Zs 20 04 03
eS EsNs 05 10
eP Zs 20 06 58
eS Ns 07 41
iP ZlZs 21 31 16.5 Comp.
eS Ns 35 31
eP Zs 22 47 (29)
eS EsNs 47 59

24th August, 1963.

iP Zs 03 25 30.6 Comp.
iP Zs 03 38 13.7 Raref.
iS Ns 38 54½
eP Zs 04 02 00
eS Ns 02 26
eP Zs 08 07 51
eS Ns 08 33
eP Zs 13 43 21
eS Es 44 03
iP Zs 16 23 20.8 Comp.
eS Ns 24 02
eP Zs 21 13 12
eP Zs 21 39 51
eP Zs 22 33 15
eS EsNs 33 55½

25th August, 1963.

iP Zs 00 27 21.0 Raref.
iS EsNs 27 57
eP Zs 01 11 32
eS EsNs 12 06
eP Zs 02 24 24
eS EsNs 24 58½
iP Zs 12 07 32.6 Raref.

iP ZlZs 12 24 12.9 Raref. Deep.
i Zl 25 41
i(sP) Zl 26 51
i Zl 27 53
iS EsElNlNs 28 53
i ElNl 31 42
iScS EsNs 33 37
eP Zs 13 28 22
eS EsNs 29 29
iP Zs 13 31 58.3 Raref.
eP Zs 15 58 47
eS EsNs 59 36

26th August, 1963.

iP Zs 00 45 59.2 Comp.
eS EsNs 47 05
iP Zs 02 33 13.4 Comp.
eS Es 33 40
iP Zs 04 54 42.7 Raref.
eP Zs 05 22 (49)
eS EsNs 23 35
eP Zs 05 30 35
iS EsNs 31 48
iP Zs 05 49 22.1 Raref.
iP Zs 07 24 17.5 Raref.
eS EsNs 24 53
iP Zs 10 04 28.2 Raref.
iP Zs 10 59 54.7 Comp.
iP Zs 11 26 26.4 Comp.
eS EsNs 27 09
iP Zs 20 01 17.9 Raref.
eS EsNs 02 03
eP Zs 21 23 12
iS EsNs 23 44
iP Zs 23 35 56.7 Comp.
eS EsNsNl 39 (27)

27th August, 1963.

eP Zs 02 56 32
eS EsNs 57 36
eP Zs 03 23 (12)
eS EsNs 23 46
eP Zs 03 37 12
e(SSS) El 58 (40)
eM Zs 04 17.5
iP Zs 03 44 01.4 Raref.
eS EsNs 44 46
eP Zs 06 04 (43)
eS Ns 05 29
eP Zs 06 44 32
eS EsNs 46 (02)

STANDARD SEISMIC STATION PMG.

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27th August (Cont'd.).

eP _n	Zs	07 08 04.3	Comp.
iP	Zs	08 09	
eS	EsNs	08 52	
eP	Zs	07 56 25	
eS	EsNs	56 46	
eP _n	Zs	09 41 06	
iP	Zs	41 13.1	
eS	EsNs	41 37	
iP	Zs	10 40 39.4	Raref.
iS	Ns	41 45	
iP	Zs	15 40 32.7	Raref.
eP	Zs	18 11 (28)	
eP	Zs	19 12 (29)	
eS	EsNs	13 52	
eP	Zs	19 19 (37)	
eS	Es	20 05	
eS	Zs	19 33 46	
eS	Es	34 (33)	
eP	Zs	20 46 17	
eP	Zs	22 28 12	

28th August, 1963.

eP	Zs	00 13 00	
eS	Es	13 46	
iP	Zs	00 42 45.6	
eS	Ns	43 31	
eP	Zs	00 49 15	
eS	Es	49 28	
eP	Zs	04 42 42	
eS	Es	43 32	
eP	Zs	06 42 08	
eP	Zs	12 34 57	
eP	Zs	13 57 44	
iP	Zs	14 21 54.2	Raref.
eS	EsNs	22 (57)	
eP	Zs	14 48 (02)	
eP	Zs	15 21 31	
iS	EsNs	22 00	
iP	Zs	15 58 13.0	Comp.
eP	Zs	16 15 08	
eS	EsNs	16 38	
iP	Zs	18 51 02.8	Raref.
eP	Zs	18 59 (17)	

28th August (Cont'd.)

eP	Zs	20 43 04
eS	EsNs	43 45
eP	Zs	23 19 51
eS	EsNs	20 (35)
eP	Zs	23 35 41
eS	EsNs	36 39

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STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 35/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
 LP - 1,500 at 30 secs.

29th August, 1963.

iP Zs 01 27 38.9 Comp.
 eP Zs 02 10 (13)
 eS Ns 10 (59)
 eP Zs 02 12 (42)
 eS EsNs 13 26
 eP Zs 03 31 (17)
 eP Zs 04 40 (38)
 iP ZlZs 09 06 12.3 Comp.
 e(P) Zs 09 (14)
 e(S) ElNl 16 22
 eSS ElNl 21 58
 eP Zs 14 31 13
 eP Zs 14 42 18 near.
 iP Zs 15 11 24.3 Raref.
 eS Es 12 12
 iP ZlZs 15 49 39.0 Raref.
 i Zl 51 46
 e? ElZl 16 02 06 May refer
 following shock?
 e(P) Zs 16 02 (20)
 Confused by preceding.
 eP Zs 17 17 03
 eS Ns 17 44
 eP Zs 19 58 (37)
 eP Zs 20 15 20
 iP Zs 20 20 01 Raref.
 iP ZsZl 21 04 58.8 Comp.
 eS ElNl 11 18
 eP Zs 21 37 52
 iP Zs 21 51 33.7 Raref.

30th August, 1963.

eP Zs 00 22 (34)
 iP Zs 00 23 52.8 Raref.
 eP Zs 00 37 (50)
 eS EsNs 37 30
 eP Zs 01 05 16
 eP Zs 03 30 (15)
 eP Zs 03 36 34
 iP Zs 04 58 37.2 Comp.
 eP Zs 05 33 (17)
 eS EsNs 34 00
 eP Zs 06 14 54
 eP Zs 08 09 (45)
 eP Zs 09 40 43
 eS EsNs 41 23

30th August (Cont'd.)

iP Zs 10 32 29.6 Raref.
 i(P) Zs 10 34 00.5 Raref.
 eP Zs 13 59 10
 eP Zs 14 30 (58)
 eS EsNs 32 26
 eP Zs 18 55 31
 eP Zs 22 01 22

31st August, 1963.

iP Zs 03 36 39.5 Raref.
 iS Es 37 21
 eP Zs 06 57 (04)
 eP Zs 08 52 (51)
 eS Ns 53 39
 eP Zs 16 11 28
 eS Es 12 03
 eP Zs 16 24 (02)
 eP Zs 16 54 (00)
 eP Zs 19 42 29
 eS Es 43 11
 eP Zs 20 39 36
 iP Zs 22 32 13.2 Comp..
 iP Zs 23 15 56.9 Raref.

1st September, 1963.

eP Zs 10 15 (23) near?
 iP Zs 10 16 44.0 Raref.
 eP Zs 22 38 12
 eS EsNs 38 (29)

2nd September, 1963.

iP Zs 00 01 46.0 Comp.
 i Zs 01 51
 eS Es 02 27
 eP Zs 01 46 43
 eP Zs 03 03 39
 eS Ns 04 11
 eP Zs 16 44 51
 eP Zs 17 29 45
 eS EsNs 29 59
 eP Zs 19 52 (26)
 eS Ns 53 23

3rd September, 1963.

iP Zs 06 15 06.2 Raref.
 eS Ns 15 44
 eP Zs 10 12 35
 eS EsNs 13 16

STANDARD SEISMIC STATION PMG.

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3rd September (Cont'd.)

eP		Zs	13	29	31
eS	Es			30	09
eP		Zs	19	06	51
eS	Es Ns			07	38
eP		Zs	20	37	38
eS	Es Ns			38	45
eP		Zs	21	39	53
eS	Ns			40	14

4th September, 1963.

eP		Zs	06	12	25
eS	Es Ns			13	31
iP		Zs	10	18	46.5 Comp.
iS	Es Ns			19	04
eP		Zs	15	44	16
iP		Zs	16	42	09.5 Raref.
eP		Zs	17	07	56
iP		Zs	21	07	53.6 Comp.
eS	Es Ns			08	16

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STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 36/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 1,500 at 30 secs.

5th September, 1963.

iP Zs 01 02 01.8 Raref.
iP Zs 03 41 42.5 Raref.
iS Es 42 24
eP Zs 07 13 35
eS Es 14 55
iP Zs 09 48 29.5 Comp.
eP Zs 10 13 03
eP Zs 18 06 38
eS Es 07 58
iP Zs 19 39 53.9 Comp.
iS Ns 40 08
iP Zs 20 10 22.2 Comp.
iS Es 11 00½
iP Zs 23 07 00.1 Comp.
iS Es 07 23½

6th September, 1963.

eP Zs 00 46 29
eS Ns 46 45
eP Zs 01 47 39
eP Zs 02 27 56
iP Zs 02 30 37.7 Raref.
eS Ns 31 16
✓ eP Zs 06 12 37
eP Zs 08 00 55
eS Ns 05 16
✓ iP Zs 10 22 44.9 Raref.
eS Ns 27 37
eP Zs 10 28 04
eP Zs 15 36 46
eS Ns 37 29
eP Zs 20 08 14
eP Zs 21 08 35

7th September, 1963.

✓ eP Zs 01 23 20
✓ eS Ns 24 37
✓ eP Zs 01 25 40
✓ eS Nl 32 38
iP Zs 04 04 20.1 Raref.
iP Zs 04 13 26.0 Raref.
eS Es 16 29
eP Zs 05 58 49
✓ eP Zs 07 38 26
✓ eP Zs 09 10 46
✓ iP Zs 12 54 23.8 Comp.
iP Zs 13 45 31.0 Comp.
iS S 46 03

7th September (Cont'd.)

iP Zs 15 04 01.0 Raref.
eS Ns 05 03
iP Zs 15 22 56.0 Raref.
iP Zs 19 30 36.8 Raref.
eP Zs 19 45 25
eP Zs 20 04 30
eS Es 05 29
eP Zs 22 08 03

8th September, 1963.

✓ eP Zs 00 54 48
✓ ePP Zs 56 35
✓ eS Nl 01 01 23
eP Zs 01 41 12
eS Es 42 13
iP Zs 04 47 21.7 Raref.
eP Zs 05 39 13
eP Zs 07 44 22
iP Zs 12 11 22.9 Raref.
eS Es 12 07
iP Zs 19 56 30.9 Raref.
✓ eS El 20 01 18
✓ iScP Zs 01 49
G El 04 18
eP Zs 21 10 50
eS Es 11 33
eP Zs 21 34 14
eS Ns 34 47
iP Zs 23 55 34.7 Comp.
eS Ns 56 19

9th September, 1963.

iP Zs 00 25 06.7 Raref.
✓ iP Zs 02 47 34.5 Comp.
eS W 49 04
eP Zs 04 34 43
eS Es 36 06
eP Zs 06 29 00
eS Es 30 07
eP Zs 12 26 15
eP Zs 12 56 40
eS El 13 00 22
eP Zs 13 24 10
eS Es 24 38
eP Zs 14 49 30
iP Zs 18 04 38.6 Raref.

10th September, 1963.

iP Zs 01 14 07.6 Raref.
eS El 17 52 /2

STANDARD SEISMIC STATION PMG.

10th September (Cont'd.)

eP		Zs	02	54	39	
iP		Zs	06	31	18.0	Raref.
iP		Zs	08	00	03.3	Comp.
eS	Es		00	27		
eP		Zs	08	49	56	
eS	Ns		50	32		
eP		Zs	14	44	43	
eS	Ns		45	34		
eP		Zs	18	05	22	
iP		Zs	19	20	32.7	Comp.
eS	El		25	29		

11th September, 1963.

iP		Zs	00	00	17.3	Comp.
eP		Zs	00	24	05	
eS	Es		25	03		
iP		Zs	00	54	54.0	Raref.
eS	Es		56	14		
iP		Zs	09	03	32.1	Raref.
eS	Es		06	(27)		
eP		Zs	13	58	13	
eS	Ns		58	55		

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11th September, 1963. (Cont'd.)

iP		Zs	14	03	58.7	Comp.
iS		Ns	04	15 $\frac{1}{2}$		
iP		Zs	15	10	47.1	Comp.
eS	Ns		11	30		
eP		Zs	15	54	03	
eS	Ns		54	40		
eP		Zs	20	05	21	
eS	Es		06	27		
eP		Zs	20	52	21	
eS	Ns		53	51		
eP		Zs	22	28	21	
eS	Es		29	17		
iP		Zs	22	30	32.7	Comp.

small local.

12th September, 1963.

eP		Zs	00	07	06	small local.
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PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 37/63.
Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 1,500 at 30 secs.

12th September, 1963.

14th September, 1963.

eP Zs 02 21 (39)
eS Es 21 58
eP Z1Zs 03 17 22
e(S) El 22 (23)
eP Zs 04 13 50
eS EsNs 15 15
eP Zs 07 21 41
iS EsNs 22 55
eP Zs 08 46 43 Confused
by microseisms.
iP Zs 15 32 41.8 Comp.
iP Zs 18 33 37.2 Raref.
eP Zs 21 31 (03)
eS EsNs 31 43
eP Zs 23 37 51
eS Ns 38 36

eP Zs 00 19 41) Super-
iP Zs 22 (28) imposed;
eP Zs 24 (32) shocks.
eS EsNs 25 36½)
eP Zs 01 16 17
eS Ns 17 25
iP Zs 01 25 34.2 Raref.
eS Es 26 18½
iP Zs 02 21 10.4 Comp.
eP Zs 03 59 34
eS N1 04 05.29
e(LQ) ElN1 08.5
eL R N1Z1 10.2
eM ElN1Z1 15.0
eP Zs 05 55 (15)
eS Ns 55 39
iP Zs 07 22 26.3 Raref.

13th September, 1963.

eP Zs 03 09 49
eS EsNs 10 03
eP Zs 05 12 (28)
eS Ns 13 15
eP Zs 05 31 52
eS EsNs 32 (52)
eP Zs 05 58 48
eS EsNs 59 31
iP Zs 06 37 35.0 Comp.
iS N 37 57
eP Zs 06 57 21
eS EsNs 58 08
iP Zs 08 01 54.0 Comp.
iS N 02 15
eP Zs 10 11 51
eP Zs 13 37 26
eS EsNs 37 41
eP Zs 16 07 41
eS EsNs 08 26
eP Zs 17 37 18
eS EsNs 37 42
eP Zs 18 07 (13)
eS Es 07 38
eP Zs 21 17 (39)
eP Zs 22 25 41
eS Ns 26 24
eP Zs 23 39 07
eS Es 39 (43)

eP Zs 11 08 30
eS Es 09 39
eP Zs 15 20 38
e(S) N1 24 (13)
eM ElN1Z1 27.6
eP Zs 15 30 01
eP Zs 17 36 (45)
eS EsNs 38 14
eP Zs 17 55 34
eS Es 56 (15)
eP Zs 19 25 08
eS EsNs 26 21
eP Zs 21 16 05
eS ELN1 17 04
eM ElN1Z1 18.0

15th September, 1963.

iP Zs 00 52 06.4 Raref.
iS N,W 55.42) N,W Wood-And-
eM N,W 51.0) erson compnts.
eP Zs 02 01 (52) Raref. In coda
eM N,W 10.5 of preceding -
aftershock.
eP Zs 04 24 05
eP Zs 04 54 31
iP Zs 06 01 05.9 Raref.
iP Zs 06 19 33.0 Comp.
eP Zs 06 32 56.
iP Zs 08 27 01.1 Comp.
eS N 27 36
eP Zs 09 12 35
eS ELN1 16.12
eM ElN1Z1 19.6

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PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 38/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 1,500 at 30 secs.

19th September, 1963.

eP		Zs	00	42	40
eS	Es			44	25
eP		Zs	02	06	28
eS	Ns			07	07
iP		Zs	06	07	15.7 Comp.
eS	Ns			07	59
eP		Zs	19	33	48
eS	Ns			37	36
eP		Zs	23	34	59

20th September, 1963.

eP		Zs	03	33	40
iS	Es			33	58½
eP		Zs	10	15	39
eS	Ns			16	01
eP		Zs	11	19	48
eS	Ns			20	07
eP		Zs	11	53	51
eS	Es			54	36
eP		Zs	19	07	10
eS	Nl			11	56
iP		Zs	20	14	12.6 Comp.
eS	Ns			14	50
eP		Zs	21	23	20

21st September, 1963.

eP		Zs	02	31	50
eS	Es			33	05
eP		Zs	04	24	14
eS	Ns			24	59
eP		Zs	12	33	26
eS	Ns			34	07
iP		Zs	16	25	59.1 Comp.
eS	Es			26	53
eP		Zs	16	34	09
eP		Zs	16	39	43
eS	Es			41	09
eP		Zs	19	42	47
eS	Es			43	28
eP		Zs	19	54	48
eS	Ns			56	08
eP		Zs	21	39	34

22nd September, 1963.

iP		Zs	00	58	42.6 Raref.
eS	Es			59	27
eP		Zs	03	02	29
eS	El			07	28
eP		Zs	04	11	54

22nd Sept.(Cont'd.)

eP		Zs	04	20	54
eS	Es			21	16
iS		Zs	11	24	27.2 Raref.
eS	N			25	16
eP		Zs	19	28	01
eS	El			33	00
eP		Zs	22	07	04
eS	Es			08	36

23rd September, 1963.

iP		Zs	03	02	36.0 Comp.
eS	Es			03	51
eP		Zs	05	42	27
iP		Zs	10	00	33.9 Raref.
eS	N			02	02
eP		Zs	10	07	10
eP		Zs	17	49	44
eS	Ns			50	52

24th September, 1963.

eP		Zs	07	44	16
eS	Es			45	18
iP		Zs	08	15	27.8 Comp.
eP		Zs	15	05	21
eS	Es			06	03
eP		Zs	15	49	26
eS	El			52	54
eP		Zs	16	49	21
ePP		Zs		51	34
eSKP		Zs		52	40
eSKKP		Zs	17	02	10
G	Nl			24.0	
eP		Zs	18	44	13
eS	Ns			44	53
eP		Zs	21	40	14
eS	Ns			40	47
eP		Zs	22	07	22
eS	Ns			08	11
eP		Zs	22	12	33
eS	El			16	00
eP		Zs	22	29	23
iP		Zs	22	58	05.7 Comp.
iS	Ns			58	48
eP		Zs	23	12	57
eS	El			16	11

STANDARD SEISMIC STATION PMG.

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25th September, 1963.

iP		Zs	00	45	29.0	Comp.
eS	Es			46	28	
eP		Zs	04	56	24	
eS	Ns			57	52	
eP		Zs	06	11	21	
eP		Zs	06	15	42	
iP		Zs	07	31	31.9	Comp.
iS	Ns			31	58 $\frac{1}{2}$	
eP		Zs	09	28	45	
eP		Zs	11	36	52	
eP		Zs	12	04	08	
eP		Zs	12	51	14	
eP		Zs	13	25	20	
eS	E1			31	36	
eP		Zs	13	48	21	
eS	E1			51	48	
eP		Zs	14	04	54	
eS	N1			08	08	
eP		Zs	14	10	22	
eP		Zs	14	27	47	
eP		Zs	14	54	18	
eS	E1 N1			57	30	
iP		Zs	15	33	14.3	Raref.
iX		Zs		33	19	
iS	Ns			33	50 $\frac{1}{2}$	
eP		Zs	18	48	10	
eS	Ns			49	25	
eP		Zs	21	01	16	
eS	N1			04	40	

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STANDARD SEISMIC STATION PMG.

Preliminary Earthquake Phases 39/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 1,500 at 30 secs.

26th September, 1963.

iP		Zs	02	38	28.6	Comp.
eS	Es	Ns		39	(59)	
eP		Zs	05	38	58	
iP		Zs	05	56	09.4	Comp.
iS	N,W			56	54	
eP		Zs	06	23	34	
eS	Es	Ns		24	53	
eP		Zs	08	43	38	
eS	Es	Ns		44	10	
iP		Zs	11	00	00.0	Comp.
eP		Zs	12	17	03	
eS	Ns			17	47	
eP		Zs	16	33	(35)	
eS	Es	Ns		35	02	
iP		Zs	17	49	58.8	Raref.
iS	Es	Ns		50	42	
eP		Zs	20	37	51	
eS	Nl			39	(34)	
eP		Zs	20	57	47	
eS	Ns			58	53	
eP		Zs	23	13	09	

27th September, 1963.

eP		Zs	05	50	18	
eS	Es	Ns		51	02	
eP		Zs	07	02	45	
eS	Es	Ns		04	24	
eP		Zs	10	33	57	
e(S)	Nl			38	35	
eP		Zs	11	10	(16)	
eP		Zs	11	31	44	
in coda of preceding.						
eP		Zs	16	28	30	
iP		Zs	18	21	24.5	Comp.
iS	Es			22	15	
iP		Zs	23	45	51.7	Raref.
eS	Es	Ns		46	37	

28th September, 1963.

iP		Zs	01	01	33.9	Comp.
eS	Es	Ns		02	(18)	
iP		Zs	05	31	28.8	Raref.
eP		Zs	06	10	28	
iP		Zs	07	04	46.0	Raref.
iP		Zs	11	12	06.1	Raref.
eP		Zs	12	14	09	
eS	Es	Ns		14	53	

28th September (Cont'd.)

iP		Zs	14	57	49.0	Comp.
iS	Es	Ns		57	58	
eP		Zs	15	28	43	
eS	Es			29	28	
eP		Zs	18	50	42	
eP		Zs	21	25	(02)	
iS	Es	Ns		25	09	

29th September, 1963.

eP		Zs	03	05	43	
eS	Nl			12	03	
eP		Zs	06	20	36	
iX		Zs		20	47	
eS	Es			21	19	
iP		Zs	07	42	27.4	Comp.
eP		Zs	10	35	(02)	
eS	Es			35	(41)	
eP		Zs	16	40	(52)	
eP		Zs	19	40	29	
e(pP)	Zl	Zs		40	49	
eS	El Nl			45	20	
e(ScP)		Zs		47	26½	
eP		Zs	22	19	33	
eS	Es	Ns		20	08	

30th September, 1963.

iP		Zs	08	58	55.4	Comp.
eS	Nl			09	02	31
eP		Zs	15	44	12	
eP		Zs	15	52	39	
iS	Es	Ns		53	23	
eP		Zs	16	45	13	
eS	Es			45	43	
eP		Zs	17	13	(16)	
eP		Zs	18	48	(10)	
eS	Ns			48	28	
iP		Zs	21	40	15.0	Comp.
eS	Es	Ns		40	59	
iP		Zs	21	59	11.1	Comp.
eS	Es	Ns		59	50	
eP		Zs	23	04	13	
eS	El			07	44	

1st October, 1963.

eP		Zs	05	05-53	
e(P)		Zs		06	26 in coda of precd.
e(S)	Es			06	45
eP		Zs	09	39	30
e(P)		Zs	10	10	11
eP		Zs	15	39	24
eS	Es			40	05 .../2

PRELIMINARY EARTHQUAKE PHASES 39/63.

STANDARD SEISMIC STATION PMG.

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1st October (Cont'd.)

iP		Zs	22	43	50.3	Comp.
eS	Es Ns			44	33	
iP		Zs	23	29	23.3	Raref.
eS	Es Ns			30	09	

2nd October, 1963.

iP		Zs	00	00	05.0	Comp.
iS	Es Ns			00	50	
✓ iP		Zs	03	32	57.8	Comp.
✓ iS	N,W			34	09	
✓ eP		Zs	05	54	31	
eP		Zs	07	20	34	
eS	Es			21	08	
iP		Zs	12	43	00.0	Raref.
eS	Es Ns			43	20	
eP		Zs	16	40	07	
eP		Zs	18	39	00	
eS	Es			40	27	
iP		Zs	23	29	20.4	Raref.
iS	Es Ns			29	48 $\frac{1}{2}$	

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COMMONWEALTH OF AUSTRALIA.
DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES.
PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.

Preliminary Earthquake Phases 40/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 3,000 at 30 secs.

3rd October, 1963.

eP		Zs	02	22	32
eS	Es			23	17
eP		Zs	04	26	24
eS	Es			26	35
iP		Zs	06	41	33.0 Raref.
eP		Zs	10	15	10
iS	Ns			15	43
iP		Zs	18	27	29.7 Comp.
iS	Es			28	25
iP		Zs	23	32	39.0 Comp.
eS	Nl			39	00
iP		Zs	23	41	22.2 Comp.
in coda of preceding.					

4th October, 1963.

eP		Zs	02	54	56
eS	El			03	01 00
eP		Zs	06	02	04
eS	Es			03	28
iP		Zs	15	43	22.4 Comp.
iX		Zs		43	26.5
eS	W			44	09
eP		Zs	20	27	04
eS	Es			27	42

5th October, 1963.

eP		Zs	02	02	57
eS	Nl			09	23
G	Nl			12 $\frac{1}{2}$	
iP		Zs	03	27	19.2 Comp.
eS	Ns			27	50
eP		Zs	05	23	02
eP		Zs	09	52	27
eS	Ns			53	13

6th October, 1963.

iP		Zs	02	10	01.6 Raref.
eP		Zs	05	48	42
eS	Es			49	31
eP		Zs	07	34	44
iS	Es			35	16 $\frac{1}{2}$
eP		Zs	09	04	13
eS	Ns			04	56
eP		Zs	13	32	51
iS	Es			33	14 $\frac{1}{2}$

7th October, 1963.

eP		Zs	09	44	15
eS	Es			44	52
eP		Zs	12	39	36
eS	Ns			40	18

7th October (Cont'd.)

eP		Zs	12	47	30
eS	Ns			48	26
iP		Zs	13	20	27.9 Raref.
eS	Ns			25	17
iScP		Zl	Zs	25	44
eG	El	Nl	Zl	28.3	
eP		Zs	14	00	14
eP		Zs	21	27	29
eS	Es			28	19
iP		Zs	21	28	56.8 Raref.
eS	Ns			29	38
iP		Zs	21	39	34.0 Raref.
eS	Nl			40	58
eP		Zs	23	00	20
eS	El			01	33
eP		Zs	23	02	53
in coda of preceding.					
eP		Zs	23	05	53
in coda of preceding.					
eP		Zs	23	20	45

8th October, 1963.

eP		Zs	00	24	28
e(S)	Nl			30	32
eP		Zs	01	08	59
iP		Zs	02	09	18.9 Raref.
eP		Zs	02	38	39
iP		Zs	03	12	15.1 Raref.
eS	Es			13	26
iP		Zs	04	36	41.9 Raref.
eS	Ns			37	05
eP		Zs	05	40	20
eS	Ns			41	36
eP		Zs	11	44	13
eP		Zs	13	12	57
eP		Zs	16	18	14
eS	Es			19	38
eP		Zs	16	37	47
eS	Ns			39	17
eP		Zs	19	26	48
eS	El			28	00
iP		Zs	20	15	48.0 Comp.
eP		Zs	21	08	26
eS	Es			10	26
iP		Zs	21	37	03.2 Raref.
eS	Es			37	48
iP		Zs	23	08	11.4 Comp.

BULLETIN 40/63.

STANDARD SEISMIC STATION PMG.

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9th October, 1963.

eP		Zs	02	05	25	
eS	Es			06	43	
eP		Zs	05	10	08	
eS	Es			10	55	
eP		Zs	05	20	53	
eP		Zs	06	13	21	Possibly artificial.
iP		Zs	12	37	28.9	Raref.
iS	Es			38	15 $\frac{1}{2}$	
iP		Zs	13	02	27.8	Raref.
eP		Zs	13	48	05	
eS	Ns			48	34	
iP		Zs	20	40	19.2	Comp.
iS	Es			41	05	
iP		Zs	23	45	54.3	Comp.
eS	Es			46	03	

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COMMONWEALTH OF AUSTRALIA
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PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG
PRELIMINARY EARTHQUAKE PHASES 41/63

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 3,000 at 30 secs.

10th October, 1963.

eP Zs 01 32 27
iP Zs 02 22 39.5 Comp.
eS Es Ns 23(00)
eP Zs 06 24 21
iP Zs 14 20 45.9 Raref.
eP Zs 10 54 46
eP Zs 20 51 57
eS Es Ns 52 44
iP Zs 21 42 47.4
eS Es Ns 43 32½

11th October, 1963.

iP Zs 00 07 24.8 Raref.
eP Zs 03 02 20
eS Ns 02 40
eP Zs 04 36 50
eP Zs 08 11 15
eP Zs 09 15 26
eP Zs 12 17 03
iP Zs 14 09 28.7 Raref.
eS Es Ns 10(10)
iP Zs 16 40 07.9 Raref.
iP Zs 19 24 16.6 Raref.
iS Es Ns 24 56
eP Zs 19 49 40
iS Ns 50 30½
eP Zs 22 33(00)
eS Es Ns 34 21

12th October, 1963.

iP Zs 00 44 16.7 Raref.
eP Zs 07 25 01
eS Es Ns 25 44
eP Zs 11 32(01)
iP Zs 11 36 18.8 Raref.
eP Zs 20 31 19
eS Es Ns 32 04

13th October, 1963.

eP Zs 05 27 21
eS W 34 55
iP Zs 08 59 19.0 Comp.
eS Es 59 57
iP Zs 09 39 17.7 Raref.
eS S,W 39 39
eP Zs 13 07 35
iP Zs 15 19 21.3 Comp.
eS Ns 19 53
iP Zs 16 09 20.7 Comp.
Zs 19 37 07

14th October, 1963.

eP Zs 00 01 42
eS El NL 09 08
iP Zs 02 11 37.2 Comp.
eP Zs 03 50 44
eP Zs 03 53(30) in coda of
eS Ns 54 37 preceding
eP Zs 04 20 35
eS El NL 28 12
eP Zs 05 15 26
iP Zs 07 04 00.8 Raref.
eS Es Ns 04 44
iP Zs 10 40 56.0 Comp.
eS Es Ns 41 39½
iP Zs 13 31 04.6 Raref.
eS NL 38 31
eP Zs 14 52 17
eP Zs 19 04 06
eS Es Ns 04 (32)
eP Zs 22 14 08
eP Zs 23 04 50
eP Zs 23 43 22
iP Zs 23 44 11.9 Comp.
iS Es Ns 44 40½

15th October, 1963.

eP Zs 12 42 49
eP Zs 13 24 23
eS Ns 25 00
eP Zs 13 27 19
eS Es Ns 27 52
iP Zs 14 45 46.3 Raref.
eS Es Ns 46 28½
eP Zs 15 34 36
eS Es 36 11
eP Zs 16 07 39
eS Es Ns 08 38
iP Zs 21 49 11.2 Comp.
e(PP) Zs 49 27
eS NL 52 31
e(SS) Es Ns 52 54

16th October, 1963.

iP Zs 02 24 51.0 Comp.
iS S,W 25 31
iP Zs 04 01 40.9 Raref.
eS Es 02 25½
eP Zs 09 58
eS Es Ns 10 43

S,W Wood Anderson components.

STANDARD SEISMIC STATION PMG.

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16th October, 1963 (Cont'd.)

iP			Zs	12	23	03.3	Raref.
iS	Es	Ns			23	49 $\frac{1}{2}$	
eP			Zs	12	52	25	
eP			Zs	15	06	(18)	
eS	Es	Ns			07	37	
eP		Zl	Zs	15	55	27	
eS	El	Nl		16	05	50	
eP			Zs	16	45	(06)	
eS	Es	Ns			45	28	
iP			Zs	20	44	06.4	Raref.
eS	El	Nl			47	54	
iP			Zs	23	18	11.4	Raref.
eS	Es	Ns			18	40	

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COMMONWEALTH OF AUSTRALIA.
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PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.

Preliminary Earthquake Phases 42/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 3,000 at 30 secs.

20th October, 1963.

17th October, 1963.

eP Zs 03 10 36
eS Nl 14 36
eP Zs 03 44 33
eS Ns 45 32
eP Zs 14 19 40
eP Zs 18 28 48
eS Ns 29 29
eP Zs 18 48 15
eS Es 48 58
iP Zs 19 09 06.2 Raref.
eP Zs 23 07 53
eS Ns 09 15
eP Zl 23 34(00)
coda interrupted by record change.

eP Zs 01 02 31
eS W 10 20 W-And.Compnt.
iP Zs 01 17 11.0 Raref.
eS Ns 17 43
iP Zs 03 06 14.8 Comp.
eP Zs 03 39 44
eP Zs 06 09 31
eP Zs 09 20 03
eS Nl 27 40
eP Zs 12 01 41
eS El 109 16
eP Zs 13 30 38
eP Zs 14 23 01
eS Es 24 23
eP Zs 17 51 12
eS Nl 58 29
eP Zs 20 22 26

18th October, 1963.

eP Zs 02 09 04
eS Ns 09 22
iP Zs 02 53 00.4 Comp.
eP Zs 08 45 03
iP Zs 09 58 41.0 Raref.
eS Es 59 22
iP Zs 12 03 58.2 Comp.
iP Zs 14 01 00.9 Raref.
eS Es 01 44
iP Zs 21 06 14.7 Raref.
eS Ns 06 57
eP Zs 21 32 19
eS Es 33 17
eP Zs 21 44 57
iP Zs 22 18 51.9 Comp.
eS Ns 19 45

21st October, 1963.

eP Zs 03 35 44
iP Zs 06 02 34.6 Comp.
iS Ns 02 47 1/2
eP Zs 09 26 03
eS El 32 12
iP Zs 13 11 15.0 Raref.
eS El 12 23
eP Zs 13 33 30
eP Zs 14 13 08
eS Es 14 16
iP Zs 15 09 07.0 Raref.
iS Es 09 53
iP Zs 15 37 51.9 Raref.
eP Zs 15 47 56
eP Zs 17 30 01
eP Zs 17 43 50
eS Es 44 30
eP Zs 22 47 27
eS Es 48 32
eP Zs 23 12 03
iS Es 12 48 1/2

19th October, 1963.

eP Zs 02 28 26
eS Nl 36 08
eP Zs 02 37 46
eS Es 38 10
eP Zs 03 40 42
eS Ns 41 05
eP Zs 07 14 10
eP Zs 11 59 01
eP Zs 14 15 53
eS Es 16 34
eP Zs 16 53 48
eS Es 54 28
eP Zs 21 01 17

22nd October, 1963.

eP Zs 00 22 47
iP Zs 01 08 02.1 Comp.
eP Zs 03 26 49
eS Nl 34 11
eP Zs 04 36 38
eS Es 37 06
eP Zs 04 43 20
eS Ns 44 09

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STANDARD SEISMIC STATION PMG.

BULLETIN 42/63.

22nd October (Cont'd.)

eP		Zs	06	42	05
eP		Zs	07	07	04
iP		Zs	08	04	32.6 Reref.
eS	Es			05	37
eP		Zs	15	39	46
ipI		Zs		40	01
eS	El			43	20
eP		Zs	20	46	40.8 Comp.
eP		Zs	21	49	32
eS	Ns			50	36

23rd October, 1963.

eP		Zs	03	55	03
eS		Ns		55	43
eP		Zs	06	40	34
iP		Zs	08	00	30.8 Reref.
ePcP		Zl		04	10
eS	Nl			04	20
eP		Zs	09	55	49
iP		Zs	10	17	23.1 Reref.
eS	S,W			17	57
eP		Zs	17	46	16
eS	Es			46	56
eP		Zs	18	07	28
eP		Zs	22	15	44
eP	Es			16	13

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COMMONWEALTH OF AUSTRALIA.

DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES.

PORT MORESBY GEOPHYSICAL OBSERVATORY.

STANDARD SEISMIC STATION PMG.

Preliminary Earthquake Phases 43/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 3,000 at 30 secs.

26th October (Cont'd.)

23rd October, 1963.

eP Zs 23 52 44

24th October, 1963.

eP Zs 01 16 03

eS El Nl 23 24

iP Zs 06 58 23.6 Comp.

iP Zs 07 19 35.1 Raref.

iP Zs 07 34 29.7 Comp.

iS Nl 41 00

iP Zs 13 01 23.0 Comp.

iP Zs 19 26 56.0 Comp.

iP Zs 20 02 28.5 Comp.

eP Zs 21 47 03 near.

eP Zs 22 52 56

eS Es Ns 53 (36)

25th October, 1963.

iP Zs 00 57 49.6 Raref.

iS Es Ns 57 57

eP Zs 03 04 27 near.

iP Zs 03 40 18.0 Raref.

iS Es 40 57

iP Zs 09 21 18.0 Comp.

eP Zs 10 51 42

eP Zs 11 31 04

eS Es Ns 31 (30)

iP Zs 14 00 06.7 Comp.

eP Zs 15 02 48

eP Zs 16 28 08

iP Zs 20 03 48.6 Raref.

iS El 07 46

eP Zs 21 42 47

eP Zs 23 03 09

eP Zs 23 26 (42)

26th October, 1963.

iP Zs 00 17 22.1 Comp.

eS Es Ns 18 (00)

eP Zs 02 24 28 near.

eP Zs 04 05 02

eP Zs 04 17 05

eS Es 17 (29)

iP Zs 05 52 22.1 Comp.

iS Es Ns 53 11

eP Zs 08 40 11

iP Zs 09 59 55.0 Raref.

iP Zs 10 14 15.0 Comp.

eP Zs 11 31 08

eP Zs 12 35 50

eS Es Ns 36 13

iP Zs 12 41 03.0 Comp.

eP Zs 13 40 (34)

eS Ns 40 (57)

iP Zs 18 59 36.9 Raref.

eP Zs 21 16 47 near.

iP Zs 22 43 03.6 Raref.

27th October, 1963.

iP Zs 01 17 12.6 Raref.

iP Zs 05 26 26.2 Comp.

iP Zs 08 51 45.8 Raref.

eS Ns 56 33

iP Zs 10 02 06.7 Raref.

iS Ns 02 50

eP Zs 10 46 07

e(S) El Nl 52 20

iP Zs 13 12 20.0 Comp.

iS Ns 12 55

eP Zs 14 54 (16)

iS Ns 54 57

iP Zs 18 32 00.1 Comp.

eS El 38 08

eP Zs 19 43 55

eP Zs 20 16 05

eP Zs 21 48 04

iS Ns 48 41

iP Zs 22 48 27.3 Comp.

28th October, 1963.

iP Zs 00 42 24.4 Raref.

eP Zs 01 45 13

eS Ns 46 10

eP Zs 02 48 09

iP Zs 08 02 29.0 Comp.

eS El Nl 08 41

iP Zs 12 13 44.0 Comp.

eP Zs 15 25 20

eS Es Ns 26 02

iP Zs 15 51 02.9 Comp.

iS Es Ns 51 32

iP Zs 20 05 20.4 Raref.

iPcP Zs 07 41

eS Es Ns 10 15

iScP Zs 10 41

eP Zs 20 46 (30)

eP Zs 21 00 15 near.

STANDARD SEISMIC STATION PMG.

PAGE 2.

28th October (Cont'd.).

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eP		Zs	21	57	26
iS	Es			58	12

eP		Zs	23	56	45
eS	Es			58	14

29th October, 1963.

eP		Zs	06	04	10
e(S)	Es Ns	Zs		05	39

iP		Zs	15	13	57.6 Comp.
eS	Es Ns			15	31

iP		Zs	16	07	21.9 Raref.
eS	Es Ns			08 (00)	

e(P)		Zs	17	03	(48)
------	--	----	----	----	------

eP		Zs	19	53	(34)
----	--	----	----	----	------

eP		Zs	20	29	23
eS	El Nl			35	06

iP		Zs	22	29	55.1 Raref.
----	--	----	----	----	-------------

eP		Zs	22	35	33
----	--	----	----	----	----

30th October, 1963.

eP		Zs	05	41	12
----	--	----	----	----	----

iP		Zs	06	44	09.3 Comp.
iS	Ns			44	27

iP		Zs	06	53	59.7 Comp.
----	--	----	----	----	------------

iP		Zs	08	44	39.0 Comp. near.
----	--	----	----	----	------------------

eP		Zs	16	05	54
----	--	----	----	----	----

eP		Zs	17	59	45
eS	Es			18	00 (22)

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COMMONWEALTH OF AUSTRALIA.
DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES.
PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 44/63.

31st October, 1963.

2nd November (Cont'd.)

eP		Zs	01	19	30
eP		Zs	03	25	02
eS	El			31	08
eP		Zs	04	31	48
iP		Zs	08	57	39.5 Raref.
iP		Zs	10	00	38.6 Comp.
eP		Zs	10	50	52
eS	NL			54	09
eP		Zs	15	31	41
eS	Es			32	27
iP		Zs	15	47	05.9 Comp.
eS	Es			47	51
eP		Zs	16	28	22
eP		Zs	21	17	06
eS	Es			17	53

eP		Zs	22	24	00
e(S)	El			27	32
eP		Zs	22	53	04
eS	Es			53	25

3rd November, 1963.

eP		Zs	02	06	47
eP		Zs	02	21	05
ePKP		Zs	03	29	25
i	Zl	Zs		29	29.6
ePP	Zl			31	58
ePKS	El NL			33	02
eSKSP		Zs		41	46
e(SS)	El			50	29

1st November, 1963.

eP		Zs	05	03	47
eS	Ns			04	22
eP		Zs	06	48	55
iP		Zs	08	56	04.4 Comp.
eS	Ns			56	44
eP		Zs	09	35	37
eP		Zs	11	00	04
eP		Zs	11	56	39
eS	Es			57	34
iP		Zs	14	18	09.2 Comp.
eS	Ns			18	50
eP		Zs	17	23	46
eP		Zs	18	23	07
eS	Es			24	32
iP		Zs	21	06	33.6 Raref.
epP		Zl		07	17
eS	Es			12	07
eScP		Zs		12	28
eP		Zs	22	50	44

4th November, 1963.

iP		Zs	01	19	01
iP	S,W			01	21 11 (Mag. approx.
iS	S,W			24	16 (8.
*iP		Zs	02	40	40.6 Raref.
iS	Es			43	44
*iP		Zs	03	47	15.2 Raref.
iS	Es			50	18
*iP		Zs	05	04	32.0 Raref.
iS	Es			07	32
*eP		Zs	05	26	58
eS	Es			30	01
*iP		Zs	05	56	48.3 Raref.
eS	Es			59	49
eP		Zs	06	30	23
eP		Zs	06	46	51
iP		Zs	06	57	03.0 Comp.
eP		Zs	07	05	36
eP		Zs	07	24	14
iP		Zs	07	51	04.0 Comp.
eP		Zs	08	45	28
eP		Zs	08	52	47

2nd November, 1963.

eP		Zs	01	22	28
eS	Ns			23	03
iP		Zs	01	43	51.1 Comp.
eS	Es			44	22
eP		Zs	06	03	09
eP		Zs	06	05	27
iP		Zs	06	12	26.8 Raref.
eS	Ns			13	12
eP		Zs	09	28	50
iP		Zs	10	14	24.9 Comp.
iS	Ns			15	16½
eP		Zs	14	18	49
eP		Zs	20	15	42
eP		Zs	20	44	20
eS	Ns			44	58
*eP	Es			19	56 08
eS	Es				59 09
*eP	Es			22	21 04
eS	Es				24 03

* Aftershocks of earthquake 01 21 11.
.... / 2.

5th November, 1963.

BULLETIN NO. 44/63.

eP		Zs	01	30	05
eP		Zs	02	18	37
eP		Zs	04	50	14
iS	Es			51	07 $\frac{1}{2}$
eP		Zs	05	20	28
eS	Ns			23	30
eP		Zs	06	04	19
eS	Es			07	20
eP		Zs	06	08	18
in coda of preceding.					
eP		Zs	06	10	23
eS	Ns			13	22
eP		Zs	08	47	36
eS	Ns			50	40
iP		Zs	09	13	46.2 Comp.
eP		Zs	09	40	53
eP		Zs	11	46	44
eS	Es			47	28
iP		Zs	12	36	09.4 Raref.
eS	Es			36	53
iP		Zs	13	26	48.6 Raref.
eP		Zs	16	09	37

6th November, 1963.

6th November (Cont'd.)

eP		Zs	04	09	25
eS	Ns			11	47
eP		Zs	04	38	46
eS	Es			44	23
eP		Zs	05	03	37
eP		Zs	05	50	59
eP		Zs	06	35	31
iP		Zs	07	38	03.7
eS	Nl			40	17
eP		Zs	08	01	31
eP		Zs	08	02	44
eP		Zs	08	49	42
eP		Zs	09	01	46
iP		Zs	09	05	18.1 Raref.
eS	Ns			08	25
eP		Zs	09	34	25
eP		Zs	10	55	33
eP		Zs	11	35	36
eP		Zs	12	43	52
eP		Zs	13	29	38
iP		Zs	15	20	52.5 Comp.
iP		Zs	23	59	00
eS	Es			00	02 04

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eP		Zs	01	05	49.5 Raref.
iP		Zs	01	23	30.1 Raref.
eS	Ns			26	33
eP		Zs	02	15	53 Magn. 6 $\frac{3}{4}$.
eS	W			18	23
eP		Zs	02	56	31
in coda of preceding.					
eP		Zs	02	58	13
in coda of preceding.					

COMMONWEALTH OF AUSTRALIA.
DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES.
PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 45/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 3,000 at 30 secs.

9th November (Cont'd.)

7th November, 1963.

eP Zs 02 03 52
eP Zs 02 45 30
in coda of preceding.
eP Zs 08 28 40
iS Es 29 21
eP Zs 09 37 12
eS Es 37 53
eP Zs 12 57 55
eS Es 59(14)
eP Zs 13 00 27
eS El 04 37
iP Zs 16 00 55 Comp.
eP Zs 16 30 54
eP Zs 16 33 19
Confused by preceding.
eP Zs 16 58 47
e(S) El N1 17 09 39
eP Zs 17 42 15
eP Zs 20 26 50
eS Es 27 54

8th November, 1963.

eP Zs 02 48(17)
eP Zs 03 00(59)
eP Zs 04 29 50
iP Zs 05 10 58.0 Raref.
eP Zs 14 20 39 Near.
eP Zs 14 29 45
eP Zs 16 18 16
eP Zs 16 30 46 Near.
eP Zs 16 47 (51)
eP Zs 20 17 37
eS Es 18 45
eP Zs 22 44 40
eS Ns 45 40
iP Zs 23 11 52.0 Raref.

9th November, 1963.

iP Zs 00 10 36.4 Raref.
eS Ns 10 58
eP Zs 01 04 34
eP Zs 01 17 31
eP Zs 05 07 34
eP Zs 05 45 01
iP Zs 07 10 27.5 Raref.
iS Es Ns 11 07
eP Zs 08 14 28

eP Zs 09 10 42
eS Es Ns 11 27
eP Zs 11 56 37 Near.
eP Zs 13 02 49 Near.
eP Zs 13 07 (33)
Confused by preceding.
eP Zs 14 31 (50)
eP Zs 17 26 38
iS Es Ns 27 44
iP Zs 18 42 36.2 Comp.
eP Zs 18 54 46
iS Es Ns 57 49
iPKIKP Zs 21 33 40.1 Comp.
iPKIKP Zs 33 49.5
i Zs 36 12
i Ns Zs 36 34
i Zs 37 10
e(SKKS) Es Ns 42 45
e(P) Zs 22 10 02
Confused by preceding.
e(P) Zs 22 13 55 Possibly
distant. Confused by preceding.
e(P) Zs 22 33 10
Above 3 phases may be associated with
preceding large distant shock.

10th November, 1963.

eP Zs 00 33 04
ePKIKP Zs 01 18 48
iPKIKP Zs 19 00
i Zs 21 16
i Zs 21 38
e Zs 21 49
e Zs 25 05
e(SKKS) Es Ns 27 48
e(SKKP) Zs 30 29
eP Zs 04 35 49
eS Es Ns 38 52
iP Zs 05 09 30.3 Comp.
eP Zs 05 43 10
eS Es 44 46
eP Zs 07 07 03
eS Es Ns 07 45
e(P) Zs 08 02 (58)
eP Zs 08 06 01
eP Zs 08 22 24
eS Es Ns 23 03
iP Zs 08 59 26.0 Raref.
eP Zs 09 12 42
iP Zs 10 43 37.0 Comp.
eS Es Ns 44 23

....2.

STANDARD SEISMIC STATION PMG.

BULLETIN NO. 45/63.

10th November (Cont'd.)

eP		Zs 17 27 02
iS	E1	34. 34
eP		Zs 18 29 23
iP		Zs 19 26 34.0 Raref.
e(P)		Zs 19 59 (46)
eP		Zs 21 29 31
eP		Zs 22 42 09

11th November, 1963.

eP		Zs 03 24 40
iP		Zs 04 45 50.1 Raref.
eP		Zs 07 41 28
eS	N1	44 20
iP		Zs 11 17 09.5 Raref.
iP		Zs 12 22 44.5 Comp.
eP		Zs 12 47 (46)
eP		Zs 12 51 21
iP		Zs 13 20 37.3 Raref.
eP		Zs 15 40 41
iP		Zs 15 56 27.9 Comp.
iP		Zs 19 50 03.9 Raref.
iS	Es	50 44
iP		Zs 20 58 04.2 Comp.
eP		Zs 22 35 30
iP		Zs 23 18 28.3 Raref.

12th November, 1963.

eP		Zs 11 34 28
e(S)	Es Ns	35 06
e(P)		Zs 11 36 (11)
i(P)		Zs 11 38 22.5 Raref.

Above arrivals suspected due to two or three overlapping shocks. P identifications suspect.

eP		Zs 20 12 22
eP		Zs 21 16 31
eS	Es Ns	17 37
iP		Zs 21 43 20.9 Raref.
iS	Es Ns	44 25
eP		Zs 22 16 29

13th November, 1963.

eP		Zs 03 15 11
eP		Zs 09 05 55.7 Raref.
eS	Es Ns	06 40
eP		Zs 09 20 (41)
e(S)	Es	21 (18)
iP		Zs 11 24 34.9 Raref.
e(P)		Zs 15 56 (42)
eP		Zs 17 26 11
iP		Zs 19 47 41.8 Raref.
eS	Es Ns	48 27
iP		Zs 20 37 43.8 Comp.
iS	Es Ns	37 49
eP		Zs 20 44 24
eP		Zs 21 33 41

14th November, 1963.

iP		Zs 00 29 36.8 Raref.
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COMMONWEALTH OF AUSTRALIA.
DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES.
PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 46/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec.
LP - 3,000 at 30 secs.

16th November (Cont'd.)

14th November, 1963.

eP Zs 04 05 00
eP Zs 04 31 15
eP Zs 04 40 38
eS El 44 38
eP Zs 05 38 14
eS Ns 38 54
iP Zs 06 18 17.9 Raref.
eS Es 18 59
eP Zs 08 32 15
eS Es 33 36
eP Zs 14 06 15
eS El 10 12
eP Zs 15 51 23
eP Zs 19 54 59
eP Zs 20 50 50
eS Ns 51 21

eP Zs 22 50 45
eS Ns 56 37
ePcS Nl 56 59
eP Zs 23 47 16
in coda of preceding.

17th November, 1963.

eP Zs 00 56 19
eP' Zs 01 08 13
ePP Zl 13 45
eSS El Nl 35 12
eP Zs 02 43 47
eS Ns 46 48
iP Zs 03 11 34.9 Comp.
eS Es 12 09
eP Zs 04 02 31
eS Ns 03 35
eP Zs 04 49 23
eS Ns 50 08
eP Zs 06 15 14
iP Zs 07 55 08.8 Comp.
eP Zs 08 03 45
iP Zs 13 19 55.5 Raref.
eP Zs 14 41 53
eS Es 42 39
eP Zs 17 13 37
eS Es 16 43
eP Zs 18 43 09
eP Zs 20 07 31
eS Ns 10 37

15th November, 1963.

eP Zs 05 53 54
eS Es 54 43
eP Zs 06 53 55
eP Zs 08 45 47
eS Ns 46 26
eP Zs 11 26 24
eP Zs 12 04 58
eS Es 05 39
eP Zs 12 08 08
eS Ns 08 49
iP Zs 14 31 21.3 Raref.
eS Es 32 06
eP Zs 16 17 04
iS Es 18 14
iP Zs 21 15 51.9 Raref.
ePcP Zs 17 12
eS El Nl 23 21
eG El 28 32

18th November, 1963.

eP Zs 00 00 03
iS Ns 00 22 1/2
eP Zs 01 03 34
eS Nl 05 00
eP Zs 02 16 47
eP Zs 05 30 57
eS Es 30 34
eP Zs 06 09 46
iP Zs 09 45 20.0 Comp.
ePP V 14 56 36
eSKS El Nl 15 03 11
ePS El Nl 05 50
eSS El Nl 11 30
iP Zs 15 28 39.8 Raref.
eP Zs 21 15 36
ePP Zs 15 49
eS Nl 19 17

16th November, 1963.

P Zs 00 14 50
eP Zs 02 39 22
eS Nl 47 00
eP Zs 05 52 54
eP Zs 06 32 24
iP Zs 06 44 37.1 Comp.
eS Ns 47 41
eP Zs 11 50 10
eP Zs 11 58 18
eS Es 59 40

V = Wilson Lamison Vertical
component. / 2.

STANDARD SEISMOGRAPH STATION PMG.

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19th November, 1963.

BULLETIN 46/63.

eP		Zs	10	51	24	
eP		Zs	11	10	19	
eS	Nl			17	56	
eP		Zs	12	21	58	
eP		Zs	13	28	27	
iS	Ns			29	01½	
eP		Zs	17	49	17	
iP		Zs	18	25	14.5	Comp.
eS	Nl			31	49	
eP		Zs	23	35	22	

20th November, 1963.

eP		Zs	00	48	54	
eP		Zs	01	56	44	
eS	Es			57	22	
iP		Zs	04	08	24.4	Comp.
iS	W			09	10	W = Wood Anderson EW component.
iP		Zs	08	59	18.3	Raref.
iS	Ns			09	00	03½
iP		Zs	12	07	17.8	Comp.
eS	El			13	34	
eP		Zs	20	05	43	
eS	Es			06	17	

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COMMONWEALTH OF AUSTRALIA.
DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES.
PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 47/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec. 25th November, 1963. -
LP - 3,000 at 30 secs. e(P)

21st November, 1963.

eP	Zs 01 39 (41)	iP	Zs 15 45 54.8 Raref.
eP	Zs 02 03 41 Near.	iS	Es 46 42
iP	Zs 06 00 56.0 Raref.	eP	Zs 15 57 49
iP	Zs 06 44 46.0 Raref. near.	iS	Ns 58 08
iP	Zs 09 14 06.2 Comp.	e(P)	Zs 16 54 (17)
eP	Zs 16 27 22	iP	Zs 20 39 46.1 Comp.
iP	Zs 21 11 36.5 Raref.	eS	Es Ns 41 11
i(P)	Zs 22 40 36.9 Raref. Possibly superimposed on small near shock.	e(P)	Zs 21 44 (20)

26th November, 1963.

iP	Zs 06 56 06.2 Comp.
iS	Es Ns 59 10
iP	Zs 08 51 20.0 Comp.
iS	Ns 54 22
eP	Zs 15 45 34

Two near shocks superimposed.

22nd November, 1963.

iP	Zs 00 25 32.9 Comp.
iP	Zs 02 03 39.9 Comp.
e(S)	Ns 04 15
iP	Zs 03 11 01.9 Raref.
iP	Zs 03 26 28.2 Comp.
eS	Es Ns 27 59
eP	Zs 07 51 57
eP	Zs 12 57 26
e(S)	Ns 58 (32)
eP	Zs 14 55 (17)
eS	El 15 02 46
eP	Zs 17 10 46

eP	Zs 16 29 46
eS	Es 30 38
eP	Zs 17 13 41
eS	Es Ns 14 32
eP	Zs 19 40 48
eS	Es Ns 41 42
e(P)	Zs 20 03 (20)
iP	Zs 22 56 01.1 Comp.
e(S)	Nl 23 00 51

27th November, 1963.

eP	Zs 02 58 55
eP	Zs 04 57 41
eS	Ns 58 05
eP	Zs 05 03 32
eP	Zs 05 51 01
iS	Es Ns 51 46
eP	Zs 09 09 18
eS	Es Ns 10 28
iP	Zs 13 17 35.8 Raref.
iP	Zs 14 04 10.1 Comp.
eP	Zs 19 50 (11)
eP	Zs 21 22 37
iP	Zs 23 39 37.0 Raref.
eS	Es Ns 40 (18)

23rd November, 1963.

iP	Zs 00 53 29
eS	Es Ns 54 12
iP	Zs 05 03 (21)
iP	Zs 19 36 31.9 Raref.

24th November, 1963.

iP	Zs 05 15 51
iP	Zs 05 53 41.2 Comp. near.
eP	Zs 07 31 01
eS	Ns 32 22
iP	Zs 15 32 15.5 Raref.
iS	Ns 32 57
eP	Zs 17 31 47
eS	Es Ns 32 26
eP	Zs 21 03 15
eS	Es Ns 03 37

25th November, 1963.

iP	Zs 00 58 03.3 Comp.
eP	Zs 01 20 14 near.
eP	Zs 11 50 42
iP	Zs 12 44 14.0 Comp.
eS	Es Ns 44 57

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COMMONWEALTH OF AUSTRALIA.
DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES.
PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 48/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec. 30th November, 1963.

LP - 3,000 at 30 secs.

28th November, 1963.

eP Zs 03 16 42
eS Es 17 49
eP Zs 08 32 36.4 Raref.
eP Zs 09 11 00
eS El 13 18
eP Zs 10 13 26
eP Zs 10 21 48
eS Ns 22 22
eP Zs 13 31 50
eS Es 32 48
eP Zs 15 12 10
eS El 15 46
eP Zs 19 30 44
e(PcP) Zl 33 14
eS El 36 58
iP Zs 19 45 52.8 Raref.
iS Es 46 37
eP Zs 19 54 37
eS Ns 55 26
iP Zs 20 01 59.1 Raref.
eS Ns 04 59
iP Zs 20 06 36.7 Comp.
eS El 09 56

29th November, 1963.

eP Zs 02 49 34
eS Es 50 23
eP Zs 05 05 01
eP Zs 05 42 14
eP Zs 09 03 40
eP Zs 10 26 09
eS Es 29 34
eP Zs 13 32 00
iP Zs 14 55 59.9 Comp.
eS Nl 15 01 (30)
eP Zs 18 34 49
iS Ns 35 57 1/2
eP Zs 19 01 29
eP Zs 20 29 19
eS Ns 30 25
eP Zs 20 43 38
eS Es 44 35
iP Zs 23 17 39.8 Raref.
eS S 18 17

iP Zs 00 04 53.3 Comp.
iP Zs 00 13 37.9 Comp.
eS S 15 46
eP Zs 04 15 01
eS Es 15 39
eP Zs 09 52 45
eS El 56 46
eP Zs 14 40 36
eS Ns 41 40
eP Zs 18 05 11
iP Zs 21 49 51.4

1st December, 1963.

iP Zs 00 01 38.7 Raref.
iS Es 02 22
eP Zs 01 55 40
eS Es 56 32
iP Zs 07 48 16.6 Raref.
iS S 49 05
eP Zs 08 53 31
iP Zs 11 55 01.4 Comp.
eS El 56 45
eP Zs 14 44 05
eS El 45 09
eP Zs 16 48 41
eS Es 52 21
eP Zs 17 23 03

2nd December, 1963.

iP Zs 03 08 36.3 Comp.
eS Es 09 10
eP Zs 08 17 20
eP Zs 09 33 37
iP Zs 10 28 11.1 Comp.
eP Zs 12 30 48
eS Ns 31 05
iP Zs 14 12 14.6 Comp.
eP Zs 17 14 05
eS Es 15 22
iP Zs 17 38 32.6 Comp.
eP Zs 18 05 38
eS Es 06 36

3rd December, 1963.

eP Zs 02 38 13
iP Zs 04 26 04.8 Raref.
iP Zs 07 14 26.9 Comp.
iS Es 15 02 1/2
eP Zs 13 47 40

S = Wood Anderson NS component.

STANDARD SEISMIC STATION PMG.

3rd December (Cont'd.)

eP		Zs 14 34 14
eS	Es	35 27
eP		Zs 15 30 31
eS	Es	31 05
eP		Zs 17 17 51
iP		Zs 17 51 28.5 Comp.
eS	Es	52 12
eP		Zs 17 59 13
eS	Es	59 56
iP		Zs 19 50 26.3 Comp.
eP		Zs 20 04 54
eS	Es	05 22
eP		Zs 21 19 27
eS	El	23 09
eP		Zs 21 34 22
eS	Ns	37 58 in coda of preceding.
eP		Zs 23 22 58
eS	El	26 26

PAGE TWO.

BULLETIN 48/63.

4th December, 1963.

eP		Zs 00 17 42
eS	El	21 09
iP		Zs 00 52 03.9 Raref.
eP		Zs 02 57 44
iP		Zs 03 05 44.7 Comp.
iS	Ns	05 50
eP		Zs 06 24 46
iS	Ns	24 48½
eP		Zs 09 12 40
eP		Zs 09 32 29
eS	Ns	33 43
eP		Zs 09 40 53
eP		Zs 09 49 16
eS	Ns	50 03
eP		Zs 22 25 33

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COMMONWEALTH OF AUSTRALIA.
DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES.
PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 49/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec. 8th December, 1963.
LP - 3,000 at 30 secs. eP

5th December, 1963.

eP Zs 05 04 (52)
eP Zs 08 42 57
iP Zs 11 08 58.0 Raref.
iS Es 09 43
eP Zs 14 19 13
eP Zs 16 01 02
iS Ns 01 42

Zs 02 32 52.1 Comp.
eP Zs 05 52 11
eP Zs 07 48 08
eS Es 48 58
iP Zs 10 53 38.3 Comp.
iP Zs 12 04 03.5 Raref.
eS Ns 05 35
eP Zs 17 32 01

9th December, 1963.

eP Zs 04 17 41
eS Ns 18 31
iP Zs 10 59 59.0 Raref.
iPP Zs 11 01 36.6
ePcP Zl 02 13
eS El 05 04
eG Nl 08 10

6th December, 1963.

iP Zs 01 57 53.8 Raref.
iS S,W 58 46
iP Zs 05 30 01.5 Raref.
iS Es Ns 30 46
eP Zs 06 05 47
eS Ns 06 41
eP Zs 09 11 18 Raref.
eS Es 11 59
iP Zs 10 57 35.2 Raref.
iS Ns 58 24
iP Zs 14 17 56.4 Raref.
iS Es 18 40

iP Zs 14 47 19.1 Comp.
eS Es 48 06
iP Zs 15 45 24.5 Raref.
iS Es 46 07.1
iP Zs 19 23 55.2 Raref.
iP Zs 21 14 14.4 Raref.
iP Zs 22 03 39.2 Comp.
iS Es 04 27.0
iP Zs 23 31 19.1 Raref.
iS Ns 32 01.0
iP Zs 23 49 01.7

7th December, 1963.

iP Zs 03 07 13.3 Comp.
eP Zs 03 44 11 Near.
iP Zs 04 13 56.4 Raref.
iPP Zs 15 36
iPPcP Zs 16 37
iS Es 18 46
iScP Zs 19 08
eG El 21 44
iP Zs 04 51 41.8 Raref.
iP Zs 05 13 49.8 Comp.
eP Zs 10 38 31
eS El Nl 43 20
eP Zs 15 22 47
eS El Nl 26 46
iP Zs 17 44 23.0 Comp.
eP Zs 18 28 43
eP Zs 22 50 49
eS Es Ns 52 16
iP Zs 23 20 58.7 Raref.
iS Ns 21 49

10th December, 1963.

iP Zs 00 21 35.1 Raref
eP Zs 01 36 53
eS Es 37 35
eP Zs 03 35 18
eS Ns 38 40
iP Zs 06 49 19.2 Comp.
eP Zs 07 00 09.5
iP Zs 08 18 19.7 Raref.
eP Zs 13 13 53
iP Zs 14 10 38.4 Comp.
eS Ns 11 29
iP Zs 14 44 15.2 Comp.
eS Es 45 56
eP Zs 15 47 12
eP Zs 19 14 16
eS Es 14 59
eP Zs 20 21 36
eP Zs 22 01 26
eP Zs 23 27 15
eS Ns 28 26
eP Zs 23 44 22 Cont...

Note: S, W = Wood Anderson N/S and E/W components.

11th December, 1963.

BULLETIN NO.49/63.

eP		Zs	00	09	52	
iP		Zs	02	37	22.8	Raref.
iS	Ns			42	11 $\frac{1}{2}$	
eScP		Zs		43	30	
eP		Zs	03	02	06	
iP		Zs	03	59	18.3	Raref.
eS	Ns		04	02	42	
eP		Zs	06	12	36	
iP		Zs	10	24	34.5	Raref.
eS	Ns			25	40	
eP		Zs	10	32	36	
eS	Es			33	20	
iP		Zs	11	18	30.6	Raref.
eP		Zs	11	39	34	
eS	Es			40	19	
eP		Zs	20	05	16	
eS	Es			06	02	
eP		Zs	17	19	02	
eS	El			27	55	
iP		Zs	22	44	01.7	Raref.
eP		Zs	23	31	26	
eS	Es			32	04	

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COMMONWEALTH OF AUSTRALIA.
DEPARTMENT OF NATIONAL DEVELOPMENT - BUREAU OF MINERAL RESOURCES.
PORT MORESBY GEOPHYSICAL OBSERVATORY.
STANDARD SEISMIC STATION PMG.
Preliminary Earthquake Phases 50/63.

Standard Seismograph Magnification Factors:

SP - 50,000 at 1 sec. 14th December (Cont'd.)
LP - 3,000 at 30 secs.

12th December, 1963.

iP		Zs 04 17 01.2	Raref.	eP		Zs 12 30 14	
iP		Zs 10 22 23.8	Raref.	eP		Zs 13 31 06	
iP		Zs 12 42 42.4	Raref.	eS	Ns	31 51½	
iS	Ns	42 49		eP		Zs 15 08 08	
eP		Zs 17 08 28		i		Zs 08 11.9	
eS	E	11 33		eS	Es	09 48	
iP		Zs 19 34 33.2	Raref.	eP		Zs 18 33 07	
iS	Ns	35 20		eS	Es	34 03	
eP		Zs 20 34 06		iP		Zs 23 37 56.4	Comp
iP		Zs 23 34 05.4	Raref.	iS	Ns	38 38½	

13th December, 1963.

eP		Zs 00 01 40		iP		Zs 00 11 00.0	Raref.
eS	Ns	02 45		eP		Zs 00 37 14	
iP		Zs 00 31 52.0	Comp.	eS	Ns	38 11	
iS	Ns	32 35.0		eP		Zs 01 44 24	
iP		Zs 02 14 45.5	Raref.	e		Zs 44 27	
iS	Ns	15 29		eS	Ns	45 01½	
iP		Zs 02 54 45.3	Raref.	iP		Zs 05 43 15.9	Raref.
eP		Zs 04 54 14		eP		Zs 07 44 23	
eP		Zs 06 00 29		iP		Zs 12 07 42.7	Comp.
iS	Es	01 13½		iS	Es	08 22½	
iP		Zs 07 56 29.0	Comp.	eP		Zs 15 13 23	
eP		Zs 15 56 48		eP		Zs 16 04 28	
eP		Zs 18 56 53		eS	E	09 40	
eP		Zs 21 12 34		eP	Es	Zs 17 20 02	
eP		Zs 21 48 56		eS		20 42	
iP		Zs 23 45 02.0	Comp.	eP		Zs 17 37 42	
iP		Zs 23 54 46.8	Raref.	eP		Zs 17 37 41	
iS	Ns	55 53½		iP		Zs 19 41 22.2	Comp.

14th December, 1963.

eP		Zs 00 25 24		eP		Zs 23 19 33	
i		Zs 25 28.4		eS	Es	20 19	
i		Zs 25 42					
iP		Zs 01 51 18.0	Raref.				
eS	Es	56 08		iP		Zs 01 59 12.6	Comp.
eP		Zs 01 57 47		e		Zl 02 00 56	
iS	Es	59 00½		iS	Ns	05 27	
iP		Zs 05 41 38.0	Comp.	eSS	Ns	09 24	
iS	Es	42 15		iP		Zs 02 11 54.1	Comp.
eP		Zs 07 37 33		iS	Ns	12 33	
eP		Zs 08 03 49		iP		Zs 02 14 24.3	Raref
eP		Zs 09 44 01		iP		Zs 02 53 18.7	Comp.
eP		Zs 11 41 21		i		Zs 53 25.0	
eS	Es	42 17		iP		Zs 02 59 54.5	
				eP		Zs 03 06 04	
				eS	Ns	06 36	

E = Sprengnether E/W component.

16th December 1963.

iP		Zs 01 59 12.6	Comp.				
e		Zl 02 00 56					
iS	Ns	05 27					
eSS	Ns	09 24					
iP		Zs 02 11 54.1	Comp.				
iS	Ns	12 33					
iP		Zs 02 14 24.3	Raref				
iP		Zs 02 53 18.7	Comp.				
i		Zs 53 25.0					
iP		Zs 02 59 54.5					
eP		Zs 03 06 04					
eS	Ns	06 36					
iP		Zs 03 51 45.9	Rare				
eS	Es	52 25					

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STANDARD SEISMIC STATION PMG.

50/63.

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16th December (Cont'd.)

iP		Zs 04 08 21.3Comp.
eS	Es	09 01
iP		Zs 04 24 25.4Comp.
eP		Zs 04 27 55
eP		Zs 04 30 25
eS	Es	31 05
iP		Zs 05 11 32.9 Comp.
eP		Zs 05 22 48
eP		Zs 08 15 26
eS	Ns	16 32
eP		Zs 08 19 35
iP		Zs 11 18 37.9 Raref.
eP		Zs 13 17 53
eS	Ns	19 07
eP		Zs 14 06 56 $\frac{1}{2}$
eP		Zs 14 26 03
e(P)		Zl 27 44
eS	Nl	32 30
e(SS)	El	35 37
eP		Zs 15 37 55
eS	Ns	38 28
eP		Zs 16 01 44
iP		Zs 16 14 20.0Raref.
eP		Zs 23 56 42
eS	Es	57 47

17th December, 1963.

iP		Zs 00 21 49.2 Comp.
eS	Nl	22 21
eP		Zs 01 22 48
eS	Es	24 4 $\frac{1}{2}$
eP		Zs 04 18 52
eP		Zs 06 05 11
iP		Zs 06 11 25.4 Comp.
i		Zs 11 30.6
iP		Zs 07 57 18.6 Raref.
eP		Zs 08 40 21
iP		Zs 10 19 54.3 Raref.
eS	W	20 43 $\frac{1}{2}$
eP		Zs 12 11 14
iS	Es	11 43.6
iP		Zs 14 00 31.6 Raref.
i		Zs 00 37.6
eP		Zs 14 41 22
eS	Es	42 28 $\frac{1}{2}$
eP		Zs 16 54 19
iP		Zs 23 33 42.5 Raref.

18th December, 1963.

eP		Zs 00 08 41
eS	Ns	09 56
iP		Zs 00 37 13.7 Raref.
e(PcP)	S	39 16
eS	Ns	42 54
eScS	Es	47 24
eP		Zs 03 58 45
eS	Ns	04 00 04
iP		Zs 06 44 47.3 Comp.
eP		Zs 06 52 03
eP		Zs 16 37 23
eS	Ns	38 03
eP		Zs 20 08 02
eS	Es	08 47
eP		Zs 20 44 24
e	Es	44 48

(C.L. COOKSON).
A/Observer-in-Charge.

S = Wood Anderson N/S component.
W = " " E/W "
E = Sprengnether E/W "