

COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF NATIONAL DEVELOPMENT
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

203 Collins Street,
MELBOURNE. VIC.

PROVISIONAL SEISMOLOGICAL BULLETIN

PORT MORESBY

Latitude: 09°24'.5 S. Longitude: 147°09'.1 E. Height: 230 ft.

Foundation: Eocene Cherts.

Instruments: Sprengnether long period horizontal component
seismometers, series H.
Sprengnether three component recorder, series H.
Galvanometer periods: EW 17.4 secs., NS 15.8 secs.
Seismometer periods: EW 17.4 secs., NS 15.8 secs.
Magnification: To be determined.
Galvanometer damping: critical.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S)	Remarks
			h. m. s.		
1	Jan. 1st	eL N	00 27.9		
2	✓ 1st	e(P) eL N	(10 27 54) (10 29.2)		
3	✓ 1st	e(S) N eL N	(15 37 10) (15 38.9)	52N, 171½W	
4.	✓ 2nd	iP NE iS NE	00 23 00 00 24 11	5S, 152E	
5	✓ 3rd	eL NE	08 36.4	31N, 40½W	
6	✓ 3rd	e(S) N eSSS N eLQ N	18 09 37 18 17 56 18 20.5	22S, 65E	
7	✓ 3rd	e(S) N eL N	22 36 30 22 39 26		
8	✓ 4th	e(S) N eL N	(05 14 45) (05 15.9)		
9	✓ 4th	eL N	(08 10.5)	31½N, 40½W	
10	✓ 4th	eP NE eS NE e N e N e N	13 09 21 13 12 21 13 12 56 13 14 13 13 16 17		
11	✓ 4th	eP NE eLQ N eS E	18 03 17 18 05 49 18 06 19		
12	✓ 5th	eL NE	02 15.8		

2.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks.
13	Jan. 5th	iP NE e N iS NE	08 10 13 08 11 25 08 14 16	2N, 122 ¹ / ₂ E	
14	5th	e(P) N eS NE e NE eSS NE eL NE	11 42 11 11 50 58 11 51 54 11 55 31 12 01.1	56 ¹ / ₂ N, 121E	
15	5th	iP NE iS NE iLQ NE	12 30 24 12 31 53 12 32 16	6S, 155E	
16	8th	eP NE e E eS NE eL N	03 17 18 03 17 31 03 20 56 03 22 06	New Hebrides Islands	
17	9th	iP NE	11 15 03	52 ¹ / ₂ S, 147E	Felt at Port Moresby; Int. 1MM.
18	9th	e(S) NE eL NE	14 16 15 14 16 40		Confused by microseisms
19	9th	eL E	18 24	44 ¹ / ₂ N, 85E	weak
20	9th	eP NE iS NE iLQ N	21 41 54 21 44 30 21 46 49		
21	10th	eP E iS NE eL E	15 10 58 15 12 39 15 12 43		
22	11th	eL N	06 30	Kamchatka	weak
23	11th	iP NE ipP E isP E ePcP E iS NE iScP E iScS E	13 26 03 13 26 29 13 26 49 13 28 26 13 31 28 13 31 53 13 35 59	23 ¹ / ₂ S, 177W	
24	12th	eL N	16 11.0	31 ¹ / ₂ N, 41W	
25	12th	eL N	23 54.5		weak
26	13th	eP N e N eS N e(sS) N e N eL N	00 13 06 00 15 01 00 20 48 00 22 42 00 23 43 00 29.7	52 ¹ / ₂ N, 177E	
27	13th	eP NE eS NE	02 58 54 03 02 11	11S, 166E	

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
28	Jan. 13th	eP N eS N e(ScS) N eSS N eL N	20 25 04 20 32 19 20 34 11 20 35 59 20 42.0	11 ¹ / ₂ N, 92 ¹ / ₂ E	
29	✓ 14th	eP N eS N eLQ N	06 02 24 06 07 57 06 11 07	22S, 175W	
30	✓ 14th	eP N eS N eLQ N eSSS N	07 27 14 07 32 32 07 34 46 07 35 43	29S, 179W	
31	✓ 14th	eP N eS N	15 04 59 15 08 21	12 ¹ / ₂ S, 167E	
32	✓ 15th	ePKP NE ePP N e N ePKS E iSKS N ePS N	19 33 41 35 09 36 12 37 12 40 40 44 42	16 ¹ / ₂ S, 71 ¹ / ₂ W	
33	✓ 15th	eP E iPP E i E iS E iSS E	22 20 21 20 49 21 10 24 10 24 48	13 ¹ / ₂ S, 167E	Depth about 140Km.
34	✓ 16th	eP NE iPP N i N iS N iLQ N	11 08 07 08 29 09 04 11 48 12 16	14S, 167E	
35	✓ 16th	eL N	16 54		weak
36	✓ 16th	e(S) N eL N	17 41 35 17 43.3		
37	✓ 17th	eP N iPP N i N iS N	04 19 01 19 15 20 46 22 03	1S, 127E	
38	✓ 17th	eP N e N i N iS N iScS N	07 23 36 24 42 26 40 30 03 33 35	52S, 139 ¹ / ₂ E	
39	✓ 17th	eL N	17 56		weak
40	✓ 18th	eL N	16 19.3	29S, 13W	
41	✓ 18th	e N	16 37 27		

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
42	Jan. 18th	iP NE i N i N iS N iLQ NE	19 26 30 26 33 27 19 27 55 28 00	6S, 155E	
43	19th	e(S) N eL N	11 41 16 11 43.2		
44	19th	e(PKP) N i NE	14 26 48 30 20	1 $\frac{1}{2}$ N, 79 $\frac{1}{2}$ W	Analysis difficult due to overlapping traces. Surface waves lasting till 20.00 hrs.
45	20th	eP N eS N e(ScS) N eSSS N	02 41 00 47 48 50 40 52 20	30 $\frac{1}{2}$ S, 71 $\frac{1}{2}$ W	
46	20th	e N	07 28 09	16N, 120E	
47	20th	e(S) N eL N	10 52 44 10 55.3		
48	22nd	eP N i N iPcP N iS N e(ScS) N	18 36 33 37 01 38 40 42 53 46 08	23N, 121 $\frac{1}{2}$ E	Depth about 100 Km.
49	23rd	iP NE e N e N e N eS NE	08 57 27 57 38 58 15 58 49 09 01, 24	18 $\frac{1}{2}$ S, 170E	Deep
50	23rd	e(S) N eL N	12 48 23 12 48.9		
51	23rd	eP N iS N	13 05 01 06 16		
52	23rd	e(S) N eL N	16 34 05 16 34.7		
53	24th	iP N e N ePcP N e N e N iS N e N eSS N eSSS N	06 04 53 05 26 05 49 06 42 08 40 13 46 14 33 18 00 21 05	56 $\frac{1}{2}$ N, 163E	
54	25th	eP N eS N iL N	00 44 22 46 25 46 33		

5.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
55	Jan. 25th	eP N iS N e N iL N i N i N	01 02 23 03 56 04 05 04 11 06 50 09 07		
56	✓ 25th	eL N	02 09		weak
57	25th	eP N eS N eL N	22 15 34 18 58 20.3		
58	26th	e(S) N e N eL N	04 08 04 08 57 10.4		
59	✓ 26th	e(S) N eL N	07 56 38 57.3		
60	✓ 26th	e(S) N eL N	18 07 (14) 08.4		
61	27th	iP N ipP N e N i N iS N iLQ N	07 51 25 51 46 52 19 55 47 57 20 01 07	15S, 174W	
62	✓ 27th	eP NE eS N iL N	08 56 52 58 25 58 45	Solomon Islands	
63	✓ 28th	eP N eS N eL N	18 12 12 13 57 14 07		
64	✓ 28th	eL N	18 58		weak
65	28th	eP N iS N iSSS N eL N i N	19 45 03 49 43 50 20 52 01 55 07	3 $\frac{1}{2}$ N, 127E	
66	✓ 30th	eP N eS N	02 15 20 20 54		
67	✓ 30th	iP N	06 15 41	7 $\frac{1}{2}$ S, 155 $\frac{1}{2}$ E	
68	✓ 31st	iP N e(PP) N iS N eL N	06 40 28 41 42 46 18 52.5	40S, 176 $\frac{1}{2}$ E	
69	✓ 31st	eP N e N eS N eLQ N	21 07 36 10 23 13 19 16 25		

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Seismometer periods: EW 17.4 secs., NS 15.8 secs., Z.
Magnification: To be determined.
Galvanometer Damping: critical.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
			h. m. s		
70	Feb. 1st	ePKP N e N ePPP N eSKS N e N e N e N e N e N	16 29 36 32 58 34 50 36 36 37 46 39 51 42 59 46 28 50 08	2N,79W	
71	1st	e(P) N	18 26 02	2N,79W	In coda of preceding.
72	1st	e(P) N	19 47 57		Masked by preceding.
73	1st	i(S) N	21 08 34	$1\frac{1}{2}$ N,79W	Masked by preceding.
74	1st	eP N iS N	22 02 36 03 20	7S,156E	
75	2nd	iP N	08 21 46	$48\frac{1}{2}$ N, $154\frac{1}{2}$ E	
76	4th	eP E iS N eL NE	12 43 37 44 37 45 45	7S, 156E	
77	5th	eP N eS E eScS E eL E	08 18 33 25 34 28 27 31.4	47N,153E	
78	5th	eL E	21 00		weak

2.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
79	Feb. 5th	eP N e E e E eS E e NE eSSS N e E eL E	21 09 45 10 31 11 57 16 45 17 44 21 53 25 45 27.8		
80	6th	e(P) E eS E eL E	10 03 10 05 18 06 40		
81	6th	i(P) E i E e E i(P2) N i(S1) E i(S2) E e N	16 07 06 08 30 09 52 10 04 14 08 15 42 15 56	27 ¹ / ₂ S, 178W	Possibly two overlapping shocks.
82	7th	e(S) E e E e N eL E	01 01 31 05 16 07 06 10.5		
83	7th	e(P) N eS N e E e E	01 17 20 22 27 27 29 28 10		Confused by microseisms and preceding shock.
84	7th	e(S) E eL E	05 04 48 05 27	55N, 167E	
85	7th	eL E	06 02		weak
86	7th	i(S) E eL E	07 13 48 16.9		
87	7th	eP NE	23 33 28	31 ¹ / ₂ N, 104E	Confused by microseisms.
88	9th	eP E iS E e E	01 45 05 48 39 51 58		
89	9th	e(S) E eL E	05 22 22 25.5		
90	9th	eL E	09 02		weak
91	9th	e(S) NE eL NE	11 42 02 42.5		
92	9th	eP N iS NE i N	16 59 31 17 02 11 03 36		
93	9th	eP N iPP E i E i E e E	22 36 20 37 34 38 10 40 08 42 56	12 ¹ / ₂ N, 121E	

3.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
94	Feb. 10th	i(S) E eL E	14 54 59 58.6	26N, 142 $\frac{1}{2}$ E	
95	✓ 10th	e(S) E eL E	17 41 07 41.8		
96	✓ 10th	eP E eS E	19 23 24 24 57		
97	11th	eP N iS E e E e E	19 08 (27) 10 51 12 00 13 02		
98	✓ 12th	iP E iL E i(S) E	06 35 36 37 34 37 46	5S, 151 $\frac{1}{2}$ E	
99	12th	iP E iS E	07 23 09 24 11	6S, 151 $\frac{1}{2}$ E	
100	✓ 12th	e(P) Z eS E	18 26 35 33 46		
101	✓ 12th	eP NEZ i(pP) Z	23 54 53 55 07	52N, 175W	
102	✓ 13th	e(S) E eL E	02 19 20 21.1		
103	✓ 13th	e(S) E e E eL E	06 19 50 20 42 22.4		
104	✓ 13th	i E	06 30 30		
105	✓ 14th	eL E	12 02.8		weak.
106	✓ 15th	eP NZ iS E iScS E i E eSS E e E iSSS E eL E	01 56 17 02 03 27 05 48 06 12 07 02 07 44 08 57 12.9	44N, 147E	
107	✓ 15th	eL E	22 18.6		weak.
108	✓ 16th	e(S) N eL N	02 17 40 24.0		
109	✓ 16th	eP NZ e E e(pP) E ePPP E iS E i E eSS E	06 13 38 13 46 14 37 16 10 19 38 19 51 22 34	39N, 142E	Depth about 300 Km?
110	✓ 16th	eP Z e Z e Z	07 47 34 47 47 47 58		

4.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks.
111	Feb. 16th	e E e E	21 50 13 51 23		
112	✓ 17th	eL N	12 12.3		
113	✓ 17th	eP Z e(S) N eL E	18 19 06 20 12 20.9		Confused by microseisms.
114	18th	eP Z iS E ✓ iL N i N	07 03 26 04 33 04 39 07 17		
115	18th	e(S) E eL NE	06 01 35 05.6		
116	18th	eP Z eS E ✓ e N iSSS E iL E	07 41 37 47 18 48 02 50 42 53 00	21S, 173 $\frac{1}{2}$ W	
117	18th	iP NE iPPP NE iPcP N iS E i(PcS) E e E iSSS E	13 28 47 30 25 31 06 34 27 34 51 36 26 37 35	31S, 178 $\frac{1}{2}$ W	P has long period
118	✓ 18th	eP Z	19 15 48	21N, 120E	
119	✓ 18th	iP Z ✓ i E i E iS E	19 55 21 58 51 01 38 02 23	20 $\frac{1}{2}$ N, 120 $\frac{1}{2}$ E	
120	✓ 18th	eP Z	20 02 32		
121	✓ 18th	iP Z i Z i Z i Z	20 10 22 10 26 10 31 13 58	About 150 miles SE of Admiral- ty Islands.	motion very vigor- ous on long period horizontals.
122	✓ 18th	eP Z i(S) N	21 18 34 19 17		in coda of pre- ceding
123	✓ 18th	e(P) Z iS N e N	23 01 51 06 24 06 46		
124	✓ 19th	eL N	02 04.9		
125	✓ 19th	eL N	02 14.4		
126	✓ 19th	e(S) N eL N	02 17 49 18.1		
127	✓ 19th	iP Z iS N eL N	08 08 31 09 22 10.3		

No.	Date 1958	Phase		Time (G.M.T.)	Epicenter (U.S.C.G.S.).	Remarks
128	Feb. 19th	iP	NZ	19 32 54	8S, 108E	
		ipP	Z	33 06		
		i	N	33 44		
		ePcP	N	35 06		
		iS	N	38 51		
		iSS	N	41 27		
		eScS	N	42 58		
		i	N	43 26		
		eL	N	44.2		
129	20th	eL	N	02 36.4		
130	20th	eP	Z	04 05 30	20 $\frac{1}{2}$ N, 120 $\frac{1}{2}$ E	
		e	Z	05 44		
131	20th	eP	Z	04 46 12		
		e	Z	46 23		
132	20th	e(P)	Z	09 12 27	21N, 120E	
		eL	E	12 18.4		
133	20th	eP	Z	14 52 51		
		eL	E	53.6		
134	20th	e(P)	Z	14 54 03		
135	21st	nil.				nil.
136	22nd	eP	NZ	08 12 50		
		i(S)	NE	13 32		
137	22nd	eP	Z	11 01 24	50 $\frac{1}{2}$ N, 175W	
		i	E	01 35		
		e	Z	02 17		
		e	E	03 37		
		iS	NE	10 22		
138	22nd	iP	Z	13 42 20		
		iS	E	43 32		
139	22nd	e(S)	E	17 03 38		
		eL	E	03.7		
140	22nd	eP	NZ	23 52 32		
		i	EZ	53 45		
		e	Z	54 58		
141	23rd	iP	NEZ	00 26 01	6S, 153E	
142	23rd	eP	Z	09 19 11	28 $\frac{1}{2}$ N, 139 $\frac{1}{2}$ E	
		e	Z	19 42		
		e	Z	21 14		
		iS	NE	24 32		
		i	N	25 00		
		i	N	26 02		
		iSS	N	27 00		
143	23rd	iP	Z	10 13 58	20 $\frac{1}{2}$ N, 120 $\frac{1}{2}$ E	
		eS	NE	20 02		

6.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks.
144	Feb. 23rd	eP Z i N i N i N eS N i E	10 54 25 56 02 56 48 57 31 11 00 00 00 18	24N, 141 $\frac{1}{2}$ E	
145	24th	iP NZ e Z eS N e N eSS NE	12 38 15 38 37 47 33 48 16 52 30	45N, 99E	
146	24th	eP Z eS E e N eL E	21 32 58 39 24 42 42 43.9	Tonga Is- lands Region	
147	25th	eP Z eS NE e E eL E	02 07 39 16 18 19 46 23.7	51 $\frac{1}{2}$ N, 179 $\frac{1}{2}$ E	
148	25th	eP Z eS E	05 20 12 23 49		
149	25th	eP Z i N iS E i EZ i E	12 25 35 26 40 26 45 26 51 27 04		
150	25th	eP Z eL E eS Z	14 53 56 54 36 54 57	Northern Sumatra	
151	25th	iP NEZ i Z i Z i Z iS NEZ	15 03 39 03 49 04 01 04 17 04 41	6S, 151 $\frac{1}{2}$ E	Rarefaction
152	25th	eP Z e Z e Z	16 19 36 20 16 20 44		
153	25th	eP Z e Z eS NE e Z	23 55 43 56 18 57 21 57 43		
154	26th	iP Z i NZ iS E i N i E	00 19 57 20 02 21 07 21 22 21 31	3 $\frac{1}{2}$ S, 152 $\frac{1}{2}$ E	
155	26th	e(P) Z e Z	08 30 34 30 58		
156	26th	eP Z eS N i E	08 38 10 39 38 40 23		

7.

No.	Date 1958	Phase		Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks.
157	Feb. 26th	eP	Z	11 43 02	31 $\frac{1}{2}$ N, 141 $\frac{1}{2}$ E	
		e(S)	E	49 06		
158	26th	eP	Z	17 00 48	50N, 155 $\frac{1}{2}$ E	
		e	Z	01 23		
159	26th	e(P)	Z	17 28 16	41N, 143 $\frac{1}{2}$ E	
160	26th	e(P)	Z	17 49 51		
160a		iP	Z	18 06 37		Rarefaction
		iS	E	07 16		
161	27th	eP	Z	16 57 14		
		e	Z	57 26		
162	28th					time marks failed.

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Sprengnether three component recorder, series H.
Galvanometer periods: EW 17.4 secs., NS 15.8 secs., Z.
Seismometer periods: EW 17.4 secs., NS 15.8 secs., Z.
Magnification: To be determined.
Galvanometer Damping: critical.

No.	Date 1958	Phase		Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
163	March 1st	eP	Z	h. m. s 02 55 18		
		e	Z	55 23		
164	1st	e(S)	E	22 39 21		
165	2nd	eL	E	12 34.5		weak
166	2nd	e(P)	Z	19 17 37		
167	3rd	iP	Z	01 58 33		
		i	E	58 50		
		iS	E	59 04		
168	3rd	iP	EZ	04 11 04	14 $\frac{1}{2}$ S, 168 $\frac{1}{2}$ E	
		e	Z	11 18		
		e	Z	12 03		
		iS	E	12 26		
		e	E	13 38		
		iL	E	15 04		
169	3rd	eP	Z	07 30 28		S marred by trace disturbance.
		e(S)	E	36 30		
		e	E	40 04		
		i	E	41 42		
170	3rd	i(S)	E	08 52 53		confused by micro- seisms.
171	3rd	iP	EZ	16 29 08	55 $\frac{1}{2}$ N, 166 $\frac{1}{2}$ E	Compression
		e	EZ	29 17		
		e	E	30 15		
		e	E	30 26		
		eS	E	34 12		
		e(ScS)	E	35 47		
		iL	E	38 00		
172	3rd	eP	Z	17 43 39	55 $\frac{1}{2}$ N, 166E	
		e(S)	E	52 50		
		e	E	53 42		

2.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
173	March 4th	i(P) Z	14 52 38	27N, 130E	
174	4th	eP Z	17 55 58		
		e Z	56 32		
		eS E	58 44		
		iL E	59 39		
175	5th	e(P) Z	05 44 01		
176	5th	eP Z	16 58 32		
		e Z	58 52		
		e(S) E	17 03 56		
177	5th	e(P) Z	18 17 20		
178	6th	e(S) E	12 07 22		
		e E	08 24		
		e E	08 47		
179	7th				no record 2343-0632
180	7th	e(S) E	08 29 24	9 $\frac{1}{2}$ N, 126E	
		eL E	31.0		
181	8th	iP NEZ	18 09(51)		
		e Z	09(52)		
		i(S) E	10(38)		
182	8th	iP NEZ	18 51(02)		compression
		i(S) E	51(37)		
183	8th	e(P) Z	19 04(39)		
184	8th	eP Z	19 15(05)		
		e Z	15(19)		
		eL E	(16.0)		
185	9th	iP NEZ	07 24(47)	6 $\frac{1}{2}$ S, 148E	compression
186	9th	eP Z	07 39(25)		in coda of preceding
		eS Z	40(30)		
187	9th	eP Z	10 05(18)		
		eS E	05(42)		
188	9th	eP Z	10 29(56)	34S, 178 $\frac{1}{2}$ W	
		e E	30(13)		
		e Z	30(26)		
		ePPP Z	31(41)		
		e E	33(16)		
		e E	35(11)		
		iS E	35(51)		
		iSSS E	39(11)		
189	10th	e(S) N	18 54 09		
		e N	54 36		
		eL NE	55.4		
190	11th	iP NEZ	00 33 38	25 $\frac{1}{2}$ N, 125E	

3.

No.	Date 1958	Phase		Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
191	March 11th	iP	Z	14 03 35	13S, 167E	
		i	Z	03 41		
		i	Z	04 06		
		i	NE	04 55		
		iS	N	07 15		
		i	N	09 38		
192	12th	e(P)	Z	11 03 49		confused by microseisms.
		e(S)	E	07 04		
193	13th	e(P)	Z	21 52 52		
194	13th	eP	Z	23 54 54		
		ePP	E	57 00		
		e	E	57 58		
		eS	NE	24 01 08		
		eSS	NE	03 18		
195	14th	eP	Z	07 50 28		
		eS	Z	51 17		
196	14th	eL	E	12 41		weak
197	14th	e(S)	E	17 09 21		
		eL	E	17 13		
198	14th	eP	Z	21 12 52		
		e	Z	13 10		
		eL	E	16.8		
199	15th					no record 0019-0129 hrs.
200	15th	e(P)	Z	07 57 46		
201	15th	eP	Z	08 35 47		
		eS	Z	36 10		
202	15th	eP	Z	10 38 19		
203	15th	eP	Z	12 34 39		
204	15th	eP	Z	15 39 17	17 ¹ ₂ S, 169 ¹ ₂ E	
205	15th	eP	Z	19 07 52	5S, 152E	
		i	Z	07 56		
		i	Z	08 02		
		iS	E	09 07		
		iL	E	09 52		
206	16th					nil
207	17th	iP	Z	21 41 18	6 ¹ ₂ S, 147 ¹ ₂ E	
		iS	E	41 53		
208	18th	eP	Z	02 27 21		
		iS	E	27 58		
209	19th	eP	Z	11 10 00		
		eS	N	13 40		
		eL	E	15.9		

No.	Date 1958	Phase	Time (G.M.T.)	Epicoenter (U.S.C.G.S.)	Remarks
210	March 20th	eP Z eS Z e Z	01 10 50 11 08 11 11		
211	20th	iP Z e Z e Z e Z iS E iScS E iSS E i(SSS) E	01 49 13 50 09 50 38 52 35 58 16 59 17 02 17 06 04		
212	20th	eP Z e Z	02 17 27 17 37		
213	20th	eP EZ e Z i NE i N iS E iL E	14 50 25 50 32 51 03 51 30 53 08 53 27	10S, 161E	
214	20th	eP EZ iS E eL E	17 20 45 23 26 24 47		
215	20th	eP Z e Z eS E	22 47 57 47 59 48 24		
216	21st	eP Z e Z e Z e E iS NE i N i E iL E	15 31 29 31 45 31 58 32 35 32 46 33 07 33 12 33 25	4½S, 143E	time marks failed at 1632 hrs
217	22nd	eP Z i Z epP NEZ e Z i Z i E iS N	01 03 23 03 25 03 34 03 39 03 57 04 07 07 30		
218	22nd	eP Z eS E	02 50 (42) 51 (04)		
219	22nd	e(P) Z eS E eL E	06 21 (45) 29 (30) (34.0)	Kermadec Islands region	
220	22nd	iP Z iP NEZ e Z iS NE	10 15 (59) 16 (23) 20 (34) 24 (16)	23½N, 94½E	Rarefaction

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
221	March 22nd	eP Z iS N eL N	14 02 (14) 06 (23) (09.0)		
222	23rd	eP Z eS Z	09 27 54 28 15		
223	23rd	eP NEZ e Z e Z ePP E e E eS N eLQ NE	10 22 18 22 41 23 10 23 50 25 12 28 15 31 16	18N, 120E	
224	24th	eP Z ePP Z e E e E eS E e E iL E	01 01 33 02 14 02 56 03 49 06 00 09 15 10 46	21S, 170 $\frac{1}{2}$ E	
225	24th	eP Z eS E eL E	05 09 04 10 18 11.5		
226	24th	eP Z e Z e Z eS N e E	08 11 23 12 11 12 32 14 44 16 19		
227	24th	eL E	11 08		Weak
228	24th	e Z e Z	16 14 35 14 42		
229	24th	e Z	16 57 58		
230	24th	e(P) Z e Z e Z	18 20 14 20 23 20 32		
231	24th	eP Z eS Z e Z e Z	20 03 06 03 21 03 23 03 37		
232	24th	e(S) E eL E	21 12 46 15.3		
233	24th	eP Z ePP Z eS NE e N e E	21 51 55 52 40 56 37 57 46 59 13	21 $\frac{1}{2}$ S, 170 $\frac{1}{2}$ E	
234	24th	eP Z	22 15 15		
235	25th	eP Z eS N eL NE	08 33 12 37 16 38 16		

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
236	March 25th	eP Z e Z	19 02 14 02 24	17 $\frac{1}{2}$ S, 167 $\frac{1}{2}$ E	Confused by microseisms
237	25th	eP Z iS NE	19 06 53 10 52		Strong microseismic activity
238	25th	eP Z eS E	20 26 53 28 49		Confused by microseisms
239	26th	eP Z e Z e Z	00 31 45 32 06 32 52	11N, 126E	Confused by microseisms
240	26th	eP Z eS E eL N	03 31 47 34 07 34.6		
241	26th	eP Z eS Z	15 24 29 24 36		Small local shock
242	26th	e(S) N eL E	20 02 16 05		
243	27th	e(P) Z	12 05 11		
244	27th	e(P) Z eS N eL NE	13 59 32 14 00 40 00 52		Confused by microseisms
245	27th	eP Z eS Z	22 10 20 10 38		Small local shock
246	28th	iP Z i Z iS E iL E	00 24 22 24 28 25 28 27 16	6S, 153E	
247	28th	eP Z	04 21 44	36 $\frac{1}{2}$ N, 71E	
248	28th	eP Z i NEZ e Z i(S) E e NE	12 18 38 19 27 20 27 28 46 29 53	37N, 71E	deep?
249	28th	eP Z e Z e(S) N	14 52 53 53 22 15 02 08	20 $\frac{1}{2}$ S, 174W	
250	29th	eP E eS E	00 21 15 22 19		only EW component operating until 0244 hrs.
251	29th	e(S) NE eL NE	06 44 52 54.0		
252	29th	iP Z e Z i Z iS E	14 56 52 56 55 57 24 57 35		

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
253	March 29th	e(S) N eL N	17 29 18 35.5		
254	30 th	e Z	04 51 57		
255	30 th	eP Z eS Z	10 21 27 21 34		Small local shock
256	30 th	eP Z e Z	12 00 31 01 48		
257	30 th	eP Z	15 54 33		
258	30 th	iP Z e Z	17 39 00 39 13	23S, 179 $\frac{1}{2}$ E	
259	30 th	eL N	23 57		Weak
260	31st	eP Z e Z	05 41 08 41 29		
261	31st	eP Z e Z	13 47 41 47 47		

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COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF NATIONAL DEVELOPMENT
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

203 Collins Street,
MELBOURNE, Vic.

PROVISIONAL SEISMOLOGICAL BULLETIN

PORT MORESBY

Latitude : 09°24'.5 S. Longitude : 147°09'.1E. Height : 230 ft.

Foundation : Eocene Cherts

Instruments : Sprengnether long period horizontal component
seismometers, series H.
Sprengnether short period vertical component
seismometer, series D-H.
Sprengnether three component recorder, series H.
Galvanometer periods : EW 17.4 secs., NS 15.8 secs., Z.
Seismometer periods : EW 17.4 secs., NS 15.8 secs., Z.
Magnification : To be determined.
Galvanometer damping : critical.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
262	April 1st	eP Z e Z e Z eS NE	02 14 05 14 08 14 22 14 57		
263	1st	eL E	07 43		
264	1st	eP Z e NEZ	11 41 40 41 42		
265	1st	eP Z e Z	19 00 40 01 02		
266	1st	eP Z e Z	21 56 54 57 31		
267	2nd	eP Z eL E	00 02 42 07.4		
268	2nd	e(P) Z e Z	01 03 48 04 01		
269	2nd	e(P) Z	01 21 54		
270	2nd	eP Z e Z	02 44 00 44 06		
271	2nd	eP Z eS E	06 29 17 30 30		
272	2nd	iP NEZ i NEZ i Z iS NE	10 52 25 52 27 53 08 53 29	5½S, 154½E	
273	2nd	eP Z eS E	15 13 49 18 21		
274	2nd	e(P) Z	17 18 16		

2.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
275	April 2nd	iP Z i NZ iS NE	17 21 23 21 33 22 06		
276	3rd	e(P) Z	12 20 07		
277	3rd	e(P) Z e(SKS)E	16 10 26 22 37		
278	4th	eP Z	01 50 45		
279	4th	iP Z	02 01 50		Rarefaction
280	4th	iP Z i EZ i Z iS E i EZ iL E	02 25 00 25 05 25 16 26 09 26 19 27 33	5½S, 152E	
281	4th	eP Z eS Z	02 41 32 42 40		In coda of preceding
282	4th	eP Z	03 02 52		
283	4th	eP Z eS Z e Z	05 19 59 20 49 20 57		
284	4th	eP Z i Z i Z iS N	07 18 33 18 35 18 41 19 24	5½S, 152E	
285	4th	iP Z i Z iS Z i Z	07 29 27 29 42 30 38 30 49		Compression in coda of preceding shock
286	4th	iP Z i Z i Z i Z iS Z	07 31 35 31 43 31 48 32 02 32 47	5½S, 152E	In coda of preceding
287	4th	eP Z e Z eS Z e Z	07 57 35 57 41 58 49 58 57		
288	4th	eP Z	11 19 18		
289	4th	iP Z e Z iS E i E iL N	14 45 30 45 44 46 31 46 41 47 40		
290	4th	eP Z i Z iS Z	15 39 40 39 42 40 52	5½S, 152E	

3.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
291	April 4th	iP Z i Z iS Z i Z	16 45 58 46 04 47 06 47 17		In coda of preceding
292	4th	eP Z	18 32 07		
293	4th	eP Z e Z eS Z e Z	20 58 36 58 42 59 43 59 54		
294	5th	eP Z eS Z e Z	04 34 18 35 17 35 19		
295	5th	eP Z e Z eS EZ eL E	05 08 26 08 32 09 37 11 02		
296	5th	eP Z eS Z	11 03 50 05 02		
297	5th	eP Z iS EZ	11 37 20 38 04		
298	5th	eP Z e Z	17 06 51 06 58		
299	5th	eP Z e Z	17 23 53 24 22		
300	5th	eP Z eS Z	17 35 30 36 40		
301	5th	eP Z eS Z	20 05 12 06 23		
302	5th	eP Z eS Z	20 21 01 22 12		
303	5th	eP Z	20 24 44		
304	5th	eP Z eS Z	20 27 46 28 53		
305	6th	e(P) Z	11 58 36		
306	6th	eP Z e Z e Z iS E	19 00 05 00 10 00 35 04 13		
307	6th	e(P) Z	19 39 58		
308	6th	eP Z e(S) E	23 59 51 06 41		Confused by microseisms
309	7th	iP Z	07 15 01	17 $\frac{1}{2}$ S, 178 $\frac{1}{2}$ W	rarefaction

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
310	✓ April 7th	i(P) Z i Z i Z	15 43 11 43 44 47 14		
311	✓ 7th	eP Z e Z e Z	18 13 34 14 40 15 15		In coda of preceding
312	✓ 7th	eP Z	18 39 20		Buried in coda of previous shocks
313	✓ 7th	eP Z e Z	18 46 52 47 36		Masked by previous shocks
314	✓ 7th	eP Z	19 24 26	45N, 95E	
314a	✓	eP Z	20 32 28		
315	✓ 7th	eP Z	21 18 59		
316	✓ 8th	iP Z i Z	13 28 27 29 22	19S, 176W	Severe microseismic disturbance 00 hrs the 8th-19 hrs 9th
317	✓ 9th	eP Z e Z	04 00 08 00 26		
318	✓ 9th	iP Z i Z e Z eS NE	18 03 16 04 04 05 18 07 26	2N, 126½E	Compression
319	✓ 10th	eP Z eS Z e Z	03 11 33 12 18 12 36		Small local shock
320	✓ 10th	eP NZ e Z	07 48 12 48 46		
321	✓ 10th	eP Z iS E	11 58 52 12 05 38	38½N, 143E	
322	✓ 10th	eP Z e Z	13 25 59 27 22		
323	✓ 10th	e(P) Z eS E eL E	17 29 50 31 53 33.3		
324	✓ 10th	iP Z e Z e(S) E	19 17 16 17 30 23 50	18S, 174½W	Confused by microseisms
325	✓ 11th	eP Z e Z e Z e Z iS E	01 06 55 06 59 07 35 07 39 13 48	38½N, 142½E	
326	✓ 11th	e Z e Z	01 11 45 12 11		

5.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
327	April 11th	iP Z i NZ iS NE	03 23 25 23 31 24 06		
328	11th	e(P) Z e Z e Z	06 08 35 09 04 09 32		
329	11th	iP NZ i Z e Z ePcP Z ePP E ePcS N iS E iScS E i E	23 21 07 21 09 21 17 22 09 23 03 25 52 28 51 30 47 31 43		Rarefaction Deep?
330	11th	iP Z e(pP) Z e Z i(S) E	23 29 27 30 03 30 17 33 34	0 125E	Rarefaction Deep and super- imposed on preceding
331	12th	eP Z e Z eS Z	00 02 21 02 29 03 08		Small local shock
332	12th	eL E	12 37.6		Confused by microseisms
333	12th	eP Z e Z i Z e(S) E	13 32 56 33 00 33 10 38 54	25N, 126E	
334	13th	eP Z	08 31 48		
335	13th	eP Z e Z e(S) E	09 19 59 20 33 30 57	66N, 156W	Confused by microseisms
336	13th	eP Z e Z e E e E eS E eScS E iSSS E	12 39 20 39 27 41 06 45 30 47 50 49 13 54 50	53N, 161E	
337	14th	eP Z eS Z	16 26 24 27 17		Small local shock
338	14th	eP Z eS Z eL E	18 32 59 33 58 34.7		
339	14th	eP Z e Z e Z e(S) E	19 25 39 25 51 26 02 30 44	14½S, 168E	Confused by microseisms

6.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
340	April 14th	ePKP Z iPKS E iSKS E iSKKS E iPS E	21 51 12 54 34 58 25 00 30 03 59		
341	15th	iL E	01 53 39		Surface waves commence and follow in groups which terminate approx. 0615 hrs.
342	15th	eP Z iS Z i Z i Z	03 28 34 29 14 29 25 29 38		
343	15th	iP NEZ i Z i Z iS E iL E	10 08 10 08 41 08 57 09 19 11 01		
344	16th	e(P) Z e Z	15 45 27 46 26		
345	17th	iP EZ iL E iS EZ i Z i E	02 03 33 04 43 05 00 05 04 05 20	6S, 154E	
346	17th	iP EZ iS Z	02 17 43 19 16		In coda of preceding
347	17th	iP EZ eL E	03 22 54 24 14		
348	17th	iP EZ	04 15 30		
349	17th	iP NEZ i(S) E	06 23 47 24 11	6S, 155E	
350	17th	iP EZ iS E	06 25 12 25 32		
351	17th	iP NEZ iS Z i Z	10 06 20 07 33 11 25	5½S, 152E	
352	17th	iP Z i Z iS Z i Z	10 15 50 16 00 16 59 17 06		In coda of preceding
353	17th	iP Z iS Z	10 33 09 34 21		
354	17th	e(P) Z	10 39 54		

7.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
355	April 17th	e(P) Z e(S) Z	10 46 06 47 17		
356	✓ 17th	e Z	11 41 13	37N, 145 $\frac{1}{2}$ E	
357	✓ 17th	iP Z eS Z	13 47 59 49 07		
358	✓ 17th	iP Z i(S) NZ i Z	16 00 38 01 20 01 42		
359	✓ 17th	iP Z e(L) N i(S) Z	16 44 23 45 19 45 52	6 $\frac{1}{2}$ S, 149 $\frac{1}{2}$ E	
360	✓ 17th	iP NZ i Z iS NZ eL N	18 12 33 12 40 13 39 13.5		
361	✓ 17th	iP NZ eL N iS N	21 25 53 26.5 26 48		
362	✓ 17th	e(P) Z	23 26 39		
363	✓ 18th	eP Z eS Z	01 02 27 02 57		
364	✓ 18th	eP Z e Z e Z	01 09b25 09 35 09 46		
365	✓ 18th	eP Z e Z	01 13 07 13 22		
366	✓ 18th	eP Z e Z eL E	03 10 00 10 08 11.9		
367	✓ 18th	eP Z iS E iL E	05 24 50 25 56 26 18	39N, 143E	
368	✓ 18th	eP Z iS N eL N	07 38 17 43 11 46 19		Deep?
369	✓ 18th	eP Z e Z i N i N iS NE i E	09 05 05 05 17 05 30 05 46 06 14 06 44	5S, 143 $\frac{1}{2}$ E	
370	✓ 18th	eP Z e Z eS Z	09 41 36 41 53 42 03		
371	✓ 18th	e(P) Z	15 50 51		

8.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
372	April 18th	e(P) Z	17 32 05		
373	X 19th	eL E eP Z eS Z	04 54.4 05 46 04 46 27		Small local shock
374	19th	eP Z e Z eS E e E	10 53 17 53 27 56 04 57 53		
375	19th	eP Z eS Z	13 23 19 23 49		Small local shock
376	19th	eL E	15 15.7		Weak
377	20th	eP Z eS N eL E	10 03 56 06 40 13 01.8	19N, 121 $\frac{1}{2}$ E	Weak
378	20th	eP Z eS EZ	13 09 25 10 57		
379	21st	iP Z	05 39 51	24 $\frac{1}{2}$ N, 122E	
380	21st	i Z	11 54 33		
381	21st	iP Z eL E	15 35 12 37.5		
382	21st	eP Z e Z	19 18 05 18 10		
383	21st	eP Z i Z i Z i Z e(PcP)EZ iS E iSS E iScS E	20 22 04 22 11 22 34 22 37 23 58 28 09 30 56 32 05	15S, 174 $\frac{1}{2}$ W	
384	21st	e(P) Z	21 26 56		
385	21st	iP Z i Z i Z i(S) E i E	22 45 24 46 04 46 18 48 04 48 48	4 $\frac{1}{2}$ S, 104E	
386	22nd	eP Z e Z eL E	05 46 19 46 51 55.8	24 $\frac{1}{2}$ N, 122E	
387	22nd	eP Z iS E i E	21 14 46 16 10 16 40		Solomon Islands Region
388	23rd	eP Z iS N	03 08 57 14 56		

9.

No.	Date 1958	Phase		Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
389	April 23rd	eP	Z	11 01 33	5 $\frac{1}{2}$ S, 153 $\frac{1}{2}$ E	Small local shock
		eS	Z	01 50		
390	23rd	eP	Z	14 56 13		
		e	Z	56 57		
391	23rd	eP	Z	15 18 46	15 $\frac{1}{2}$ S, 176W	Confused by microseisms
		eL	N	27.0		
392	23rd	iP	Z	19 14 26	4 $\frac{1}{2}$ S, 153E	
		i	Z	14 36		
		i	Z	14 53		
		iS	N	15 44		
393	24th	e	Z	02 17 41		Minor activity
394	24th	iP	Z	02 20 44		
		iS	Z	21 52		
395	24th	e	N	03 19 09		
396	24th	e	E	05 49		
397	24th	e	Z	10 59 14		
398	24th	eP	EZ	13 15 15	22S, 170 $\frac{1}{2}$ E	
		iS	E	19 37		
		eLQ	E	20 08		
399	24th	eP	Z	17 26 56	22S, 170 $\frac{1}{2}$ E	
400	24th	e	E	17 31 40		
401	24th	e	E	17 32 15		
		e	E	34 10		
402	24th	eL	E	20 52.8		
403	25th	iP	NEZ	05 58 01		
		iS	NE	58 45		
404	25th	iP	NEZ	09 17 47		
		eL	E	18.8		
405	25th	eL	E	11 28.0		
406	25th	eP	EZ	11 32 25		
		eL	E	34 13		
407	25th	iP	Z	15 49 18		
		iS	NEZ	50 26		
408	25th	iP	NEZ	19 12 20		
		iP	NEZ	23 54 09		
409	26th	eL	E	01 24		
410	26th	i	Z	07 15 51		
411	26th	iP	NEZ	09 30 35	15S, 167 $\frac{1}{2}$ E	
		i(P)	E	31 05		
		iS	NE	34 33		

10.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
412	April 26th	eP NZ iS NEZ	09 55 01 55 41		
413	✓ 26th	eL E	21 33		
414	27th	i Z eL E	09 08 45 21.8		
415	✓ 27th	e(S) E eL E	19 24 33 37.7		
416	28th	eL E	06 34.0		
417	28th	eP Z i EZ iS E i E iL E	11 30 07 30 10 31 31 31 50 32 29	5S, 153 $\frac{1}{2}$ E	
418	✓ 28th	e(P) Z i(S) E	12 07 06 10 32		
419	✓ 28th	i(P) Z	12 20 38		
420	✓ 28th	i E	12 28 23		
421	✓ 28th	iP Z i Z e Z	12 53 56 54 06 55 03		
422	✓ 29th				n i l
423	✓ 30th	eP Z e Z eS Z	08 26 16 26 25 27 31		
424	✓ 30th	e(P) Z	14 27 56		No records 2338- 0634 hrs.

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BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

203 Collins Street,
MELBOURNE, C.1.

PROVISIONAL SEISMOLOGICAL BULLETIN

PORT MORESBY

based

Latitude : 09°24'.5S Longitude : 147°09'.1E Height : 230 ft.

Foundation : Eocene cherts.

Instruments : Sprengnether long period horizontal component
seismometers, series H.
Sprengnether short period vertical component
seismometer, series D-H.
Sprengnether three component recorder, series H.
Galvanometer periods : EW 17.4 secs., NS 15.8 secs., Z.
Seismometer periods : EW 17.4 secs., NS 15.8 secs., Z.
Magnification : To be determined.
Galvanometer damping : critical.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
425	May 1st	iP NEZ i Z ipP Z iS Z esS Z	h m s 00 33 39 34 12 34 24 37 22 38 39	13½S, 167½E	
426	✓ 1st	e Z e Z	06 14 18 14 33	Banda Sea	
427	✓ 1st	e Z	20 54 00		Minor activity confused by microseisms
428	✓ 2nd	eL E	01 01.7		
429	✓ 2nd	i(P) NZ iS NEZ	16 15 02 15 16		
430	✓ 3rd	e Z	06 43 05	4N, 128½E	
431	✓ 3rd	i(P) NZ	09 31 45		
432	✓ 4th	i(P) Z	20 07 13		
433	✓ 5th	e Z	01 53 32		
434	✓ 5th	e Z	08 50 17		
435	✓ 6th	e Z	02 10 13		
436	✓ 6th	i Z iS Z i Z	19 15 33 16 16 16 40		
437	✓ 7th	iP EZ i Z	02 04 18 05 12		

2.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
438	May 7th	iP EZ i Z i Z iS EZ i E	h m s 03 40 56 41 04 41 19 41 39 42 10		
439	7th	e Z i Z	12 11 47 11 55		
440	7th	i Z i Z	13 12 58 13 01		
441	7th	e Z	13 58 42		
442	8th	i(P) NEZ	12 59 46		
443	8th	i(S) NEZ i NZ i NE e(ScS) NE i NE	13 02 10 02 59 03 14 11 29 21 27		
444	9th	i Z	04 59 21		
445	9th	i(P) Z e NZ i Z	08 23 58 24 37 24 53		
446	10th	e N i(S) N e N e N	07 16 49 17 22 19 03 19 55		
447	10th	eL N	23 35.5		
448	11th	e(P) Z iS NE e(PS) NE e(SS) NE	05 36 45 47 17 48 29 53 33		
449	11th	eL NE	06 04.5		Confused by microseisms
450	11th	i Z i Z	12 12 13 13 16		
451	12th	eL NE	15 29.8		
452	12th	e NEZ	16 57 40	31N, 140 ¹ / ₂ E	
453	12th	i NEZ	18 35 33	12N, 162E	
454	13th	e(P) N i(S) N	10 55 05 57 32		
455	13th	i Z	14 20 18		
456	14th	iP NEZ iS NE	04 00 11 01 28	4 ¹ / ₂ S, 153E	
457	14th	iP NEZ	09 12 43		
458	14th	e Z	14 20 01		

3.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
459	May 15th	e N	^h ^m ^s 03 10 00		Minor activity
460	15th	e N eL N	06 16 13 20.6		
461	15th	iP NEZ iS N i(SS) N L N M N	07 06 06 09 25 09 42 10.4 13	11½S, 165E	
462	15th	eP Z ePP Z e(S) N e(SSS) N M N e(PcS) N	09 48 17 48 43 51 55 52 38 55.1 56 30	13S, 166½E	
463	15th	iP Z e(S) N e(SSS) N M N e(PcS) N	15 50 26 54 02 54 43 57.4 58 40	13S, 166½E	
464	15th	i Z	18 48 13	Fiji Islands	
465	15th	eL N	19 01		
466	16th	e NZ	01 36	12½N, 161E	Minor activity
467	16th	iP NZ	08 23 32		
468	16th	eL N	13 57 00		
469	16th	i Z e Z	15 07 57 08 31		
470	16th	i Z i(S) NZ	15 53 47 54 04		
471	17th	i Z i NZ	00 49 30 50 21		
472	17th	iP NZ i(pP) Z i N	07 04 01 04 16 05 08	3S, 147½E	
473	17th	e(P) NZ e N e N	11 00 19 01 13 01.55		
474	18th	eP NZ iS N eL NZ	02 37 23 39 44 41.0	13S, 167E	
475	18th	e(P) Z e N e(S) N eL N	05 31 10 32 20 35 35 37.0	13S, 167E	
476	18th	eP Z	12 25 47	13S, 167E	

4.

No.	Date 1958	Phase		Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
				h m s		
477	✓ May 18th	e	Z	14 08 00		Minor activity
478	✓ 19th			00 20		Coda initial phases unrecorded during record change
479	✓ 20th	eL	E	00 27.5		
480	20th	iP	EZ	05 50 56	25S, 180	
	✓	e	EZ	56 16		
		eL	E	59.0		
481	20th	i(P)	Z	07 36 48		
	✓	i	Z	38 02		
		e	N	39 01		
		e	N	43 00		
482	20th	e	Z	12 28 59		
	✓	i	Z	29 23		
		i(S)	EZ	29 43		
483	22nd	iP	NEZ	15 09 34	3S, 146E	
		e(L)	NE	10		
		i	Z	10 07		
		i	Z	10 57		
		i	Z	11 04		
		i	N	11 47		
484	✓ 22nd	iP	NEZ	21 41 01		
		i(S)	N	42 02		
		i	Z	42 26		
485	✓ 22nd	e	NZ	23 54.1		Minor activity
486	✓ 23rd	eL	N	05 18.4		
487	23rd	e	Z	10 27 29		
		e	N	31 17		
	✓	eL	N	34.9		
		e	N	41 58		
488	24th	e	N	07 43 41		
		e	N	52 40		
	✓	e	N	55 43		
		e	N	08 03 36		
489	24th	i(P)	Z	10 03 31		
		i	Z	03 39		
	✓	e	N	04 44		
		e	N	04 55		
		e	N	05 27		
490	24th	i(P)	Z	10 33 28		In coda of preceding
	✓	e	NE	34 13		
		i	Z	34 27		
491	✓ 24th	iP	NEZ	16 34 01	6S, 146E	
492	✓ 25th	eL	N	01 13		Confused by microseisms

5.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
493	May 25th	i(P) NZ i Z	^h ^m ^s 04 52 54 53 28		
494	25th	eL N	15 32		Confused by microseisms
495	25th	e(PKP) NZ e(PKS) N e(PPP) N e(SKS) N e(SS) N (M) N	21 30 58 34 35 36 45 38 11 51 33 22 17	✓	
497	26th	e NZ e N e(L) N	04 37 40 46		Confused by microseisms
498	26th	e Z	11 07 59	53N, 169 ¹ / ₂ W	
499	26th	iP Z e Z e(S) N	15 39 19 40 01 40 14		
500	26th	eP Z i(S) N	16 24 14 29 03	17 ¹ / ₂ S, 178 ¹ / ₂ W	Deep?
501	26th	iP NZ i NZ	21 48 10 49 43		
502	26th	e NZ	22 18		Minor activity
503	27th	e Z e NZ	01 32 29 33 51		
504	27th	e(P) Z e NZ e N	11 28 37 30 06 32 54		
505	27th	i(P) Z i(S) NZ e N e N	20 48 03 49 32 51 08 52 10		
506	27th	iP NZ	23 33 45	5 ¹ / ₂ S, 146E	
507	27th	iP Z	23 46 16		In coda of preceding
508	28th	i(P) Z i(S) NZ i Z e Z	02 16 19 17 46 17 53 18 54	New Ireland region	
509	28th	iP NZ iS NZ i Z i Z i Z	11 19 58 20 03 20 11 20 17 20 20		
510	29th	iP NZ i NZ i(S) N i N	01 26 55 27 04 27 21 28 19		

6.

No.	Date 1958	Phase		Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
511	May 30th	eL	N	h m s 05 38		
512	30th	eP	NZ	05 52 25	7S, 154 ¹ / ₂ E	
		iS	NZ	53 57		
		i	N	57 57		
		e	N	06 00 29		
513	30th	e(P)	Z	16 19 26		
		e(pP)	Z	19 54		
		e(S)	N	25 37		
		e	N	27 39		
		e	N	29 09		
514	30th	e(P)	NZ	18 16 20		
		e(S)	N	25 39		
		e	N	27 39		
		e	N	30 37		
		e	N	36 49		
		e	N	49 47		
		e	N	56 47		
515	30th	i(PP)	Z	21 27 05	Fiji Islands region	
		e(PPS)	N	37 45		
		e(SS)	N	42 03		
		e(SSS)	N	46 41		
516	31st	i	Z	05 30 20		
517	31st	e	N	14 27 23		
		eL	N	33		
518	31st	iP	NZ	19 37 26		
		e(S)	Z	41 27		
519	31st	e	Z	19 45		Shock, in coda of preceding

(J.M. RAYNER),
DIRECTOR.

COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF NATIONAL DEVELOPMENT
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

203 Collins Street,
MELBOURNE, C.1.

PROVISIONAL SEISMOLOGICAL BULLETIN

PORT MORESBY

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Latitude : 09°24'.5S Longitude : 147°09'.1E Height : 230 ft.

Foundation : Eocene cherts

Instruments : Sprengnether long period horizontal component
seismometers, series H.
Sprengnether short period vertical component
seismometer, series D-H.
Sprengnether three component recorder, series H.
Galvanometer periods : EW 17.4 secs., NS.15.8 secs., Z.
Seismometer periods : EW 17.4 secs., NS 15.8 secs., Z.
Magnification : to be determined.
Galvanometer damping : critical.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
520	✓ June 1st	eL N e N	h m s 01 08 14 28		
521	✓ 1st	i Z	03 30 49		
522	✓ 1st	iP NZ i NZ i N	12 35 58 36 08 39 47	5 $\frac{1}{2}$ S, 146E	
523	✓ 1st	i Z i NZ	15 28 29 28 35		
524	2nd		No record		
525	3rd	e(P) Z i Z e Z i(S) N i N i(PcP) N	00 33 43 33 53 35 03 35 20 35 40 40 31		
526	✓ 3rd	iP Z i Z iS Z	19 36 46 36 54 40 52	15S, 168E	
527	✓ 4th	iP NZ iS NZ i Z i Z	09 48 32 49 07 49 55 50 54	7S, 145E	
528	✓ 5th	iP NZ iS N e N	02 15 58 17 08 20 03	5 $\frac{1}{2}$ S, 151 $\frac{1}{2}$ E	

2.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
529	June 5th	e Z	h m s 02 26 54		Minor activity in coda of preceding
530	5th	eP NZ e(S) N	03 00 24 01 37		
531	5th	e(P) Z e(PP) Z e(PcP) N e(S) N e(PcS) N	08 25 24 26 02 28 52 29 34 32 35	10 ¹ ₂ S, 166E	
532	5th	e(P) Z e(S) N e N e N	09 43 50 45 07 47 25 48 58		
533	5th	eP Z i Z e N e N	14 13 52 13 58 18 02 18 34		
534	6th	e Z e Z	07 01 16 02 14		
535	6th	e Z	08 02 36		
536	6th	e(P) Z e(S) N e(SSS) N	09 30 21 40 57 50 05		
537	6th	e(P) Z e N e N	12 17 01 18 32 19 32		
538	6th	eL N	20 18		
539	7th	iP NZ i Z iS NZ i Z i NZ	03 25 01 25 04 25 58 26 33 26 45	5S, 150 ¹ ₂ E	Rarefaction
540	7th	iP Z i Z iS NZ	07 01 46 02 03 02 39		
541	7th	iP NZ iS N i N e N i N e N	13 03 13 09 50 10 10 13 12 13 33 14 04	53S, 140E	
542	7th	iP Z i Z iS N	15 20 21 20 32 21 26		
543	7th	eL N	18 07.2		
544	7th	iP NZ i NZ iS N	18 28 52 29 02 29 33		Compression

3.

No.	Date 1958	Phase		Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
				h m s		
545	June 8th	eP	Z	07 44 40		
	✓	i(S)	N	49 21		
		i	N	50 42		
546	8th	e(P)	Z	20 15 20		
	✓	i(S)	NZ	16 05		
547	9th	i	Z	05 49 39		
548	10th	i	Z	01 27 01		
549	10th	e	NZ	02 20 35		Minor activity
550	10th	eP	Z	04 07 33	30 $\frac{1}{2}$ S, 177W	
	✓	eS	N	13 45		
	✓	e(SS)	N	16 43		
551	10th	e	Z	10 28 45		
552	11th	e	Z	13 25 11		
553	12th	e	Z	01 21 33		
554	12th	e(P)	Z	02 31 48		
	✓	e(S)	N	34 06		
		e(ScS)	N	44 15		
555	12th	e(P)	Z	06 28 53		
556	12th	e	Z	13 47 42		
	✓	e	Z	48 48		
557	12th	e(PKP)	Z	21 04 31		
	✓	e(PKS)	N	08 14		
	✓	i(SKKS)	N	14 00		
		e	N	16 06		
		e	N	19 49		
558	13th	e(P)	Z	09 56 33		
	✓	e(S)	N	59 08		
		e(SSS)	N	10 00 15		
		e(PcS)	N	05 15		
559	13th	e(P)	Z	11 06 53		
	✓	e(S)	Z	08 38		
	✓	e(PcP)	N	13 26		
		e(PcS)	N	16 38		
560	13th	i	Z	21 05 39		
561	14th	i(P)	Z	15 01 36		
	✓	i(S)	N	01 54		
		i	Z	02 05		
562	15th	iP	Z	02 47 23	18 $\frac{1}{2}$ S, 177 $\frac{1}{2}$ W	Confused by microseisms
	✓	i(S)	N	52 19		
563	15th	e(P)	Z	04 38 33		
	✓	i	Z	38 38		
		i	Z	39 13		
564	15th	e(P)	Z	09 11 09		Confused by microseisms
	✓	e(S)	NZ	12 32		

No.	Date 1958	Phase		Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
				h m s		
565	✓ June 15th	e	Z	10 51 47		Note: June 15th. Activity intense; shocks mostly local and small but recordings confused and many phases consequent- ly doubtful
566	✓ 15th	eP	Z	11 27 29		
		i	Z	27 54		
		i(S)	NZ	28 01		
		i	Z	28 35		
567	✓ 15th	eP	Z	11 33 27	9S, 150E	
		i	Z	33 31		
		i	NZ	33 40		
568	✓ 15th	iP	Z	11 38(57)		In coda of preceding
		i	Z	39(31)		
569	✓ 15th	i(P)	Z	11 50 47		
		i	Z	51 14		
570	✓ 15th	i(P)?	Z	11 52(23)		Separation of shocks indistinct
		i	Z	52(46)		
		i	Z	53(07)		
571	✓ 15th	e(P)	Z	12 01 58		
		i(S)	Z	02 20		
572	✓ 15th	e	Z	12 23 31		
		i	Z	23 37		
		i	Z	24 15		
573	✓ 15th	i	Z	12 26 10		Separation of shocks indistinct
		i	Z	26 15		
		i	Z	26 20		
574	✓ 15th	eP	Z	12 45 07		
		i	Z	45 24		
		e(S)	NZ	45 52		
		i	Z	45 58		
575	✓ 15th	iP	Z	14 01 27		
		i(S)	NZ	02 03		
		e	N	03 22		
576	✓ 15th	e	Z	14 39 14		
577	✓ 15th	eP	NZ	15 00 41	18S178 ¹ / ₂ W	
		e(PPP)	N	01 46		
		e(PcP)	Z	03 04		
		iS	N	05 30		
		e(PcS)	NZ	06 52		
		e	N	08 31		
		e	N	10 02		
578	✓ 15th	e	Z	16 32 40		
579	✓ 15th	e(P)	Z	17 07 57		
		e(S)	N	08 42		
		i	N	08 58		
580	✓ 15th	eP	NZ	17 21 45	9 ¹ / ₂ S, 150E	
		i	Z	27 45		
581	✓ 15th	e	Z	17 43 01		Small; in coda of preceding

5.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
582	June 15th	e(P) Z i NZ	^h ^m ^s 18 05 43 08 24		In coda of preceding
583	✓ 15th	e(P) Z i NZ e NZ	18 34 24 35 00 35 08		
584	✓ 15th	e Z	18 38 32		In coda of preceding
585	15th	e(P) Z i Z e(S) NZ i Z	20 32 57 33 41 33 48 34 06		
586	15th	eP NZ i Z e(S) N	21 33 17 33 22 33 48		
587	15th	e(P) Z i Z i Z e(S) NZ	21 38 14 38 22 38 26 38(54)		In coda of preceding
588	✓ 15th	iP Z e(S) N	21 43 46 44(15)		In coda of preceding
589	✓ 15th	e(P) Z i Z	21 52 52 53 40		In coda of preceding
590	15th	eP Z i Z i N	22 05 00 05 03 05 31		
591	15th	iP Z i Z i Z iS NZ	22 28 06 28 13 28 21 28 44		
592	✓ 15th	i(P) Z	23 50 32		
593	15th	e(P) Z i Z i NZ i(S) N	23 54 10 54 17 54 47 54 56		
594	✓ 16th	e Z e N	01 11 50 18 35	14½S 167½E	
595	16th	e(P) Z e(S) NZ	01 25 59 26 49		
596	✓ 16th	e Z e N	02 32 49 33 27		
597	✓ 16th	e Z	03 14 41		
598	✓ 16th	eP Z eS NZ	03 30 14 30 51		
599	✓ 16th	eP Z i(S) N	06 06 53 07 33		
600	✓ 16th	e Z	07 14 47	15S 169E	

6.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
601	✓ June 16th	e Z eL N	08 20 08 30 ..	14 $\frac{1}{2}$ S 177 $\frac{1}{2}$ W	
602	✓ 16th	e Z	14 25 26		
603	✓ 17th	e Z	05 32 17		
604	✓ 17th	iP Z e(S) N	19 13 23 18 44		Confused by microseisms.
605	✓ 18th	e N eL N	16 33 35 40 ..		
606	✓ 18th	e Z	21 06 42		
607	✓ 19th	e(P) Z	01 51 08		
608	✓ 19th	eP Z iS N e(PS) N	05 28 03 36 11 36 43	49 $\frac{1}{2}$ N 156E	
609	✓ 19th	eL N	13 58.8		
610	✓ 19th	eP Z eS N e(SS) N e N	18 10 23 16 59 20 23 24 53	52 $\frac{1}{2}$ S 140E	
611	✓ 19th	e(P) Z iS N	19 23 13 24 02		
612	✓ 19th	e Z	22 16 43		
613	✓ 20th	e N e N eL N	00 54 14 01 01 44 05 ..	16S 173W	
614	✓ 20th	i Z	17 38 43	20 $\frac{1}{2}$ S 179W	
615	✓ 21st	e Z	08 59 24		
616	✓ 21st	i Z	21 05 28		
617	✓ 22nd	e Z	09 16 20		
618	✓ 22nd	e(P) Z i(pP) Z iS N e(PcS) N e(ScS) N	14 22 04 22 17 25 31 29 44 33 36		
619	✓ 23rd	e Z i(S) N e N e N	07 24 20 27 45 28 30 30 52	15 $\frac{1}{2}$ S 168 $\frac{1}{2}$ E	
620	✓ 23rd	e(P) Z e N	10 56 08 56 45		
621	✓ 23rd	e Z e N	11 33 36 35 43		
622	✓ 23rd	e Z	14 36 03		
623	✓ 23rd	e Z	15 14 27		

7.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks.
624	June 23rd	e Z e(S) N	15 54 54 55 49		
625	23rd	e Z e(S) NZ	16 16 46 17 31		
626	23rd	i(P) Z	18 59 28	18S 178W	
627	23rd	i(P) Z	19 23 49	18S 178W	
628	23rd	i(P) Z e N	22 33 51 37 00		
629	24th	e(P) Z e N e N	00 15 58 30 41 34 21	8 $\frac{1}{2}$ S 112E	
630	24th	e N eL N	07 11 50 29 ..		
631	24th	e N	09 42 02		
632	24th	e NZ	15 20 13		
633	25th	eL N	02 40 ..		
634	25th	eP NZ i Z	09 38 07 39 08	3S 144 $\frac{1}{2}$ E	
635	25th	eP NZ iS Z	12 45 30 46 39	5S 152E	
636	25th	eP Z e N	20 41 03 45 18		
637	25th	iP Z e N	22 49 45 50 53		
638	26th	e N	04 10 05		
639	26th	e(P) Z e(S) N	04 48 50 57 18	54 $\frac{1}{2}$ N 159 $\frac{1}{2}$ E	
640	26th	e(P) Z i Z e N e N	23 31 24 32 45 33 24 43 05		
641	27th	e Z	00 25 55		
642	27th	e Z	04 03 03		
643	27th	e(P) NZ e(pP) Z eS N e(SS) N	18 13 47 14 25 17 36 18 42		
644	27th	e(P) NZ iP NZ iS N e N	18 57 49 20 11 51 12 29 15 17		
645	27th	iP Z i Z iS N	20 18 52 18 56 19 32		

8.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks.
646	June 28th	iP Z	00 54 22		
647	28th	e(P) N e(S) N e N	08 33 27 41 31 48 37		
648	28th	e(P) Z e(S) N e N	11 40 32 44 22 44 49		
649	28th	iP NZ i(PPP) N i(PcP) N e(S) N	19 35 32 36 27 38 47 40 12	12N 162E	
650	29th	iP Z iS N	02 52 16 53 17		
651	29th	e(P) Z eS N eSSS N	09 22(16) 28 25 33 48	16 $\frac{1}{2}$ S 172W	
652	29th	e(P) Z	12 20(45)		
653	29th	e(P) Z e N e N e N e N	12 48(29) 52 19 59 19 13 00 42 11 15	15 $\frac{1}{2}$ S 173W	
654	29th	eP Z eS N	23 20 34 25 14	3 $\frac{1}{2}$ N 127E	
655	30th	iP Z iS N	04 14 08 14 39		
656	30th	iP Z iS NZ	10 24 16 24 37		
657	30th	iP Z eS N e(SSS) N	18 34 00 39(54) 45 35	31N 141 $\frac{1}{2}$ E	
658	30th	iP Z iS Z	19 37 14 38 13		

(J.M.RAYNER)
Director.

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COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF NATIONAL DEVELOPMENT
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

203 Collins Street,
MELBOURNE. C.1.

PROVISIONAL SEISMOLOGICAL BULLETIN

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PORT MORESBY

Latitude : 09°24'.5S Longitude : 147°09'.1E Height : 230 ft.

Foundation : Eocene cherts

Instruments : Sprengnether long period horizontal component
seismometers, series H = E, N.
Wilson Lamison short period vertical component
seismometer = Z.
Sprengnether three component recorder, series H.
Galvanometer periods : EW 17.4 secs., NS 15.8 secs., Z 1.4 sec.
Seismometer periods : EW 17.4 secs., NS 15.8 secs., Z 1.1 sec.
Galvanometer damping : critical.
Wood Anderson short period horizontal component seismometers = W, S.
Magnification : 2775
Kew short period vertical component seismometer.

No.	Date 1958	Phase		Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
				h. m. s.		
659	July 1st	iP	Z	18 32 10		Confused by micro-seisms.
660	1st	iP	Z	22 02 45		
661	2nd	iP eS	Z N	04 54 33 59 42	18S, 177W	
662	2nd	i(P)	Z	05 26 05		
663	2nd	iP iS	Z NZ	06 09 50 10 16		
664	3rd	iP iPPP i(PcP) iS e	Z Z Z N N	06 34 25 36 01 36 32 39 36 42 51	28½S, 179E	
665	3rd	iP	Z	07 44 03		
666	3rd	eP e(S)	Z N	10 35(29) 45 36	55S, 126W	Confused by micro-seisms.
667	3rd	iP	Z	16 45 29		
668	4th	iP e(S)	Z N	13 15 13 23 04		
669	4th	iP iPP eS e(SS)	NZ Z N N	18 39 49 40 24 44 21 45 17	6N, 125E	

2.

No.	Date 1958	Phase		Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
				h. m. s.		
670	✓ July 4th	iP	Z	18 56 13		
671	✓ 5th	iP	Z	13 58 56		
672	✓ 5th	iP	Z	23 18 30		
673	✓ 6th	iP	Z	06 42 05		
674	✓ 6th	e(P)	Z	18 52 25		
675	✓ 7th	eP	Z	16 39 19		
		i	Z	39 27		
		iS	NZ	40 04		
676	✓ 7th	iP	Z	22 48 04		
		i	Z	48 32		
		i(S)	Z	49 00		
677	8th	eP	Z	03 04 48		
		e	Z	05 07		
		e(pP)	Z	06 42		
	✓	e(S)	N	09 17		
		e	N	12 08		
		e	N	14(59)		
678	✓ 8th	e(P)	Z	06 13 55	21½S, 174W	
		e(S)	N	20 27		
		e(SS)	N	23 29		
		e(SSS)	N	26 07		
679	✓ 8th	iP	Z	10 09 54		
680	✓ 8th	iP	Z	12 32 26		
681	✓ 8th	iP	Z	16 34 58		
		i	Z	35 36		
682	✓ 8th	e(S)	N	19 44 51		
		e	N	53(02)		
683	✓ 9th	eP	Z	10 47 16		
		eS	NZ	48 24		
684	✓ 9th	e(P)	Z	11 00 44		
685	✓ 9th	iP	Z	14 00 34	20½S, 178½W	
		e(pP)	Z	02 07		
		eS	N	05 27		
		e(SS)	N	08 50		
		e(ScS)	N	09 52		
686	✓ 9th	iP	NZ	14 18 25		
		iS	N	19 21		
687	✓ 9th	e(P)	Z	14 44(17)		
688	✓ 9th	e(P)	Z	22 01(25)		
689	✓ 10th	iP	NZ	06 29 00	58½N, 136W	
		i	Z	29 52		
		i	Z	30 24		

3.

No.	Date 1958	Phase		Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
				h. m. s.		
690	July 10th	iP	Z	09 12 25		} in coda of preceding
		i	Z	13 23		
		i	Z	13 53		
691	10th	iP	Z	22 08 33		
692	11th	iP	Z	06 16 11		
		i	Z	16 22		
		i	Z	16 30		
		iS	NZ	17 23		
693	11th	iP	Z	17 26 23		
		i	Z	26 33		
		i	Z	26 41		
		iS	NZ	27 06		
694	11th	i(P)	Z	18 38 25		
		e(S)	N	47 12		
		e(PPS)	N	47 44		
		eL	N	55.3		
695	11th	eP	Z	19 29 41		
		i	Z	29 56		
		e	N	33 07		
696	12th	iP	Z	03 35 49	12N, 165E	Confused by micro- seisms.
		i(pP)	Z	36 08		
		e(PcS)	N	40 33		
		eS	N	43(39)		
		eSS	N	48 01		
		eSSS	N	50 29		
697	13th	iP	Z	12 07 11	10S, 161½E	
		i	Z	07 26		
		i	Z	07 33		
		i	Z	07 50		
		iS	N	09 55		
		e(PcP)	N	12(09)		
698	14th	iP	Z	09 55 51		
699	14th	iP	Z	10 11 11		
		e(S)	N	14 17		
		e(SSS)	N	14 53		
		e(PcP)	N	15 53		
700	15th	iP	Z	23 29 49		
		i(S)	NZ	30 19		
701	16th	e	N	13 19 05		
		e	N	20 16		
		e	N	25 35		
		e	N	32 52		
		eL	N	36.4		
702	16th	eP	Z	16 58 44	12S, 166½E	
		iPP	Z	59 02		
		eS	N	17 02 15		
		ePcP	N	03 07		
		ePcS	N	06 54		

4.

No.	Date 1958	Phase		Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
				h. m. s.		
703	July 16th	eP	Z	18 44 46	12S, 166 $\frac{1}{2}$ E	
		ePP	Z	45 04		
		eS	N	48 20		
		ePcP	N	49 12		
		ePcS	N	52 56		
		eScS	N	56 19		
704	16th	eP	Z	20 44 45		
		i(P)	Z	45 18		
		e	N	48 22		
		e	N	49 23		
		e	N	51 54		
705	17th	i(P)	W	11 35(18)		
		i(S)	W	35 51		
706	17th	eL	N	10 59.7	5 $\frac{1}{2}$ N, 176W	
707	17th	e(P)	Z	16 49 09		
708	17th	eP	Z	19 13 19		
		eS	N	22(15)		
		e(SS)	N	27 08	5 $\frac{1}{2}$ N, 177 $\frac{1}{2}$ W	
		eL	N	30.7		
709	17th	iP	Z	21 10 29		
		ipP	Z	10 50		
		eS	N	18 36		
		i	N	19 33		
710	17th	iP	Z	21 17 16		coincident with preceding
		e(S)	W	18(40)		
711	18th	e(P)	Z	07 34 47	25 $\frac{1}{2}$ N, 124E	
712	18th	eP	Z	10 36 00		
		iS	W	36 57		
713	18th	iP	Z	21 45 54		
		ipP	Z	46 23		
		eS	N	51 59	4S, 138 $\frac{1}{2}$ E	
		esS	N	52 47		
		e	N	56 59		
714	19th	iP NSW	Z	06 32 45		
		iS	N	34 19		
		iSS	N	34 35		
		iSSS	N	34 47		
		e	N	42 27		
		e	N	45 43		
		e	N	46 53		
		e	N	07 01 17		
715	19th	iP	Z	09 07 25		
		i	Z	08 02		
		i(pP)	Z	08 17		
		e	N	09 05		
		e(S)	N	11 21		
		e	N	13 43		
716	19th	iP	Z	15 51 04		

5.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
			h. m. s.		
717	July 19th	iP Z i Z	17 44 12 44 19		
718	19th	eP NSW Z i Z i Z iS N	18 21 17 22 49 23 20 24 53	0, 129 $\frac{1}{2}$ E	
719	19th	eP Z	19 58 57		in coda of preceding.
720	19th	eP Z	22 10 00		
721	19th	eP Z i Z i Z eS N eSS N	22 18 27 18 46 19 10 22 04 22 38	$\frac{1}{2}$ S, 129E	
722	20th	e(P) SZ e(S) SWZ	00 28 21 28 57		
723	20th	eP SWZ eS SWZ	08 58 48 09 00 03		
724	21st	eP Z e Z e N	04 10 49 12 41 14 26		
725	21st	eP Z i Z eS N e N e N c(SSS) N	07 34 19 34 37 41 46 42 55 45(16) 47 24	44 $\frac{1}{2}$ N, 147E	
726	21st	e Z	14 21 29		
727	21st	iP Z eS N eScS N e(SS) N eSSS N	14 48 15 57 09 58 11 15 01 19 04 45	51 $\frac{1}{2}$ N, 178W	
728	21st	iP NSW Z eS N e N e N	18 37 36 41 20 41 35 45 05	14S, 167 $\frac{1}{2}$ E	
729	22nd	e(P) WZ e(S) Z	02 36 24 37 05		
730	22nd	eP Z	07 29 50		
731	23rd	iP Z i Z ePPP N eS N eSS N	10 35 03 35 12 37 01 41 05 44 06	31N, 142E	

6.

No.	Date 1958	Phase		Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
732	July 23rd	iP	SWZ	h. m. s. 11 44 45	Solomon Islds. Region	in coda of preceding.
		i	Z	44 51		
		i	Z	45 11		
		iS	NSW	45 23		
		e	N	49 54		
		e	N	52 43		
733	24th	e(S)	SW	04 33 10		confused by micro- seisms.
734	25th	eL	N	00 26.0		
735	25th	i(P)	Z	22 07 20		
736	26th	iP	SWZ	03 53 51		
		e(S)	WZ	54 50		
737	26th	e(P)	SW	05 09 43		
		e(S)	SW	10 20		
738	26th	e	N	06 44 08		
		eL	N	51.4		
739	26th	iP	SWZ	07 51 35		
		i	Z	51 45		
		i	Z	52 01		
		iS	NSW	52 11		
740	26th	iP	SWZ	11 44 18		
		e(S)	NW	44 56		
741	26th	iP	Z	17 55 25		
		i	Z	55 31		
		eS	NWZ	58(08)		
		i	N	58 16		
		i(SS)	N	58 35		
		i(SSS)	N	58 49		confused with preceding
742	26th	i(P)	WZ	18 07 44		
743	26th	eP	WZ	19 09(13)		
		eS	SWZ	09 42		
744	26th	iP	Z	20 35 33		
745	26th	e(P)	SW	22 49 02		
		i	Z	49 10		
		e NSW	Z	49 53		
		e(S)	NSW	50 00		
746	27th	iP	SWZ	00 28 39	20 $\frac{1}{2}$ S, 178 $\frac{1}{2}$ W	
		epP	Z	30 19		
		iPcP	Z	30 53		
		iS	N	33 29		
		e(SS)	N	36 42		
747	27th	iP	Z	07 57 33		
		i	Z	57 45		
		i	Z	57 58		
		i	Z	59 08		
748	27th	eS	SWZ	08 32 58		

7.

No.	Date 1958	Phase	Time (G.M.T.)	Epicenter (U.S.C.G.S.)	Remarks
749	July 27th	e(P) Z eS N eL N	h. m. s. 17 31 13 41 29 52 41	28 $\frac{1}{2}$ S, 62E	
750	28th	No record			
751	29th	iP WZ iS ENZSW i Z	00 47 15 48 28 49 34		
752	29th	iP Z iS WZ	05 27(24) 27 50		
753	29th	iP i(S) SW	06 31(35) 32 36		
754	29th	iP SWZ eS ENSZ	07 00 13 00 59		
755	29th	iP Z ePPP E eS EN eSS N e(ScS) E	10 56 45 58 32 11 02 30 05 15 06 42	20 $\frac{1}{2}$ S, 175 $\frac{1}{2}$ W	
756	29th	i(PKP) Z i(PKF2) Z i(PP) Z	21 57 35 58 57 22 02 46		
757	30th	iP Z e(S) EN e E e E	02 56 57 03 04(14) 06 30 09 55		
758	30th	iP NEZ SW i Z i Z i Z i Z i Z i(S) N	04 47 23 47 25 47 29 48 02 48 15 48 39 49 57		
759	30th	i Z	13 25 01		
760	30th	i(P) Z e(S) N e(PS) NE eL N	15 23 48 33 55 34 59 50.9		
761	31st	e(P) SW	15 12 34		

(J.M. RAYNER)
DIRECTOR.

No. 58/8

COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF NATIONAL DEVELOPMENT
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

203 Collins Street,
MELBOURNE. C.1.

PROVISIONAL SEISMOLOGICAL BULLETIN

PORT MORESBY

Latitude: 09° 24' .5S.

Longitude: 147° 09' .1E

Height: 230ft.

Foundation: Eocene cherts

Instruments:

Sprengnether long period horizontal component
seismometers, series H = E, N.

Wilson Lamison short period vertical component
seismometer = Z.

Sprengnether three component recorder, series H.

Galvanometer periods: EW 17.4 secs., NS 15.8 secs., Z 1.4 sec.

Seismometer periods: EW 17.4 secs., NS 15.8 secs., Z 1.1 sec.

Galvanometer damping: critical.

Wood Anderson short period horizontal component seismometers = W,S.

Magnification: 2775

Kew short period vertical component seismometer = V.

No.	Date 1958	Phase	Time (G.M.T.)	Per.	Δ	Remarks
			h. m. s.	s.	Degrees	
1	Aug. 1	e(P) e(S)	WZ W	04 01 30 01 44		
2		iP i(pP) iPP eS eSS	Z Z Z ENSW EN	05 44 15 45 15 45 47 49 27 52 25	2.0 1.6 2.0 11.6	28.0 Compression. h = 480Km. H = 05 37 49 USCGS: 16S 176½W.
3		iP	Z	14 33 47	1.6	USCGS: 19S 177½W.
4		e(P) i i(S) i i(S)	W WZ WZ Z ENW	16 56 26 56 28 57 19 57 29 58 29		Multiple Shock?
5	2	e e	W Z	05 23 44 25 23		
6		e(P) e(S) i	W SW Z	09 06 18 06 28 06 31	(8.8)	H = 09 06 02
7	3	iP ipP iS iScP esS	ENSWZ ENZ EN Z EN	01 12 33 14 09 17 24 17 42 20 23	1.0 1.6 3.2 2.0 9.8	34.8 Dilatation. h = 580Km. H = 01 06 30. USCGS: 21½S 179W.
8	4	iP i(S)	SWZ SW	01 57 42 58 27	3.7	Dilatation. H = 01 56 43
9		eP i iS	EZ ENSWZ ENSWZ	04 17 15 17 20 20 21	1.0	USCGS: 6S 130E
10		iP iS	Z ENSWZ	13 35 32 36 39	5.7	Compression. H = 13 34 04
11	5	iP i eS e	Z Z EN E	00 22 48 23 02 23 43 24 03	1.6 2.0 2.0	4.8 USCGS: 5½S 152½E. H = 00 21 31.

No.	Date 1958	Phase	Time (G.M.T.)	Per.	△	Remarks
			h. m. s.	s.	Degrees	
12	Aug. 5	iP Z	04 29 01	2.8		H = 04 28 14.
		iS ENSWZ	29 36			
13		iP Z	04 38 57			
14		iP Z	17 29 23	1.2		USCGS: 24 $\frac{1}{2}$ S 175W.
		ipP EZ	30 09	1.6		
		iPcP Z	30 59	1.8		
		i Z	31 44	1.6		
15	6	eLq N	14 28.2			
16	7	e(S) Z	04 34 22			
17		iP Z	11 29 20	1.8	6.4	H = 11 27 46
		eLq E	30.2	14		
		iS ENSW	30 32	2.2		
		iSS Z	30 48	2.0		
		M EN	32.0	11		
		iScP E	39 44	10		
18		iP NSZ	13 23 09		3.2	H = 13 22 20
		iPPP Z	23 21	1.2		
		iS EW	23 46			
19		i(P) Z	13 23 51	1 $\frac{1}{2}$		Compression. Double Shock?
20		iP Z	22 15 00	1.6	7.3	H = 22 13 13.
		iS SW	16 23			
21		iP WZ	22 55 21		4.1	H = 22 54 19.
		iS SWZ	56 09			
22	8	iP SWZ	07 44 37	1.2		Compression.
		i SWZ	44 41	1.0		Double Shock?
		i SW	45 49			
23		iP ENSWZ	17 05 05	1.0	3.4	Compression. H = 17 04 10.
		iS ENSW	05 47			
24	9	iP Z	04 47 03		4.0	Dilatation. H = 04 46 02.
		i(S) ENSWZ	47 50			
25	10	eP Z	18 07 44			Dilatation.
		i Z	08 02			USCGS: 3 $\frac{1}{2}$ S 150 $\frac{1}{2}$ E.
		eLq EN	08.6			
26		iP Z	23 47 45	1.4		USCGS: 21 $\frac{1}{2}$ N 144E.
27	11	iP Z	07 58 16	1.8	23.4	h = 50Km. H = 07 53 11.
		ipP Z	58 29	1.6		USCGS: 18S 168 $\frac{1}{2}$ E.
		iS EN	08 02 22	12		
		esS EN	02 42	(8)		
		eSSS N	03 13	13		
28		eP Z	20 34 49			USCGS: 3S 100 $\frac{1}{2}$ E.
29	12	iP Z	16 58 23	1.8	22.7	Compression. H = 16 53 23.
		iPP Z	58 52	1.8		USCGS: $\frac{1}{2}$ N 126E.
		iPPP Z	59 03	2.0		
		eS E	17 02 24			
		eSSS N	03 31	6		
30		iP EZ	19 09 31	2.0	23.4	H = 19 04 19.
		ipP SW	09 37	2.0		USCGS: 9 $\frac{1}{2}$ S 123 $\frac{1}{2}$ E.
		iPP Z	10 01	1.6		
		iPPP Z	10 13	1.6		
		eS EN	13 37			
		iSS N	14 33			
		iSSS EN	14 45			

No.	Date 1958	Phase	Time (G.M.T.)	Per.	Δ Degrees	Remarks
			h. m. s.	s.		
31	Aug. 12	eP ENZ	19 30 06	1.8	22.9	H = 19 25 04. USCGS: 0 126 $\frac{1}{2}$ E.
		ipP ENZ	30 17	1.6		
		iPP Z	30 36			
		iPPP Z	30 47			
		iS EN	34 13			Confused with preceding.
32		iP Z	21 19 18		25.3	h = 200Km. H = 21 14 10. Measured: (15N 151E).
		ipP Z	20 00			
		iPP E	20 07			
		eS N	23 25			
		eSS N	24 55			
		M N	30.6			
		M E	31.1			
33		iP ENSWZ	23 13 45		5.8	H = 23 12 19. USCGS: 6S 152E.
		ipP Z	13 48			
		iPPP Z	14 03	1.4		
		iS EN	14 53			
		ipP N	20 55			
34	13	i(S) ENZ	00 14 16			USCGS: 6S 152 $\frac{1}{2}$ E. P phase lost during record change.
		i EZ	14 33			
		i Z	15 18			
35		i Z	01 03 13			
		e EN	13.1	20		
36		iP ENZ	03 55 43	2.0	23.7	h = 60Km. H = 03 50 39. USCGS: $\frac{1}{2}$ N 126E.
		i ENSWZ	55 45	1.6		
		ipP Z	56 05	1.8		
		iPP Z	56 15	1.6		
		ePPP EN	56 31	10		
		eS EN	59 48	12		
		e EN	04 00 13			
		M EN	07.0	20		
37		iP ENSWZ	10 04 27	1.8	6.0	H = 10 02 58. USCGS: 6S 153E.
		iPPP Z	04 47	1.6		
		iS EN	05 35	3.6		
		i Z	06 01	1.4		
38		e EN	13 59.5	16		
39		iP Z	14 55 25	1.0	34.0	h = 450Km. H = 14 49 21. USCGS: 17 $\frac{1}{2}$ S 176 $\frac{1}{2}$ W.
		ipP Z	56 46	1.6		
		isP Z	57 55	1.4		
		i Z	58 38			
		isPP Z	58 53	1.6		
		eS E	15 00 17	16		
		e(SS) E	03 16	17		
40		ipP Z	16 58 01	1.0		USCGS: 23 $\frac{1}{2}$ S 180
41		iP Z	19 24 56	1.6		
		e N	27 39	11		
		e E	27 52	11		
		e EN	28 18	11		
		e N	31 43	10		
42		iP Z	20 23 55	1.6	67.6	H = 20 12 55. USCGS: 51N 177 $\frac{1}{2}$ W.
		eS E	32 48	10		
		ePS EN	33 18	11		
		eSSS E	40 24	20		
		eLq EN	41.2	24		
		M EN	51.5	22		
43		eP Z	21 58 33		8.1	h = 200Km. (USCGS). H = 21 56 38. USCGS: 4 $\frac{1}{2}$ S 154E.
		i ENSWZ	58 35	1.6		
		iPPP Z	58 59			
		iS ENSW	22 00 03			

No.	Date 1958	Phase	Time (G.M.T.)	Per.	△	Remarks
			h. m. s.	s.	Degrees	
44	Aug. 14	eL N	02 41.5	30		USCGS: 19 $\frac{1}{2}$ N 146 $\frac{1}{2}$ E.
45		iP Z	09 52 37		38.2	H = 09 45 19.
		i Z	52 43			USCGS: 23 $\frac{1}{2}$ S 175 $\frac{1}{2}$ W.
		iPPP Z	54 22			
		eS N	58 28			
		ePcS E	58 47			
46		iP Z	12 48 04	2	23.0	h = (320Km). H = 12 43 28.
		i Z	48 34			
		iP Z	49 03			
		esP N	49 38	5		
		eS E	51 47	9		
		e EN	52 02	8		
		eSSS E	52 23	12		
		eLq EN	53 24	20		
47		iP WZ	14 59 17		1.5	H = 14 58 53
		iS SW	59 35			
48		iP Z	15 06 16	1.4	69.0	H = 14 55 12
		iPcP Z	06 38	1.2		USCGS: 52N 175W.
		e E	11 59	11		
		eS EN	15 17	11		
		ePS E	15 41			
		ePPS N	15 57			
		eScS N	16 14			
		eSS EN	19 37	14		
		eSSS E	22 35	18		
		ePKKS E	29 29	18		
		iPKPPKP Z	34 33	2.4		
		M EN	34..			
49	15	i W	01 36 36			Small local shock.
50		iP ENSWZ	02 28 04		4.1	Dilatation. H = 02 27 03
		i(S) EN	28 51			USCGS: 6S 150 $\frac{1}{2}$ E.
		i Z	30 16			
		i Z	31 06			
		i Z	31 43			
51		iPKP Z	06 39 51	1.8	141 (USCGS)	h = 200KM (USCGS).
		i Z	39 58			USCGS: 7N 73W.
		e E	50 32			
52		i(P) W	06 39 56			Small local shock.
		i W	40 32			
		i S	40 35			
53		i(P) Z	15 03 19			Small local shock.
		i(S) W	04 30			
54		iP NZ	20 06 09	2	64.9	Dompression. h = 60Km.
		iPcP Z	06 41	1.8		USCGS: 53N 160 $\frac{1}{2}$ E.
		ePPP EN	10 00			H = 19 55 38.
		iS EN	14 41	20		
		iPS E	15 12	20		
		iPPS N	15 27	27		
		i Z	35 21			
55		iP ENSWZ	22 34 26		24.4	Dilatation. h = 200KM.
		(eS) W	38 27			H = 22 29 27.
		e W	38 41			USCGS: 1 $\frac{1}{2}$ N 125E.
		(esS) SW	39 40			
		e(SSS) SW	40 05			
		i Z	41(05)			
56	16	iP Z	01 48 26	1.8		

5.

No.	Date 1958	Phase	Time (G.M.T.)	Per.	Δ	Remarks
			h. m. s.	s.	Degrees	
57	Aug. 16	iP Z	11 21 11		41.5	h = (30)Km. H = 11 13 25
		ipP Z	21 27			
		iPP ENZ	22 46			
		e(PPP) E	23 04			
		ePcS E	27 02			
		eS N	27 24			
58		e Z	13 10 03			
		e(S) ES	10 11			
59		i(P) Z	13 27 42	1.6		
		i Z	23 12	1.8		
		i Z	28 43	2.0		Confused with initial phases of following.
60		iP Z	13 28 57	1.8	68.0	H = 13 18 03
		iPcP Z	29 34	1.8		USCGS: 51 $\frac{1}{2}$ N 176W.
		iPP Z	31 27	1.8		
		i EN	31 46	15		
		iPcS E	33 42			
		iS EN	37 56			
		iSSS E	45 37			
61		iP Z	19 27 47	1.2	(103)	H = 19 13 50
		iPP Z	32 00	2.0		USCGS: 34 $\frac{1}{2}$ N 48E.
		iPPP Z	34 12	2.0		
		iSKS EN	38 26			
		i(SKKS) EN	38 39			
		ePS E	41 08			
		eSSP N	46 51			
		e(SSS) E	50 27			
62		iP Z	22 32 22	1.6		Compression. Obscured by preceding shock distant and deep?
63	17	i Z	02 09 17			
		e N	20 57			
		e N	22 41	11		
		e E	24 36			
		e N	30 21	10		
64		iP Z	09 19 41	1.2	68.8	H = 09 08 38.
		i Z	20 17	2.4		USCGS: 51 $\frac{1}{2}$ N 176W
		i Z	20 40	2.0		
		eS EN	28 39			
		e N	29 56			
		eSS N	33 17			
		e N	35 21	12		
65		i Z	16 02 17			
66		iP ENSWZ	18 02 39	1.0	6.2	Compression. H = 18 01 06
		i Z	02 46			USCGS: 3S 145 $\frac{1}{2}$ E.
		i(S) N	03 49			
		i S	04 11			
		i S	04 27			
67		iP Z	21 18 48	1.4	(38.5)	H = 21 11 27. Dilitation.
		ipP Z	18 59	1.4		USCGS: 35 $\frac{1}{2}$ S 179 $\frac{1}{2}$ W.
		i(PcP) Z	20 52	1.4		
		iS N	24 41	9		
		e N	28 30			
68	18	i Z	03 53 09			
69		i Z	07 46 25			
		M E	49.2	12		
70		i Z	18 32 20			

No.	1958	Phase	(G.M.T.)	Per.	Δ	Remarks
			h. m. s.	s.	Degrees	
71	Aug. 19	eP Z	04 51 40		30.2	H = 04 45 31
		i Z	51 44	1.8		USCGS: 19S 175E.
		eS E	56 36			
		eSS N	58 16	9		
		ePcS EN	58 28	12		
		M EN	05 02.7	16		
72		iP Z	11 15 20	1.0	(3.8)	H = 11 14 22. Small local shock.
		iS ENSW	16 04			
73		eP Z	21 50 17		8.5	H = 21 48 13.
		i ENSWZ	50 20			USCGS: 1S 149 $\frac{1}{2}$ E.
		iS N	51 52			Compression.
		i EW	51 53			
74		iP ENSWZ	22 57 21		8.8	Compression. h = 150KM. (USCGS).
		i Z	57 44		(USCGS)	USCGS: 1S 149E.
75		iP ENSWZ	03 44 39	2	20.7	Dilatation. H = 03 40 00.
		i Z	44 52			USCGS: 14S 167E.
		iPPP Z	45 09	1.4		
		iS ENSW	48 23	(10)		
		iPcP Z	48 47	(6)		
76		iP Z	05 03 11		8.8	USCGS: 1S 149E.
					(USCGS)	Confused with preceding shock.
77	20	iP Z	08 53 52	1.6	42.0	h = 60Km. H = 08 46 09.
		iP Z	54 16	1.6		USCGS: 24N 122E.
		iPcP Z	55 41	2.0		
		eS EN	09 00 03			
		e(PS) EN	00 20			
78		iP Z	09 53 22	1.6	19.7	H = 09 48 53.
		i(pP) Z	53 30	1.6		
		eS EN	56 57			
79		e EN	15 59 12			No vertical record.
		e EN	16 08 46			
80		e N	17 53 28			USCGS: 19S 170E.
		M EN	57.1			No vertical record.
81		iP ENSWZ	22 49 07	1.6	(3.8)	Compression. Deep?
		i Z	49 12			H = (22 48 09).
		i Z	49 18			USCGS: 5S 149E.
		i(S) ENSWZ	49 51	3		
		i E	50 02			
		i E	50 14			
82	21	iP Z	00 31 51	1	0.9	H = 00 31 35.
		iS SW	32 09			
83		iP Z	01 16 20	1.6	41.3	H = 01 08 36.
		i Z	17 22	1.6		Measured: 23S 172W.
		i Z	17 42	1.6		USCGS: 24S 176W.
		iPPP Z	18 35	3.6		
		eS EN	22 32	9		
		eSS EN	25 20	10		
84		i(P) WZ	02 35 42			
85		iP Z	04 10 49	1	41.5	H = (04 03 03).
		i Z	11 42	1.6		Measured: (18S 171W).
		i Z	12 31			
		e(S) EN	17 02			
		e N	19 35			
		e N	21 28			
		M E	26..			
86		iP Z	05 38 36	1.2		
		e N	42 48			
		e EN	45 44			
		M N	49.8			

No.	Date 1958	Phase	Time (G.M.T.)	Per.	Δ Degrees	Remarks.
			h. m. s.	s.		
87	Aug. 21	iP ENWZ	21 06 03	1.6	38.0	Dilatation. h = 200Km. H = 20 59 06 USCGS: 18S 176W.
		ipP Z	06 52	2		
		isP E	07 16	14		
		esPP E	08 37	14		
		eS EN	11 37	9		
		iScP Z	11 44	2		
		esS EN	13 07	12		
		eScS EN	15 54	24		
88	22	iP Z	00 09 58	1.6	47.9	H = 00 01 21. USCGS: 48 $\frac{1}{2}$ S 115E.
		iPcP Z	11 31	1.8		
		iPP Z	11 55	1.6		
		ePcS N	15 19			
		eS EN	16 52	10		
		eSS EN	20 19	12		
		e(PKKS) E	35 57	10		
89		iP Z	10 01 22	2	22.6	h = 150Km. H = 09 56 37 USCGS: 15S 167E.
		ipP Z	01 57	1.6		Measured: 15 $\frac{1}{2}$ S 169 $\frac{1}{2}$ E.
		eS EN	05 12	10		
90		iP ENSWZ	22 18 00	1	(4.0)	Compression. Keep? H = 22 16 54 USCGS: 6S 149E.
		i ENZ	18 24			
		iS EN	18 52			
91	23	iP ENSWZ	06 50 15	1	(4.6)	Compression. H = (06 49 06) Measured: (5S 146E)
		iS ENSWZ	51 08			
92		i(P) Z	08 03 45		(19.0)	H = 07 59 (23) USCGS: 12S 167E.
		eS E	07 12	(8)		
		e E	09 27			
		e E	11 48	12		
93		iP Z	22 14 57		4.3	Compression. H = 22 13 52 Measured: 5 $\frac{1}{2}$ S 145 $\frac{1}{2}$ E.
		iS S	15 47			
		i W	15 48			
94	24	eL E	13 22.0	13		
95		eP Z	17 01 05		35.4	h = 150Km. USCGS: 14N 121E.
		i Z	01 07			
		ipP Z	01 47	2		
		e N	05 54			
		ePcS EN	07 17			
		eScS E	11 10	12		
96	25	eL EN	08 40.5	14		
97	26	iP Z	06 53 17	1.6		
98		iP ENSWZ	12 25 17	1.6	20.8	Dilatation. H = 12 20 36 USCGS: 14S 167E.
		ipP Z	25 27	1.4		
		iPPP Z	25 45	2		
		iS EN	29 02	11		
		M EN	32.5	16		
99		eP EWZ	12 49 37		20.7	H = 12 44 57 USCGS: 14S 167E.
		i Z	49 38	1.6		
		iS EN	53 21	11		
		i EN	53 38	12		
		i EN	53 57	13		
		M E	56.5	16		
		M N	57.0	16		
		i(ScP) Z	57 31	2		
100		M EN	16 10.9	14		USCGS: 12S 167E,
101		iP ENSWZ	18 00 08	1.8	20.7	Dilatation. H = 17 55 28 USCGS: 14S 167E.
		iPP Z	00 25	2		
		iS E	03 52	11		
		i E	04 33			
		i(ScP) Z	08 04	2		

8.

No.	Date 1958	Phase	Time (G.M.T.) H. m. s.	Per. s.	Δ Degrees	Remarks
102	Aug. 26	eP E i Z eS EN M E M N	23 27 53 27 55 31 39 35.0 35.5	1.8 11 16 14	20.7	H = 23 23 15 USCGS: 14S 167E
103		eP Z	23 36 12	1.6		USCGS: 14S 167E. Confused by coda of preceding shock.
104		iP Z iPP Z iPPP Z	23 49 44 50 03 50 13	2 2 2		Dilatation. Confused by coda of preceding shock. USCGS: 14S 167 $\frac{1}{2}$ E.
105	27	e(L) N	00 52 06			
106		iP Z 1 Z i Z i(S) EN	00 54 19 54 32 55 11 58 03	1.6 1.8 2	20.6	H = 00 49 40. Measured: (14S 167 $\frac{1}{2}$ E.) Confused with preceding.
107		e(L) N	01 51.7	17		
108		iP Z i(pP) Z i Z i Z e N e N e E e E e N	05 07 10 07 44 08 02 10 55 11 07 13 09 13 27 16 10 23 19	1.8 2 1.6		h = (150)Km. Measured: (14S 168 $\frac{1}{2}$ E.)
109		iP Z iS ENW	15 03 00 03 16	1 $\frac{1}{2}$	(1.3)	H = 15 02 38
110		e Z	15 37 15	2		USCGS: 38N 20 $\frac{1}{2}$ E. Obscured by microseisms.
111		iP Z iS EW i N	20 45 44 46 25 46 27		(3.7)	H = 20 44 48
112	28	iP Z i W i EW	04 57 37 58 20 58 40		(5.5)	H = (04 56 12).
113		e(L) N M EN	07 40.5 44..	15		
114		i SWZ i Z i Z	10 12 34 12 57 13 56			
115	29	iP Z	02 48 56			Dilatation.
116		iP Z i(S) NS	04 05 24 06 26			Dilatation.
117		iP Z iPP Z iPPP Z iS EN i(PoP) Z i N	12 28 56 29 17 29 27 32 40 33 05 33 17	2	20.6	H = 12 24 17. USCGS: 14 $\frac{1}{2}$ S 167E.
118		iP Z	12 56 29			USCGS: 14S 167E. In coda of preceding.Dilatation.
119		iP Z	12 59 20			Compression. In coda of preceding.

No.	Date 1958	Phase	Time (G.M.T.)	Per.	Δ Degrees	Remarks
120	Aug. 30	iP SWZ i ENSZ i Z i Z iS ENSWZ i EN i E	h. m. s. 03 32 12 32 20 32 38 32 46 33 08 33 14 33 26	s.	4.9	H = 03 30 59
121		iP SWZ i Z	06 34 47 34 53			
122		iP Z i ENZ iS ENZ i(S) EN i E	07 06 14 06 22 07 09 08 50 09 05		4.8	H = 07 05 02 Double shock.
123		iP SW i ENSZ iS EN i E	08 11 26 11 34 12 21 12 40		4.8	H = 08 10 14. Shocks Nos.120,122,123 are duplicates.
124		iP Z	11 13 17			
125		iP ENSWZ iS ENWZ	14 32 54 33 50		4.9	Dilatation. H = 14 31 41 Measured: (6 $\frac{1}{2}$ S 152E).
126		eSKS E eLq EN M EN M E M N	19 03 05 26.3 34.. 38.. 40..	30 18 18 18	104.2 (USCGS)	USCGS: 27 $\frac{1}{2}$ N 112W.
127	31	i(P) SW i(S) WZ	04 57 49 58 09		1.6	H = 04 57 23
128		iP Z eS E M EN	23 13 10 23 57 52..	15	89.7	H = 23 00 14 USCGS: 63N 144 $\frac{1}{2}$ W.
129		i Z	23 34 32			

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COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF NATIONAL DEVELOPMENT
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

203 Collins Street,
MELBOURNE, C.1.

PROVISIONAL SEISMOLOGICAL BULLETIN
FORT MORESBY

(716)
copied

Latitude : 09°24'.5S Longitude : 147°09'.1E Height : 230 feet

Foundation : Eocene cherts

Instruments : Sprengnether long period horizontal component
seismometers, series H = E, N.
Wilson Lamson short period vertical component
seismometer = Z.
Sprengnether three component recorder, series H.
Galvanometer periods : EW 17.4 secs., NS 15.8 secs., Z 1.4 sec.
Seismometer periods : EW 17.4 secs., NS 15.8 secs., Z 1.1 sec.
Galvanometer damping : critical.
Wood Anderson short period horizontal component seis-
mometers = W, S.
Magnification : 2775.
Kew short period vertical component seismometer = V.

No.	Date	Phase	Time (G.M.T.)	Per.	 degrees	Remarks
			h m s	s		
1	1958 Sept. 1	iP Z ipP Z eS E eLq N i E	01 04 32 04 43 10 32 13.5 15 01	16 15	39.5	USCGS:24S175 ¹ / ₂ W Dilutation H = 00 56 57
2		iP Z eS EN e(sS) E	15 37 40 44 11 46 52	10 (13)	49.3	Dilutation h=(420)Km. H=15 29 32 USCGS:33N134 ¹ / ₂ E
3	2	iP Z ePP Z iPPP Z iS EN iSS EN iSSS E	02 31 39 31 50 31 59 34 39 35 06 35 21	1 1 ¹ / ₂ 2	16.4	USCGS:10 ¹ / ₂ S164 ¹ / ₂ E H=02 27 50
4		iP EWZ i(P) Z iS EN i(SS) EW i(ScS) N	02 58 32 58 43 03 00 06 00 18 11 54	1 ¹ / ₂ 12	8.3	USCGS:6 ¹ / ₂ S155E H=02 56 31
5		iP SWZ i(S) SW	11 57 03 57 41	1 ¹ / ₂	3.2	H=11 56 14
6	2	iP Z i(S) ENSW	13 48 06 48 46		3.4	H=13 47 14
7		iP ENSWZ i(S) ENSW	14 26 52 27 38			
8		e EN	19 20 13			

No.	Date	Phase	Time (G.M.T.)	Per.		Remarks
			h m s	s	degrees	
9	1958 Sept. 3	e Z ePKP ₂ Z e E e E ePPS E eSS EN eSSP EN eSSS N L max EN ePKKS E e(SKKKS) E e(SSP) E	04 05 02 05 17 11 47 17 27 22 41 29 36 30 33 35 50 16.. 04 15 59 20 07 36 03	 11 14 (20) 20 16 19 14 14 20	(164) (196)	USCGS: 0 18W H=03 44 24
10		eP Z epP Z ePP Z eS EN esS E eSS EN eSSS E	08 19 20 19 36 21 13 26 25 08 27 05 29 59 31 29	 12 12 12	50.5	Dilatation h=60km. USCGS: 40 ¹ N143E H=08 10 23
11		iP SWZ i(S) NSWZ	18 14 21 14 53	1	2.7	H=18 13 39
12	4	iP Z iS ENSW	12 26 28 27 10		3.6	H=12 25 33
13		iP ENSWZ iS ENW	12 54 19 54 56		3.2	H=12 53 31
14		e(P) Z	18 55 27			
15		e Z e Z e Z eSKS N eSKKKS EN ePS N iPS E eSSP E eSSS N e Z L max N L max E L max N L max E	22 10 29 11 29 13 11 17 15 18 58 21 51 22 05 28 59 33 09 27 45 52.5 22 54.5 58.. 59..	2 2 2 (14) 13 14 13 18 30 3 23 20 18 19	124 (USCGS)	USCGS: 33 ¹ S69 ¹ W Record masked by microseisms
16	5	iP Z	13 10 14	1 $\frac{1}{2}$		Compression USCGS: 5S102E Horizontal components obscured by large microseisms
17		iP Z i Z	13 16 23 16 41	1 $\frac{1}{2}$		Compression USCGS: 5S102E
18	6	iP ENSWZ iS ENSWZ	03 20 30 20 50	$\frac{1}{2}$	1.6	Compression H=03 20 04 Measured: 9S149E Obscured by large microseisms

No.	Date	Phase	Time (G.M.T.)	Per.		Remarks
			h m s	s	degrees	
19	1958 Sept. 7	iP Z i(P) Z i Z iS ENSW	04 42 23 42 40 42 56 43 28	1 1/2 2 1 1/2	5.7	USCGS:10S153E H=04 40 58
20		i(P) W i S iS S	04 45 07 45 08 46 11		5.6	H=04 43 44
21		e(P) SW	06 30 08			Small local shock
22		e(P) SW	07 17 34			Small local shock
23		iP Z eS EN	09 11 52 13 06		6.5	H=09 10 16
24		eP Z e(S) SW	14 11 36 12 55		(6.3)	H=14 10 (03)
25	8	iP Z ipP Z iPcP Z eS EN e(PS) EN ePPS N eScS EN eSS N e(SSS) N eLq EN L max N	05 36 03 36 21 05 36 40 44 31 45 01 45 14 45 37 48 37 51 20 52.. 06 02.5	1 2 1 1/2 12 12 8 12 12 30 20	63.8	Compression h=30-40Km. USCGS:53 1/2 N 159E H=05 25 35
26		iP Z e E e(ScS) E	14 02 41 08 41 13 21		21.3	Compression h=320Km. H=13 58 (20) Measured: 0 128E Santa Cruz Islands region
27		eP Z ipP Z ePP Z eS EN eSS E eSS EN eSSS E	15 01 29 01 49 03 16 08 03 08 36 15 11 37 11 54	11 16 10	45.5	h=60Km. USCGS:33 1/2 N 131 1/2 E H=14 53 18
28	9	iP Z e E e E	01 41 09 52 56 54 01	1 1/2 1 1/2 10		Dilatation
29		iP Z i Z	04 17 25 17 35	1		Dilatation
30		iP Z i Z	11 41 42 41 53			USCGS:46N151E
31		e Z eS E eLq E	22 34 29 43(15) 51.2			USCGS:54N171E

No.	Date	Phase	Time (G.M.T.)	Per.		Remarks
			h m s	s	degrees	
32	1958 Sept. 10	iP ENZ iS ENSW i Z	02 36 30 36 58 36 47	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	2.3	H=02 35 53
33		iP ESWZ iS ENSWZ	03 56 23 57 51		7.8	H=03 54 29
34		iP Z eS WZ	16 04 12 05 48		8.5	H=16 02 08 Measured: 7S15 $\frac{1}{2}$ E
35	11	iP Z i(S) SW	09 30 16 30 52		3.1	H=09 29 28
36		iP Z iS ENSW	09 32 23 32 53	2	2.4	H=09 31 45
37		i(P) Z	10 00 13	$\frac{1}{2}$		
38		iP Z i(S) ENSW	13 11 30 12 15		3.9	H=13 10 31
39		iP Z ipP Z iPP Z (iPPP) Z iS ENSW i(SS) N	18 07 25 07 38 08 10 08 28 11 51 13 13	2 $\frac{1}{2}$ 2 2 10(EN)	26.0	Compression USCGS: 7 $\frac{1}{2}$ N126 $\frac{1}{2}$ E H=18 01 53
40		eP Z e(SS) E e EN i Z	23 42 59 48 17 50 39 43 23	8 10		USCGS: 21S170 $\frac{1}{2}$ E
41	12	iP Z i(S) SW	03 48 45 49 06		1.7	H=03 48 17
42		iP Z eS EN e E eLq EN L max EN L max N L max E	05 48 47 57 42 06 02 25 05 13 11.3 16.5 17.5	1 14 13 30(N) 16 18 16	67.9	Dilatation USCGS: 42S80E H=05 37 50
43		iP Z iS ENSW	09 56 47 57 59	1	6.3	Dilatation H=09 55 14 Measured: 5 $\frac{1}{2}$ 52E
44		iP Z	11 52 48			
45		eP Z iPP Z i Z	13 53 34 55 09 59 38	$\frac{1}{2}$		USCGS: 6S106E
46		e(P) Z	19 01 51			
47		eP Z e(S) SW	19 41 47 42 12			Very small local shock

No.	Date	Phase	Time (G.M.T.).	Per.		Remarks
			h m s	s	degrees	
48	1958 Sept. 12	eP Z i Z i Z e(S) EN eSSS N	22 12 16 12 39 13 19 15 28 16 08	10	17.5	Compression USCGS: 6 ¹ ₂ S129 ¹ ₂ E H=22 08 (13)
49	13	e(L) EN	01 32.0			
50		iP Z i Z ipP Z eS EN e E esS E	03 38 04 38 17 38 31 42 42 43 13 43 46	8 6	28.5	h=(100)Km. H=03 32 19 Measured: 1 ¹ ₂ N121E
51		e(S) WZ	07 33 18			Small local shock
52		e WZ	07 52..			Slight activity
53		iP Z i Z e(S) EN e N	11 00 55 01 39 05(42) 10 21			
54		i Z	21 57 22			
55		i Z	22 10 56			
56	14	iP ENZ ipP Z iPcP Z i(P) Z i(PPP) Z eS N eS E esS E esS N ePPS N eSS E e(SS) N	14 32 48 32 57 33 10 35 32 36 58 41 55 41 56 42 12 42 13 42 35 46 23 46 26	1 ¹ ₂ (Z) 2 2 2 1 ¹ ₂ 10 10 6 6 10 10	70.0	USCGS: 56 ¹ ₂ N120 ¹ ₂ E H=14 21 38
57		iP Z iPcP Z eS E ePS E eSS E	21 43 57 44 13 53 46 54 29 58 44	2 8 11	77.2	USCGS: 8 ¹ ₂ S67E H=21 32 05
58	15	eL N	01 58.2	20		
59		i Z	05 14 29			
60		iP Z e(L) N e Z e E L max N L max E	05 15 35 18.5 19 13 19 30 19.8 23.5	2 24 19 16		Dililation Double shock ?
61		i Z	14 05 26			Small local shock

No.	Date	Phase	Time (G.M.T.)	Per.	degrees	Remarks
			h m s	s		
62	1958 Sept. 15	eP Z i Z iP Z eS N eLq N	16 55 40 55 41 56 00 17 01 43 05.7	24	40.6	h=50Km. USCGS:33S180 H=16 48 07 Measured:32S176 ¹ / ₂ W
63		iP ENSWZ i Z i(pP) Z i Z iPcP Z iS ENSW iScP SWZ i(PcS) N i(PcS) E isS N i E iScS E	19 50 59 52 29 52 47 53 28 53 47 55 04 56 27 57 27 19 57 31 58 04 58 37 20 00(20)	1 ¹ / ₂ 1 ¹ / ₂ 1 ¹ / ₂ 1 1 ¹ / ₂ 11 11 (11) 10 11	28.4 (USCGS 600)	Compression h=650Km. USCGS:2 ¹ / ₂ N120 ¹ / ₂ E H=19 45 53
64		iP SWZ iS SWZ	21 47 51 48 35	¹ / ₂	3.8	H=21 46 50
65	16	iP WZ iS SW	04 14 45 15 15	¹ / ₂	2.5	H=04 14 06
66	17	eL N	12 50..			
67		i WZ	15 12 57			
68	18	iP Z	01 23 17			
69		eP Z i Z i Z i Z eS EN L max EN	01 57 20 57 23 57 34 57 52 02 01 08 05.5	2 ¹ / ₂ 2 2 2 13 17	21.1	H=01 52 36 Measured:17S168E
70	18	eP Z iPPP Z i E i Z i(P) Z i(P) Z i(P) Z L max E	06 53 22 53 42 54 44 54 49 55 58 56 51 58 07 58.6	2 1 ¹ / ₂ 1 ¹ / ₂ 2 2 2 11		Dilatation USCGS:2 ¹ / ₂ S141E May be series of shocks
71		iP Z iS ENW	07 48 39 49 49		6.1	Compression H=07 47 08 Measured:5 ¹ / ₂ S152E
72		e Z eSS EN	15 02 01 28 12	16	174 USCGS	USCGS:1N30W
73		iP Z i Z	15 34 59 35 20			Compression In coda of preceding
74	19	e(P) Z e(S) SW	00 13 59 14 37			

No.	Date	Phase	Time (G.M.T.)	Per.	 degrees	Remarks
			h m s	s		
75	1958 Sept. 19	iP Z iS SW i SWZ	04 19 05 19 48 20 00		3.7	H=04 18 09
76		iP Z ipP Z iPP Z i Z e N e N eS E eSSS E L max N L max E	08 17 56 18 06 18 33 20 18 21 54 22 10 22 13 23 32 23 3 29.9	1 1/2 2 2 2 12 10 15 20 16	24.7	Compression USCGS: 2 1/2 N 127 E H=08 12 37
77		iP ENSWZ i Z i Z i W iS NS i SW	21 22 28 22 42 22 57 23 23 23 24 *23 26	1 1/2	4.8	Dilatation h=70-100Km. H=21 21 16 Measured: 5 1/2 S 145 E * May be P phase of a following shock
78	20	eP Z e Z	05 26 28 29 21	1 1/2 2		USCGS: 20 1/2 N 105 E
79		iP ENSWZ i EN iS ENSW i Z	17 11 31 13 02 13 05 13 07	1	8.3	Dilatation USCGS: 6 1/2 S 154 1/2 E H=17 09 30
80		i(S) SWZ	17 22 12			Confused with preceding
81		iP Z	17 25 42			Confused with preceding
82	21	iP Z	05 27 17	1		Compression
83		e(P) Z ipP Z (ePPP) Z eS E N ePS N e(sS) E e(ScS) E e(SSS) N	05 53(46) 53 58 56 38 06 00 43 00 44 00 53 00 57 03 36 05 24	1 1/2 1 1/2 1 1/2 9 9 6 8	(48.3)	USCGS: 38 N 142 E H=(05 45 06)
84		iP Z ipP Z iPP Z iPPP Z i Z eS EN eSS EN e E e N e(ScS) N	07 36 46 36 52 37 14 37 27 38 49 40 45 41 29 41 41 41 43 47 55	1 1/2 1 1/2 2 2 14 20	22.4	Moluccas region H=07 31 49

No.	Date	Phase		Time (G.M.T.)	Per.		Remarks
				h m s	s	degrees	
85	1958 Sept. 21	iP	Z	13 36 16	1 $\frac{1}{2}$	38.3	h=(130)Km. USCGS:15S174W H=13 29 10
		epP	Z	36 48	1 $\frac{1}{2}$		
		i(PcP)	Z	38 19	2		
		eS	EN	41 58	8		
		esS	N	42 55	10		
		e	E	43 03	10		
		eSSS	N	45 29	10		
		e	N	46 27	20		
		e	E	47 11	16		
86	22	iP	Z	07 06 42	1		Dilatation USCGS:6S110E
87		iP	Z	08 44 00	1	34.4	Compression
		i(pP)	Z	44 35	1 $\frac{1}{2}$		h=(120)Km.
		eS	EN	49 15	9(E)		USCGS:28N144E
		eSSS	E	52 15			H=08 37 26
		e	E	53 21			
88		iP	SWZ	14 10 07	$\frac{1}{2}$	2.7	H=14 09 25
		iS	ENSW	10 39			
89		iP	Z	17 14 30			
		e	EZ	15 55	11(E)		
		e	E	16 37	16		
		e	E	18 03	12		
90		eP	Z	19 13 32	3	40.0	h=30Km.
		ipP	Z	13 35	1 $\frac{1}{2}$		USCGS:33 $\frac{1}{2}$ S177 $\frac{1}{2}$ W
		iPPP	Z	15 25	1 $\frac{1}{2}$		H=19 05 52
		eS	EN	19 20	13(E)		
					8(N)		
		esS	EN	19 41	16		
		e(SS)	E	22 25	13		
		iScS	E	23 20	17		
		L max	EN	29.1	18		
91		iP	Z	21 55 53		2.6	H=21 55 12
		iS	SWZ	56 24			
92		eP	Z	22 56 37	2	22.9	USCGS:16 $\frac{1}{2}$ S168 $\frac{1}{2}$ E
		iPP	Z	57 05	2		H=22 51 35
		eS	E	23 00 40	10		
		e	N	00 44	10		
		eSS	EN	01 26	10		
		eLq	EN	01..			
		L max	EN	05.3	14		
93	23	iP	Z	12 58 53		2.9	Compression
		eS	W	59 27			H=12 58 08
		i	Z	59 44			Small local shock
94		iP	Z	19 59 20		(5.9)	Small local shock
		i(S)	SZ	20 00 27			
95	24	eS	E	04 07 49	9	88	USCGS:59 $\frac{1}{2}$ N
		e	E	08 01	8	USCGS	143 $\frac{1}{2}$ W
		e	E	08 12	12		
		ePS	E	08 59	10		
		ePPS	N	09 21	11		
		eSS	E	13 51	12		
		eLq	EN	20.6	(30)		
		L max	N	36..			

No.	Date	Phase	Time (G.M.T.)	Per.	degrees	Remarks
			h m s	s		
96	1958 Sept. 25	ePKP Z i Z i Z i Z e(PKS) E iPP Z eSKKS E e(SKSP) E e E eSS EN e EN e N eSSS EN e N eLq EN L max EN L max E	07 40 13 40 21 40 30 42 47 43 33 45 45 52 25 56 22 59 51 08 07 13 08 53 09 55 14 29 16 40 33.1 59.6 09 09.2	 2 3 2 10 4 8 14 10 20 20 16 28 23 36 20 17	(177)	USCGS: 9N39 $\frac{1}{2}$ W
97		e(S) E e E e EN	15 11 33 16 56 18 33		(37)	East of Fiji Is.
98		eP Z i Z e E eLq EN L max EN	15 23 11 24 11 30 53 24.2 40.6	 2 10 (16) 16		32 $\frac{1}{2}$ S 178W (USCGS) Confused with preceding
99		eS E e(SS) E eSSS E	21 09 22 12 20 12 48	(14)		USCGS: 33S 178W
100		iP Z iS SWZ	21 14 47 15 23		3.1	H=21 13 59
101		eP Z i Z i(S) W	23 38 56 39 07 39 16	 1 $\frac{1}{2}$ 1	1.6	H=23 38 30
102	26	iP Z i(pP) Z iPPP Z eS EN e(sS) E e E e N e E	11 38 41 38 54 39 06 41 48 42 14 42 24 42 29 42 58	 1 $\frac{1}{2}$ 2 2 6	17.3	h=60Km. H=11 34 44 Measured: 6S 130 $\frac{1}{2}$ E
103	27	eP Z ipP Z i Z iPPP Z ePcS E eS E esS E e N eSSS E	07 43 49 44 06 45 30 45 53 49 34 49 53 49 54 50 28 52 53 53 25	 2 1 $\frac{1}{2}$ 2 2 10 8 8 10 10	40.8	h=50Km. USCGS: 9S 106E H=07 36 04
104		iP Z i Z i(pP) Z i Z	14 02 15 02 19 02 49 03 13	 1 $\frac{1}{2}$	39.1	Dilatation h=130Km. USCGS: 15S 174W H=13 55 02

No.	Date	Phase	Time (G.M.T.)	Per.		Remarks
			h m s	s	degrees	
104 (cont.)	1958 Sept. 27	i Z eS E esS E e E	03 38 08 02 09 01 11 50	13 12		
105	28	i(P) Z	08 27 47	1 $\frac{1}{2}$		Compression
106		iP Z i(pP) Z iS ENSW	12 52 01 52 27 53 13	1 $\frac{1}{2}$ 1 $\frac{1}{2}$	6.4	h=130Km. Compression USCGS:5S153 $\frac{1}{2}$ E H=12 50 28
107		iP Z iS ENSW	18 03 42 09 22	$\frac{1}{2}$ 1	3.4	H=18 07 50
108	29	iP ESWZ iS ENSWZ	04 04 51 04 58	$\frac{1}{4}$	0.4	Dilatation H=04 04 41
109		iP Z i(PP) Z i(PPP) Z i(S) N E	09 57 35 57 58 58(08) 10 01 01 01 03		19.1	Compression USCGS:4 $\frac{1}{2}$ S130E H=09 53 12
110		i(S) SWZ	14 21 51			
111	30	iP SWZ i Z i ENSZ	03 17 14 17 37 17 50			
112		eP Z i Z i(PP) Z i Z i Z i Z iS N E Z E	07 13 46 13 50 14 15 14 32 15 16 16 21 17 52 17 53 18 25 23 14	3 1 $\frac{1}{2}$ 2 1 $\frac{1}{2}$ 1 $\frac{1}{2}$ 2 8 2 16	23.4	USCGS:3 $\frac{1}{2}$ N128E H=07 08 39
113		eP Z e E e E L max EN	08 53 06 58 25 09 00 50 03..			USCGS:23S172 $\frac{1}{2}$ E
114		iP Z i Z e(S) EN i E e E e EN e N	09 23 21 24 10 09 27 32 28 05 28 51 29 51 33 30	1 $\frac{1}{2}$ 1 $\frac{1}{2}$		USCGS:3N128E

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COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF NATIONAL DEVELOPMENT
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

58/10

203 Collins Street,
MELBOURNE, C.1.

PROVISIONAL SEISMOLOGICAL BULLETIN
PORT MORESBY

Cape

Latitude : 09°24'.5S Longitude : 147°09'.1E Height : 230 feet

Foundation : Eocene cherts

Instruments: Sprengnether long period horizontal component
seismometers, series H = E, N.
Wilson Lamison short period vertical component
seismometer = Z.
Sprengnether three component recorder, series H.
Galvanometer periods : EW 17.4 secs., NS 15.8 secs., 1.4 sec.
Seismometer periods : EW 17.4 secs., NS 15.8 secs., 1.1 sec.
Galvanometer damping : critical
Wood Anderson short period horizontal component seismometers
= W, S.
Magnification : 2775
Kew short period vertical component seismometer = V.

No.	Date	Phase	Time (G.M.T.)	per.	 degrees	Remarks
	1958 Oct.		h m s	s		
1	1	eP Z eS EN e E Lmax EN eScS N	06 35 56 39 24 40 24 42.7 47 24	 10 10 19 10	19.1	USCGS:11S166 ¹ ₂ E H=06 31 33 Masked by microseisms
2		iP Z i Z i Z i Z i Z ePcS N E eS EN ePPS EN i N eScS E iSS E i E eLq E L Z Lmax ENW	09 38 20 38 26 38 58 40 40 41 31 43 33 43 33 45 14 45 27 45 39 48 03 48 32 49 00 49.8 54.. 56.0	3 1 ¹ / ₂ 2 1 ¹ / ₂ 1 ¹ / ₂ 10 10 12 12 11 14 14 24 17(N) 14(EW)	47.9	USCGS:57S147E H=09 29 43 Compression
3		iP SWZ i WZ i(S) SW	22 02 47 03 35 03 44	1		Dilatation
4	2	i(P) SW	02 53 38			No record E, N, or Z
5	3	Lmax EN	01 50 ..	16		
6		iP Z i Z i(S) ENS	02 52 23 52 37 53 14		4.4	H=02 51 17

2.

No.	Date	Phase	Time (G.M.T.)	per.		Remarks
			h m s	s	degrees	
7	1958 Oct. 3	iP Z i Z i(S) ENSW	09 28 40 28 47 29 55		6.6	H=09 27 03
8		iP Z i Z i(S) ENSW	13 31 36 31 39 32 13		3.2	H=13 30 47
9		iP Z i Z i(S) ENSW	23 33 30 33 38 34 47		6.8	H=23 31 50
10	4	iP ENSWZ i Z iS E i S i E i Z i Z i(PcP) Z i Z i Z	00 51 03 51 36 52 10 00 52 27 52 38 56 12 57 18 57 49 58 51 59 24	2 2 3 5	5.9	Dilatation h=100+Km. USCGS:4 ¹ / ₂ S14 ¹ / ₂ E H=00 49 37
11		iP Z i Z iPP Z i Z i Z eS EN eSS EN eSSS EN Lmax EN Lmax E	04 08 47 08 56 09 17 09 30 10 57 12 28 12 52 13 05 15.5 17.7	2 2 1 ¹ / ₂ 1 ¹ / ₂ 10 (12) 17 12	20.3	USCGS:14S167E H=04 04 11
12		eP Z i Z i Z eS EN Lmax EN Lmax E	04 49 15 49 20 49 51 52 54 55.7 58.2	2 1 ¹ / ₂ 10 16 13	20.1	New Hebrides H=04 44 41
13		eLq EN e N	10 05.4 07 36	16		USCGS:22 ¹ / ₂ N144 ¹ / ₂ E
14		e E e(S) EN eLq EN	11 44 48 44 58 46.7			USCGS:23N144 ¹ / ₂ E
15		iP Z i Z i Z i Z eS EN e Z Lmax EN	18 14 16 14 18 14 37 14 49 15 03 17 52 17 56 21.4	1 1 ¹ / ₂ 1 ¹ / ₂ 1 ¹ / ₂ 1 ¹ / ₂ 2	19.8	Dilatation USCGS:13 ¹ / ₂ S168E H=18 09 46
16	5	e S e WZ	04 54 22 54 24			Slight activity

No.	Date	Phase	Time (G.M.T.)	per.		Remarks
			h m s	s	degrees	
17	1958 Oct. 5	iP Z i Z	06 12 53 14 21			h=200Km.USCGS USCGS:18 $\frac{1}{2}$ N145 $\frac{1}{2}$ E
18		i SWZ	12 39 02			Slight activity
19		iP SWZ iS ENSWZ	14 16 49 17 15		2.2	H=14 16 16
20	6	iP Z i Z i Z i Z e E e E	00 54 19 54 35 55 27 56 29 01 01 25 04 17	1 1 $\frac{1}{2}$ 2 1 $\frac{1}{2}$ 14 12	38.8 USCGS	USCGS:32S179W
21		iP Z	02 14 50	1 $\frac{1}{2}$	35.5 USCGS	USCGS:25S179 $\frac{1}{2}$ W
22		e Z e Z e Z e N (L) N E Lmax N	07 21 00 21 39 23 18 31 17 48.7 48.8 55.3	2 15 (25) (25) 18		
23		iP Z iS ENSWZ	17 59 25 59 54	1 1(E,Z)	2.4	H=17 58 47
24		e Z	19 03 39	2		USCGS:55 $\frac{1}{2}$ N162 $\frac{1}{2}$ E
25	7	iP Z i ENSW iS ENSWZ	09 58 09 58 10 58 51		3.5	Compression H=09 57 17
26		i Z	11 08 37			
27		iP ENZ i Z i Z iS ESWZ i E i SWZ	12 34 19 34 21 34 32 35 30 38 15 40 56	2 1 1	6.2	Compression USCGS:5S151 $\frac{1}{2}$ E H=12 32 47
28		iP WZ iS SWZ	15 33 00 33 23		1.9	H=15 32 29
29	8	eP Z eLq N Lmax EN	03 20 32 30... 35 ..			Kermadec Is. Measured: approx. 29S175W
30		eS EN eLq N	04 57 26 05 01 ..			Kermadec Is. Measured: approx. 29S175W
32		iP EWZ i Z i Z i Z iS EWZ Lmax EN	14 03 04 03 09 03 28 03 46 04 46 06.4	1 $\frac{1}{2}$ 1 1 $\frac{1}{2}$ 4(E) 16(E) 14(N)	9.1	Dilatation USCGS:7S155 $\frac{1}{2}$ E H=14 00 52

4.

No.	Date	Phase		Time (G.M.T.)	per.		Remarks
				h m s	s	degrees	
31	1958 Oct. 8	iP	Z	11 20 11		38.8	USCGS:29S177 ¹ / ₂ W
		eS	E	26 06	12		H=11 12 48
		eSSS	N	29 18	14		
33		iP	Z	14 27 04	1 ¹ / ₂	9.1	Dilatation
		i	Z	27 09	1		USCGS:7S156 ¹ / ₂ E
		i	Z	27 28	1 ¹ / ₂		H=11 24 52
		eS	E	28 46	3		
34		eP	Z	15 45 29		38.5	USCGS:29S178W
		i	Z	45 37			H=15 38 08
		eS	N	51 22	16		
		e	E	51 32	16		
		Lmax	N	16 00.0	16		
		Lmax	E	00.4	16		
35		L	EN	18 18.6			
36		e(S)	E	22 34 24	10		
		Lmax	EN	37.7	14E 16N		
37	9	e	E	10 32 00			USCGS:14N145 ¹ / ₂ E
38		e(PP)	Z	11 40 03		114	USCGS:55 ¹ / ₂ S27 ¹ / ₂ W
		i	Z	40 10		USCGS	
		i	Z	40 18	1		
		e(SKKKS)	N	47 00			
		e	E	47 44			
		e(PS)	N	49 42	17		
		e	N	51 52			
		e	N	53 11	14		
		eSSP	EN	55 56			
		e(SSS)	EN	59 40	14		
		e	N	12 02 54			
		Lmax	N	12 58.0	20		
		Lmax	E	56.7	20		
39		iP	WZ	12 18 29		4.3	H=12 17 24
		iS	WZ	19 19			
40	10	iP	Z	04 11 35	1 ¹ / ₂	34.2	Phillipines Region?
		e(S)	N	16 58			H=04 05 51
41		i(P)	Z	08 02 06			Small local shock
42		iP	Z	08 40 52	1 ¹ / ₂	63.3	USCGS:53N160E
		i	Z	41 14	1 ¹ / ₂		H=08 30 24
		i	Z	41 51	1 ¹ / ₂		
		eS	EN	49 20	10		
		eSS	N	53 28	18		
43		iP	Z	11 40 59	1 ¹ / ₂	27.0	USCGS:5 ¹ / ₂ N127E
		i	Z	41 10	1 ¹ / ₂		H=11 35 18
		iPP	Z	41 47	1 ¹ / ₂		
		i	Z	42 14	2		
		eS	N	45 32	14		
		e	E	45 48			
		e	N	46 29	16		
		eSS	EN	46 45	8(E)		
		e	N	51 22	14		

5.

No.	Date	Phase	Time (G.M.T.)	per.	 degrees	Remarks
	1958 Oct.		h m s	s		
44	10	iP Z i ENSWZ e(S) ENSW	15 14 40 14 44 15 21	1	3.6	H=15 13 45 New Guinea Highlands? Dilutation
45	11	L N	02 26 ..			USCGS: 53N159 ¹ / ₂ E Faint waves only
46		L E L N	03 06 .. 10 ..	18 18		
47		iPKP Z iPP Z i Z i(PKS) Z i(PKS) Z	14 56 43 59 10 59 17 59 52 15 00 02	1 ¹ / ₂ 1 ¹ / ₂ 1 ¹ / ₂	134 USCGS	h=200Km. USCGS USCGS: 23 ¹ / ₂ S 65W Phases at 56 43 & 59 52 very prominent
48		i SWZ	20 01 39			Very small local shock
49	12	iP Z	05 34 25			Small local shock
50		eP Z e E	09 51 46 10 00 21	1 12		USCGS: 17S175 ¹ / ₂ W
51		iP ENZ i SWZ i(S) ENW e(PcS) E	12 49 15 49 16 50 16 59 42	1 1 (1 ¹ / ₂) 8	5.3	Dilutation USCGS: 4 ¹ / ₂ S 144E H=12 47 56
52		iP NSWZ i Z ipP Z i Z iPP Z iPcP Z ipPP Z isPP Z iScP Z iS ENSW e(sS) E N e(SS) EN eScS N esSS N e N	15 26 17 26 47 27 02 27 10 28 00 28 05 28 36 28 59 31 31 32 18 33 50 33 51 35 35 35 52 36 32 37 42	1 1 ¹ / ₂ 1 ¹ / ₂ 2 2 2 1 ¹ / ₂ 1 ¹ / ₂ 2 10(EN) 12(N) 12 14 17	41.9	Compression h=200Km. USCGS: 27 ¹ / ₂ N 125 ¹ / ₂ E H=15 18 47
53		iP Z i Z i Z Lmax N	17 31 34 31 51 32 16 39.1	1 ¹ / ₂ 2 2 16		Dilutation USCGS: 14S167E
54	13	iP Z i(S) Z	02 27 43 29 16			
55	14	iP Z iS SWZ i Z	12 38 58 39 41 39 56		3.7	H=12 38 02
56		iP Z i Z i S	23 35 16 35 21 35 56			

6.

No.	Date	Phase	Time (G.M.T.)	per.	 degrees	Remarks
			h m s	s		
57	1958 Oct. 15	i Z	06 22 25			
58		iP Z i Z	10 07 07 08 00			
59		iP Z i Z	11 38 54 39 19			31S178 ¹ / ₂ W:USCGS
60		i Z i Z e EN Lmax N	17 08 47 17 09 19 12 27 16.6	16		USCGS:17S169E
61		i Z	18 54 17			
62	16	iP Z iS WZ	02 48 01 48 47		4.0	H=02 47 01
63		iP Z i(S) E i N	07 31 13 32 49 33 01			N.W. end of New Ireland?
64		iP Z ipP Z isP Z esP EN e E iS EN isS N e Z e E	18 06 23 06 43 06 58 06 59 07 26 09 53 10 29 10 25 12 48	2 1 ¹ / ₂ 1 ¹ / ₂ 16 8(E) 8 4 11	19.1	Compression h=100Km. USCGS:11S167E H=18 02 08
65	17	iP Z	02 40 03	1		Compression
66		iP Z	10 30 23	1 ¹ / ₂	35 USCGS	h=400Km.USCGS USCGS:19 ¹ / ₂ S177 ¹ / ₂ W
67		i Z	12 31 31			Small local shock
68		i Z	20 45 09			Small local shock
69	18	iP Z i Z i Z iS ENWZ	00 27 31 27 42 28 16 28 28	1 1 1 ¹ / ₂	5.0	H=00 26 16 Measured:5S145E
70		iP Z	01 28 09			Small local shock
71		iP Z	09 52 22			Small local shock
72	19	iP Z i Z e EN e(SSS) E e(SSS) N e E Lmax EN	02 01 33 01 49 07 53 11 05 11 15 11 51 16.8	11 15 11 18		USCGS:19S172 ¹ / ₂ W

7.

No.	Date	Phase	Time (G.M.T.)	per.		Remarks
			h m s	s	degrees	
73	1958 Oct. 19	iP Z iS ENS	02 11 31 12 31		5.2	H=02 10 13
74		iP Z i Z i(PcP) Z i(ScP) Z eS N eS E ePPS N eSSS N e E Lmax EN Lmax E Lmax N Lmax EN	11 50 21 52 06 52 30 56 20 56 26 56 28 56 50 59 47 12 00 07 00.6 05.4 06.2 08.7	1 12 12 18 17 17 15	40.3	USCGS:34 ¹ ₂ S178W H=11 42 45
75	20	i SWZ iP Z eS EN	01 06 00 01 06 41 15 43		69.2	Possibly small local activity USCGS:52N175W H=00 55 36 Confused with preceding activity
76		iP EZ i Z i Z i Z i(PPP) Z iS ENSW i N i E ePcS E e(SSS) N e(SSS) E iScS N	01 19 19 19 31 19 38 20 39 20 47 24 43 24 59 25 19 25 35 25 36 27 15 27 17 29 37	(3) 1 ¹ / ₂ 1 ¹ / ₂ 2 8(E) 11(N) 8 10 10 11	34.3	Compression USCGS:9 ¹ ₂ S112 ¹ / ₂ E H=01 12 34
77		i Z	03 03 06			Confused by preceding
78		i(P) Z	19 49 21			
79	21	iP ENSWZ iS NSWZ	06 16 11 16 55	(1)	3.8	Dilatation USCGS:5 ¹ / ₂ S147E H=06 15 13
80		eP Z iPP Z i Z iPcP Z eS E e(SS) EN eScS E	15 47 47 49 08 49 45 50 22 53 22 56 01 58 06	2 2 2 1 ¹ / ₂ 11 	35.9	USCGS:11S111E H=15 40 48
81		iP Z iPcP Z	17 40 05 42 17	1 ¹ / ₂ 1 ¹ / ₂		Compression USCGS:29S179W
82		iP Z iS NS	18 10 50 11 41		4.5	H=18 09 42

8.

No.	Date	Phase		Time (G.M.T.)			per. s	△ degrees	Remarks
				h	m	s			
958	Oct. 21	iP	Z	18	38	57		4.5	H=18 37 49
		iS	N		39	49			Shocks 82, 83 identical
		iP	Z	18	50	35		7.7	USCGS: 6S154 ¹ ₂ E
		iS	ENSWZ		52	02			H=18 48 42
5		iP	Z	19	01	59		7.9	H=19 00 04
		iS	ENSWZ		03	28			
86	22	eP	Z	19	00	(36)		3.4	H=18 59 (44)
		iS	NS		01	15	0.75		
87		eP	Z	22	50	10		2.3	H=22 49 34
		e(S)	NS		50	37			
88		iP	ENZ	23	47	35	2	21.9	USCGS: 14 ¹ ₂ S168E
		i	Z		47	52			H=23 42 53
		i(PPP)	Z		48	09	2		Compression
		eS	EN		51	30			
		Lmax	EN		56.0		11(E)		
89	24	eP	Z	09	02	23		21.2	USCGS: 15 ¹ ₂ S168E
		e	Z		02	39			H=08 57 38
		e	Z		02	53			
		eS	E		06	12			
		eS	N		06	15			
90		iP	Z	13	04	29		2.0	H=13 03 57
		iS	SWZ		04	53			
91		iP	Z	13	40	55		4.0	H=13 39 55
		i	Z		41	01			
		i(S)	SW		41	42			
92		iP	Z	15	51	21	1 $\frac{1}{2}$		Celebes - Banda Sea region.
		i	Z		53	35			Possibly a series of superimposed shocks.
		i	Z		54	39			
		i	E		54	47			
		i	E		56	13			
		i	N		57	30			
93		iP	Z	21	18	23		23.9	Compression
		iS	N		22	33			USCGS: 0 125E
		eS	E		22	34			H=21 13 11
		eSS	E		23	24	7		
		e	E		26	09	14		
		e	EN		28	18			
		eScS	EN		29	23			
94	25	iP	Z	00	58	14	1	(34)	Dilatation
		i(PF)	Z		59	24			Fiji Islands
		i	Z		59	50			
95		iP	Z	02	12	21		2.5	H=02 11 42
		i(S)	EW		12	51			
96		eP	Z	09	20	42		7.9	Solomon Islands
		e(S)	EN		22	11			H=09 18 47
		i	Z		22	34			Measured: 7S155E

No.	Date	Phase		Time (G.M.T.)			per.		degrees	Remarks
	1958 Oct. 25			h	m	s	s			
97		iP	Z	23	11	42			3.0	H=23 10 56
		iS	NSW		12	17				
		i	EN		12	24				
98	26	iP	Z	02	24	14	1			Dilatation
		i(pP)	Z		24	25				USCGS: 5 $\frac{1}{2}$ N 117E
		iPP	Z		25	29	1 $\frac{1}{2}$			
		ePcP	Z		26	54				
		eSSS	E		32	14				
99		e	E	09	43	14	14			
100		e	N	13	46	42				
		Lmax	N		49.5		16			
101		eP	Z	18	52	47			23.4	USCGS: 3N 127E
		e	Z		52	59				H=18 47 40
		e	Z		53	47				
		eS	EN		56	54				
102	27	e	Z	04	02	53				Slight activity
103		e	Z	10	28	02				Slight activity
104		iP	Z	15	12	07				Compression
		ipP	Z		12	21				USCGS: 23 $\frac{1}{2}$ S 175 $\frac{1}{2}$ W
		e	EN		18	45				
105		e(S)	N	19	40	58				USCGS: 56N 162E
106	28	eS	EN	04	34	46				USCGS: 62 $\frac{1}{2}$ S 157W
		e	E		42	41				
107		iP	Z	10	57	57	2		72.0	Dilatation
		i(pP)	Z		58	03	1			USCGS: 30 $\frac{1}{2}$ N 85E
		eS	EN	11	07	15	12			H=10 46 35
		e	EN		07	34				
		e(SSS)	N		15	51	22			
		e	N		17	41	18			
		eL	N		18.6		40			
108		iP	Z	18	20	00	1		7.3	USCGS: 4 $\frac{1}{2}$ S 153 $\frac{1}{2}$ E
		i	Z		20	31	1			H=18 18 13
		i	Z		21	22	2			
		iS	NS		21	23				
			EW		21	24				
		i	NZ		21	56				
		i	E		21	58				
109		eL	N	19	18.1		15			
		eL	E		18.4		15			
110	29	e	EN	00	09	50				
		eL	E		24.2		20			
		eL	N		24.9		20			
111		eS	E	06	27	11				USCGS: 51N 179E
		e(SS)	N		31	33				

No.	Date	Phase	Time (G.M.T.)	Per.	$\triangle$ degrees	Remarks
112	1958 Oct. 29	iP Z iS EN e(PPS) N eScS EN eSS N eSSS EN e(G) E N Lmax N	h m s 07 55 02 08 03 51 04 25 04 55 08 11 11 14 11(43) 11 49 22.8	s 2 (16) 16 16(N) 26 20	67.0	Compression USCGS:51 $\frac{1}{2}$ N179 $\frac{1}{2}$ E H=07 44 10
113		iP Z	08 06 06			USCGS:51 $\frac{1}{2}$ N179E Confused by preceding
114		iP Z	13 28 22			
115	30	iP Z i Z i Z e EN	03 19 21 19 30 19 38 21 42			
116		iP Z iS ENSWZ	09 38 36 39 20	1	4.0	Compression H=09 37 36
117		iP Z	10 12 15	1		Dililation USCGS:20 $\frac{1}{2}$ S176W
118		iP Z i Z iS NS	16 01 15 01 30 02 05		4.3	H=16 00 10
119	31	iP Z iS NS EW	01 44 03 44 44 44 45		3.5	H=01 43 10
120		i Z	02 03 11			
121		iP ENZ i(S) EW i EN	19 04 33 05 59 06 36	1	7.6	Dililation USCGS:3 $\frac{1}{2}$ S143 $\frac{1}{2}$ E H=19 02 42
122		iP Z e E e N	21 45 16 47 11 47 17			
123		iP Z	22 00 09			
124		iP Z i(pP) Z i Z i(PPP) Z eS ENZ esS EN Lmax N	23 47 09 47 43 48 07 49 30 53 17 53 53 00 04.0	1 8(EN) (10) 18	41.5	Compression h=60-100Km. USCGS:25N122 $\frac{1}{2}$ E H=23 39 30

(J.M. RAYNER),
DIRECTOR.

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COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF NATIONAL DEVELOPMENT
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

203 Collins Street,
MELBOURNE, VIC.

SEISMOLOGICAL BULLETIN

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PORT MORESBY

Latitude: 09° 24'15 S.

Longitude: 147° 09'11 E

Height: 70 metres

Foundation: Eocene Cherts

Instruments:

- 1) 2 Sprengnether Horizontal Seismometers
N-S component: period 15.8 sec., damping critical
E-W " " 14.8 " , " "
- 1 Wilson-Lamison Vertical Seismometer
period 1.1 sec., damping critical
- 1 Sprengnether 3-component Recorder
N-S component: Galvo. period 15.8 sec., damping critical
E-S " : " " 14.8 " , " "
- 2) 2 Wood-Anderson Seismometers
N-S comp.: period 0.8 sec., damping 0.65, magnification 2500
E-W " : " 0.8 " , " 0.72, " 2650
- 1 Kew Vertical Seismometer
period 1.0 sec., damping 0.52, magnification 3960
- 1 Sprengnether 3-component Recorder

Further information or copies of seismograms may be obtained by
writing to:-

Observer in Charge,
Geophysical Observatory,
P.O. BOX 323,
PORT MORESBY. PAPUA.

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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			A	Remarks
			h	m	s		A _N	A _E	A _Z		
1	Dec. 1	eP Z eS NE	01	48	13	s				Km. 889	Mag. 4 $\frac{1}{2}$ H=01 46 16 Approx. 7S 155E
2		iP Z iS NE	05	16	06	$\frac{1}{2}$			+	556	Compression Mag. 4 $\frac{1}{2}$ H=05 14 52
3		iP Z e Z	07	28	47						
4		eP Z	11	56	06						Near Sumatra
5		iP Z iS EZ	14	29	40					722	Mag. 5 H=14 28 04
6	2	eP Z e(S) E e N eLq NE	07	18	50					4111	H=07 11 42 16 S 175 W
7		e(S) NEZ	09	10	52						Small local shock
8		iP Z	20	06	05						
9		iP Z i Z eS NE	21	18	30	1 $\frac{1}{2}$			-	1022	Dilatation Mag. 5 $\frac{1}{2}$ H=21 16 16 Southern Bougainville- Solomon Islands
10		L max E	23	37.5		11					P & S phase un- recorded during record change
11	3	eP Z i Z i Z e(PP) Z e(PcP) Z e NE e NE e N e(ScS) N	09	55	45						USCGS:19N 121 $\frac{1}{2}$ E
12		iP Z i Z	11	03	27						
13		iP Z i Z	10	43	50						
14		i(P) Z	16	43	16						
15		iP Z i Z	22	43	11						
16	4	eP Z e(S) Z	04	12	14					889	H=04 10 17
17		eP Z e(S) Z	06	05	37					889	H=06 03 40
18		eP Z e(S) Z	06	39	15					889	H=06 37 18

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No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					A _N	A _E	A _Z		
			h m s	s				Km.	
19	Dec. 4	eP e e	Z N N	12 33 31 37 31 38 31					
20		e(P) e	Z NE	14 41 (02) 43.0					
21		eP i	Z Z	18 59 56 19 00 24					
22		iP i	Z Z	22 57 32 59 04					
23	5	iP iS	Z Z	02 23 07 24 39				911	H=02 21 07
24		iP iS	Z NE	16 40 24 41 08				422	Mag. 5 H=16 39 26
25		e(P) e(S)	Z EZ	18 58 42 59 04					
26	6	eLq M M	N N E	10 28.5 46 .. 49 ..	32 19 16				USCGS: 6 $\frac{1}{2}$ N 83W
27	7	eP	Z	01 16 55					USCGS: 21 $\frac{1}{2}$ N 121E
28		eP	Z	01 51 26					USCGS: 21 $\frac{1}{2}$ N 121 $\frac{1}{2}$ E
29		iP epP i ePP i e(PcP) eS e M L max	Z Z Z Z Z N NE N E N	02 51 11 51 21 51 39 51 44 52 13 54 41 55 28 56 14 03 01.4 04.4	1 $\frac{1}{2}$ 1 $\frac{1}{2}$ 1 $\frac{1}{2}$ 1 $\frac{1}{2}$ 1 $\frac{1}{2}$ 8 9(N) 12 22 18		+	2744	Compression Mag. 6 H=02 45 52 USCGS: 4 N 127 E
30		eP eS eS	Z Z NE	05 06 (09) 06 37 06 39	1 $\frac{1}{2}$			267	Mag. 3 $\frac{1}{2}$ H=05 05 (32)
31		eP i e(S) i e M M	Z Z NE Z E E N	06 23 31 24 12 24 (47) 24 55 25 23 27.7 27.8	2 2 14 10 12			744	H=06 21 (52) Epicentre about 3 S 14.8 E Mag. 4 $\frac{3}{4}$
32	7	i(S)	Z	18 45 15					Minor local activity
33		eLq eLR L max	N NE N	18 44.0 49.6 54.0	24 20				USCGS: 18 N 105W
34		eP	Z	20 14 27					Tenimber Islands region.
35		iP	Z	21 54 45					Solomon Islands?

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NO.	Date	Phase		Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
								A _N	A _E	A _Z		
36	Dec. 8	iP	Z	h	m	s	s				Km.	
		i(PP)	Z	03	14	40	1				2311	Dilatation
		iS	NE		15	18	1 $\frac{1}{2}$					H=03 10 15
		e(PcP)	Z		18	14						Depth 200 Km.
		e(SS)	E		18	39						USCGS:13 S 167
		M	N		19	01						
		M	E		21.6		14					
					22.0		15					
37		e	Z	09	40	51						Minor local activity
38		eP	Z	12	17	50					5999	H=12 08 07
		e	Z		18	37						USCGS:44 N 149.1E
		eS	NE		25	22						
		eLq	E		31.0							
		Lmax	N		36.5		24					
		Lmax	E		42.0		20					
39		e(P)	Z	13	43	32						
		e	NE		44	07						
40		iP	Z	16	59	13					422	Mag. 3 $\frac{3}{4}$
		e(S)	E		59	57						H=16 58 (15)
		i(S)	N		59	59						
41		iP	Z	17	10	07	1				+	Compression
			Z	19	41 ^m	42 ^m						Minor local activity
42	9	eP	Z	00	45	38					2966	H=00 40 (00)
		ePPP	Z		46	35						9S 120 $\frac{1}{2}$ E
		i	Z		48	23						
		i	Z		49	12						
		e	NE		49	35						
43		e(P)	Z	00	54	14						Bougainville-
		i	Z		55	34						New Ireland
		i	Z		55	58						region. Records
												of shocks 42
												and 43 confused
												- may be multi-
												ple shocks
44		iP	Z	01	13	38					900	Mag. 5
		i	Z		13	40						5S. 154E
		iS	E		15	09						H=01 11 40
		iS	NZ		15	10						
		i	Z		15	17						
45		eP	Z	02	47.0							Kermadec Is.
		M	N	03	04.2		16					region?
46		e	NE	03	24	21						Minor local activity
47		iP	Z	04	24	33						Minor local activity
48		e	Z	08	06	52						USCGS:8S 118E
		ePP	Z		07	26						
		iPPP	Z		07	42						
		L max	NE		21.8		19(N) 15(E)					

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No.	Date	Phase		Time (G.M.T.)	Per.	Amplitude			Remarks
						A _N	A _E	A _Z	
				h m s	s				
49	Dec. 9	iP	Z	12 22 26	1 1/2				Mag. 5 3/4 H=12 17 50 USCGS:14 1/2 S 16 7E S phase very prominent
		i(pP)	Z	22 33	1 1/2				
		i	Z	22 44	2				
		iS	EZ	26 15	9(E) 4(Z)				
		iS	N	26 16	7				
		i(sS)	N	26 32					
50		eP	Z	16 30 11					Mag. 4 3/4 5 S 15 4 E H=16 28 13 Minor local activity
		iS	NEZ	31 42					
51	9	e	NEZ	20 02 ..					
52	10	e(P)	Z	03 56 34					USCGS:37N 71E
53		iP	Z	04 43 22	1		-		Dilatation Mag. 4 1/2 H=04 42 29
		iS	N	44 02					
		iS	EZ	44 03					
54		iP	Z	04 43 46	1 1/2		-		Dilatation H= 04 42 53 Shock probably associated with preceding.
		iS	Z	44 27					
55	10	iP	NEZ	07 10 00			+		Compression H= 07 03 02 Depth about 250 Kms USCGS:37S 176 1/2 E
		i	NE	10 02					
		i	Z	10 14	2				
		i	Z	10 36	1 1/2				
		ipP	Z	11 02	1 1/2				
		isP	Z	11 26	2				
		ePP	NE	11 34	12(E) 14(N)				
		iPP	Z	11 35	2				
		iPcP	Z	12 05	1 1/2				
		e(pPP)	NE	12 40	10(E) 12(N)				
		e(sPP)	NE	13 02	14				
		eScP	Z	15 22					
		eS	NE	15 35	10(E) 14(N)				
		e	E	16 03					
		e	N	16 05					
		e	N	16 49	12				
		e(sS)	NE	17(18)	10(E) 12(N)				
		e(G)	NE	18 47	18				
		e(ScS)	N	19 29					
		e(ScS)	NE	19 35	4				
		Lmax	E	07 19.5	11				
		e	N	21 05	16				
		e	E	21 07					
56	10	eP	Z	14 44 17	1 1/2		+		Compression H= 14 38 59 Depth about 200 Kms USCGS:5N 126E
		i	Z	44 37	1 1/2				
		ipP	Z	44 58					
		esP	Z	45 27	1 1/2				
		e	Z	45 46	2				
		e	Z	46 10					
		eS	N	48 32	5				
		eS	E	48 34					
		e	N	49 28	13				
		ess	E	49 54	9				
		e	N	50 09	15				
		e	N	50 47	9				
		e	E	51 06	12				
		i	Z	51 08	1 1/2				

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No.	Date	Phase		Time (G.M.T.)			Amplitude			△	Remarks
							A _N	A _E	A _Z		
57	Dec. 10	eP	Z	h m s	s					Km.	
		eS	N	20 35 (31)						478	Mag. 4 $\frac{1}{4}$
		eS	EZ	36 20							H=20 34 (26)
		eS		36 21							
58		iP	Z	20 51 58	1 $\frac{1}{2}$					2144	Dilatation?
		eS	E	55 (28)	8						H=20 47 (30)
		e	N	55.8	15						Epicentre about
		Lmax	N	21 00.5	11						15S. 166E
		Lmax	E	00.7	10						
59		iP	Z	21 55 22						789	Mag. 5
		eS	NEZ	56 40	2(Z)						H=21 53 38
60		eSKS	NE	22 14 22	8(E)						USCGS: 24 $\frac{1}{2}$ N 109W
		e(SS)	E	23 28							
		e(SS)	N	23.5							
		eLr	N	38.3	30						
		Lmax	E	42.6	20						
		Lmax	N	43.1	22						
61	11	iP	Z	13 45 36						389	Mag. 4 $\frac{1}{4}$
		iS	NEZ	46 17							H=13 44 43
		i	Z	46 24							
62		iP	Z	18 45 53							USCGS: 29 $\frac{1}{2}$ N 140E
		e(S)	N	52.0							
		eLq	N	55 ..							
63	12	iP	Z	03 12 00						256	Mag. 3
		eS	NEZ	12 27							H=03 11 24
64		iP	Z	05 38 13							Dilatation
		i	Z	38 28							
		e	NEZ	40 41							
		e	N	42 36							
65		eP	Z	06 36 32							
		e	Z	38 13							
66		eP	Z	16 27 10						467	Mag. 4 $\frac{1}{4}$
		eS	NE	27 58							H=16 26 07
		i	Z	27 59							
		e	N	28 22							
67		iP	Z	22 36 24	1 $\frac{1}{2}$				+		Compression Celebes-Celebes Sea region.
68		e		22 47 ..							Minor local activity
69	13	iP	NEZ	09 08 04	2					878	Dilatation
		i	Z	08 14							Mag. 5 $\frac{1}{2}$ - 5 $\frac{3}{4}$
		iS	NEZ	09 33							H=09 06 09
		i	Z	09 42							USCGS: 4 $\frac{1}{2}$ S 153 $\frac{1}{2}$ E
		i	Z	09 50							
70		i(P)	Z	13 55 50							
71		eP	Z	14 05 03						911	Mag. 5 $\frac{1}{4}$
		eS	NE	06 36							H=14 03 03
72		eP	Z	15 27 52						911	Mag. 5-5 $\frac{1}{4}$
		eS	NEZ	29(25)							H=15 25 (52)
											Shocks 69, 71, 72 probably from Bougainville-New Ireland area.

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No.	Date	Phase		Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
				A _N	A _E	A _Z						
73	Dec. 13	iP	Z	h	m	s	s				Km.	Small local shock
74	14	e(P)	Z	03	58	56						
75		i	Z		59	15						
		eSKS	N	07	36	32	18				12221	H=07 11 29
		eSSS	N		50(04)							USCGS:35S 108SW
		eLq	N		55.7		15					
		M	N		05.5		18					
76		iP	Z	08	14	26						Small local shock in coda of preceding.
77		iP	Z	13	55	05						Small local shock
78		eP	Z	14	06	00					900	Probably Bougainville-New Ireland area
		e(S)	Z		07	31						H=14 04 02
79		i	Z	18	00	56						
80		eP	Z	20	10	47					900	Probably Bougainville-New Ireland area
		e(S)	Z		12	18						H=20 08 49
81		iP	Z	23	52	54						
		i	Z		54	53						
82	15	e	Z	03	06	12						Minor local activity
83		eP	Z	11	32	03					911	Mag. 4.3-5
		eS	NEZ		33	35						Probably Bougainville-New Ireland area H=11 30 04
84		eP	Z	11	55(46)						(5999)	H=11 46 (23)
		e	Z		55	58						USCGS:44N 149E
		eS	N	12	03	18						
85	15	eP	Z	12	47(57)							USCGS:31S 177W
		e	N		59.4							
		M	N	13	04.0							
86		i	Z	14	28	07						Local
87		iP	Z	17	10	35					389	Mag. 3.3
		iS	NEZ		11	17						H=17 09 42
88		e(P)	Z	17	35	36					(900)	H=17 33 37
		e(S)	Z		37	07						Probably Bougainville-New Ireland area
89	16	eP	Z	00	17	39					911	H=00 15 39
		e(S)	Z		19	12						Probably Bougainville-New Ireland area
90		iP	Z	03	25	39						H=03 19 (32) Approx. 25S 178E Approx. depth 300 Km.

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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
			h	m	s		A _N	A _E	A _Z		
91	Dec.	eP iS	Z EZ	17	23 22 24 54	s				Km. 889	Mag. 4 $\frac{3}{4}$ 5S 154E H=17 21 24
92		eP eS i	Z NE Z	21	21 35 23 05 23 07					889	H=21 19 38 Probably same area as shock 91
93		iP	Z	21	38 39	1					Dilatation
94	1 7	eP iS	Z Z	01	00 11 01 42					900	H=00 58 13 Probably Bougainville- New Ireland area.
95		eP epP esS	Z Z E	09	04 38 05 56 12 54	12					USCGS:33N 137E
96		e	Z	12	17 36						
97		eP eS	Z Z	14	46 46 48 17					900	Mag. 4 $\frac{1}{2}$ H=14 44 48 Probably Bougainville- New Ireland area
98	17	i	Z	14	59 24						Probably local
99		eP e e(S) e(SS) M M	Z NE NE N N E	15	42 13 48 (24) 48 36 51 46 57.5 58.0	12 20 18				(4777)	H=15 34 (15) 30N 128E USCGS:27 $\frac{1}{2}$ E 128E
100		iP iPP iS iS iS i	NEZ Z S E NE Z	20	35 51 36 02 37 20 37 22 37 23 37 31	2				889	Dilatation, Mag. 6-6 $\frac{1}{2}$ H=20 33 57 Depth approx 100 Km. USCGS:4 $\frac{1}{2}$ S 153 $\frac{1}{2}$ E
101	18	i	Z	00	03 28						
102		iP iS	Z Z	00	26 52 28 25					900	H=00 24 56 Probably Bougainville -New Ireland area
103		iP iS	Z Z	00	55 43 57 15					900	H=00 53 45 Probably Bougainville- New Ireland area.
104		iP iS	Z Z	01	22 31 24 02					900	H=01 20 33 Probably Bougainville- New Ireland area.
105		iP e(pP)	Z Z	01	44 49 45 18						USCGS:Loyalty Is
106		eP eS	Z Z	01	53 11 54 41					889	H=01 51 14 Probably Bougainville- New Ireland area.

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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			△	Remarks
			h	m	s		A _N	A _E	A _Z		
135	Dec. 18	e i(S)	Z Z	18	34 35	38 47	s			Km.	
136		eP i i ePcP e(S) e e e e(SSS)	Z Z Z Z E E N E NE	19	31 31 31 33 37 37 37 38 40	27 39 56 35 29 51 55 20 51	12 16 14(F) 16(M)			4422	H=19 23 55 USCGS:16S 173W
		e e Lmax Lmax	E N N E		42 42 48.4 48.6	17 22 6	19 20 14 14				
137		eP i iS iS	Z Z E NZ	20	46 46 47 48	28 32 58 01				889	Mag. 5 $\frac{1}{2}$ H=20 44 31 Probably Bougainville- N.I. area
138	1 9	iP i i iS	NEZ NEZ NEZ NEZ	04	23 24 25 25	57 45 01 08	1(Z)	+		667	Compression H=04 22 28 6 $\frac{1}{2}$ S 152 $\frac{1}{2}$ E Mag. 5 $\frac{3}{4}$
139		e	Z	06	55	55					
140		eP eS	Z Z	08	32 34	29 00				900	H=08 30 31 Probably Bougainville New Ireland region
141		e	Z	08	57	02					
142		eSKS eSS eSSS eLq Lmax	N N N N N	10	13.6 21.6 25.5 32.. 45..		18				Approx. 34S 103W
143		eP e	Z E	11	00 04	52 56					
144		e(P) i	Z Z	11	05 07	56 07					
145		eP	Z	11	26	51					
146		iPKP ePP e ePKS	Z Z Z NE	11	33 36 37 37	52 13 14 22	2 2	+			Compression USCGS:16S 72W
147		eP e e	Z NE Z	13	41 43 43	41 (12) 13	2			900	H=13 39 43 Mag. 4 $\frac{1}{2}$ Probably Bougainville- N.I. area
148		eP eS e	Z E Z	15	02 03 03	28 58 59				889	H=15 00 31 Mag. 4 $\frac{1}{2}$ Probably Bougainville- New Ireland area.

No.	Date	Phase		Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
								A _N	A _E	A _Z		
149	Dec. 19	eP	Z	h	m	s	s				Km.	
		eS	Z	15	17	25					889	H=15 15 35 Probably Bougainville - New Ireland area
150		eP	Z	18	47	22					7533	H=18 36 25
		e	Z		47	33	2					USCGS: 51 $\frac{1}{2}$ N 177 $\frac{1}{2}$ W
		eS	NE		56	16	7					
		e(ScS)	NE		57	03						
		e(SS)	N	19	00	4						
		e(SSS)	E		03	4						
		M	NE		15	0	18(E) 20(N)					
151		iP	Z	20	52	56					878	H=20 50 59
		i	NEZ		52	58	1(Z)					Mag. 5
		i	E		54	25						Bougainville - New Ireland area
		i	NEZ		54	27	1 $\frac{1}{2}$ (Z)					
152	20	eP	Z	00	09	52	2					
		e	Z		11	22	2					
153		eL	N	01	15	..						
154		iP	Z	09	29	36	1				900	H=09 27 38
		i	Z		29	38						Mag. 5 $\frac{1}{4}$
		iS	Z		31	07	2					Bougainville - New Ireland area
		iS	E		31	08						
		iS	E		31	09						
155		eP	Z	14	39	21					900	H=14 37 (23)
		e(S)	Z		40	52						Bougainville - New Ireland area
156		eP	Z	16	40	27					589	H=16 39 08
		eS	NEZ		41	34						Mag. 4 $\frac{3}{4}$
157		eP	Z	17	39	37					911	H=17 37 37
		e(S)	Z		41	09						Bougainville - New Ireland area
158	20	eP	Z	19	28	41					4777	H=19 20 43
		e	Z		29	02						USCGS: 28 $\frac{1}{2}$ N 127 $\frac{1}{2}$ E
		eS	NE		35	04						
		ePS	N		35	24						
		e	N		36	42	(18)					
		eSS	N		38	16	11					
		M	NE		44	5	20					
159	21	eP	Z	00	46	19						Local Shock
		e	Z		47	56						
160		eP	Z	03	56	51					900	H=03 54 53
		e(S)	Z		58	22						Bougainville - New Ireland Region
161		eP	Z	05	58	41					8999	H=05 46 28
		iPcP	Z		58	48						USCGS: 44 $\frac{1}{2}$ N 81E
		eS	NE	06	08	46	11					
		eScS	E		09	02						
		e	N		09	17						
		ePS	NE		09	34	(20)					
		e(SS)	NE		13	40						
162		eP	Z	10	49	(52)						Local Shock
		i	Z		51	19						
163		i	Z	12	48	21						Local shock

No.	Date	Phase		Time (G.M.T.)			Per.	Amplitude			A _{..}	Remarks
								A _N	A _E	A _Z		
164	Dec. 21	eP	Z	h m s			s				Km.	
		iS	Z	15 44 48			1 1/2				911	H=15 42 48 Bougainville - New Ireland area
165		eP	Z	18 23 32							(2977)	H=18 17 (53) Approx. 1 N 122E
		eS	N	28 (04)								
166	22	eP	NEZ	02 19 15			1				889	Mag. 5 1/4 H=02 17 18 May be double shock USCGS:6S 155E
		i	Z	19 19								
		iPP	Z	19 24								
		i(P)	EZ	19 38			1 (Z)					
		eS	EZ	20 45								
		eS	NE	20 46								
		i	Z	20 50			1 1/2					
		M	E	24.1			13					
167		iP	Z	02 24 24								
168		iP	NEZ	04 04 03							211	Dilatation Mag. 3 1/4 H=04 03 32
		iS	NE	04 26								
169		eP	NEZ	07 40 44							889	H=07 38 47 Mag. 4 3/4 Bougainville - New Ireland area
		eS	NE	42 14								
		i	Z	42 17								
170		eP	Z	08 03 08								H=07 57.0 Probably 300-500 miles SW of Tonga and up to 300 Km. deep. USCGS:Tonga Is. region
		eS	EZ	07 58								
171		i	Z	10 33 21								
172		iP	Z	11 13 41							333	H=11 12 55
		e(S)	Z	14 16								
173		e	Z	11 46 32								
174		eP	Z	12 32 44							889	H=12 30 47 Bougainville - New Ireland region
		eS	Z	34 14								
175	22	e	Z	14 20 ..								Minor activity - probably local
176		iP	Z	15 22 49								Banda Sea Approx 6 S 130E
177		eP	Z	17 32 07							889	H=17 30 10 Mag. 4 1/2 Bougainville - New Ireland region
		eS	Z	33 37								
178		eP	Z	17 38 (37)							2233	H=17 34 (07) 11 1/2 S 167E
		e	Z	38 47								
		E	Z	38 59								
		eS	NE	42 12								
179		eP	Z	19 28 26							4377	H=19 20 (58) 33 1/2 S 180
		eS	NE	34 (25)			10					
		eLq	E	37.5			18					
		M	NE	43 ..								
		Lmax	NE	46 ..			16					

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No.	Date	Phase	Time (G.M.T.)	Amplitude			▲	Remarks
				Per.	A _N	A _E	A _Z	
180	Dec. 22	eP Z eS NEZ	h m s 22 40 16 41 00	s				Km. 367 H=22 39 25 Mag. 3½
181	23	eP Z	03 38 01					USCGS: Tonga Is.
182		eP Z iS NEZ	06 34 59 35 02					911 H=06 32 52 Mag. 4½ Probably Bougainville - New Ireland area
183		M NE	07 34 ..					USCGS: 2N 79W
184		eP Z i Z i EZ	09 43 48 43 50 45 19					900 H=09 41 50 Mag. 4½ Probably Bougainville - New Ireland area
185		eP Z i NEZ iS Z	14 28 08 28 10 29 40					911 H=14 26 09 Mag. 4½ Probably Bougainville - New Ireland area
186		iP Z eS NE i Z iP Z eS NE i Z	17 21 48 24 17 24 19 17 21 48 24 17 24 19					878 H=17 19 53 Mag. 4½ Probably Bougainville - New Ireland area
187		e(P) Z e E Lmax NE	18 48 03 50 36 52 ..					
188		M NE Lmax NE	19 38.5 41.5	18 16				H= 19 (15.8) Kermadec Is. Approx. 32S 177W
189		eP Z e Z M NE	19 42(30) 42 40 59.7	16				H= 19 (34.7) Kermadec Is. Approx. 32S 177W In coda of preceding
190	24	iP NEZ i Z iS NE iS NE i Z	01 14 19 14 44 15 05 15 06 15 08	1(Z)				444 Dilatation H=01 13 19 Mag. 5½ USCGS: 6½S 150½E
191		eP Z eS Z	10 48 17 49 48					900 H=10 46 19 Probably Bougainville - New Ireland region
192		eP Z e Z e Z e(S) NE	10 51 35 52 00 52 35 55 05					2144 H=10 47 10 N.E. of Timor approx. 7½S 128E
193		eP Z eS E e Z	13 00 47 02 18 02 35					900 H=12 58 49 Mag. 5½ Probably Bougainville - New Ireland area

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No.	Date	Phase		Time (G.M.T.)			Per.	Amplitude			A.	Remarks
				h	m	s		A _N	A _E	A _Z		
194	Dec. 24	eP	NEZ	14	14	39	1				Km. 389	H=14 13 46 Mag. 4 $\frac{3}{4}$ 7S 150 E
		i	Z		14	41	$\frac{1}{2}$					
		eS	NE		15	20						
		eS	NE		15	23						
		i	Z		15	35	1					
195		eP	Z	19	53	57					855	H=19 52 (04) Mag. 4 $\frac{1}{4}$
		eS	Z		55	(24)						
196		eP	NEZ	20	40	25					2600	H=20 35 18 USCGS:18S 169E
		i	Z		40	38	2					
		i	Z		40	44	$1\frac{1}{2}$					
		i	Z		41	04	2					
		iS	NE		44	32	12					
		e	NE		44	53	12(E) 14(I)					
		M	N		48	..						
197		e(S)	NE	22	(10.6)							
		M	N		13.6		14					
198		eP	Z	22	16	02	$1\frac{1}{2}$				2589	H=22 10 56 In coda of pre- ceding USCGS:18S 169E
		e	Z		16	12	$1\frac{1}{2}$					
		e	Z		16	22	2					
		i	Z		16	29	$1\frac{1}{2}$					
		eS	N		20	08	11					
		eS	E		20	12	11					
		M	N		23.5		20					
199	25	iP	NEZ	08	07	04	$1\frac{1}{2}$ (Z)				633	Dilatation Mag. 6 $\frac{1}{2}$ H= 08 05 40 USCGS:5 $\frac{1}{2}$ S 151 $\frac{1}{2}$ E
		i	N		08	03						
		i	E		08	04						
		iS	NE		08	09	1					
		i			08	51						
		M(W2)	N	11	18.5		20					
200		iP	NZ	09	38	04	$1\frac{1}{2}$ (Z)				633	H=09 36 40 Mag. 5 Probably associated with preceding shock
		i	Z		38	17	$1\frac{1}{2}$					
		e	N		39	05						
		i	NE		39	07	$1\frac{1}{2}$					
		iS	NZ		39	09	2(Z) 4(N)					
		e	N		40	32	20					
201		e(S)	Z	20	56	47						Minor local activity
202	26	eP	Z	02	17	(16)					444	H=02 15 (30)
		e(S)	N		18	03						
		e(SS)	NZ		18	13	$1\frac{1}{2}$ (Z)					
203		eP	Z	03	22	27					578	H=03 21 10
		eS	NZ		23	27						
		e(L)	N		24.5							
204		i(P)	Z	05	54	04						
205		eP	NZ	05	54	35	2(Z)				900	H=05 52 37 Mag. 5 $\frac{1}{2}$
		i	Z		54	38	$1\frac{1}{2}$					
		i	Z		54	57	$1\frac{1}{2}$					
		iS	Z		56	06	$1\frac{1}{2}$					
		eS	NE		56	06						
		i	Z		57	06	$1\frac{1}{2}$					

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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
			h	m	s		A _M	A _E	A _Z		
206	Dec. 26	iP NEZ ipP Z esPP Z eS NZ eScP Z eL N	05	57	10	1 (Z)				Km. 3789	Dilatation H=05 51 13 Epicentre 22°S 180°E Depth about 600 Kms USCGS: South of Fiji
207		eP NEZ iS Z eS NE	08	39	26	1½				900	H=08 37 28 Mag. 5¼
208		eP Z eS E e(L) N	16	57	57					1944	H=16 53 54 Epicentre about 6¼S. 130 E
209		iP Z iS Z eS NE i Z	22	03	24					522	H=22 02 14
210		eP Z e N e N e E M E	22	46	41					4733	H=22 38 (47) epicentre 52 S 141 E
211	27	e Z	04	20	30						
212		iP Z i Z eS NEZ	08	30	01					(2255)	Dilatation? H=08 25 26 Banks Islands region Possibly deeper than normal
213	28	eP Z eS NE Z	04	42 (13)						(767)	H=04 40 (32)
214		iP NZ iPcP Z eS NE e E e N	05	46	26	1 (Z)			+	8455	Compression H=05 34 40 USCGS: 29¼N 80E
215		iP Z	06	51	05	1			-		Dilatation H=06 43 (50) Approx. 18 S 175W
216		eP Z eS Z	12	37	30					900	H=12 35 32 Mag. 4 Probably Bougainville - New Ireland region
217		iP NEZ iS E	17	21	03	½ (Z)			-	511	Dilatation H=17 21 (52) Approx. 5 S 146 E. Mag. 5½
218		iP Z iP Z i(S) Z i(S) Z	17	30 (21)							Double aftershock
219			17	34	..						Aftershock confused by pre- ceding.

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No.	Date	Phase		Time (G.M.T.)			Per.	Amplitude			Km.	Remarks
				h	m	s		A _N	A _E	A _Z		
220	Dec. 28	iP	Z	17	53	13	s					Local shock
		i	Z		53	23						
221	29	iP	Z	03	03	45					444	H=03 02 45
		iS	NE		04	32						Approx. 6 S 147E
												Mag. 4 $\frac{3}{4}$
222		e(P)	Z	12	55	24						Local shock
		e	Z		56	01						
223		iP	Z	16	35	16					(556)	H=16 34 (01)
		e(S)	NE		36	14						Mag. 3 $\frac{3}{4}$
224		e(P)	Z	22	22	10						
		i	Z		22	21						
225		iP	EZ	22	47	18	1				5511	Dilatation
		epP	Z		48	08						H=22 38 48
		eS	E		54	08	14					USCGS : 2 $\frac{1}{2}$ N 99E
		eS	N		54	09	14					Depth 200 Km.
		e	E		55	04	10					
		e(SS)	E		57	53	15					
		eLq	NE		59	..	20(N)					
226	30	eP	Z	08	51	35	1 $\frac{1}{2}$				10832	H=08 38 (03)
		eSKS	N	09	03	(15)	14					
		ePS	NE		04	23	14					
		ePPS	NE		05	3						
		eSS	E		09	5						
		eSSP	N		09	59	22					
		eLq	N		19	2	20					
227		iP	Z	10	13	37	1 $\frac{1}{2}$					Dilatation
		* iP	Z		13	47	1				433	Dilatation
		i	E		14	18						H=10 12 38
		i	N		14	19						Mag. 5 $\frac{1}{4}$
		i	N		14	27						Approx. 6 S 147 E
		* iS	NE		14	32						Probable multiple
		i	N		14	39						shock
		i	NE		14	45						
228	31	iP	NEZ	01	52	19	1(Z)					Dilatation
		i	Z		52	28	1					Depth 400 Km.
		ipP	Z		53	37	1 $\frac{1}{2}$					
		i	Z		53	58	2					
		esP	E		54	21						
		esP	Z		54	23	2					
		esP	N		54	25						
		e	NE		56	54	12					
		e	E		59	53	9					
		e	E	02	00	22	12					
		e	N		00	29	14					
229		iP	Z	03	57	04						USCGS: S. Sinkiang
230		iP	Z	05	01	23						Mag. 4 $\frac{1}{2}$
		i	Z		03	52	1 $\frac{1}{2}$					Approx. 6 S 143 E
231	31	iP	Z	14	10	13					544	H=14 09 00
		i	Z		11	05	1 $\frac{1}{2}$					Mag. 4 $\frac{1}{2}$
		eS	NE		11	09						
		i	Z		11	12	2					
		i	Z		11	20	1 $\frac{1}{2}$					
232		e(P)	Z	17	46	30						Local
		i	Z		48	15	1 $\frac{1}{2}$					