

COMMONWEALTH OF AUSTRALIA.

DEPARTMENT OF NATIONAL DEVELOPMENT.

BUREAU OF MINERAL RESOURCES, GEOLOGY & GEOPHYSICS.

485 Bourke Street, MELBOURNE, Victoria.



PROVISIONAL SEISMOLOGICAL BULLETIN - MELBOURNE.

Latitude: $37^{\circ} 49' 53''$ S. Longitude: $144^{\circ} 58' 24''$ E. Height: 28m.

Instruments: Wood Anderson type seismograph (period 1 second),
two components. Milne Shaw (period 12 seconds),
E-W component.

No.	Date 1956.	Phase.	Time			Remarks.
			h.	m.	s.	
1	January 1	iP NE	23	15	06	
		e N		19	21	
		e E		20	01	
		eS NE		20	14	
		e E		21	27	
		e E		22	01	
2	January 6	iP NE	10	36	39	Local tremor - felt Castlemaine region. $\Delta .85^{\circ}$ H 10 36 22
		i E			40	
		i N			41	
		iS NE			49	
		i E			54	
3	January 9	i PE	12	11	39	
		i N		11	40	
		e E		13	19	
		e N		13	42	
		eS NE		16	12	
4	January 10	iP NE	08	59	38	
		ePP E	09	01	07	
		e E		01	22	
		e E		01	46	
		e(S)E	09	05	04	
		e E		05	26	
5	January 11	e L N		07.8		
6	January 11	i P E	05	45	16	
		e E		51	00	
7	January 11	e P E	06	21	03	
		e S E		29	58	
8	January 11	i P N	12	01	34	
		e E		11	27	
9	January 11	e E	14	33	41	
9	January 13	i P NE	06	21	00	$\Delta 22.5^{\circ}$ h 0.00 H 06 16 02
		ipP E		21	09	
		ePP E		21	27	
		iPPPE		21	35	
		e E		22	46	
		e NE		24	56	
		e S NE		25	01	
		esS N		25	17	
		eL N		26.2		
		eL E		27.2		

No.	Date 1956.	Phase.	Time			Remarks.
			h.	m.	s.	
10	January 16	e PP E	23	58	16	
		e(PKS) E		59	42	
		e E	24	01	16	
		e E		02	19	
		e SKS E		03	35	
		e SKKS E		05	10	
		e PS E		08	10	
		e E		14	36	
		e E		15	02	
		e(S3P) E	24	15	25	
		e E		20	30	
		e E		32	36	
		e L E		34.9		
11	January 26	i P NE	22	01	44	Local tremor Δ 1.5° H 22 01 18
		i NE		01	47	
		i S NE		02	02	
12	January 27	e(P) NE	13	24	19	Small shock near Sydney
13	January 27	e P E	13	45	41	
		e(PP) E		47	08	
		e E		47	50	
		e E		56	50	
14	January 28	i P NE	07	49	29	
15	January 30	e P E	08	48	36	
		i NE		48	38	
		e NE		49	00	
		e E		50	12	
		e S E		52	56	
		e N		53	10	
		e(sS) E		53	23	
		e E		54	12	
		e E		54	41	
		e L E		55.0		
16	January 30	e P E	10	07	31	
17	January 31	i P NE	09	23	28	c 34.7 h 0.07 H 09 17 18
		e N		24	07	
		ipP N		24	56	
		i PP N		25	02	
		e(PcP) N		25	48	
		e S E		28	24	
		e N		28	33	
		e(L) E		31.3		
		e ScS E		32	45	



(P. B. Nye)
Director.

COMMONWEALTH OF AUSTRALIA.

DEPARTMENT OF NATIONAL DEVELOPMENT

BUREAU OF MINERAL RESOURCES, GEOLOGY & GEOPHYSICS.

485 Bourke Street, Melbourne, Victoria.



PROVISIONAL SEISMOLOGICAL BULLETIN - Melbourne.

Latitude: $37^{\circ}49'53''$ S. Longitude: $144^{\circ}58'24''$ E. Height: 28m.

Instruments: Wood-Anderson type seismograph, two components, period 1.0 seconds, damping co-efficient 0.5, magnification 2800. Milne-Shaw seismograph, E-W component, period 12 seconds, damping co-efficient 0.7, magnification 250.

No.	Date 1956.	Phase.	Time (G.M.T.)			Remarks.
			h.	m.	s.	
19	February 1	i P NE	13	50	56	Δ 56.7 ⁰
		ipP NE		52	12	H 13 41.46
		ePcP NE		52	48	h 0.05
		e N		58	10	
		iS E		58	21	
		eScS E		00	12	
		isS E	14	00	31	
		e E		02	51	
		e E		08	55	
20	February 9	i(P3) E	15	02	19	
		e E		03	21	
		e(SS) E		08	42	
		eL E		26	04	
21	February 12	iP NE	11	59	41	Δ 61.5 ⁰
		ipP NE		59	52	H 11 49 25
		iS N	12	07	58	
22	February 16	iP NE	18	48	31	Local shock
		i N			35	Δ 0.42
		iS NE			36	H 18 48 23
23	February 17	e(S) E	10	17	13	
		eSS E		24	28	
		eL E		31.5		
24	February 18	iP NE	07	44	36	
		iPcP NE		45	01	
		e(PP) N		47	08	
		iS NE		52	57	
		iScS E		53	53	
		esS E		55	59	
		iSS NE		57	26	
		e NE	08	01	13	
25	February 24	eP E	09	24	53	
		e E		25	34	
		e E		25	43	
		eS NE		29	55	
		eL E		32.8		

(P.B. NYE)
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DEPARTMENT OF NATIONAL DEVELOPMENT.BUREAU OF MINERAL RESOURCES, GEOLOGY & GEOPHYSICS,485 Bourke Street, MELBOURNE, Victoria.PROVISIONAL SEISMOLOGICAL BULLETIN - MELBOURNE.

Latitude: 37° 49' 53" S. Longitude: 144° 58' 24" E. Height 28m.

Instruments: Wood-Anderson type seismograph, two components, period 1.0 seconds, damping co-efficient 0.5, magnification 2800.
Milne-Shaw seismograph, E-W component, period 12 seconds, damping co-efficient 0.7, magnification 250.

Number.	Date 1956.	Phase.	Time (G.M.T.)			Remarks.
			h.	m.	s.	
26	March 10	e P NE	19	40	15	
		e L E		50	06	
27	March 10	i P NE	21	44	59	
		e S N		51	11	
		e (PS) N		51	24	
28	March 13	e (L) E	14	16	24	
29	March 14	e P E	15	44	20	
		e (sS) E		49	10	
30	March 14	e P E	15	49	03	
		e (PcP)		52	24	
		e (sS)		53	53	
31	March 14	e E	16	24	23	
32	March 17	e P N	20	01	04	
		e (L) E		09	05	
33	March 17	e P N	23	47	49	
34	March 19	e P N	17	42	31	
		i pP NE		42	40	
		e NE		46	12	
		e S NE		47	40	



Number.	Date 1956.	Phase.	Time (G.M.T.) h. m. s.	Remarks.
34 (contd.)	March 19 (contd.)	e sS NE	48 00	
		e E	48 38	
		e E	49 39	
		e(SSS) E	50 09	
		e E	53 13	
35	March 20	e S E	09 53 46	
		e E	55 19	
		e SSS E	56 17	
36	March 21	e S E	18 01 02	
		e E	01 38	
		e L E	03 19	
		e L E	05.0	
37	March 30	e E	07 23 08	
		e E	26 27	

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485 Bourke Street,
MELBOURNE. VIC.PROVISIONAL SEISMOLOGICAL BULLETIN - MELBOURNELatitude: $37^{\circ} 49' 53''$ S. Longitude: $144^{\circ} 58' 24''$ E. Height 28m.

Instruments: Wood-Anderson type seismograph two components,
period 1.0 seconds, damping co-efficient 0.5,
magnification 2800.
Milne-Shaw seismograph, E-W component, period 12
seconds, damping co-efficient 0.7, magnification 250.

No.	Date 1956	Phase	Time (G.M.T.)			Remarks
			h.	m.	s.	
38	April 2	ePNE eS E	11	00	11 08 11	
39	April 7	iPNE	18	06	32	
40	April 7	iP E e N e E e(S)NE i(sS)E i NE i NE eL NE	18	10	17 42 10 51 06 08 08 17.0	
41	April 10	i P ₁ NE i NE e NE i(P ₂)E e E e N i(PP ₂)E e(S ₁)NE i N i(s ₁)E i E i(S ₂)NE i(sS ₂)NE i E ² e NE e N	13	25	10 17 41 53 35 41 48 13 26 29 31 59 15 41 30 04	Possibly two earthquakes from same region.
42	April 20	iP NE e N iS NE i NE e E	15	22	31 32 44 27 54	
43	April 25	e SE e E e E	08	42	05 48 48	

No.	Date 1956	Phase	Time (G.M.T.)			Remarks
			h.	m.	s.	
44	April 26	e(S)E	07	53	57	
45	April 28	iP NE	04	04	14	Local shock H = 04 04.05 Δ = 0.425°
		i N			17	
		iS NE			19	
		i N			23	



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DEPARTMENT OF NATIONAL DEVELOPMENT.

BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS,

485 Bourke Street,

MELBOURNE, Vic.

PROVISIONAL SEISMOLOGICAL BULLETIN - MELBOURNE.

Latitude $37^{\circ}49'53''$ S Longitude $144^{\circ}58'24''$ E Height 28 m

Instruments Wood Anderson type seismograph two components
 period 1.0 second damping coefficient 0.5 magnification
 2800

Milne Shaw seismograph EW component period 12 seconds
 damping coefficient 0.7 magnification 250



No.	Date 1956.	Phase	Time G.M.T.			Remarks.
			h.	m.	s.	
46	May 1st	e P NE i pP NE e PcP N e E e NE e SNE	02	51	07 19 21 55 00 19	
47	1st	e PNE e pP NE e SE e L NE	11	10	14 20 21 30	
48	1st	e (L) E	13	18		
49	2nd	e (L) E	03	04		
50	5th	e (S) E e (LR) E	03	37	23 01	
51	7th	i P NE e (PP) NE e S NE e LQ NE e LR NE	11	05	36 56 22 02 53	
52	13th	e (S) E e (L) E	18	38	45 0	
53	19th	e (L) E	00	37	28	
54	19th	i P NE e pP N e PPP E e N e S E e NE e SSS N i L R NE	01	37	10 19 37 46 27 53 59 18	
55	19th	e P N e N e S N e PS E e E e E e E e LQ E	20	13	49 23 20 55 05 25 48 11	

No.	Date 1956.	Phase	Time G.M.T.			Remarks
			h.	m.	s.	
56	May 22nd	e P NE e S E e (ScS)E e LR E	03	09	08 15 36 19 01 22 03	
57	22nd	i P NE i pP N e E e S NE e E e SS E e NE i (LR)E	13	42	20 43 51 44 24 47 14 49 56 50 11 51 45 52 28	
58	23rd	i P NE i NE i NE i pP NE i S NE i S SNE i ScSNE i NE i NE	20 20 21	55 55 55 56 00 03 04 04 04	21 24 33 46 49 26 26 46 52	$\Delta = 39.1^\circ$ H = 20 48 33 h = 450 km.
59	May 24th	e P N e N e S NE	20	07 08 12	33 27 04	
60	26th	e P NE e pP E e NE e S NE e E e LQ E	08	37 37 40 43 45 46	44 57 18 34 23 16	
61	26th	i P NE i NE i pP NE e PPP NE i S NE e SS E i SSS NE i ScS NE	20	27 27 29 30 32 35 36 36	45 49 31 07 47 55 22 54	$\Delta = 36.6^\circ$ H = 20 21 11 h 600 km.
62	27th	e P NE i pP NE e NE e SE e sS NE i E iScS E	17	03 04 04 08 09 11 13	20 00 29 37 37 41 32	
63	30th	e P NE e pP E e S NE	15	48 49 53	20 29 29	

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485 Bourke Street,
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PROVISIONAL SEISMOLOGICAL BULLETINMELBOURNE

Latitude : $37^{\circ}49'53''\text{S}$. Longitude: $144^{\circ}58'24''\text{E}$. Height: 28m.

Instruments: Wood Anderson type seismograph two component
 Period 1.0 second
 Damping coefficient 0.5
 Magnification 2800
 Milne Shaw seismograph EW component
 Period 12 seconds
 Damping coefficient 0.7
 Magnification 250

No.	Date 1956	Phase	Time (G.M.T.)	Remarks
64	June 4th	eP E	h m s 12 12 08	$\Delta = 30.7$ H=12 05 54
		e E	12 23	
		ePP E	13 11	
		e E	14 51	
		eS NE	17 07	
		eLR N	12 20 02	
65	" 5th	eL E	06 32	
66	" 8th	eP N	12 36 24	$\Delta = 35.0$ H=12 29 33 33
		e NE	41 30	
		eS NE	41 53	
		e N	42 16	
		e E	43 18	
		eLQ E	44 18	
67	" 8th	eP NE	21 04 48	
		epP E	04 59	
		e(S) NE	10 22	
		eLR E	14 26	
68	" 9th	eL E	05 52	
69	" 9th	e(SKS) NE	10 33 01	
		e E	34 27	
		e(PS) NE	36 08	
		e E	41 35	
		e E	52 10	
70	" 9th	eP E	23 27 48	$\Delta = 104.8$ H=23 13 44
		ePP N	32 16	
		eSKS NE	38 35	
		eS E	39 35	
		ePS E	41 10	
		eSS E	47 08	
		eLR E	00 02 34	

No.	Date 1956	Phase	Time (G.M.T.)	Remarks
71	June 13th	iP NE epP N e(PcP) NE eS E eScS N	h m s 12 15 20 16 00 17 04 21 02 25 03	$\Delta = 43.2$ H= 12 07 31 ? Masked by microseisms
72	" 13th	i	06 14 39	Small local shock
73	" 15th	e(S) E eL E	15 48 00 15 51	
74	" 16th	e E	18 38 20	
75	" 16th	e(S) E eL E	18 47 56 52 13	
76	" 17th	eP E e(S) E	03 07 23 12 11	
77	" 19th	e(S) E eL E	00 38 34 00 43	
78	" 21st	e(S) E e E eL E	11 21 58 22 34 24 11	
79	" 21st	e(S) E eL E	19 55 05 19 59	
80	" 21st	eP NE ePP NE eS E e E eL E	20 39 25 40 53 45 15 47 44 20 49	$\Delta = 38.1$ H= 20 32 07
81	" 22nd	e(PP) N eSKS NE eS NE ePS E e E e E eSS E eSSS E eL E	02 35 27 42 26 43 12 44 00 44 53 45 37 49 00 52 01 02 57	
82	" 23rd	e(S) E eL E	23 31 08 23 33	
83	" 24th	eP N ePP N eS NE eLQ E eLR E	20 05 09 05 56 10 23 12 30 14 06	$\Delta = 32.8$ H= 20 58 37
84	" 25th	eL E i E	11 52 28 53 15	
85	" 28th	eL E	04 12	
86	" 29th	e E e E eL E	00 40 06 46 01 00 53.4	



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PROVISIONAL SEISMOLOGICAL BULLETINMELBOURNE

Latitude : $37^{\circ}49'53''\text{S}$. Longitude: $144^{\circ}58'24''\text{E}$. Height: 28m.

Instruments: Wood Anderson type seismograph two components
 Period 1.0 second
 Damping coefficient 0.5
 Magnification 2800
 Milne Shaw seismograph EW component
 Period 12 seconds
 Damping coefficient 0.7
 Magnification 250
 Benioff Seismograph Variable Reluctance Type
 three component Long and short period Recorders
 Constants not available as yet.

No.	Date 1956	Phase	Time (G.M.T.)			Remarks
			h	m	s	
87	July 2nd	eP NE	14	33	30	$\Delta = 48.9$ H = 14 24 53 Deep?
		e NE		37	20	
		eS NE		40	30	
		e E		42	09	
		e E		43	52	
		e E	14	45	18	
88	" 4th	eP NE	00	46	31	$\Delta = 36.8$ H = 00 39 59 h = 450 km
		e E		47	24	
		eS NE		51	45	
		eScS N		55	55	
		e E		56	39	
89	" 4th	eP N	03	10	52	$\Delta = 32.3$ H = 03 04 24
		eS NE		16	02	
		eLR E		19	45	
90	" 4th	eP NE	03	49	26	$\Delta = 31.4$ H = 03 43 06
		eS NE		54	30	
		e E		58	22	
91	" 4th	eL E	07	33		
92	" 4th	eL E	33	33		
93	" 9th	e(L) E	03	00		Series of shocks?
94	" 10th	eL E	15	27		
95	" 12th	e(P) E	17	04	46	
		e(S) E		11	49	
		eL E	17	15		
96	" 15th	eP NEZ	09	58	25	$\Delta = 14.0^{\circ}$ H = 09 55 07
		epP NEZ		58	33	
		e Z		58	56	
		eS EZ	10	01	02	



No.	Date 1956	Phase	Time (G.M.T.)			Remarks
			h	m	s	
97	July 16th	iP Z i Z e E ePcP Z i z e z e N e N e(S) E eSS E e E eL E	15	18	48 52 57 03 10 58 46 52 24 41 05 38.4	
98	" 17th	iP NEZ ipP NEZ isP Z iPcP Z iS NEZ iPcS NEZ iScP NEZ isS NEZ iSS NEZ i Z iSSS E iLR NEZ	07	40	26 52 00 44 29 44 29 56 12 43 13 48	$\Delta = 35.7$ H = 07 33 59 h = 450 km
99	" 17th	e(P) NEZ e NEZ	17	14	26 40	
100	" 18th	eP NZ epP Z e NZ ePP Z ePPP Z ePcP Z eS NEZ e(sS) NE eSS E eLR NE	00	34	09 18 23 25 38 51 28 48 31 43 12	$\Delta = 33.6$ H = 00 27 30
101	" 18th	eP Z e Z e E e E	05	23	51 40 14 16	
102	" 18th	iP NEZ iS NEZ	06	26	31 02	$\Delta = 35.3$ H = 06 19 24 Further analysis difficult due to vigorous character of record.
103	" 19th	iP Z	02	07	49	
104	" 19th	eP Z e Z e N e Z e Z	20	50	20 30 34 50 26	
105	" 20th	iP NZ i Z	02	07	49 53	
106	" 20th	eP Z e Z e Z	17	24	48 55 03	

No.	Date 1956	Phase	Time (G.M.T.)	Remarks
			h m s	
107	July 20th	iP NEZ e NEZ e EZ eS E e E	17 40 47 41 08 42 12 46 05 50 36	$\Delta = 33.4$ H = 17 34 10
108	" 20th	eP NZ	17 55 19	
109	" 21st	iP Z	15 02 56	
110	" 21st	iP NZ epP Z ePP Z ePPP Z e N e NE eS NEZ e E eLR Z	15 27 16 27 27 28 11 28 27 29 18 29 58 32 09 32 31 15 34 59	$\Delta = 29^{\circ}.8$ H = 15 21 10
111	" 21st	e(P) Z e Z e Z e EZ	15 45 43 45 50 46 41 57 58	
112	" 22nd	iP NEZ e NZ e NZ	06 08 41 08 51 09 14	
113	" 23rd	iP NZ i EZ e E eS E eL E	14 32 42 32 51 33 36 38 01 14 42	$\Delta = 33.6$ H = 14 26 03
114	" 23rd	iP EZ i Z	18 51 40 51 44	
115	" 23rd	eP Z e EZ e Z e Z e(SKS)E e E eL E	19 38 36 38 47 38 54 41 46 49 10 55 44 20 00.9	
116	" 23rd	eP Z ePP EZ eS NE eL NE	22 03 44 04 56 08 51 22 12.0	$\Delta = 33.3$ H = 21 57 07
117	" 24th	iP NEZ ipP NEZ i NZ iPP NEZ eS E e(sS) N eScS E eSSS N	19 04 39 04 51 05 21 06 19 11 05 11 17 14 30 19 15 04	$\Delta = 43.5$ H = 18 56 38

No.	Date 1956	Phase	Time (G.M.T.)			Remarks
			h	m	s	
118	July 26th	iP NZ eS NEZ e(ScP) Z	17	54	37	Deep?
				58	55	
			18	00	03	
119	" 26th	iP NEZ epP NE e NEZ e(S) Z iSS Z	18	09	36	
				09	47	
				10	09	
				13	59	
				15	05	
120	" 27th	e(S) N eL E	16	25	50	
			16	29.5		
121	" 27th	eP Z	21	46	08	$\Delta = 33.1$ H = 02 01 58
122	" 28th	iP Z ipP NZ eS N eLR E	02	08	27	
				08	52	
				13	38	
				17	40	
123	" 28th	i(P) Z	05	01	57	
124	" 28th	iP Z	10	07	19	
125	" 28th	iP NEZ i NEZ i NEZ e NEZ e(S) NE	11	18	15	
				18	20	
				18	33	
				24	26	
				25	50	
126	" 31st	iP Z	10	39	29	
127	" 31st	iP EZ NZ	16	46	25	
				48	15	



International
Seismological
Centre

(P.B. NYE)
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485 Bourke Street,
MELBOURNE VIC.

PROVISIONAL SEISMOLOGICAL BULLETIN

MELBOURNE

Latitude : $37^{\circ}49'53''S$. Longitude : $144^{\circ}58'24''E$. Height: 28m.

Instruments: Milne Shaw seismograph EW component
Period 12 seconds
Damping coefficient 0.7
Magnification 250
Benioff Seismograph Variable Reluctance Type
three component Long and short period recorders
Constants not available as yet.

<u>No.</u>	<u>Date</u> <u>1956</u>	<u>Phase</u>	<u>Time</u> <u>(G.M.T.)</u>	<u>Remarks</u>
			h m s	
128	August 1st	eP EZ ipP NEZ i EZ eS EZ	17 40 54 41 07 41 39 47 23	$\Delta = 44$ H= 17 32 48
129	" 1st	eP Z	20 25 20	
130	" 1st	eL NEZ	20 39	
131	" 2nd	i(P)	07 31 27	
132	" 2nd	e(S) NEZ eL NE	20 12 29 20 18.5	
133	" 3rd	eP Z epP NEZ e(S) NZ	17 50 10 50 18 52 51	
134	" 4th	iP Z i Z e Z epP Z i Z e Z eS NE e NE esS Z i E eScS E	09 55 21 55 31 55 41 56 01 56 33 57 55 10 00 04 00 36 01 13 05 12 10 05 28	$\Delta = 30.1$ H = 09 49 28 h = 250km
135	" 4th	eP Z	23 17 32	
136	" 5th	e Z e Z	00 35 32 35 48	
137	" 5th	e(P) EZ e(S) E	05 42 16 47 38	
138	" 5th	e(P) Z	19 39 38 39 50	

No.	Date 1956	Phase	Time (G.M.T.)	Remarks
139	August 9th	iP EZ i EZ	07 21 41 21 53	
140	" 9th	eP Z	09 40 32	
141	" 9th	iP Z i EZ ipP Z iPP Z iPPP Z eS NE eLR NZ	21 51 51 51 56 52 01 52 51 53 08 56 52 59 52	$\Delta = 31.0$ H = 21 45-43
142	" 9th	iP Z i NEZ i N ipP NEZ i NE i N i N iS NEZ isS NZ iSSS E	23 08 07 08 14 08 31 08 41 08 44 09 02 09 47 13 57 15 08 23 17 06	$\Delta = 39.5$ H = 23 00 51 h = 250 km
143	" 12th	eP Z e NE e Z e Z e(S) E	00 32 48 33 16 33 41 34 08 00 37 44	
144	" 12th	iP NZ i Z e(S) NZ	05 46 43 46 49 52 01	
145	" 12th	eP Z ipP Z iPcP Z eS EZ e E iScS E i E i E eLQ E	17 10 54 11 01 11 11 20 09 20 15 20 57 24 44 28 18 17 30.6	$\Delta = 73.5$ H = 16 59 23
146	" 13th	iP NZ i Z i Z i Z iPP Z iPPP Z eS E	09 14 20 14 24 14 36 14 50 15 22 15 35 19 19	$\Delta = 30.7$ H = 09 38 06
147	" 14th	iP Z i Z	12 51 56 52 09	
148	" 14th	iPg NEZ iSg NEZ	17 21 11 21 20	Local Shock M.M II Felt mainly in Geelong District $\Delta = 0.7$ H = 17 20 57
149	" 15th	iPg NEZ eSg NE	00 48 14 48 24	$\Delta = 0.7$ H = 00 48 00 Probably related to previous shock.

No.	Date 1956	Phase	Time (G.M.T.)	Remarks
150	August 15th	iP NEZ e Z iPcP Z ipP Z eS NE i NZ esS NZ i NEZ eL N	05 29 42 30 14 30 41 30 47 36 56 37 48 38 44 39 34 05 44	$\Delta = 54.3$ H=05 20 43 h = 300 km.
151	" 15th	iP NEZ ipP Z i NZ i Z i Z iPcP Z iScP Z iS NEZ e EZ isS E iSS E eScS NE i E	10 59 07 59 31 59 49 11 00 03 00 36 00 49 04 41 05 24 05 41 06 07 08 37 08 59 09 16	$\Delta = 42.9$ H=10 51 17 h = 100 km.
152	" 15th	eP Z e Z i Z e Z eS NE	13 24 39 25 10 25 35 28 44 35 03	$\Delta = 84.7$ H=13 12 07
153	" 17th	i Z e Z e Z	12 00 16 00 24 12 00 56	
154	" 17th	iP Z i Z i Z ePcP Z e Z e N eS NE e E e E eLR E	14 22 42 22 48 23 01 25 15 25 53 27 36 28 08 29 14 30 50 31.55	$\Delta = 34.6$ H=14 15 53
155	" 17th	eP Z e(S) Z	15 17 20 22 42	
156	" 19th	eP N e E eL E	05 23 04 29 00 05 32.6	
157	" 22nd	iP Z i Z i(S) Z	11 32 05 32 23 11 36 49	
158	" 24th	iP Z iS E eLQ E	04 40 50 51 54 05 06.0	$\Delta = 93.8$ H=04 27 35
159	" 24th	iP EZ ipP Z iS E	08 33 26 33 38 38 27	$\Delta = 31.0^{\circ}$ H= 08 27 09

<u>No.</u>	<u>Date</u> <u>1956</u>	<u>Phase</u>	<u>Time</u> <u>(G.M.T.)</u>	<u>Remarks</u>
160	August 25th	i(P) Z	00 30 41	
161	" 25th	i(P) Z	13 36 15	
162	" 26th	e(P) Z	08 53 12	
		i(S) Z	58 27	
		eL N	09 01	
163	" 28th	iP Z	09 55 05	
		e Z	10 00 17	
		e Z	10 01 08	
164	" 31st	i(P) Z	09 45 24	
165	" 31st	iP Z	22 12 43	
		i Z	12 51	
166	" 31st	iP Z	23 15 56	



(P. B. NYE)
Director..

COMMONWEALTH OF AUSTRALIADEPARTMENT OF NATIONAL DEVELOPMENTBUREAU OF MINERAL RESOURCES GEOLOGY AND GEOPHYSICS

485 Bourke Street,
MELBOURNE, VIC.

PROVISIONAL SEISMOLOGICAL BULLETINMELBOURNE

Latitude : 37°49'53"S. Longitude : 144°58'24"E. Height : 28m.

Instruments : Milne Shaw seismograph EW component
 Period 12 seconds
 Damping coefficient 0.7
 Magnification 250
 Benioff Seismograph Variable Reluctance Type
 three component long and short period Recorders
 Constants not available as yet.

No.	Date 1956	Phase	Time (G.M.T.) h m s	Remarks
167	September 2nd	i(P)EZ i Z	14 31 15 31 25	
168	3rd	iP EZ e Z e Z e(S) N i E	18 11 28 11 51 11 58 16 02 17 11	
169	4th	i(P) Z	05 27 24	
170	4th	i(P) Z	07 50 00	
171	4th	iP EZ e Z e E e(S) Z	12 02 45 02 51 02 59 12 07 58	
172	5th	i(P) Z	07 31 29	
173	5th	e(P) Z	18 19 57	
174	5th	iP EZ i Z e Z i Z	20 48 31 48 46 49 03 50 21	
175	6th	iP Z	08 55 11	
176	7th	iP Z	04 01 23	
177	9th	iP Z i Z i Z	15 25 34 25 50 26 51	
178	9th	iP Z i Z ipP Z i Z eS Z esS Z eScS E e E eL E	17 43 04 43 10 43 26 43 51 49 31 50 08 52 54 54 43 17 58.2	$\Delta = 44.5$ H = 17 35 01

No.	Date 1956	Phase	Time (G.M.T.)	Remarks
179	September 10th	iP EZ i Z i Z e(S)E e(PS)E e E e(LR)E	h m s 02 16 15 16 21 16 26 23 53 24 12 30 31 02 32 11	
180	10th	iP Z	12 41 03	
181	11th	eL E	00 05	
182	11th	iP NZ ipP NZ iPP NZ iS NZ eLQ N	02 39 37 39 49 41 11 45 34 48 32	$\Delta = 39.1$ H = 023211
183	11th	iP NZ ipP Z i Z eS NE eLQ E	15 50 15 50 29 52 49 55 02 56 17	$\Delta = 28.9$ H = 15 44 04
184	11th	eL E	21 00	
185	11th	iP Z i Z e(SKS)E eL E	21 16 48 17 02 27 27 21 42	
186	12th	i Z i Z	20 12 45 13 14	
187	13th	eP NZ ePP Z eS EZ eLR NEZ	14 03 37 03 50 06 11 14 06 57	$\Delta = 14^{\circ}.0$ H = 14 00 19
188	13th	iP NZ iPP NZ i NEZ iS N eSS Z eLR EZ	14 33 29 33 41 34 37 36 12 36 23 36 39	$\Delta = 14^{\circ}.2$ H = 14 30 08
189	13th	eP Z i Z eS E eL NE	18 49 52 50 01 54 26 18 56	$\Delta = 27.1$ H = 18 44 10
190	14th	eP Z	09 14 47	
191	14th	iP NEZ i EZ i NEZ	12 14 19 14 23 14 32	
192	15th	e(SKS)E e NE	08 04 24 08 03	
193	15th	eP NEZ e N e NZ e NZ eJ E	09 40 04 40 08 40 50 41 34 09 45	

Time marks
on Benioff
EW Compon-
ents out
of action

No.	Date 1956	Phase	Time (G.M.T.)	Remarks
194	September 15th	iP NEZ ipP Z iPP NEZ iPCP NE iS NEZ iScP Z	h m s 10 39 28 40 42 41 04 41 45 44 27 10 45 02	$\Delta = 34.5$ H = 10 33 15 h = 400 km
195	15th	i(P) Z	13 47 08	
196	15th	eP Z eS E eL E	16 32 29 37 03 16 39	$\Delta = 27.8$ H = 16 26 41
197	16th	eP Z ePP Z eSKS NE eS NE ePS EZ eSSP N eSSS E eLQ E eLR E	08 51 07 55 19 09 01 48 02 38 04 13 09 42 13 29 09 19.1 09 25.0	$\Delta = 100^{\circ}.7$ H = 08 37 21
198	16th	iP NEZ i Z i Z e N eS N eScS N	13 33 50 34 21 34 44 37 46 39 32 43 36	$\Delta = 38.3$ H = 13 26 43
199	17th	iP Z i NZ	20 29 09 29 27	
200	18th	e(P) Z e EZ e Z eL E	02 33 08 33 26 37 10 02 42	
201	19th	i(P) Z	12 12 25	
202	20th	ePn NZ iPg NEZ eSn NEZ iS ^x NEZ eSg NEZ	16 56 35 56 39 57 00 57 02 57 04	$\Delta = 1.9^{\circ}$ H = 16 56 02 Local shock
203	20th	iP Z i Z i Z i(SKS)Z e(S) Z	22 04 46 05 08 05 11 15 09 22 15 26	
204	21st	iP NEZ i NEZ i Z i Z	09 34 17 34 27 35 05 36 55	
205	21st	e(P) EZ e Z	09 42 23 42 34	
206	22nd	i(P) Z	06 59 21	

No.	Date 1956	Phase	Time (G.M.T.)	Remarks
207	September 24th	iP EZ i Z i Z eS E e E eL E	^h ^m ^s 06 12 41 12 51 13 14 19 30 22 31 06 23.7	$\Delta = 47.1$ H = 06 04 12
208	24th	iP NEZ i Z i Z eS NE i E eLQ E	07 08 28 08 46 09 17 13 21 14 53 07 15.2	$\Delta = 31.1$ H = 07 02 12
209	29th	iP NEZ i Z i Z i EZ	04 03 02 03 07 04 27 04 50	
210	29th	iP Z i NEZ i Z i E i Z i NZ e E eL E	09 14 17 14 25 14 29 14 54 15 11 16 16 27 50 09 36.5	
211	29th	iP Z i Z	21 32 37 33 08	
212	29th	iP NEZ i NEZ i EZ i cPNEZ iPPP Z iS E i E eL E	22 30 50 31 11 31 24 32 31 33 17 37 21 41 08 22 43.4	$\Delta = 45.1$ H = 22 22 42
213	29th	iP NEZ i NZ i NEZ i N i E e E	22 32 19 32 34 32 44 33 02 39 36 43 08	
214	30th	iP NEZ i EZ i(pP)NEZ i Z i Z i Z eS E e E	14 50 45 50 50 51 00 51 22 52 42 53 43 57 45 15 03 11	$\Delta = 49.7$ H = 14 42 01 h = 100 km

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Latitude : $37^{\circ}49'53''$ S. Longitude : $144^{\circ}58'24''$ E. Height : 28m.

Instruments : Milne Shaw seismograph EW component
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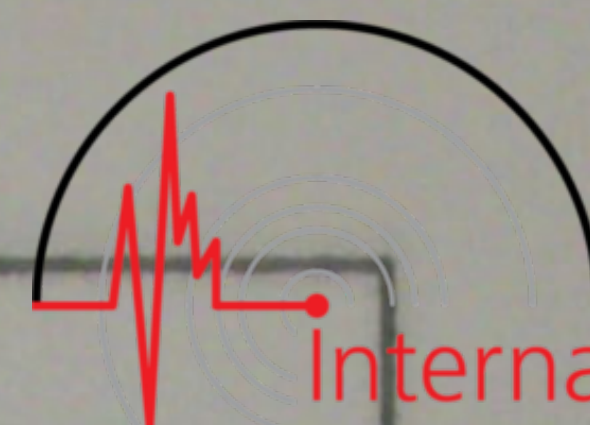
No.	Date 1956	Phase	Time (G.M.T.)	Remarks
			h m s	
215	October 2nd	iP NZ	15 09 29	
		i NEZ	09 40	
		e N	09 46	
		i EZ	09 53	
		e NEZ	11 21	
		e(SKS)E	15 19 56	
216	3rd	i(P)EZ	16 33 37	
		e	33 52	
217	4th	e(P) Z	02 25 01	
		e Z	25 44	
		eL E	02 38.0	
218	5th	eP Z	00 19 58	No report from other stations
		e Z	20 07	$\Delta = 37^{\circ}.0$ H = 00 12 50
		eS E	25 41	
		eL E	00 26.3	
219	5th	iP NEZ	21 49 28	$\Delta = 30.5^{\circ}$ H = 21 43 22
		ipP Z	49 54	h = 100 km
		eS N	54 10	
		eSSS N	56 30	
		eLR N	21 57 33	
220	6th	iP Z	06 24 12	
		e Z	24 19	
		i Z	24 27	
		eL E	06 34.4	
221	6th	iP Z	17 07 27	
		e Z	07 42	
222	7th	iP Z	19 41 34	
		e Z	42 09	
223	7th	iP Z	21 34 05	$\Delta = 29.5^{\circ}$ H = 21 28 08
		i Z	34 11	h = 100 km
		ipP NZ	34 26	
		e Z	34 52	
		ePP N	35 07	
		e N	35 17	

No.	Date 1956	Phase	Time (G.M.T.)	Remarks
223 (cont)	October 7th	eS E eSS E eLR E	H M S 38 51 40 38 41 32	
224	8th	iPNEZ i Z ipPEZ iPcPZ eS N iScPZ iScSE	00 26 18 26 38 26 43 28 59 31 25 32 36 00 36 35	$\Delta = 32.5^\circ$ H = 00 19 57 h = 100 km
225	8th	iP Z i Z i Z ePP Z ePcPE eS E eSS E eL E eScSE	15 03 22 03 24 03 29 04 56 05 44 09 08 11 43 15 12.2 15 13 24	$\Delta = 37.2$ H = 14 56 10
226	9th	iP Z i Z i Z i Z e(S)Z eL E	06 27 06 27 22 27 28 27 31 33 31 06 36.2	
227	9th	iP Z i Z	17 00 17 00 26	
228	10th	e(S)E eL E e E e E i EZ	02 15 42 02 17.2 17 22 18 28 19 26	
229	10th	iP Z e Z i Z	15 44 44 44 49 44 56	
230	11th	iPNEZ ipPNEZ i E i EZ i NEZ ePPPE iSNEZ issNEZ iSSNE eSSSNE eLQ E eLR E	02 36 55 37 28 37 42 38 32 40 40 41 52 47 08 48 00 52 37 56 03 02 59.7 03 03.6	$\Delta = 84.3^\circ$ H = 02 24 33 h = 100 km
231	11th	e(SS)EZ e E e E eL E	17 24 01 34 58 36 03 17 37.4	
232	12th	e(P)Z e Z	12 35 01 35 07	

No.	Date 1956	Phase	Time (G.M.T.)	Remarks
			h m s	
233	October 13th	eP NZ e NZ e Z	15 14 14 14 19 17 38	
234	13th	iP Z e NZ e NZ	15 25 13 25 29 25 41	
235	13th	eP Z i NZ epP NZ iPP NZ iPcP Z iS NEZ isS Z i E eL E	19 00 19 00 30 00 42 01 30 03 16 05 20 06 00 07 31 19 10.9	$\Delta = 31.7^\circ$ H = 18 54 03 h = 100 km
236	13th	eP NEZ e NEZ e NEZ e NEZ	23 26 50 26 53 27 22 27 38	
237	14th	eP Z e Z e Z	04 05 44 06 07 06 39	
238	14th	iP Z e Z	11 14 01 14 09	
239	15th	iP NZ e NZ i Z	07 54 36 54 58 55 19	
240	16th	iP Z e Z i Z	12 17 00 17 10 17 51	
241	19th	i(P) Z	10 57 15	
242	19th	iP Z i Z i Z iPcP Z iS E isS E	12 06 49 07 16 07 32 08 59 11 39 14 51	$\Delta = 35.0^\circ$ H = 12 00 48 h = 650 km
243	19th	eP Z e NZ e Z eS E e E e E e E eLR E	14 15 48 15 52 16 06 24 10 24 30 28 36 31 55 14 33.5	$\Delta = 62.3^\circ$ H = 14 05 27
244	19th	iP Z e Z	20 46 27 46 34	
245	19th	eP Z E(S) E e E e E e E eL E	21 00 58 12 10 12 47 13 01 18 56 21 26.2	

No.	Date 1956	Phase	Time (G.M.T.)	Remarks
246	October 20th	eP ePP eS eL	h m s 11 38 25 38 44 42 04 11 42 43	$\Delta = 20.1$ H = 11 33 51
247	22nd	iP NEZ ipP Z i Z i Z e(P)EZ i Z e E e E e E e E iS E i E eSS E eLQ E i E eSSS N	12 41 12 41 21 41 28 41 38 42 03 42 33 42 52 43 39 43 54 44 41 46 05 46 47 47 16 47 33 47 56 48 00	$\Delta = 29.8$ H = 12 35 06
248	22nd	a(s) E eL E	15 30 15 15 32.0	
249	23rd	eP NZ ipP NZ i N i Z iPcP N e Z iS E isS E eL E	08 50 51 51 04 51 31 51 35 51 49 53 54 58 41 59 02 08 04.1	
250	23rd	iP Z i Z i Z eL E	10 09 22 09 27 09 40 10 19.0	
251	24th	iPKP Z i Z i Z eSKS E eSKKSE eSS E eSSP E eSSS E eLR Z	15 01 19 01 32 01 43 08 32 10 15 20 56 21 12 25 26 15 42.2	
252	24th	iP Z e NEZ	17 29 22 29 32	
253	25th	e(SS)E eL E	06 00 35 06 22.5	
254	26th	eP Z e EZ epP Z ePPP Z eS EZ eSS E eLQ E	02 53 42 53 47 53 53 55 15 59 02 01 08 03 01 20	$\Delta = 33.7^\circ$ H = 02 47 02

No.	Date 1956	Phase	Time (G.M.T.)	Remarks
			h m s	
255	October 26th	iP NEZ	09 01 21	$\Delta = 34.8^\circ$ H = 08 54 46 h = 150 km
		i Z	01 29	
		ipP EZ	01 48	
		i E	02 14	
		i NE	02 19	
		i NEZ	02 56	
		iPPPNEZ	03 07	
		i E	03 19	
		i N	04 09	
		i N	05 07	
		iS NEZ	06 39	
		isSNEZ	07 30	
		e E	08 20	
		i E	08 44	
		iSS E	09 02	
		iScS E	11 22	
256	26th	iP NEZ	22 56 43	$\Delta = 31.5^\circ$ H = 22 50 22
		i EZ	56 47	
		i NE	57 01	
		ePP N	57 37	
		i Z	57 57	
		iPPP N	58 07	
		e E	58 14	
		i E	58 54	
		i Z	23 00 02	
		iS NEZ	01 48	
		isS N	02 03	
		eLQ E	03 38	
		eSSS N	04 00	
		iLR Z	04 58	
257	27th	eP Z	19 43 20	
		e Z	43 28	
		e(S) E	46 38	
		eL E	19 46.7	
258	28th	iP NEZ	03 34 49	$\Delta = 29.5^\circ$ H = 03 28 46
		ipP EZ	34 59	
		i EZ	35 16	
		iPP NE	35 47	
		iPPPNZ	35 58	
		iPcP Z	37 51	
		iS NEZ	39 40	
		eLQ N	41 08	
		iSSSEZ	41 33	
		iLR Z	42 38	
		eScS E	46 31	
259	28th	iP Z	05 29 02	
		i Z	29 07	
260	28th	iP Z	06 50 46	
		eL E	07 01.0	
261	28th	eP Z	10 54 44	$\Delta = 58.4$ H = 10 44 49
		ipP Z	54 52	
		e Z	55 10	
		e Z	55 20	
		e Z	55 49	
		i NZ	56 03	
		iPPNEZ	56 53	
		eS E	11 02 43	
		eSS E	06 38	
		eL E	11 08.5	



No.	Date 1956	Phase	Time (G.M.T.)	Remarks
262	October 31st	ePP Z eSKS E e E e E e EZ ePPS E e E e E eL N	h m s 14 22 14 28 43 29 15 30 15 31 39 32 17 38 11 38 44 14 47.7	
263	31st	eL E	22 54.5	

(P. B. Nye.)
DIRECTOR

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No.	Date 1956	Phase	Time (G.M.T.)	Remarks
			h m s	
264	November 1st	eL E	08 13.0	
265	2nd	1(PKP)Z	16 23 56	
266	3rd	iP NEZ	18 07 59	$\Delta = 33.2$ H = 18 02 04 h = 600 km
		i NEZ	08 04	
		i N	08 10	
		e N	08 19	
		i N	08 24	
		e N	08 33	
		i N	09 01	
		i E	09 05	
		e(PcP)E	10 21	
		i E	10 45	
		iS E	12 40	
		i N	14 49	
		iS S N	15 43	
267	4th	eP Z	06 24 06	
		eL E	06 32.6	
268	4th	iP EZ	07 12 56	$\Delta = 37.7$ H = 07 05 48 h = 100 km
		i N	13 02	
		i N	13 10	
		ipP Z	13 13	
		i N	13 16	
		i Z	13 24	
		i N	13 29	
		i E	13 43	
		i NZ	13 48	
		i Z	14 07	
		ePP Z	14 28	
		i N	14 39	
		ePPP E	14 50	
		iS E	18 39	
		iS S E	19 21	
		eLQ E	21 36	
		eSSSEZ	21 48	
		i E	23 01	



No.	Date 1956	Phase	Time (G.M.T.)	Remarks
			h m s	
269	November 6th	eP Z eS E eL E	00 10 38 16 26 00 21.6	
270	6th	iPNEZ ipPNE i Z e NE i NZ i N i Z iP PZ iS N iSS N iSSSN i E	14 19 23 19 40 19 54 20 08 20 26 21 02 21 21 22 02 24 43 26 49 27 16 28 50	$\Delta = 33.7$ H = 14 12 43
271	7th	iP Z	03 13 20	
272	7th	eP Z i Z	19 46 32 46 39	
273	8th	iP Z e Z e Z i Z epP Z iS E iSS E	03 51 39 51 47 51 54 52 16 53 12 03 56 11 59 18	$\Delta = 32.0^0$ H = 03 45 59 h = 600 km
274	8th	iPNEZ i Z i Z i Z i Z e Z i Z i(pP)Z e Z iScPZ iSNEZ i E e E iScSNE	06 57 03 57 06 57 12 57 20 57 50 58 08 58 20 58 38 58 49 02 09 02 17 02 26 05 48 06 17	$\Delta = 37.3$ H = 06 50 32 h = 500 km
275	8th	iP Z	07 47 36	
276	8th	eP Z e Z i Z eS E eL E	15 53 51 53 57 54 05 16 01 14 16 04.7	
277	8th	eP Z e Z	17 11 30 11 45	
278	9th	e(S)E e NE e E eL E e E	07 52 24 52 41 52 56 53 09 54 11	



No.	Date 1956	Phase	Time (G.M.T.)	Remarks
279	November 9th	ePP Z e Z eSKSNE ePSE Z e E e E e EZ e E e E eL	h m s 13 26 38 27 15 31 51 36 44 37 00 37 31 37 45 39 05 45 09 13 57.6	
280	9th	iP Z e EZ e Z ipP Z ePP EZ eS N esS N	18 02 24 02 42 03 00 03 26 03 47 07 19 09 19	$\Delta = 33.4$ H = 17 55 46 h = 350 km
281	10th	eP Z e Z e Z e(s) E eL E	14 49 51 50 03 50 13 58 15 15 08.3	
282	10th	iP Z e Z e Z	23 41 08 41 50 42 53	
283	11th	iP NEZ i NEZ i NE i N i N	03 20 14 20 22 20 31 20 40 20 42	
284	11th	iP Z i Z i Z	19 27 46 28 00 28 06	
285	12th	eL E	01 27.6	
286	12th	eP EZ i Z e Z e Z e Z	08 41 21 41 23 41 33 42 03 43 04	
287	12th	iP Z	09 56 21	
288	12th	eL E	15 31.1	
289	13th	iP Z i Z i Z ePcP Z eS NE eL E	03 28 19 28 21 28 29 29 50 35 03 03 42.6	$\Delta = 46.3$ H = 03 19 55
290	13th	i(P) Z	07 10 50	



No.	Date 1956	Phase	Time (G.M.T.)	Remarks
291	November 13th	eP Z e Z ePP Z eS E eSS E eL E	h m s 07 47 08 47 11 48 06 52 04 53 41 07 54.0	$\Delta = 30.2$ H = 07 40 58
292	13th	iP Z i Z eS E eSSS E eL E	08 42 21 42 28 47 22 49 20 08 50.0	$\Delta = 31.0^\circ$ H = 08 36 04
293	13th	iP NEZ i N i NEZ iPPNEZ i NEZ i N i Z iS NEZ i E iLR Z	09 59 55 10 00 02 00 07 00 14 00 48 01 06 02 23 03 32 03 47 04 45	$\Delta = 19.9^\circ$ H = 09 55 24
294	13th	eL E	13 34.9	
295	13th	eP Z i Z e Z eL E	14 48 47 48 51 50 59 15 02.7	
296	14th	iP NZ	05 16 53	
297	14th	eP Z e Z i Z e(S)NEZ	09 17 05 17 08 20 57 09 21 59	
298	14th	e(P)NZ e E e NE e E e NE e E	09 41 14 43 08 44 06 44 24 44 45 09 46 00	
299	15th	eL E	18 16.6	
300	16th	iP Z ipP NZ i Z i N i N eS E ess NE i NE i E iSS N i E	08 54 49 55 13 55 49 56 05 57 46 09 00 54 01 39 02 13 03 14 03 51 07 52	$\Delta = 41.0^\circ$ H = 08 47 14 h = 100 km

No.	Date 1956	Phase	Time (G.M.T.)	Remarks
301	November 16th	e(P) Z e Z i Z e E e E eL E	h m s 11 54 20 56 06 58 42 02 06 05 14 11 07.1	
302	16th	eP Z e EZ e E e(S) E eL E	16 21 59 22 04 22 21 27 18 16 30.6	
303	17th	eL E	21 15.2	
304	18th	eL E	10 03.3	
305	18th	eP Z e E e Z e N ePPPEZ eS E e E eL E	18 23 11 23 17 23 27 24 36 24 41 28 27 29 06 18 31.8	$\Delta = 33.0$ H = 18 16 37
306	19th	eP Z eS E	02 57 24 03 02 55	$\Delta = 35.5$ H = 02 50 28
307	19th	e E e E i E	03 06 06 07 52 08 56	
308	19th	eP Z e Z e Z e(S) E iL E	12 11 06 11 18 11 53 12 16 12 26 42	
309	20th	iP NEZ e NZ e NZ e NZ i Z e E e NEZ e E i E	11 10 07 10 22 10 24 11 09 12 52 17 41 17 55 18 53 20 20	All readings from short period components only
310	20th	iP NEZ e N e N e E e NZ i Z e Z	12 06 39 06 43 06 54 06 58 07 07 07 19 08 30	
311	21st	iP Z i Z e Z	07 18 55 18 57 18 59	

No.	Date 1956	Phase	Time (G.M.T.)	Remarks
			h m s	
312	November 21st	iP Z e Z e Z e Z e Z	07 45 12 45 23 45 55 46 03 46 19	
313	21st	iP NZ i Z e Z e NZ e E e Z e Z eS E e E eLQ E e E iLR E	07 56 32 56 35 56 43 56 50 57 08 57 32 57 44 08 02 05 04 12 04 49 06 09 06 59	$\Delta = 35.6$ H = 07 49 36 h = 100 km
314	22nd	eP EZ i NEZ ipPNEZ i NE iPPPNEZ i E i NEZ e Z e E e N e Z e Z e Z iS E eL Z (T) Z	08 19 43 19 44 19 54 19 58 20 12 20 20 20 28 20 32 20 39 21 04 21 20 21 38 22 02 23 16 08 24.0 08 35.2	$\Delta = 19.5$ H = 08 15 16
315	22nd	eP Z e Z eS E eLQ E	15 45 15 45 20 51 21 15 53 53	$\Delta = 40.4^\circ$ H = 15 37 39
316	22nd	eP Z i NZ e E e E e E eS E eL E	23 36 14 36 16 36 20 36 28 36 35 41 54 23 44.5	$\Delta = 36.6$ H = 23 29 09
317	23rd	e(S) E e E e E	18 13 18 13 48 14 18	
318	24th	i(P) Z	19 32 26	
319	24th	iP Z e Z i Z eS E e E eSS N eL E	20 48 51 48 55 49 02 54 09 55 02 56 11 20 57.8	$\Delta = 33.4$ H = 20 42 13

No.	Date 1956	Phase	Time (G.M.T.)	Remarks
320	November 25th	iP Z e(S) E eL E	h m s 01 49 32 52 13 54 00	
321	25th	eP Z e NZ e NZ e NZ e NZ e(S) E	02 13 05 13 10 13 33 13 56 14 01 17 39	
322	25th	iP Z i Z i NEZ e NEZ e Z e Z e Z e E eS E e E e E eLQ E eSSS E	18 13 51 13 53 13 55 13 59 14 20 14 28 14 34 16 02 18 59 19 12 20 00 20 50 21 16	$\Delta = 32.0$ H = 18 07
323	26th	eP Z e Z e E e Z e Z eL E	05 16 04 16 14 16 31 16 41 17 53 05 26.0	
324	26th	iP Z i(pP)NZ i NEZ i EZ i EZ iPPNEZ iPPPNZ i NZ i N i NE i N i E i Z i Z iS NEZ i(sS)NEZ iSS N eL Z	23 35 19 35 23 35 32 35 51 35 55 36 05 36 18 36 31 36 37 36 44 37 11 37 33 37 46 39 03 39 54 40 14 40 44 23 42.0	$\Delta = 27.2$ H = 23 29 36
325	27th	eP NZ i EZ i Z i Z ePP Z e Z e Z eS NE eL E	00 57 26 57 30 57 32 57 50 58 09 58 37 58 54 01 01 53 01 03.5	$\Delta = 26.1$ H = 00 51 54 Confused by preceeding shock
326	27th	eP NZ e Z i Z	02 25 14 25 19 25 23	

No.	Date 1956	Phase	Time (G.M.T.)	Remarks
			h m s	
326 (cont)	November 27th	ipP Z e Z e(S) E e E e(sS)E e E	25 30 25 48 29 46 29 57 30 10 30 21	
327	27th	eP Z epP NZ e Z ePP Z eS E esS E eL E	06 23 06 23 14 23 17 23 47 27 43 27 59 06 29.1	$\Delta = 27.5$ H = 06 17 21
328	27th	e(S) E e E eL E	07 12 10 13 12 07 14.2	
329	27th	eP NZ i Z i Z e NZ e NZ e Z e NZ i E i NZ e Z eS E i E i E	13 24 45 24 46 24 48 24 51 24 56 24 58 25 06 25 09 25 16 26 09 29 19 29 42 13 30 47	$\Delta = 27.1$ H = 13 19 03
330	27th	eP Z e Z e Z eS E e(sS)E eL E	15 57 56 58 17 58 23 16 02 42 02 52 16 04.0	$\Delta = 28.8$ H = 15 51 59
331	28th	eP Z i Z e Z e(S) E	07 04 54 04 59 05 08 07 09 46	
332	28th	i(P) Z	07 07 40	
333	28th	iP EZ i Z e NZ i EZ i NEZ i Z e E i Z e(S) E eL E	15 13 13 18 21 18 25 18 34 18 38 18 43 18 49 19 03 23 46 15 27.6	

No.	Date 1956	Phase	Time (G.M.T.)	Remarks
334	November 28th	iP EZ	h m s 19 40 00	$\Delta = 88.4$ H = 19 27 10
		e NE	40 08	
		i(pP)Z	40 12	
		i NEZ	40 23	
		e N	40 32	
		i Z	40 41	
		i Z	40 52	
		e Z	41 34	
		eSKS E	50 21	
		eS NE	50 41	
		e(sS)NE	51 03	
		e E	52 51	
		e E	53 46	
		eL E	20 03.2	
335	28th	eP Z	04 25 45	
		e Z	25 55	
		e Z	26 02	
		e Z	26 34	
336	29th	e(P) Z	04 47 13	
		e(S) E	53 16	
		eL E	04 58.8	
337	29th	eP Z	09 26 01	$\Delta = 65.8$ H = 09 15 17
		i Z	26 04	
		e NZ	26 10	
		i Z	26 13	
		e Z	26 24	
		e Z	26 46	
		e N	27 52	
		e Z	28 42	
		e Z	28 56	
		eS E	34 44	
		ePS E	35 04	
		ePPS E	35 25	
		e N	35 32	
		eSSS E	41 53	
		eL E	09 43.1	
338	30th	e(P) Z	11 36 28	
		i Z	36 47	
339	30th	iP EZ	16 58 58	
		i EZ	59 04	
		e N	59 07	
		i EZ	59 14	
		e N	59 33	
		eL E	17 07.8	

COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF NATIONAL DEVELOPMENT
BUREAU OF MINERAL RESOURCES GEOLOGY AND GEOPHYSICS
203 Collins Street,
MELBOURNE, Vic.



PROVISIONAL SEISMOLOGICAL BULLETIN
MELBOURNE

Latitude : $37^{\circ}49'53''$ S. Longitude : $144^{\circ}58'24''$ E. Height : 28m.

Instruments : Milne Shaw seismograph EW component
Period 12 seconds
Damping coefficient 0.7
Magnification 250
Benioff Seismograph Variable Reluctance Type
three component long and short period Recorders
Constants not available as yet

No.	Date 1956	Phase	Time (G.M.T.)	Remarks
340 to 342	see end of bulletin		h m s	
343	December 6th	i NEZ i NEZ	06 13 23 13 25	local tremor probably quarry blast
344	9th	i(S)E L NEZ	16 34 42 50.4	
345	10th	i Z i NE i NE	06 27 56 27 59 28 01	
346	11th	i NZ	08 49 59	
347	13th	iPNEZ i NZ e Z	15 00 06 00 10 05 44	
348	13th	i(P)NZ	19 43 31	
349	14th	iPNEZ	06 08 21	
350	14th	e Z e N e N	17 27 34 27 36 27 43	
351	14th	i Z	18 10 24	
352	15th	i NZ i N	13 58 49 59 10	
353	17th	iPNEZ i NE	21 55 30 55 37	
354	18th	iP NZ i NEZ i Z	02 06 48 06 50 06 56	
355	18th	L N	03 21.0	
356	18th	iP NZ i Z L	19 29 31 30 06 45.4	
357	19th	iPNEZ i N i N	06 15 34 15 36 15 40	local tremor probably quarry blast

No.	Date 1956	Phase	Time (G.M.T.)			Remarks
			h	m	s	
358	December	20th iP Z	11	06	47	
		i Z		06	52	
		i Z		07	12	
		i Z		07	51	
		iPP E		08	10	
		i E		10	30	
		L EZ		19.0		
359		21st iP NZ	00	49	32	local tremor
		iSNEZ		49	34	
360		21st iP EZ	02	27	35	
		i Z		27	39	
361		21st L Z	09	54.0		
362		21st iPNEZ	19	52	17	local tremor
		iSNEZ		52	30	
363		21st e Z	20	21	11	
364		22nd iP NZ	13	56	48	local tremor
		i Z		56	52	
		i N		56	57	
		iSNEZ		57	01	
		i EZ		57	08	
365		22nd iP EZ	22	44	37	$\Delta = 32^{\circ}.6$ H = 22 38 06
		i NEZ		44	40	
		i Z		44	52	
		i Z		46	02	
		iSE		49	49	
		L Z		53.7		
366		23rd iPnEZ	02	20	44.7	
		iPgEZ		20	54.0	
		iSnNZ		21	34.6	
367		23rd eP NZ	08	47	26	
		i Z		47	35	
		i Z		47	57	
		i Z		48	12	
368		24th iP NZ	18	47	33	
369		25th iP Z	04	36	53	
		i Z		37	04	
370		25th iP Z	13	43	00	
		i Z		43	10	
		i Z		43	25	
371		26th eL NZ	07	02.7		
372		26th iPNEZ	18	03	33	local tremors
		iS NZ		04	06	
		iS E		04	07	
		i NE		04	14	
373		27th iPNEZ	00	20	50	$\Delta = 36^{\circ}.2$ H = 00 13 44 h = 300 km.
		iPNEZ		21	39	
		iPPNZ		22	24	
		iSNEZ		26	13	



No.	Date 1956	Phase	Time (G.M.T.)			Remarks
			h	m	s	
374	December 27th	iPNEZ	14	15	39	
375	27th	iP NZ e Z e E	14	19	46 19 56 32 06	
376	27th	iP NZ i Z	21	40	21 40 27	
377	28th	iP Z i Z	13	49	43 50 32	
378	28th	iP EZ i EZ i Z i(pP)EZ e Z iS NE isS Z	14	30	01 30 06 30 14 30 42 34 52 35 05 36 04	$\Delta = 32^{\circ}.8$ H = 14 23 41 h = 150 km.
379	28th	iP NZ i Z e Z	21	19	48 19 56 20 31	
380	29th	eP Z	03	47	15	
381	29th	iPNEZ e Z i Z	19	33	16 34 33 35 01	
382	29th	iP EZ iPP Z e Z	20	29	27 30 38 32 45	
340	1st	iP Z i Z ipPEZ e NEZ e EZ e NZ ePP Z e E e NE e Z eS NE eSS E e E eLR Z	07	49	23 49 32 49 38 49 45 49 51 50 04 50 14 50 39 50 46 53 09 53 56 53 13 56 04 07 56.8	$\Delta = 26^{\circ}.2$ H = 07 43 55
341	2nd	e(S)E eL E	16	46	10 51.8	
342	4th	iP Z i NEZ i E e NZ i EZ e NZ i Z e(S)E e NZ	10	19	37 19 40 19 43 19 49 19 57 20 01 20 12 29 39 29 59	



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