



**HAWAIIAN VOLCANO OBSERVATORY**  
**1973 QUARTERLY ADMINISTRATIVE REPORTS**  
INTRODUCTORY NOTE BY THOMAS L. WRIGHT AND JENNIFER S. NAKATA

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**SUMMARY 69**

JANUARY, FEBRUARY, AND MARCH 1973  
BY ARNOLD T. OKAMURA AND ROBERT Y. KOYANAGI  
CHRONOLOGICAL SUMMARY BY DONALD W. PETERSON

**SUMMARY 70**

APRIL, MAY, AND JUNE 1973  
BY ROBERT Y. KOYANAGI, ARNOLD T. OKAMURA, AND PATRICIA STEVENSON  
CHRONOLOGICAL SUMMARY BY ROBERT I. TILLING

**SUMMARY 71**

JULY, AUGUST, AND SEPTEMBER 1973  
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**SUMMARY 72**

OCTOBER, NOVEMBER, AND DECEMBER 1973  
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CHRONOLOGICAL SUMMARY BY ROBERT I. TILLING

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U.S. DEPARTMENT OF THE INTERIOR  
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## INTRODUCTORY NOTE

The Hawaiian Volcano Observatory Summaries have been published in the current format since 1956. The Quarterly Summaries (1956 through 1973) and the Annual Summaries (1974 through 1985) were originally published as Administrative Reports. These reports have been compiled and published as U.S. Geological Survey Open-File Reports. The quarterly reports have been combined and published as one annual summary. All the summaries from 1956 to the present are now available as .pdf files at <http://www.usgs.gov/pubprod>.

The earthquake summary data are presented as a listing of origin time, depth, magnitude, and other location parameters. Network instrumentation, field station sites, and location algorithms are described. Tilt and other deformation data are included until Summary 77, January to December 1977. From 1978, the seismic and deformation data are published separately, due to differing schedules of data reduction.

There are eight quarters—from the fourth quarter of 1959 to the third quarter of 1961—that were never published. Two of these (4<sup>th</sup> quarter 1959, 1<sup>st</sup> quarter 1960) have now been published, using handwritten notes of Jerry Eaton (HVO seismologist at the time) and his colleagues. The seismic records for the remaining six summaries went back to California in 1961 with Jerry Eaton. Other responsibilities intervened, and the seismic summaries were never prepared.

### Chronology

The following Kīlauea eruption chronology covers the two recent reports and the six missing quarters:

Location	Beginning Date	Ending Date	Comment
Kīlauea Iki crater (Kīlauea's summit)	11/14/1959	12/20/1959	19 eruptive episodes
Kapoho (lower east rift zone)	1/13/1960	2/18/1960	4 eruption stages
Halemaumau (Kīlauea's summit)	2/24/1961	2/24/1961	Intermittent activity during uninterrupted inflation following the 1960 eruption
Halemaumau (Kīlauea's summit)	3/22/1961	3/25/1961	Same as above.
Halemaumau (Kīlauea's summit)	7/10/1961	7/17/1961	Same as above.
Heiheiāhulu (middle east rift zone)	9/22/1961	9/25/1961	First historical east rift eruption at this location

The 1959-1960 eruptions were among two of the most spectacular Kīlauea eruptions. The HVO staff was kept busy with acquisition of unusually high quantities of instrumental data and observations of the two sequences, which were separated by less than one month. Even with a year's interval before the beginning of the summit-east rift sequence in 1961, the staff never caught up, and the seismic records were set aside for later study.

A total of 1,672 earthquakes—1,106 for 1960 and 566 for 1961—are part of HVO's cataloged database. The annual listings have been appended to the 1<sup>st</sup> Quarter Report of 1960 and to the 4<sup>th</sup> Quarter Report for 1961. The number of earthquakes is probably low, biased toward the larger magnitudes. The entire HVO catalog, including 1960 and 1961, is accessible from the ANSS CATALOG SEARCH site at <http://www.ncedc.org/anss/catalog-search>.

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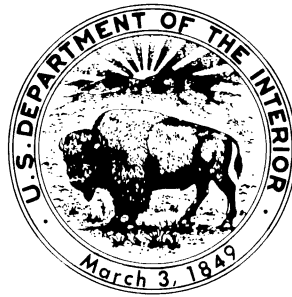
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HAWAIIAN VOLCANO OBSERVATORY

SUMMARY 69

January, February, and March 1973

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This report is preliminary and has not been  
edited or reviewed for conformity with  
Geological Survey standards and nomencla-  
ture

*Menlo Park, California*

1977



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

HAWAIIAN VOLCANO OBSERVATORY

SUMMARY 69

January, February, and March 1973

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Chronological Summary  
By  
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## SUMMARY OF ERUPTIVE ACTIVITY

Kilauea's eruption on the upper east-rift zone at Mauna Ulu and Alae continued without interruption throughout this quarter. The lava lake in Mauna Ulu's summit crater, its main vent in the trench about 170 m east of the lake, and the conduit system feeding both the lake and the subsidiary vent at Alae all continued to behave in the same basic pattern established in earlier months (see Quarterly Summaries Nos. 67 and 68). The surface of the lava lake in Mauna Ulu fluctuated from 24 to 35 m below the rim, and generally stood at 30 m.

The vent at Alae continued to serve as the main opening through which lava reached and spread out over the ground. The vent itself, near the northern edge of the crusted lava lake at the summit area of the newly constructed Alae lava shield, changed frequently in configuration. "Gas-piston" behavior was common, during which lava quietly and slowly rose within the vent, then abruptly underwent vigorous fountaining as a large gas bubble escaped. During such degassing and fountaining the level dropped back in the vent from several meters to a few tens of meters. Then the process would be repeated. Duration of cycles varied from 15 minutes to several hours, but averaged from 1/2 to 1 hour.

During most of the quarter, the Alae vent fed lava into conduits below the surface of the crusted lava lake. At the beginning of January most of the lava was being directed into a surface flow and growing lava-tube system that was extending toward the south-southwest. On January 5, lava descended Poliokeawe Pali and, on January 12, Holei Pali. Lava continued to flow through this channel-tube system for the remainder of the quarter. For several weeks, pahoehoe flows spread out across the coastal flats between the base of Holei Pali and the shore near Apua Point. On February 24 lava reached the ocean about 1 km west of Apua Point and for the rest of the quarter continued to enter the sea. By the end of March, the resultant lava delta had added about 0.175 km<sup>2</sup> of new land to the island and was continuing to grow.

Meanwhile, another lava-tube system, trending easterly from Alae and formerly active in fall, 1972, became reactivated; by January 24 lava again poured into Makaopuhi Crater. By mid-February Makaopuhi's west pit was filled to the level of the east pit's floor ("mezzanine"), and no vestige of the scarp remained that had previously defined the west pit's outline. Lava slowly spread across the floor of the east pit, ultimately covering about two-thirds of its area before the inflow into Makaopuhi dwindled and ceased in early March. The decline in the supply of lava to Makaopuhi apparently resulted from blockage in the tube system about 100 m east of the Alae vent. New overflows from a tube skylight led to the growth of a new satellitic lava shield on the northeast flank of Alae.

## SEISMIC SUMMARY

Events recorded by the U.S. Geological Survey seismograph network in Hawaii fall into two categories:

- 1) Local earthquakes and tremor originating in the region of the Hawaiian Islands (usually within 100 km of at least one seismograph),
- 2) Distant earthquakes originating more than 3,000 km from Hawaii.

As an index of seismic activity at Hawaiian volcanoes, daily counts of earthquakes and minutes of tremor recorded by seismographs in Hawaii are listed in Table 1. The earthquakes are separated in groups on the basis of region of origin as determined by the analysis of records obtained daily at the observatory (UWE, MLO, MLX, AHU, DES, NPT, WPT, MPH, KMO, OTL).

Computer locations of well-recorded events are listed in Table 2. The location of each seismograph station is listed in Table 4, along with a description of the equipment at each station.

Table 1.--Number of earthquakes and minutes of tremor recorded on seismographs around Kilauea

Tremor is separated into three categories: Deep, Intermediate, and Shallow, on the basis of relative amplitude on seismographs in the summit region. Unless otherwise stated, tremor is presumed to be associated with movement of magma within the central complex of Kilauea Volcano.

Earthquake categories are: Kilauea Summit 30 km, earthquakes from a source about 30 km beneath the summit region; Kilauea Summit long-period, earthquakes characterized by low-frequency waves that originate roughly 5 km beneath the summit region; Kilauea Summit Shallow, earthquakes a few km deep in the caldera region; SW Rift and Kaoiki, earthquakes along the southwest rift zone of Kilauea and the adjacent portions of the Kaoiki fault system; Upper East Rift, earthquakes from the upper east rift zone and the adjacent fault systems of Kilauea's south flank; Koae, earthquakes along the northeast-trending Koae fault system south of the caldera; Lower East Rift, earthquakes from the lower east rift zone of Kilauea; Offshore Puu Pili, offshore earthquakes mostly southeast of Puu Pili (PPL) station.

Date (1973)	Tremor (m = minutes h = hours)			Earthquakes								
	Deep	Inter- mediate	Shallow	Kilauea Summit			SW rift and Kaoiki	Upper east rift	Koae	Lower east rift	Offshore Puu Pili	Remarks
				30KM	Long Period	Shallow						
Jan 1	28 <sup>m</sup>	10 <sup>m</sup>	Low level tremor from the upper east rift throughout the month		79	145	12	11	2			
2					181	122	16	13	1	1	2	
3					101	92	19	13				
4		8 <sup>m</sup>			65	158	20	31	2	2		
5		16 <sup>m</sup>			144	86	12	20	1			
6		6 <sup>m</sup>			120	129	10	19	3			
7		8 <sup>m</sup>			78	166	13	13		3		
8					44	148	19	25	4	2		
9					1	26	139	11	20	3		
10		14 <sup>m</sup>			2	16	159	12	26	7	2	
11						43	155	20	23	1	2	
12					1	32	168	30	32	1	2	2
13						15	159	27	38	4	5	2?
14		26 <sup>m</sup>				14	135	15	18	5	3	
15		25 <sup>m</sup>				54	173	19	23	7		
16		3 <sup>m</sup>				23	143	10	12	1		
17					3	25	174	15	16	1	1	
18					1	16	150	14	22	2	1	
19		3 <sup>m</sup>			1	17	149	15	36	10	1	
20						19	154	18	22	5	1	
21		7 <sup>m</sup>				18	175	14	26	1	2	
22		2 <sup>m</sup>				16	110	8	20	5	2	
23		4 <sup>m</sup>			1	25	116	12	17	8	1	
24					2	?	58?	22	10	1	1	
25						6	115	9	27	2		
26					1	38	102	13	8	2	2	
27						2	97	18	19	1	1	
28		7 <sup>m</sup>				6	121	13	25	6		
29						18	98	10	39	3		
30						49	123	4	37	2		
31	5 <sup>m</sup>	3 <sup>m</sup>				8	98	13	31	5	2	1

Date (1973)	Tremor (m = minutes h = hours)			Earthquakes								
				Kilauea Summit			SW rift and Kaoiki	Upper east rift	Koa'e	Lower east rift	Offshore Puu Pili	Remarks
	Deep	Inter- mediate	Shallow	30KM	Long Period	Shallow						
Feb 1		13 <sup>m</sup>	Low level tremor from the upper east rift throughout the month		28	93	13	57	6	1		Small rockfalls and "gas explo- sions" at Makaopuhi
2	39 <sup>m</sup>	11 <sup>m</sup>		3	137	112	11	101?	9	2		
3		6 <sup>m</sup>		1	60	70	14	107?	7	7		
4				1	45	73	16	91?	5	2		
5		8 <sup>m</sup>		1	97	65	9	94?	1	3		
6		3 <sup>m</sup>		2	18	83	10	80?	1	2		
7		3 <sup>m</sup>		2	15	95	16	108?	3	3		
8		5 <sup>m</sup>		2	138	86	15	81?	10	2		
9					9	112	22	19	2	1		
10					18	96	19	53	1	1		
11		7 <sup>m</sup>		2	7	97	20	49	2	2		
12				8	24	100	18	99?		1		
13		10 <sup>m</sup>		1	13	98	13	88?	7	6		
14				3	31	95	14	96?	8	1		
15		2 <sup>m</sup>			15	109	13	103?	3	1		
16		2 <sup>m</sup>		2	3	88	14	106?	2	9		
17					4	63	10	64?	4	3		
18		3 <sup>m</sup>			17	79	11	83?	7	4		
19					13	66	7	43	3	4		
20		5 <sup>m</sup>			33	50	10	50		4		
21				1	26	49?	10	23	7			
22				1	9	88	16	54	4	1		
23				2	3	104	12	25	1	2		
24					24	88	17	53		8	5	
25					5	55	6	47	3	2		
26				1	6	90	15	27	4	4		
27				1	5	90	14	33		5		
28					13	82	8	34	3	2		

Date (1973)	Tremor (m = minutes h = hours)			Earthquakes									
				Kilauea Summit			SW rift and Kaoiki	Upper east rift	Koae	Lower east rift	Offshore Puu Pili	Remarks	
	Deep	Inter- mediate	Shallow	30KM	Long Period	Shallow							
Mar 1	35 <sup>m</sup>	6 <sup>m</sup>	Low to moderate tremor from the upper east rift throughout the month		28	72	12	30	2	2		Scattered rockfall activity at Makaopuhi during the month	
2		4 <sup>m</sup>			5	62	10	29	3	1			
3						64	9	26	1	1			
4					10	90	14	50	3	4			
5						174	20	32	1	2			
6					15	60	11	33	3	3			
7					1	2	81	8	20	11	1		1
8						11	53	8	19	6	1		
9						27	122	19	30	1	1		
10					2	20	136	30	25	1	3		2
11	19 <sup>m</sup>	3 <sup>m</sup> 19 <sup>m</sup>		10	112	6	31	5					
12				18	83	12	18	2					
13			1	17	91	11	21						
14				30	91	18	9	3					
15				41	65	19	16						
16			29	81	12	21							
17		1	19	71	19	25	1	1					
18			17	85	16	37	2						
19		1	44	94	10	14	1						
20		2	42	121	17	11	2	1					
21	5 <sup>m</sup> 9 <sup>m</sup>	5 <sup>m</sup>		50	102	12	7						
22			1	62	90	15	10	1		1			
23				35	163	15	5	2		1			
24			19 <sup>m</sup>	5	112	30	11	1	1				
25				5	102	21	9	2					
26			1	1	111	9	19	6	1				
27		5 <sup>m</sup>		18	106	17	15	8	1				
28				38	102	48	30	9	2				
29		?	5 <sup>m</sup>	1	40	106	16	20	11	2			
30				1	57	182	36	16	3		2		
31				79	136	23	9	3	1	1			

Table 2 is a chronological listing of successfully located earthquakes. For each event the following data are presented:

Origin time in Hawaiian Standard Time: date, hour (HR), minute (MN), and second (SEC).

Epicenter in degrees and minutes of North latitude (LAT N) and West longitude (LONG W). Poor convergence of the epicenter solution is indicated by "?".

Depth - depth of focus in km. Assumed depth is indicated by "\*".

Mag - magnitude, if determined.

NO - number of stations used in locating earthquakes.

GAP - largest azimuthal separation in degrees between stations.

DMIN - epicentral distance in km to the nearest station.

ERT - standard error of the origin time in seconds.

ERH - standard error of the epicenter in km.

ERZ - standard error of the depth in km.

MD - mean deviation of the time residuals.  $\left[ = \sum_i R_i^2 / NO \right]^{1/2}$  where  $R_i$  is the observed seismic wave arrival time less the computed time at the  $i^{\text{th}}$  station.

Q - solution quality of the hypocenter. This measure is intended to indicate the general reliability of each solution:

<u>Q</u>	<u>Epicenter</u>	<u>Focal Depth</u>
A	excellent	good
B	good	fair
C	fair	poor
D	poor	poor

Q is based both on the nature of the station distribution with respect to the earthquake and the statistical measures of the solution. These two factors are each rated independently according to the following scheme:



### Station Distribution

	<u>NO</u>	<u>GAP</u>	<u>DMIN</u>
A	$\geq 8$	$\leq 120^\circ$	$\leq \text{DEPTH or } 5 \text{ km}$
B	$\geq 6$	$\leq 150^\circ$	$\leq 2 \times \text{DEPTH or } 10 \text{ km}$
C	$\geq 6$	$\leq 225^\circ$	$\leq 50 \text{ km}$
	$\geq 4$	$\leq 180^\circ$	
D	Others		

### Statistical Measures

	<u>ERH(km)</u>	<u>ERZ(km)</u>	<u>MD(sec)</u>	<u>RMAX(sec)*</u>
A	$\leq 1.0$	$\leq 2.0$	$\leq 0.10$	$\leq 0.25$
B	$\leq 2.5$	$\leq 5.0$	$\leq 0.20$	$\leq 0.50$
C	$\leq 5.0$		$\leq 0.30$	$\leq 0.75$
D	Others			

Q is taken as the average of the ratings from the two schemes, that is, an A and a C yield a B, and two B's yield a B. When the two ratings are only one level apart the lower one is used, that is, an A and a B yield a B (Hamilton and others, 1969).

The criteria for Q are the same as used by the Office of Earthquake Research and Crustal Studies, U. S. Geological Survey.

\*RMAX is the maximum residual

Table 2

## SUMMARY OF SEISMIC EVENTS

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
JAN	1	14	40	34.3	19-15.6	155- 1.3	35.1	1.2	17	226	8.3	0.34	1.7	2.8	0.11 C
	1	19	14	29.3	19-19.8	155-15.5	8.3	1.5	19	162	3.4	0.07	0.6	1.0	0.12 C
	1	20	19	24.5	19-18.8	155-12.4	3.1	2.1	24	155	6.8	0.15	0.9	1.1	0.25 C
	1	21	34	24.4	19-12.0	155-31.3	29.3	0.9	11	86	7.7	0.30	1.7	3.2	0.14 B
	1	23	28	54.3	19- 9.9	155-29.0	40.2	1.4	16	113	2.2	0.33	1.7	3.0	0.12 B
	2	2	25	34.7	19-22.5	155-26.9	5.2	0.8	18	76	7.6	0.09	0.7	0.8	0.19 C
	2	7	10	18.0	19-20.2	155-26.6	8.0*	0.4	12	210	5.7	0.17	1.2		0.15 C
	2	18	27	17.9	19-24.4	155-17.3	9.4	1.5	9	73	1.1	0.19	0.7	1.6	0.07 A
	2	18	59	23.9	19-25.0	155-17.5	9.7	1.4	8	88	0.8	0.27	1.0	2.2	0.07 B
	2	19	30	18.7	19-24.4	155-17.1	8.7	1.4	9	70	0.9	0.19	0.8	1.7	0.08 A
	2	20	5	4.5	19-24.4	155-17.0	8.3	1.5	7	128	1.0	0.24	1.5	2.0	0.07 B
	2	20	20	10.8	19-10.4	155-34.0	6.4	3.6	23	107	10.0	0.16	1.0	1.0	0.22 C
	2	21	3	40.5	19-24.1	155-17.4	8.3	1.1	10	79	1.6	0.08	0.5	0.8	0.07 A
	2	22	16	22.8	19-22.4	155-25.5	3.3	0.9	17	120	5.6	0.14	0.9	1.5	0.24 C
	3	0	53	12.5	19-24.4	155-17.1	9.4	1.6	9	70	0.9	0.17	0.6	1.4	0.06 A
	3	3	32	40.3	19-24.4	155-16.9	9.5	1.4	9	71	1.0	0.17	0.6	1.4	0.05 A
	3	6	7	1.1	19-16.5	156-11.1	15.3*	3.2	18	291	32.9	0.74	4.6		0.13 D
	3	8	33	3.3	19-19.1	155-46.0?	7.1	0.8	6	182	12.4	0.25	1.9	2.4	0.09 C
	3	8	39	13.9	19-19.8	155-12.4	4.3		18	169	6.2	0.15	1.0	1.1	0.22 C
	3	19	21	27.0	19-18.6	155-23.9	4.0		6	148	3.2	0.18	0.8	2.5	0.06 B
	4	1	47	0.5	19-20.3	155-12.4	5.8	1.5	21	155	4.0	0.11	0.8	0.7	0.22 C
	4	2	15	26.9	19-23.7	155-23.3	8.0*	1.4	15	65	6.3	0.04	0.3		0.07 B
	4	3	22	44.9	20- 3.9	155-45.1	8.3	1.7	22	146	7.5	0.14	3.6	7.8	0.14 C
	4	8	42	36.9	19-23.4	155- 3.8	8.0*		11	106	6.7	0.09	0.8		0.12 B
	4	16	28	32.9	19-22.0	155-25.0	6.3	1.1	14	231	9.8	0.33	1.8	1.1	0.19 C
	4	19	12	47.2	19-21.2	155-29.5	6.7	1.6	20	67	10.1	0.09	0.6	0.7	0.16 B
	4	22	3	51.2	19-20.5	155- 8.4	8.6	1.2	14	158	3.8	0.08	0.7	1.4	0.10 B
	5	0	50	17.0	19-19.9	155- 7.8	8.0*	0.7	11	169	5.4	0.11	1.1		0.14 C
	5	6	25	47.7	19-19.9	155-14.6	6.5	1.1	11	179	4.8	0.16	1.0	1.2	0.17 C
	5	14	27	59.4	19-19.6	155-13.9	13.6	0.1	6	193	6.2	0.17	1.2	1.7	0.04 C
	6	2	2	36.1	19-19.5	155- 8.6	9.3	0.4	9	176	5.3	0.15	1.1	2.4	0.10 C
	6	5	7	1.3	19-23.6	154-59.3	5.1	1.3	13	176	9.4	0.17	1.3	1.1	0.18 C
	6	13	12	9.9	19-45.7	155-25.5	26.1	1.5	11	96	4.1	0.25	1.2	3.0	0.12 B
	6	14	46	57.8	19-19.4	155-15.5?	9.9		8	181	3.5	0.65	2.8	6.4	0.18 C
	6	20	16	37.1	19- 8.4	155-34.5	5.6	1.8	10	127	11.8	0.11	0.9	1.1	0.14 C
	6	22	25	20.1	19-20.6	155-12.4	8.0*		9	187	5.1	0.19	1.7		0.19 C
	7	11	41	24.4	19-20.1	155-24.2	7.0	0.5	14	101	1.6	0.09	0.8	0.6	0.17 B
	7	22	27	39.7	19-20.8	155-12.3	7.8	0.9	14	150	3.2	0.12	1.1	0.6	0.17 B
	7	22	58	49.7	19-24.4	155-24.6?	0.0	1.3	12	130	8.1	7.38	0.8	14.1	0.17 C
	7	23	8	58.3	19-34.5	155- 9.4	8.0*	1.5	13	157	12.6	0.13	1.0		0.20 C
	8	10	51	39.5	19-37.7	156- 0.5	8.0*	3.3	18	223	42.5	0.30	2.3		0.20 C
	8	23	40	34.9	19-24.7	155-24.7?	0.0	1.5	12	129	8.7	9.22	1.0	17.6	0.19 C
	9	0	29	36.7	19-19.3	155-15.4	5.7		16	183	3.8	0.18	1.1	0.9	0.20 C
	9	1	27	6.7	19-20.9	155-12.6?	1.2	2.2	18	155	2.8	0.13	0.9	1.6	0.22 C
	9	2	47	16.9	19- 4.5	155- 8.5	14.4*		14	275	37.8	0.32	2.3		0.20 D
	9	6	35	25.7	19-21.8	155-24.5	7.8	1.6	19	57	3.5	0.09	0.8	0.7	0.18 B
	9	6	51	32.6	19-19.8	155-11.8	5.2	2.0	19	169	5.1	0.18	1.2	1.0	0.26 C
	9	10	41	54.4	19-16.9	155-26.6	50.8	2.5	20	108	0.9	0.35	1.4	3.3	0.15 B
	9	12	54	27.7	19-29.7	155-14.9	23.4	1.0	13	122	7.8	0.13	0.7	1.4	0.07 B
	9	19	52	15.0	19-19.7	155-24.7	5.7	2.0	8	261	2.7	0.58	2.7	1.5	0.15 D
	9	21	45	20.6	19-22.1	155-23.8	7.8	0.6	13	112	3.6	0.09	0.8	1.5	0.15 B
	9	21	55	16.4	19-20.4	155-11.0	8.2	0.7	14	189	3.8	0.09	0.7	0.4	0.10 B
	10	2	37	22.9	19-20.1	155-11.8	10.3	-0.0	12	209	4.6	0.39	1.6	2.9	0.11 C
	10	5	42	53.0	19-19.5	155-17.6	7.0	0.7	10	183	1.1	0.23	1.0	1.3	0.09 C
	10	10	54	28.9	19-25.1	155-24.2	8.0*	1.3	12	182	8.3	0.05	0.4		0.06 C

## SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
JAN	10	13	28	35.9	19-19.9	155-15.2	24.5	1.7	21	161	3.9	0.14	1.1	1.4	0.14 C
	10	15	1	13.7	19-19.9	155-15.7	31.4	1.0	11	187	3.1	0.18	1.0	1.6	0.08 B
	10	21	47	24.3	19-35.1	155-41.17	4.4	0.9	14	162	19.7	0.88	16.4	41.8	0.20 D
	11	6	2	23.7	19-21.0	155-12.8	8.0*		8	172	5.4	0.09	0.7		0.07 C
	11	7	41	32.8	19-19.2	155-15.9	10.6		7	229	3.1	0.25	1.2	1.7	0.04 C
	11	10	5	3.5	19-20.1	155- 9.3	9.2	0.2	8	229	3.7	0.17	1.2	1.4	0.07 C
	11	13	10	19.7	19-21.7	155-25.6	3.4	0.8	12	70	5.0	0.10	0.8	2.0	0.19 B
	11	17	22	16.4	19-17.6	155-22.9?	4.1	1.3	10	125	4.8	0.14	1.6	2.4	0.14 B
	12	0	14	31.8	19-17.6	155-22.8	8.0*	0.2	8	174	4.8	0.22	1.6		0.22 C
	12	2	23	56.6	19-19.1	155-24.9?	6.5	0.5	14	96	3.4	0.10	1.1	2.0	0.20 B
	12	3	26	19.3	19-16.7	155- 3.6	31.9	0.9	15	254	14.7	0.40	2.1	3.1	0.08 C
	12	3	36	16.0	19-19.2	155- 8.6	8.3	1.5	11	240	5.8	0.32	2.1	2.9	0.12 C
	12	10	0	57.9	19-15.3	155- 8.3	41.3		11	269	18.3	0.31	2.6	2.6	0.09 D
	12	14	45	11.4	18-55.0	155-25.0	31.7		19	255	27.1	0.62	3.3	4.6	0.15 D
	13	1	37	34.6	19-20.7	155-13.7	6.8		12	169	5.0	0.23	1.3	1.4	0.18 C
	13	6	21	5.6	19-21.9	155-24.7?	9.1		14	66	3.9	0.08	0.8	2.1	0.13 B
	13	9	42	55.4	19-24.6	155-17.0	13.4		13	143	1.9	0.08	0.7	0.7	0.09 B
	13	11	30	0.1	19-17.9	155-48.1	7.9	3.7	22	110	8.2	0.08	0.7	1.1	0.11 B
	14	3	57	18.7	19-17.9	155-13.2	3.2	1.8	21	202	8.4	0.21	1.1	1.6	0.20 C
	14	6	1	49.9	19-58.8	155-34.1	8.8	3.1	27	166	24.9	0.10	0.9	1.4	0.12 C
	14	6	40	17.2	19-58.6	155-34.0	10.1	3.2	29	166	24.5	0.10	0.9	1.3	0.13 C
	14	8	9	11.8	19-59.7	155-34.0?	1.3	2.8	14	174	26.2	1.57	2.9	12.0	0.22 C
	14	8	21	33.9	19-38.3	156-14.3	14.4*		10	329	83.3	5.76	34.4		0.12 D
	14	8	49	53.8	19-16.6	155-27.2	4.6	1.9	7	191	9.6	0.17	1.3	1.3	0.09 C
	14	9	42	41.4	19-20.1	155-10.9	9.5	0.3	15	163	4.2	0.07	0.5	1.0	0.07 B
	14	12	10	5.9	18-52.7	155-10.9	8.0*	1.3	18	267	48.5	0.50	3.3		0.16 D
	14	12	25	21.9	19-24.9	154-46.8?	4.0	2.0	12	296	13.8	1.32	5.3	3.1	0.12 D
	14	15	58	2.3	19-24.8	155-18.0	12.6	1.8	17	78	1.3	0.03	0.4	0.3	0.07 A
	14	19	19	31.2	19-58.1	155-35.2?	1.9	1.8	12	158	24.7	0.17	1.7	1.3	0.17 C
	14	20	0	57.7	19-20.7	155- 7.2?	0.0	1.1	11	165	7.7	9.86	1.5	18.9	0.22 C
	15	2	38	24.3	19-19.7	155-12.4	8.6	1.2	14	209	6.2	0.17	1.0	2.0	0.10 C
	15	3	38	23.0	19-18.8	155-15.4	6.5	1.6	19	168	4.3	0.12	0.8	0.6	0.17 C
	15	4	28	27.2	19- 9.0	155-13.6?	41.8	1.6	16	204	18.8	0.34	1.9	3.2	0.11 C
	15	8	7	39.9	19-59.4	155-33.9	8.5		14	172	25.7	0.15	1.6	2.4	0.17 C
	15	11	41	15.3	19-23.5	155-25.9	8.0*		9	239	7.7	0.39	2.3		0.15 D
	15	13	30	28.2	19-17.6	155-23.6?	1.3	1.2	12	121	4.8	0.39	0.9	1.4	0.17 C
	15	16	1	14.4	19-18.8	155-15.4	13.0	0.3	8	198	4.3	0.18	0.7	1.5	0.04 B
	15	21	26	38.6	19-24.5	155-23.8	8.5	0.9	20	58	7.2	0.06	0.6	1.5	0.14 B
	15	22	40	44.9	19-20.5	155- 6.0	8.0*	0.8	11	156	5.5	0.14	1.4		0.19 C
	16	0	13	48.1	19-53.5	155-29.5	8.9	2.0	13	257	15.6	0.51	3.5	2.7	0.13 D
	16	1	52	35.5	19-17.4	155-10.7	8.0*	0.0	13	203	8.7	0.26	1.8		0.22 C
	16	8	44	27.1	19-18.7	155-14.6	9.1	0.5	10	181	5.6	0.13	1.0	1.8	0.10 B
	16	8	52	34.8	19-58.8	155-34.8	1.2	1.2	14	164	25.4	1.43	1.6	5.2	0.17 C
	16	17	47	32.3	19-19.7	155-15.6	15.4		9	173	3.3	0.48	3.4	4.1	0.19 C
	17	10	15	52.9	19-20.3	155-17.4	36.4	1.0	14	140	0.4	0.22	1.2	1.9	0.09 B
	17	11	38	51.5	19-23.4	155-24.8	6.7	2.0	17	59	6.5	0.06	0.5	0.5	0.12 B
	17	12	6	19.6	19-23.4	155- 1.3	4.0	1.0	8	150	7.0	0.12	1.1	1.3	0.13 B
	17	12	44	12.9	19-58.7	155-34.7	2.5	1.8	9	164	25.2	0.22	2.0	2.1	0.21 C
	17	16	25	0.4	20- 3.1	155-43.9	8.1	1.0	10	144	9.7	0.08	0.9	1.3	0.07 B
	17	16	40	30.2	19-22.1	155-23.3	8.2	0.5	13	141	3.5	0.08	0.8	1.4	0.12 B
	18	2	43	45.7	19-18.1	155- 8.9	8.0*	0.9	9	196	7.4	0.11	0.9		0.10 C
	18	7	9	23.9	19-21.0	155-13.8	6.1	1.0	17	181	3.4	0.13	0.9	0.6	0.19 C
	18	8	11	3.4	19-20.2	155-12.0	8.5	0.0	12	158	4.3	0.10	0.7	1.5	0.10 C
	18	13	42	13.9	19-24.3	155-24.9	8.0*	1.2	16	65	8.0	0.06	0.5		0.11 C
	18	23	7	1.7	19-19.4	155- 9.2	8.7	1.8	15	175	5.0	0.12	1.0	2.2	0.14 C

## SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
JAN	19	0	23	20.2	19-18.8	155-12.8	8.0*		9	222	8.0	0.19	1.2		0.11	C
	19	1	22	48.6	19-17.1	155-15.0	13.9		9	240	6.6	0.27	1.0	2.0	0.05	C
	19	1	46	41.6	19-19.0	155-14.1	8.0*		9	203	6.0	0.20	1.3		0.16	C
	19	2	0	39.9	19-20.0	155-12.2	9.2	0.4	13	204	4.6	0.26	1.3	2.3	0.10	C
	19	9	49	54.2	19-21.9	155-24.3?	6.1	3.3	26	47	3.7	0.09	0.9	1.6	0.28	B
	19	14	10	56.0	19-19.2	155-15.4	6.9	1.5	19	166	3.9	0.10	0.8	0.5	0.16	C
	19	14	20	0.6	19-17.5	155- 9.7	3.7	2.2	20	176	8.5	0.23	1.2	1.1	0.25	C
	19	15	37	10.4	19-20.2	155- 8.1	8.6	0.7	9	163	4.6	0.05	0.5	0.9	0.05	B
	19	16	23	4.6	19-17.6	155- 8.9	8.0*	0.8	11	213	8.5	0.07	0.5		0.06	C
	19	20	38	10.9	19-18.2	155-15.4	9.8	0.7	11	213	5.0	0.29	1.3	2.3	0.10	C
	19	21	24	25.9	19-16.4	155-29.9	5.1	0.9	14	95	5.7	0.11	1.1	1.1	0.20	B
	19	23	31	14.3	19-21.8	155-24.2?	8.1	1.3	18	51	3.3	0.05	0.5	0.4	0.13	B
	20	6	36	15.3	19-22.1	155-25.8	8.0*	0.8	8	272	5.6	0.59	3.3		0.09	D
	20	7	57	11.1	19-19.6	155-10.9	8.0*	0.5	11	237	5.0	0.25	1.5		0.10	D
	20	11	33	57.7	19-21.4	155-12.8	13.8		8	161	5.3	0.19	1.1	1.9	0.05	C
	20	16	57	13.9	19-19.6	155-13.4	8.0*	0.5	13	197	5.4	0.09	0.7		0.10	C
	20	23	26	18.0	19-24.0	155-29.3	7.0	1.2	19	94	12.6	0.07	0.6	0.5	0.14	B
	20	23	47	4.3	19-22.3	155- 5.1	0.3	1.9	18	130	5.8	2.83	1.0	5.5	0.18	C
	21	1	52	26.3	19-19.7	155- 7.4	8.0*	0.9	11	173	6.1	0.17	1.6		0.22	C
	21	10	34	20.2	19-20.2	155-10.9	9.4		10	219	3.9	0.18	1.2	1.6	0.09	C
	21	13	1	58.1	19-19.2	155-13.8	8.0*		8	203	6.5	0.14	1.0		0.10	C
	21	15	9	10.1	19-22.3	155-48.6	7.3	1.1	13	190	13.4	0.22	2.5	3.4	0.14	C
	21	16	11	35.8	19-18.8	155-16.1	28.5	0.9	18	166	3.3	0.15	0.8	1.3	0.08	B
	21	19	49	55.6	19-20.1	155- 1.0?	11.1	0.9	11	226	3.3	0.23	3.3	3.0	0.27	D
	21	20	50	18.5	20- 3.5	155-54.8?	7.3	1.9	12	252	16.0	0.70	4.6	12.6	0.16	D
	21	22	55	15.2	19-24.3	155-17.4	8.1	0.8	13	61	1.3	0.05	0.4	0.5	0.06	A
	22	10	46	12.5	19-20.2	155- 8.9	7.9	2.1	14	146	3.8	0.14	1.0	0.8	0.16	B
	22	13	12	4.3	19-55.1	155-38.6	13.7*	3.1	25	128	24.6	0.10	0.9		0.16	C
	22	13	57	44.9	19-55.3	155-38.4	14.0*	3.3	22	128	24.6	0.09	0.9		0.15	C
	22	15	44	45.7	19-21.8	155-19.1?	0.6	1.1	8	95	3.7	0.22	0.6	3.8	0.10	B
	22	22	26	37.9	19-10.6	155-36.6?	0.0	2.3	14	98	8.0	7.33	1.4	13.9	0.29	C
	22	22	35	6.3	19-49.9	155-31.2	14.4	2.5	15	111	8.6	0.11	1.1	3.0	0.15	B
	22	23	14	31.0	19-26.1	154-54.3	5.7	2.4	18	215	5.3	0.19	1.4	0.7	0.16	C
	23	3	36	6.8	19-19.4	155-15.1	8.7	0.6	10	202	4.2	0.18	1.1	1.7	0.09	C
	23	3	38	45.1	19-18.6	155-13.5	14.4		7	218	7.4	0.20	1.1	1.8	0.04	C
	23	3	40	25.1	19-19.9	155-13.6	8.0*		8	189	6.1	0.32	2.4		0.24	C
	23	4	24	52.9	19-19.6	155-14.1	7.4	1.5	18	185	5.9	0.12	0.8	0.5	0.14	C
	23	5	37	48.3	19-19.3	155-14.2	8.0*	0.5	12	197	5.9	0.17	1.2		0.17	C
	23	9	28	54.7	19-19.9	155-11.9	8.1	1.6	9	211	4.6	0.12	1.0	0.5	0.07	B
	23	14	32	44.7	19-18.4	155-13.6	8.0*		8	220	7.4	0.23	1.6		0.14	C
	23	20	9	10.3	19-11.7	155- 2.8	8.0*	2.5	7	333	30.0	3.90	68.1		0.27	D
	24	8	53	33.5	20- 8.8	155-39.1?	8.0*		13	290	43.0	1.12	7.2		0.28	D
	24	16	41	23.7	19-24.8	155-28.4	6.5	1.9	15	133	12.2	0.12	0.9	0.9	0.17	B
	24	17	55	58.6	19-20.3	155-14.1	6.1		17	177	4.7	0.16	1.0	0.9	0.19	C
	24	20	58	53.8	19-49.8	155-22.1	23.2	2.4	17	142	7.1	0.36	1.8	3.7	0.10	B
	25	11	9	14.3	19- 9.1	155-40.5	2.3	1.9	12	124	12.2	0.20	1.4	1.8	0.25	C
	25	18	8	7.6	19-36.3	155- 6.5	8.0*	1.7	13	183	12.2	0.17	1.2		0.16	C
	25	18	40	52.4	19-21.5	155-23.7	8.4	0.8	13	110	2.6	0.07	0.7	0.6	0.12	B
	25	20	37	9.4	19-27.3	155-20.6	7.8	1.8	15	99	0.6	0.05	0.5	0.3	0.09	A
	25	23	55	21.9	19-20.5	155-12.4	6.1	1.1	17	188	3.6	0.18	1.2	0.8	0.22	C
	26	1	4	11.9	20- 3.3	155-43.0	7.5	1.2	14	154	10.4	0.34	3.0	5.2	0.22	C
	26	2	38	20.7	19-21.1	155-13.2	6.2	1.8	21	141	2.7	0.10	0.8	0.6	0.23	C
	26	6	1	32.5	19-19.8	155-14.0	6.8	2.0	21	167	5.4	0.10	0.7	0.5	0.17	C
	27	0	43	33.1	19-14.2	155-27.6	30.6	2.4	22	117	4.3	0.19	1.0	2.0	0.13	B
	27	3	25	17.4	19-14.1	155-16.0	8.8		12	180	3.0	0.15	1.2	1.4	0.11	C

## SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
JAN	27	5	21	37.7	19-27.2	155-13.7	29.1		14	121	4.7	0.18	0.9	1.9	0.09	B
	27	15	32	42.8	19-21.5	155- 6.8	3.7	1.9	15	141	5.4	0.11	1.0	1.0	0.16	C
	27	15	49	32.2	19-17.8	155-14.8	9.2		10	225	6.3	0.32	1.6	2.7	0.09	C
	27	22	12	38.6	19-23.6	155-26.9	3.8	2.6	21	55	8.9	0.10	0.7	1.1	0.22	C
	28	15	52	42.9	19-24.5	155-16.0	12.1	1.1	17	65	1.9	0.05	0.5	0.5	0.09	A
	28	16	19	30.8	19-23.0	155-24.4	6.9	1.2	17	69	5.6	0.06	0.6	0.6	0.14	R
	28	16	43	53.3	18-54.7	155- 9.5?	8.0*	1.9	14	279	45.9	0.78	5.3		0.22	D
	28	17	18	22.4	19-24.1	155-15.8	12.5	2.4	22	65	2.5	0.06	0.7	0.6	0.16	R
	28	17	26	34.1	19-24.0	155-15.6	0.5*	0.7	6	128	2.5	0.06	0.2		0.06	C
	28	18	33	18.3	19- 9.8	155-40.9	3.0	2.9	16	125	11.6	0.14	1.0	1.1	0.18	C
	28	23	20	53.3	19-15.8	155-32.0	1.6	2.6	22	66	9.1	0.65	0.9	2.4	0.26	C
	29	2	2	54.9	19-24.1	155-23.9	10.8	1.6	16	60	7.3	0.08	0.7	1.3	0.11	B
	29	3	9	34.3	19-19.0	155-15.6	10.1		9	238	3.7	0.32	1.5	2.0	0.07	C
	29	19	9	12.2	19- 9.7	155-41.5	3.4	1.4	13	211	12.3	0.35	2.2	1.4	0.21	C
	29	20	37	15.6	19-22.4	155-22.8	7.6	1.0	14	138	4.2	0.06	0.5	0.4	0.09	R
	30	9	5	17.2	19-19.3	155-13.1	8.9	2.3	19	149	5.9	0.05	0.4	0.9	0.08	R
	30	11	0	18.6	19-19.6	155- 7.7	8.0*	0.6	12	175	5.9	0.14	1.2		0.13	C
	30	15	32	6.9	19-23.8	155-16.8	14.7	0.6	13	73	2.0	0.06	0.6	0.9	0.09	A
	31	3	59	14.1	19-17.9	155-23.6	2.4	1.1	10	155	4.4	0.07	0.6	1.4	0.11	C
	31	16	18	45.9	19-25.6	155-25.3	6.2	2.6	21	64	8.6	0.07	0.6	0.6	0.17	B
	31	16	34	27.8	19-23.3	155-31.1	8.0*	2.3	11	295	14.9	0.39	2.2		0.18	D
	31	21	52	22.4	19-20.5	155-12.9	9.4	0.9	15	183	3.6	0.10	0.6	1.0	0.09	B
	31	22	7	10.4	19-19.7	155-14.1	8.0*	1.6	16	167	5.9	0.07	0.6		0.12	C
	31	22	27	20.6	19-19.4	155-14.0	8.0*	0.3	10	196	6.1	0.13	0.9		0.12	C
	31	22	29	30.3	19-18.8	155-13.7	8.0*	0.9	11	212	7.0	0.17	1.1		0.13	C
	31	22	37	5.3	19-20.2	155-12.8	8.7	0.9	14	192	4.2	0.13	0.8	1.4	0.09	C
FEB	1	0	28	45.0	19-54.7	155-21.4	9.8	2.9	25	208	11.7	0.16	0.9	1.0	0.10	C
	1	0	35	39.5	19-11.4	155-27.7?	6.4	2.4	18	134	3.5	0.11	1.0	0.8	0.20	R
	1	4	3	50.3	19-22.0	155-23.9?	8.3	1.1	15	112	3.5	0.08	0.6	0.6	0.13	R
	1	4	31	11.7	19-20.5	155-11.9	6.1	1.6	20	154	3.8	0.11	0.9	0.7	0.22	C
	1	10	42	38.0	19-19.7	155-11.7	8.5	0.2	11	220	5.4	0.16	1.0	1.7	0.08	C
	1	16	28	14.6	19-20.3	155-10.4	8.2		11	191	3.4	0.12	0.9	0.4	0.09	C
	2	14	59	29.4	19-23.0	155- 9.1	36.8	2.3	23	149	2.2	0.25	1.3	2.2	0.13	C
	2	17	12	16.0	19-17.7	155-15.2	9.4	0.4	11	225	5.9	0.29	1.5	2.3	0.10	C
	2	17	35	10.7	19-18.4	155-16.1	8.5	0.9	12	195	3.8	0.20	1.4	1.8	0.16	C
	2	18	23	33.3	19-28.7	155-46.7?	6.2	2.9	18	177	18.8	0.15	0.9	1.0	0.12	C
	2	23	5	36.1	19-21.2	155-14.2	29.7	0.9	17	131	3.7	0.21	1.2	2.2	0.12	B
	3	5	5	57.8	19- 5.9	155-25.5	40.3	1.2	18	186	7.9	0.38	1.5	3.7	0.12	C
	3	7	57	49.4	19-14.4	155-14.7	11.4		9	213	5.7	0.23	0.9	1.9	0.06	R
	3	14	55	4.8	19-21.9	155-24.1	8.2	1.1	13	113	3.5	0.10	0.8	0.6	0.14	R
	3	19	36	6.3	19-24.4	155-26.6	8.0*	0.9	14	91	9.7	0.05	0.5		0.09	C
	3	20	41	41.7	19-22.8	155- 5.5?	0.0	2.0	20	127	7.1	3.70	0.8	7.0	0.17	C
	4	9	26	15.3	19-19.2	155-15.5	10.9		9	185	3.7	0.22	1.2	2.0	0.10	C
	4	9	53	1.2	19-20.3	155-15.8	31.7		22	135	2.8	0.11	0.6	1.0	0.08	B
	4	17	58	43.6	19-20.4	155-24.9?	6.7	2.1	21	83	2.8	0.07	0.8	1.4	0.19	R
	4	18	0	25.1	19-26.1	155-23.4	8.0*	1.0	12	182	5.4	0.15	1.1		0.16	C
	4	19	41	51.0	19-19.5	155-12.0	5.6	1.7	22	150	5.6	0.13	0.9	0.8	0.24	C
	4	21	6	6.8	19-24.2	155-25.6?	7.2	2.5	24	58	8.5	0.07	0.5	0.6	0.16	B
	5	3	36	52.8	19-24.6	155-26.4?	6.8	1.8	20	71	9.8	0.16	1.1	1.0	0.24	C
	5	7	17	56.5	19-20.2	155-25.0	5.1	1.0	9	152	3.0	0.09	0.7	0.7	0.10	R
	5	8	49	55.7	18-57.6	155-12.5	14.5*	1.2	19	251	34.8	0.33	2.2		0.19	D
	5	21	20	27.1	19-26.1	155-23.3	9.1	1.2	12	99	5.3	0.04	0.5	0.7	0.06	A
	5	21	25	27.6	19-20.2	155-10.4	13.4		10	239	3.5	0.30	1.7	2.3	0.07	C
	6	23	57	52.9	19-20.5	155-16.4	32.3	2.8	27	127	1.9	0.15	0.9	1.4	0.14	R
	7	0	28	11.4	19-20.5	155-16.6	31.9	2.4	24	142	1.6	0.20	1.1	1.8	0.13	H

## SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MIN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	Mn	Q
FEB	7	5	42	18.1	19-56.7	155-23.4	31.0*	1.4	13	292	19.6	0.53	4.2	0.25	D
	7	11	20	42.6	19-18.9	155-13.3	8.0*		9	212	7.4	0.15	1.0	0.10	C
	7	20	1	10.6	19-14.3	155-17.9	30.5	2.8	27	165	6.8	0.16	0.9	1.5	0.14 C
	8	1	57	20.0	19-18.0	155-24.9	6.8	0.9	11	135	4.3	0.11	1.2	0.8	0.16 B
	8	2	51	3.6	19-20.3	155-12.1	9.2		13	199	4.1	0.30	1.4	2.4	0.10 C
	8	3	7	35.9	19-26.5	155-28.8	7.6	1.4	17	79	11.5	0.13	0.6	1.0	0.13 B
	8	3	55	38.0	19-16.4	155-27.4	6.0	1.4	15	98	1.2	0.10	1.0	0.8	0.21 B
	8	12	15	10.9	19-24.8	155-26.8	8.0*	2.3	16	118	10.5	0.14	1.1		0.20 C
	8	13	33	54.3	19-20.1	155-17.1	6.9		10	163	0.5	0.05	0.4	0.3	0.06 B
	8	14	6	46.4	19-22.9	155-26.5?	7.2	2.6	20	53	7.5	0.14	0.7	1.0	0.15 C
	8	16	52	25.8	19-15.0	155-25.5?	8.0	1.9	12	138	3.4	0.15	1.5	1.0	0.24 C
	8	17	6	20.9	19-12.3	155- 8.0	40.3	1.2	18	206	18.3	0.19	1.1	1.7	0.09 C
	9	1	0	53.7	19-21.2	155- 6.1	8.0*		9	142	6.1	0.20	2.1		0.25 C
	9	2	51	49.7	19-59.3	155-47.6?	12.2*	0.9	15	277	41.9	0.24	1.7		0.11 D
	9	11	16	43.1	19-15.8	155-27.3	8.3	3.1	16	110	1.6	0.14	1.0	1.0	0.20 B
	9	14	30	16.6	19-25.1	155-28.1	4.4	1.9	17	79	12.1	0.10	0.7	1.1	0.20 C
	9	17	51	39.5	19-21.9	155-28.8	4.1	2.1	20	62	10.0	0.10	0.7	1.3	0.22 C
	10	2	3	16.3	19-21.4	155-25.1?	8.1	2.3	20	68	3.9	0.09	0.7	0.6	0.18 H
	10	4	53	59.7	19-15.4	155- 2.5	34.6		17	274	26.9	0.40	2.3	2.5	0.09 C
	10	10	52	36.1	19-31.0	155-35.7	10.0	2.3	15	86	3.2	0.04	0.5	0.4	0.07 A
	11	5	43	39.9	19-24.6	155-25.0?	0.0	1.6	14	103	8.7	6.46	0.6	12.3	0.15 C
	11	9	32	4.3	19-26.1	155-29.6	2.2	2.0	15	79	12.5	0.10	0.6	1.3	0.16 C
	11	12	32	32.5	19-20.2	155- 7.7	8.6		14	164	5.0	0.12	1.1	2.3	0.14 C
	11	14	19	39.0	19-21.6	155- 8.7?	8.1	1.7	15	186	2.2	0.19	1.5	0.7	0.16 C
	11	19	7	14.1	19-24.7	155-28.6	7.3	1.8	18	60	12.5	0.09	0.7	0.7	0.12 B
	11	19	47	37.5	19-10.3	155-11.6	46.0		12	227	20.8	0.45	2.4	3.6	0.09 C
	12	0	14	33.8	19-28.0	155- 6.5	8.0*	2.0	14	132	6.4	0.08	0.9		0.11 C
	12	6	21	25.2	19-27.4	155- 6.1	8.0*		12	177	6.7	0.11	1.1		0.11 C
	12	7	28	29.9	19-21.8	155- 8.9?	8.3		13	217	1.7	0.18	1.4	0.5	0.11 C
	12	8	55	56.6	19-22.6	155-25.2	8.0*	0.6	14	138	5.6	0.08	0.7		0.13 C
	12	14	10	32.4	19-18.7	155-13.8?	6.8	2.4	20	174	6.8	0.10	0.8	1.4	0.16 C
	12	14	47	46.6	19-18.2	155-13.8	6.0	1.5	17	176	7.3	0.17	1.1	0.8	0.20 C
	12	19	46	58.3	19-20.1	155-20.3	28.7	3.9	27	71	5.0	0.13	0.8	1.3	0.14 B
	12	19	55	46.5	19-20.1	155-20.3	28.9	2.2	25	70	5.0	0.15	0.9	1.6	0.14 B
	12	22	49	53.2	19-19.9	155-20.5	27.9	2.1	18	77	4.7	0.13	0.8	1.4	0.12 B
	12	23	19	38.0	19-19.5	155-20.4	28.7	1.8	22	81	4.2	0.17	1.1	1.8	0.15 B
	13	1	21	42.9	20- 8.3	155-54.0	37.4	3.1	27	277	12.7	0.43	2.5	4.0	0.19 C
	13	5	25	15.2	19-20.1	155- 9.2	8.3	0.3	6	230	3.8	0.35	2.6	2.7	0.07 D
	13	8	43	49.6	19-10.1	155-34.8	3.5	1.4	14	132	9.6	0.14	1.0	1.1	0.20 P
	13	11	46	10.1	19-18.4	155-16.0?	9.4	1.0	12	201	4.0	0.24	1.5	2.4	0.15 C
	13	11	48	6.0	19-19.0	155-16.6	8.7	1.1	12	175	2.4	0.13	1.0	1.2	0.11 C
	13	19	27	13.5	19-24.0	155-15.6?	2.5	1.0	8	130	2.5	0.24	1.0	2.0	0.20 C
	13	19	29	24.8	19-20.4	155-13.6	5.7	1.2	20	150	4.1	0.11	0.8	0.7	0.21 C
	13	23	58	12.5	19-21.6	155-23.8?	7.8	0.9	16	48	2.8	0.06	0.7	0.6	0.15 P
	14	2	15	1.7	19-19.7	155-15.6	7.8	1.8	20	162	3.2	0.06	0.6	0.3	0.12 C
	14	13	52	14.1	19-18.5	155-13.7	8.0*	1.7	10	217	7.1	0.15	1.0		0.09 C
	14	15	9	41.1	19-25.5	155- 0.4	44.2	1.6	18	236	10.5	0.35	1.6	2.6	0.08 C
	14	15	22	38.8	19-24.5	155-24.9	8.0*	1.9	21	65	8.4	0.08	0.7		0.16 C
	14	18	53	42.3	19-19.4	155-15.6	7.1	1.8	22	142	3.3	0.09	0.7	0.5	0.15 C
	14	23	3	28.4	19-18.5	155-13.7	8.0*		7	219	7.2	0.25	1.7		0.13 C
	15	3	3	57.9	19-19.6	155-11.9?	8.1	0.9	13	216	5.3	0.14	1.0	0.4	0.11 C
	15	4	29	12.1	19-21.3	155-24.2?	8.4	0.8	15	64	2.6	0.08	0.8	0.7	0.17 B
	15	12	39	53.0	19-19.8	155- 9.5	8.7	1.8	13	169	7.4	0.08	0.6	1.5	0.08 B
	15	12	53	41.6	19-19.8	155- 9.5	4.4	1.7	18	169	7.3	0.14	1.0	0.9	0.22 C
	15	20	57	49.2	19-17.0	155- 3.6	36.1	1.0	14	270	14.4	0.44	2.5	2.9	0.08 D

## SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	()
FEB	16	13	11	6.9	19-20.6	155-11.2	8.0	0.2	9	208	3.5	0.11	0.9	0.4	0.07 B
	16	16	33	52.3	19-22.1	155-12.7	5.4	0.2	11	144	0.7	0.16	0.8	1.5	0.13 B
	16	19	58	33.4	19-19.6	155-13.9	6.4	1.5	18	186	5.7	0.14	0.9	0.7	0.18 C
	16	21	8	59.5	19-22.6	155-16.6	24.5	1.4	21	89	1.3	0.11	0.7	1.1	0.11 B
	16	21	19	33.2	19-24.3	155-28.9	7.0	1.8	12	84	12.3	0.07	0.6	0.6	0.12 B
	16	22	51	52.4	19-25.0	155-27.9	4.6	2.0	22	54	11.9	0.09	0.7	0.9	0.21 C
	16	23	50	36.4	19-19.0	155-13.6	8.0*	0.4	8	208	7.0	0.16	1.2		0.12 C
	16	23	58	59.0	19-14.6	155-21.6	29.6	2.9	27	155	8.0	0.15	0.9	1.5	0.14 C
	17	5	0	1.0	19-20.0	155-10.9	2.3	2.5	23	146	9.9	0.15	0.9	1.2	0.25 C
	17	8	7	22.6	19-20.6	155-10.8	5.4	2.1	21	139	3.1	0.10	0.8	0.7	0.20 B
	17	8	8	46.5	19-20.0	155-11.0	8.6	0.6	13	165	4.4	0.10	0.8	1.5	0.09 C
	17	10	40	48.2	19-28.6	155-47.9	8.0	2.2	17	152	20.9	0.10	0.9	1.5	0.13 C
	17	12	20	37.7	19-26.2	155-27.1	8.0	1.3	21	69	9.4	0.12	0.7	0.9	0.16 B
	17	15	42	17.5	19-24.8	155-25.3	6.4	2.5	24	43	9.1	0.07	0.6	0.6	0.17 B
	18	12	13	57.9	19-22.1	155-27.8	4.1	1.5	22	65	8.7	0.09	0.7	1.0	0.22 C
	18	13	26	54.4	19-19.1	155-16.1	9.2	0.2	8	182	3.0	0.34	2.1	3.3	0.14 C
	19	5	11	5.4	19-19.3	155-13.6	8.0	3.0	23	148	6.1	0.07	0.5	0.3	0.11 B
	19	6	26	18.9	19-37.1	155-48.4	12.7	3.2	19	146	8.4	0.06	0.6	0.7	0.09 B
	19	20	34	12.1	19-19.5	155-13.8	6.2	1.2	19	163	6.3	0.11	0.8	0.7	0.19 C
	19	22	35	1.9	19-50.9	155- 2.7?	59.1	1.5	15	251	31.5	0.72	3.1	5.6	0.11 D
	21	3	51	8.8	19-19.3	155-10.5	5.0	1.0	13	200	5.2	0.28	1.7	1.3	0.23 C
	21	7	0	58.0	19-30.7	155-57.1	9.0		18	228	22.8	0.32	2.4	2.2	0.21 D
	21	21	45	51.2	19-24.8	155-24.1	6.5	1.6	20	61	7.9	0.07	0.6	0.6	0.16 B
	22	15	28	20.3	19-15.3	155- 2.7	32.6		21	249	17.7	0.26	1.6	1.6	0.08 C
	22	22	16	9.9	19-31.7	156-31.0	8.0*	2.9	14	285	73.3	0.77	4.9		0.14 D
	22	22	46	55.1	19-16.1	155- 4.3	31.7	1.9	18	252	23.5	0.19	1.4	1.3	0.10 C
	23	1	27	52.7	19-33.7	155-54.8	4.8	2.1	14	217	16.1	0.32	2.7	2.4	0.17 C
	23	2	32	32.7	19-20.7	155-25.3	4.3	2.4	22	78	3.6	0.08	0.7	0.8	0.24 B
	23	3	1	29.8	19-19.9	155-12.6	6.9	2.2	22	144	4.6	0.10	0.8	0.6	0.21 C
	23	7	30	19.1	19-19.5	155-12.8	3.6	1.7	20	188	5.4	0.20	1.1	1.2	0.24 C
	23	7	47	51.0	19-59.2	155-43.7?	44.1	4.1	26	142	16.6	0.32	1.3	3.1	0.10 B
	23	11	36	52.9	20- 1.7	155-22.4?	11.1	2.8	10	226	15.6	0.42	3.0	2.0	0.13 D
	23	18	44	41.8	19-48.7	155-32.4	16.2	2.5	14	103	9.2	0.21	1.7	4.8	0.20 B
	24	5	32	42.8	19-31.4	155-51.9	4.8	2.7	18	187	18.4	0.22	1.3	1.7	0.14 C
	24	8	15	28.7	19-26.1	155-16.1	29.7	2.1	18	80	1.4	0.23	1.3	2.3	0.15 B
	24	12	44	45.9	19-21.0	155-23.6?	3.5		11	97	1.5	0.16	1.3	1.4	0.23 B
	24	12	45	10.9	19-21.3	155-24.7	7.1	1.9	18	64	3.2	0.06	0.6	0.6	0.16 B
	24	18	3	10.8	19-19.1	155-11.3	2.4	2.1	23	155	6.1	0.18	1.0	1.4	0.27 C
	25	13	44	7.4	19-59.6	155-23.2	29.7	3.5	21	204	12.3	0.23	1.3	2.6	0.12 C
	25	16	40	10.7	19-19.2	155-13.7	8.0*	1.6	11	204	6.3	0.12	0.8		0.11 C
	26	0	42	36.2	19-23.5	155-24.4	6.5	2.3	19	99	6.3	0.08	0.6	0.6	0.14 B
	26	2	8	47.7	19-21.6	155-12.2	5.9	1.2	13	160	1.7	0.13	0.8	0.9	0.14 C
	26	5	33	17.6	19-22.9	155- 4.3?	3.7	2.1	10	153	5.9	0.20	1.5	1.5	0.20 C
	26	8	50	15.2	19-19.4	155-15.3	6.4	1.1	11	184	4.0	0.16	1.0	0.9	0.15 C
	26	9	17	49.7	19-20.2	155-20.3	28.1	2.5	28	69	5.1	0.13	0.8	1.4	0.15 B
	26	12	11	19.1	19-14.7	155-26.0	6.2	2.7	24	121	3.3	0.09	0.8	0.6	0.22 C
	27	6	31	7.4	19-22.1	155-25.4	2.6	1.4	15	104	5.1	0.14	1.0	1.9	0.25 C
	27	6	31	40.3	19-17.7	155-13.1	6.4	1.9	22	181	8.7	0.15	0.9	0.6	0.16 C
	27	11	15	18.5	19-43.4	155- 2.1	48.5	2.1	15	210	24.4	0.37	1.6	3.4	0.11 C
	27	13	15	58.8	19-18.3	155-13.2	8.0*	1.6	8	226	8.1	0.17	1.2		0.09 D
	27	13	29	30.7	19-22.8	155- 2.4	4.5	2.3	10	134	5.5	0.15	1.2	1.4	0.21 C
	28	0	16	14.2	19-19.8	155-12.1	8.0*	1.3	14	211	5.0	0.12	0.8		0.10 C
	28	3	10	28.2	19-24.6	155-24.3?	7.6	1.2	18	59	8.1	0.06	0.6	0.7	0.13 B
	28	3	57	56.0	19-53.6	155- 1.8	49.8	2.6	22	234	32.7	0.42	2.0	3.7	0.13 C
	28	7	10	20.3	19-24.8	155-24.7	8.0*	1.3	18	63	8.7	0.07	0.6		0.15 C

## SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MO	Q
FEB	28	9	14	51.0	19-23.4	155-28.8?	7.3	1.3	13	88	11.3	0.08	0.7	0.7	0.14	B
	28	15	30	22.5	20- 5.8	156- 1.6	3.2	2.7	17	272	26.1	0.53	6.0	4.9	0.21	D
	28	15	48	55.0	19-24.6	155-23.6	5.1	1.2	13	110	6.9	0.12	0.9	1.2	0.19	B
	28	21	7	28.4	19-15.9	155-11.9	8.0*	1.5	10	270	11.9	0.53	2.9		0.15	D
MAR	1	4	0	36.6	19-19.1	155-13.3	8.0*	1.3	9	209	7.4	0.19	1.3		0.13	C
	1	18	41	12.2	19-17.9	155-14.8	8.0*	1.7	13	188	6.2	0.11	0.8		0.11	C
	2	0	19	31.1	19-21.2	155-14.4	8.5	1.3	10	229	3.4	0.34	1.9	2.1	0.10	C
	2	0	48	16.6	19-19.7	155-13.2	6.0	1.7	16	198	6.9	0.20	1.2	0.8	0.21	C
	2	2	44	21.2	19-20.5	155-24.5?	8.6	1.7	12	91	2.3	0.07	0.8	0.7	0.15	B
	2	8	30	56.0	19-18.1	155-12.7	8.0*		10	234	8.9	0.26	1.7		0.15	D
	2	13	24	53.4	19-23.4	155-24.3	8.0*		8	204	6.2	0.24	1.7		0.15	C
	3	0	1	48.1	19-17.4	155-11.1?	0.1	1.5	15	236	8.9	7.67	1.9	14.1	0.20	D
	3	7	25	19.1	19-23.1	155- 5.9	2.6	1.8	13	122	7.2	0.12	0.8	1.1	0.15	B
	4	5	42	29.8	19-22.2	155-26.6	8.0*	1.7	14	75	6.9	0.06	0.6		0.11	B
	4	6	26	22.3	19-19.3	155-10.7	8.0*	1.2	11	243	5.4	0.16	1.0		0.08	D
	4	11	29	32.9	19-19.2	155- 9.1	8.0*	1.7	12	178	5.4	0.12	1.0		0.13	C
	4	17	59	19.2	19-56.7	155-31.1	25.4	2.3	16	163	19.3	0.22	1.2	3.2	0.13	C
	4	19	26	28.8	19-39.3	156- 1.9?	0.0	2.3	14	271	20.5	0.58	5.2	1.8	0.25	D
	4	20	9	9.9	19-42.4	156-10.2?	8.2	2.3	14	290	57.9	0.66	11.4	25.0	0.33	D
	5	6	2	17.6	19-19.9	155-10.5	8.5	1.5	9	224	4.1	0.13	1.0	1.2	0.06	B
	5	23	11	49.2	19-24.1	155-25.2	4.5	1.7	15	62	7.9	0.11	0.9	1.3	0.20	B
	6	1	45	20.4	19-31.9	155-37.3?	7.2	2.9	21	85	5.4	0.14	1.2	1.5	0.23	B
	6	8	15	34.1	19-20.9	155-48.3	6.7	2.8	13	180	11.5	0.18	2.0	2.7	0.12	C
	6	17	29	27.0	19-23.3	155-28.7	4.2	2.1	22	88	11.1	0.10	0.7	1.0	0.22	C
	6	18	49	45.9	19-25.1	155-26.6?	7.3	3.9	27	45	10.5	0.07	0.6	1.2	0.18	C
	6	20	4	45.1	19-20.7	155-14.0	10.7	1.1	9	169	4.7	0.10	0.6	1.0	0.06	B
	7	4	36	20.0	19-19.8	155-14.8?	7.7	1.4	10	179	4.6	0.24	1.9	1.2	0.21	C
	7	6	40	16.7	19-18.8	155-13.4	6.3	2.1	19	152	7.3	0.12	0.8	0.7	0.20	C
	7	6	1	45.6	19-18.4	155-13.2?	7.6	3.3	24	152	7.5	0.06	0.5	0.9	0.12	C
	7	9	18	24.8	19-20.3	155-12.0	10.1		12	212	4.2	0.12	0.7	1.0	0.08	B
	7	17	32	43.7	19-18.9	155-13.4?	8.0	3.3	22	152	6.7	0.08	0.5	0.4	0.10	C
	7	17	36	43.7	19-20.3	155-14.8	6.0		15	192	4.4	0.23	1.6	1.0	0.22	C
	7	18	24	26.0	19-21.6	155- 4.9?	2.0		9	126	4.6	0.15	1.2	1.6	0.17	B
	7	20	0	24.5	19-20.7	155-15.2	4.6		14	176	3.3	0.17	1.2	0.9	0.21	C
	7	20	14	11.7	20- 2.1	156-15.4	8.0*		13	305	88.3	1.20	7.3		0.11	D
	8	1	21	49.8	19-21.4	155-15.6	5.8		12	202	2.0	0.17	0.9	0.9	0.12	C
	8	2	9	58.6	19-19.1	155-14.1	7.0	2.2	20	171	6.1	0.13	0.9	0.6	0.15	C
	8	4	45	13.7	19-21.6	155- 7.0	3.8	1.9	19	137	5.0	0.11	0.8	0.9	0.16	C
	8	9	30	20.3	19-24.6	155-25.4	0.3*	1.4	12	226	9.0	0.28	1.3		0.15	D
	8	9	53	35.8	19-18.4	155- 8.8	8.0*		9	192	10.6	0.20	1.7		0.18	C
	8	17	54	0.2	19-20.8	155- 7.3?	1.7	3.1	22	138	5.0	0.13	1.1	1.1	0.20	C
	8	23	2	10.1	19-20.4	155-17.0?	7.5		9	184	0.9	0.35	1.1	2.5	0.08	C
	8	23	6	49.5	19-19.3	155-17.2	6.5	1.3	11	176	1.6	0.07	0.5	0.4	0.07	B
	9	18	28	42.3	19-19.1	155-27.1?	7.5	2.1	15	73	5.0	0.07	0.7	1.5	0.15	B
	10	1	9	31.6	19-20.6	155-19.7	1.7*		9	104	4.1	0.03	0.2		0.05	B
	10	6	44	52.9	19-25.5	155-25.0	8.0*	1.9	14	153	8.4	0.07	0.6		0.09	C
	10	10	8	35.8	19-19.5	155- 8.2	3.6		16	176	5.6	0.22	1.5	2.3	0.27	C
	10	12	10	41.8	19-21.9	155-15.7	27.9	2.2	20	116	1.0	0.11	0.7	1.1	0.10	A
	10	23	37	58.6	19-20.6	155-12.6	5.9		14	184	5.5	0.23	1.3	1.2	0.22	C
	11	1	19	42.2	19-20.5	155-16.0	26.9		14	131	2.5	0.15	0.9	1.6	0.08	B
	11	6	36	28.7	19- 9.8	155-37.5	5.3	2.9	20	102	9.5	0.14	1.0	1.0	0.22	C
	11	9	13	44.5	19-22.6	155- 5.4	2.6	2.1	7	126	6.6	0.06	0.5	1.1	0.05	B
	11	13	49	23.2	19-22.7	155-41.0	8.0	2.3	9	242	15.0	0.44	2.7	3.6	0.13	D
	11	14	25	38.4	19-20.9	155-13.8	8.6	1.4	9	166	4.7	0.20	1.2	2.4	0.12	C
	11	14	59	11.8	19-21.0	155-14.3	8.4	1.2	9	157	3.8	0.15	1.0	1.9	0.11	C



## SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MO	Q
MAR	12	9	44	3.4	19-20.1	155-21.2	28.8	2.1	18	80	3.7	0.17	1.0	1.9	0.12 R
	12	9	44	38.1	19-20.3	155-20.8	27.7	2.4	22	72	4.5	0.15	0.9	1.4	0.13 R
	12	18	35	36.3	19-19.3	155-13.4	8.0*	1.5	10	205	7.1	0.20	1.5		0.18 C
	13	0	50	51.5	19-19.4	155-14.5	9.2	1.3	10	191	5.2	0.22	1.2	2.4	0.12 C
	13	4	33	10.3	19-24.8	155-17.7	11.5	2.0	19	56	1.1	0.06	0.6	0.6	0.11 R
	13	6	15	6.3	19-20.2	155-11.2	8.6	0.7	10	216	4.2	0.15	1.0	1.9	0.09 R
	13	15	15	3.6	19-44.8	155-24.1	21.9	2.5	22	74	7.0	0.11	0.6	1.9	0.11 R
	13	17	6	55.1	20- 9.0	155-40.3?	40.1	3.0	23	230	11.5	0.52	2.4	4.3	0.11 C
	13	22	16	27.6	19-20.2	155- 7.9	8.7	0.2	8	164	4.9	0.14	1.1	2.4	0.10 C
	14	0	35	31.4	19-16.0	155-22.7	6.4	0.7	14	139	7.0	0.09	0.8	0.6	0.17 R
	14	3	2	28.2	19-23.3	155-24.6	7.2		10	194	6.2	0.13	0.9	0.7	0.10 R
	14	19	20	1.7	19-22.6	155-47.7	10.5	3.0	17	139	14.6	0.11	1.0	1.2	0.11 R
	15	2	31	10.2	19-22.8	155-23.2	5.1	1.1	12	169	4.8	0.13	1.0	1.0	0.16 C
	15	7	56	13.8	19-19.3	155-11.7	2.2	2.3	23	152	6.2	0.17	1.0	1.5	0.26 C
	15	13	17	15.2	19-24.4	155-25.1?	5.6	1.3	15	104	8.4	0.12	0.8	2.4	0.19 R
	15	14	51	44.3	19-25.7	155-37.0?	46.5	2.3	13	223	25.1	0.57	6.0	4.7	0.28 D
	15	20	34	10.4	19-21.3	155-25.1?	6.8	1.7	12	74	3.8	0.10	1.0	2.2	0.19 R
	15	22	16	9.8	19- 4.2	156- 7.6?	40.3	2.2	20	301	34.6	0.23	1.5	2.3	0.09 C
	16	9	40	9.3	19-37.0	155-30.0	7.4	2.1	12	92	17.7	0.22	1.0	1.5	0.16 C
	17	1	44	36.4	19-22.9	155-22.5	8.0*	0.7	14	100	5.1	0.06	0.5		0.10 R
	17	5	37	22.2	19-20.7	155-13.3	8.0*	0.0	11	175	5.6	0.15	1.0		0.11 C
	17	14	35	12.6	19- 3.3	155-13.0	20.0	2.0	19	224	28.5	0.30	2.1	9.1	0.17 C
	17	21	59	46.4	19-17.6	155-30.3	4.2	1.0	14	99	6.7	0.12	1.0	1.1	0.19 R
	18	10	2	13.7	19-22.2	155-23.8	10.0		7	198	3.8	0.36	1.5	3.2	0.07 C
	18	19	6	18.6	19-18.8	155-12.9	5.9	1.6	17	176	8.2	0.25	1.4	1.1	0.21 C
	18	19	10	22.0	19-19.6	155-13.8	8.0*	0.5	10	209	6.4	0.25	1.7		0.17 C
	18	21	36	45.3	19-20.1	155-17.2	7.8		7	184	0.3	0.09	0.6	0.7	0.03 R
	18	23	44	40.4	19-17.6	155-25.5	8.0	2.3	21	109	3.0	0.09	0.8	0.6	0.17 R
	19	0	48	60.0	19-19.5	155- 6.8	8.0*		11	178	6.9	0.18	1.6		0.19 C
	19	4	1	21.3	19-19.1	155-13.4	8.0*-0.0		9	208	7.2	0.19	1.4		0.14 C
	19	7	50	45.3	19-21.7	155-15.6	8.9	1.3	10	143	1.4	0.17	0.8	1.5	0.07 R
	19	20	12	26.1	19-21.9	155-23.1	6.8	0.6	13	92	3.3	0.06	0.5	0.5	0.10 A
	19	22	14	50.6	19-23.9	155-49.3	9.6	1.7	14	202	15.5	0.16	1.4	1.5	0.13 C
	20	3	23	8.4	19-17.4	155-22.0	2.4	0.8	13	134	5.6	0.11	0.7	1.4	0.14 R
	21	7	30	23.7	19-19.4	155-14.5	32.2	2.5	22	143	5.3	0.14	0.9	1.4	0.11 R
	21	8	11	46.3	19-23.4	155-23.9?	7.7	2.8	21	55	6.0	0.05	0.6	1.2	0.14 R
	21	8	14	56.0	19-23.5	155-23.2	8.0*	1.2	13	178	6.1	0.13	0.9		0.13 C
	22	13	45	56.5	19-15.4	155-22.6	4.7	1.2	14	164	8.4	0.11	1.1	1.2	0.17 C
	22	23	8	50.7	19-20.3	155-11.3	10.0	1.0	12	213	4.2	0.25	1.2	2.1	0.08 C
	23	1	38	44.7	19-21.7	155-23.4	6.2	0.9	12	173	2.8	0.10	0.7	0.6	0.11 C
	23	4	25	6.1	19-21.7	155-24.0	7.2	0.7	13	107	3.0	0.11	0.9	0.8	0.16 R
	23	14	39	8.1	19-23.9	155-24.3	7.1	3.0	21	56	7.1	0.07	0.6	0.6	0.17 R
	23	19	24	33.5	19-20.0	155-13.5	5.9		14	187	6.0	0.20	1.4	1.0	0.23 C
	24	1	22	49.7	19-16.8	155-23.6	3.8		14	133	6.3	0.09	0.8	1.2	0.16 R
	24	20	52	3.4	18-53.5	155- 9.8	8.0*		18	272	43.4	0.88	5.7		0.18 D
	24	23	41	51.8	19-20.4	155-29.0	47.0		12	102	10.0	0.34	1.2	3.4	0.08 R
	25	5	53	33.9	19-18.0	155-15.1	6.8	1.7	18	184	5.5	0.16	1.0	0.7	0.19 C
	25	19	22	55.3	19-24.7	155-28.4	4.4	0.9	11	170	12.1	0.12	0.8	1.4	0.13 C
	26	6	3	52.0	20- 2.9	155-28.3	13.7*	1.8	16	211	22.1	0.24	1.9		0.18 C
	26	9	56	45.6	19-43.4	155-46.2	20.3	3.5	21	118	8.3	0.14	0.8	2.2	0.11 R
	26	11	31	25.4	19-20.6	155- 6.2	8.0*	1.9	8	164	5.8	0.16	1.6		0.15 C
	27	0	46	11.6	19-19.0	155-13.4	8.0*	1.7	7	212	7.4	0.18	1.3		0.09 C
	27	0	55	34.4	19-59.1	155-41.2	10.8	2.1	19	138	18.7	0.10	1.0	1.7	0.10 R
	27	4	34	23.9	19-20.0	155-14.1	8.0*	1.2	17	169	5.5	0.08	0.6		0.11 C
	27	7	14	25.1	19-20.4	155-13.3	7.2	0.5	13	204	4.0	0.21	1.5	0.8	0.19 C

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MIN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
MAR	27	16	59	42.3	19-23.9	155-24.3	2.7	1.5	12	201	7.0	0.14	0.7	1.2	0.09 C
	27	17	28	22.4	19-21.9	155-25.6	4.7	1.3	17	83	5.2	0.09	0.7	0.9	0.20 B
	28	0	23	1.4	19-18.4	155-14.9	12.2	1.5	10	211	5.4	0.22	0.8	1.8	0.07 B
	28	11	31	50.9	19-18.9	155-10.1	3.6		12	181	5.9	0.24	1.6	2.4	0.24 C
	28	18	48	8.2	19-21.7	155-25.1	8.7		10	107	4.2	0.07	0.6	1.6	0.08 A
	28	19	55	7.2	19-19.2	155- 8.7?	0.8	2.0	16	178	5.7	1.42	1.2	5.2	0.22 C
	28	23	1	18.7	19-22.7	155-26.2	6.1	2.0	15	73	6.2	0.10	0.8	1.0	0.17 B
	29	7	0	43.9	19-21.9	155-25.1	8.1	1.9	18	56	4.4	0.05	0.6	1.3	0.11 H
	29	7	23	16.8	19- 5.6	155- 8.0	15.6*		13	248	29.4	0.46	3.3		0.17 D
	29	16	23	40.3	19-20.5	155- 8.9	29.8	2.2	22	174	3.4	0.16	1.0	1.3	0.11 C
	29	18	23	1.9	19-24.1	155-15.7	4.4	1.2	9	122	2.5	0.38	1.1	2.8	0.12 B
	29	20	36	35.2	19-20.0	155-10.8	9.4	1.1	14	164	4.2	0.08	0.6	1.1	0.09 B
	29	21	21	27.1	19-20.7	155-19.9	3.0	1.6	10	105	4.5	0.20	0.5	4.0	0.09 H
	30	9	32	41.2	19-46.2	155-25.9	32.1	3.0	19	92	3.0	0.19	0.9	2.4	0.12 B
	30	18	56	59.4	19-25.4	155-28.1?	8.0	1.9	19	78	11.6	0.06	0.5	0.5	0.13 B
	30	22	21	9.4	19-18.4	155-13.3	8.0*		11	224	7.9	0.22	1.5		0.13 C
	31	3	19	46.4	19-23.6	155-25.3	6.6	1.7	15	56	7.3	0.08	0.7	0.9	0.15 B
	31	4	38	10.2	19-21.8	155-24.0	7.7	1.6	11	62	3.3	0.06	0.7	0.7	0.10 A
	31	6	28	59.6	19-18.3	155-21.4	8.0*	1.7	9	219	4.7	0.29	1.9		0.16 C
	31	7	16	39.4	19-20.1	155-14.5?	4.3	1.9	18	165	5.0	0.15	1.0	1.0	0.21 C

Table 3. Felt earthquakes

<u>Date</u>		<u>Time</u>			<u>Magnitude</u>	<u>Felt report</u>
		<u>H</u>	<u>M</u>	<u>S</u>		
Jan	2	20	20	10.8	3.6	Honaunau, Pahala
	13	11	30	00.1	3.7	South Kona
	14	06	01	49.9	3.1	Kamuela
	14	06	40	17.2	3.2	Kapapala, Kamuela
	14	19	19	31.2	1.8	Kamuela
	21	20	50	18.5	1.9	Kamuela
	22	13	12	04.3	3.1	Honokaa, Kamuela, Pohakuloa
	22	13	57	44.9	3.3	Kamuela, Honokaa, Pohakuloa
	28	23	20	53.3	2.6	Kapapala
Feb	4	17	58	43.6	2.1	Kapapala
	9	11	16	43.1	3.1	Kapapala
	12	19	46	58.3	3.9	Volcano, Pahala, South Kona, Honolulu, Kurtistown, Hilo
	23	07	47	51.0	4.1	Kamuela
	26	12	11	19.1	2.7	Kapapala
	Mar 6	18	49	45.9	3.9	Volcano, Kapapala, South Kona
7	06	51	45.6	3.3	Volcano, Keaau, Hilo	
13	17	06	55.1	3.0	Kamuela	
21	08	11	46.3	2.8	Kapapala	

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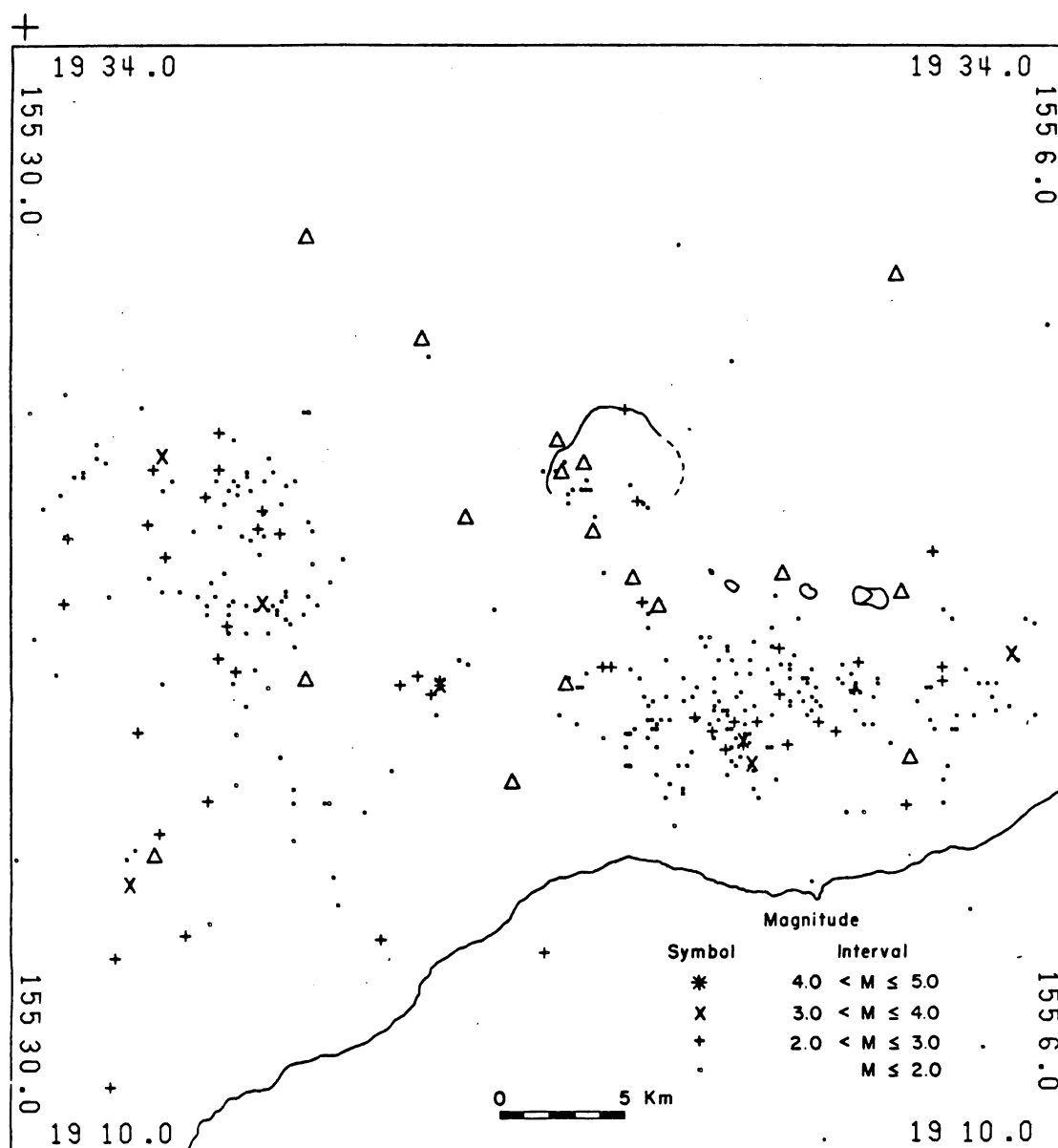


Figure 1.--Plot of epicenters in the Kilauea region. Triangles are seismometer locations. Kilauea Caldera and the major pit craters on the east rift are shown in outline. The Pacific Ocean lies in the lower right portion of the illustration.

Table 4. Seismometer stations in Hawaii operated by the U. S. Geological Survey.

STATION NAME	CODE	LAT-N	LONG-W	ELEV	TYPE	CAL	VCO	RADIO	REMARKS
AHUA	AHU	19 22.40	155 15.90	1070	3	6.0	2380		
CONE PEAK	CPK	19 23.70	155 19.70	1038	3	1.34			
DESERT	DES	19 20.20	155 23.30	815	3	1.34			
ESCAPE ROAD	ESR	19 24.68	155 14.33	1177	3				
HALE POHAKU	HPU	19 46.85	155 27.50	3396	1	5.6	1360	RF6	
HILINA PALI	HLP	19 17.96	155 18.63	707	1	6.0	2040		
HUALALAI	HUA	19 41.25	155 50.32	2189	1	5.2	1700	RF4	
KAAPUNA	KAA	19 15.98	155 52.28	524	1	5.5	1020	RF12	
KAHUKU	KHU	19 14.90	155 37.10	1939	1	5.7	1700	RF3	
KAPAPALA RANCH	KPR	19 16.40	155 26.70	610	1	6.5	1700	RF1	
KEANAKOLU	KKU	19 53.39	155 20.58	1863	1	4.8	2380	RF7	
KIPUKA NENE	KPN	19 20.10	155 17.40	924	3	1.34			
KOHALA	KOH	20 7.69	155 46.77	1166	1	1.5	2380	RF2	
MAUNA LOA	MLO	19 29.80	155 23.30	2010	1	6.5	1360		
MAUNA LOA X	MLX	19 27.60	155 20.70	1475	3	1.34			
MAKAOPUHI	MPR	19 22.07	155 9.85	881	1	5.7	2720	RF5	
MOKUAWEOWEO	MOK	19 29.28	155 35.98	4104	1	6.5	2040	RF3	
MOUNTAIN VIEW	MTV	19 30.25	155 3.75	409	1	6.2	680	RF8	
NORTH PIT	NPT	19 24.90	155 17.00	1115	3	1.34			
OUTLET	OTL	19 23.38	155 16.94	1038	3	5.0			
PUU HULUHULU	PHH	19 22.45	155 12.66	988	3				
PUU HONUAULA	PHO	19 28.90	154 53.40	215	1	6.5	2720	RF1	
PUU PILI	PPL	19 9.50	155 27.87	35	1	4.4	1360	RF11	
SOUTH POINT	SPT	18 58.91	155 39.92	244	1	7.8	2040	RF7	
WAHAULA	WHA	19 19.90	155 2.92	29	1	6.0	680	RF9	
WALDRON LEDGE	WLG	19 25.49	155 15.69	1067	3				
OPTICAL SEISMOGRAPHS									
HALEAKALA Z	HAL	20 46.00	156 15.00	2090	3	0.71			
HALEAKALA EW	HAE	20 46.00	156 15.00	2090	0	1.0			Wood-Anderson
HALEAKALA NS	HAN	20 46.00	156 15.00	2090	0	1.0			Wood-Anderson
HILO Z	HIL	19 43.20	155 5.30	20	3	1.0			
HILO EW	HIE	19 43.20	155 5.30	20	0	1.0			Wood-Anderson
HILO NS	HIN	19 43.20	155 5.30	20	0	1.0			Wood-Anderson
KIPAPA	KIP	21 25.40	158 .90	76	3	0.56			
UWEKAHUNA Z	UWE	19 25.40	155 17.60	1240	3	0.7			
UWEKAHUNA Z	USZ	19 25.40	155 17.60	1240	4	1.0			
UWEKAHUNA EW	USE	19 25.40	155 17.60	1240	4	1.0			
UWEKAHUNA PEZ		19 25.40	155 17.60	1240					15-90 Press Ewing
UWEKAHUNA PEE		19 25.40	155 17.60	1240					
UWEKAHUNA PEN		19 25.40	155 17.60	1240					

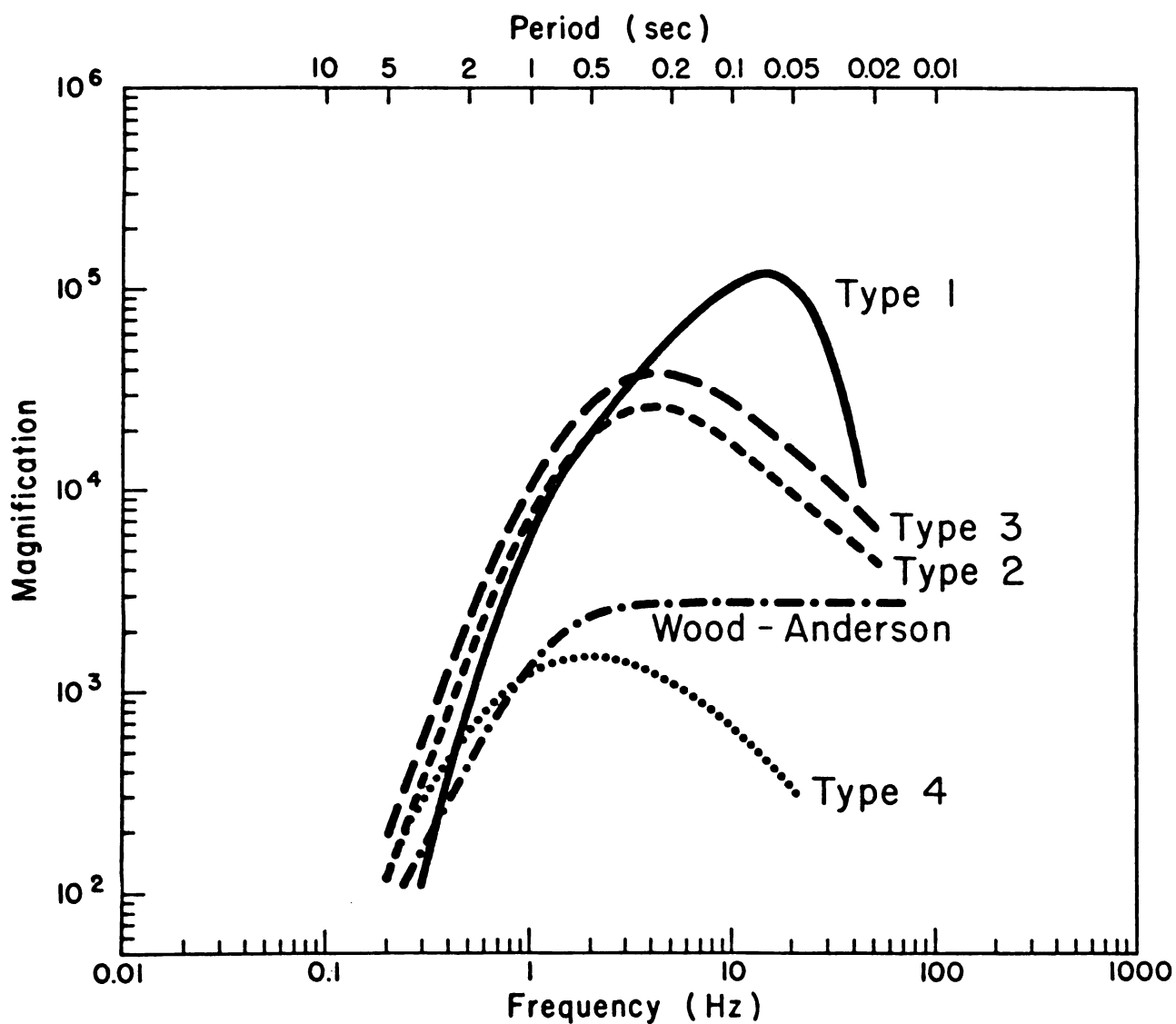


Figure 2.--System response curves for the Wood-Anderson torsion seismograph and for the four different types of seismometer-amplifier (or galvanometer) combinations in use by the Hawaiian Volcano Observatory.

Table 5.--Seismic Instrumentation Types

Type 1. Consists of:

- a) EV-17 - Electrotech EV-17 1.0 sec. period moving magnet vertical component seismometer or horizontal component adjusted for an output of 0.5 volts/cm/sec and 0.8 critically damped.
- b) Preamp/VCO - Develco Model 6202 voltage controlled oscillator or a USGS/NCER Model JE202. 3 db points for bandpass filter at 0.1 Hz and 30 Hz. Signals are transmitted on audio FM carrier over cable or FM radio link to HVO.

Type 2. Consists of:

- a) EV-17 - Electrotech EV-17 1.0 sec. period moving magnet vertical or horizontal component seismometer.
- b) 3.5 Hz galvanometer with appropriate shunt resistances for critical damping. System is poorly calibrated.

Type 3. Consists of:

- a) EV-17 Electrotech EV-17 (as described above), Hall-Sears HS-10 0.5 sec. period moving coil seismometer or Observatory-built 0.8 sec. period moving coil seismometer with HVO-built solid state seismic preamplifier (voltage gain, 200X), direct signal transmission over cable to HVO and HVO-built solid state amplifier and galvanometer driver, or Observatory-built electromagnetic seismometer with 2 Hz galvanometer. Peak magnification approximately 40,000 at 4 Hz.

Type 4. Consists of:

Sprengnether short period vertical and horizontal seismometers (E-W) with 1.5 sec. galvanometers, coupling factor = 0.25, 2X critically damped. Peak magnification approximately 1500X at 2 Hz.

Experimental type amplifier systems are not given type numbers.

# TILTING OF THE GROUND AROUND KILAUEA CALDERA

Tilting of the ground around the summit of Kilauea is monitored daily by a short-base water-tube tiltmeter in Uwekahuna Vault, and at irregular intervals it is measured on a regional scale by means of a network of field tilt-bases and a portable water-tube tiltmeter. The attitude of the ground surface at each tilt-base is reported in terms of north-south and east-west tilt coordinates. Both coordinates at each station were arbitrarily set equal to 500 when measurements at that station were begun. Increasing tilt coordinates correspond to northward and eastward tilting of the earth's surface; that is, to a relative subsidence toward the north and east. A one-unit change in coordinate corresponds to a tilting of 1 microradian (1 mm per km) in the direction indicated.

Location of and essential data on each tiltmeter station are listed in Table 8.

Table 6.--Tilt Coordinates at Uwekahuna,  
January, February, and March 1973

Date	N-S	E-W	Date	N-S	E-W
Jan. 7	721	320	March 4	719	321
14	721	318	11	719	321
21	720	319	18	719	320
28	720	319	25	719	319
Feb. 4	720	318			
11	720	319			
18	719	321			
25	719	321			

Table 7.--Tilt coordinates and changes at bases around Kilauea caldera. (See fig. 3)

Tilt base	Date (1973)	Tilt N-S	Coordinates E-W	Rate ( $10^{-6}$ rad/mo) and direction of tilting since last reading	Date of last reading (1972)
Uwekahuna (U on fig. 3)	21 Mar	745.5	352.4	0.38 S54.0°W	5 Dec
Tree Molds (TM)	21 Mar	580.6	482.5	0.22 N66.8°W	5 Dec
Sand Spit (SS)	22 Mar	1012.2	726.6	2.89 S 2.8°E	6 Dec
Mehana (M)	21 Mar	615.2	600.9	0.80 N16.5°W	5 Dec
Keamoku (Kea)	22 Mar	773.9	233.4	1.79 S54.6°E	5 Dec
Ahua Kamokukolau (Kam)	22 Mar	383.1	530.9	2.39 N33.9°W	6 Dec
Kipuka Nene (KN)	Not occupied this epoch				
Hilina Pali (HP)	Not occupied this epoch				
Kapapala Ranch (Kap)	Not occupied this epoch				

Table 8.---Geological Survey water-tube tiltmeter stations in Hawaii

Station	Symbol	Location		Frequency of reading	Base length M	Description
		Lat. N. Deg. Min.	Long. W. Deg. Min.			
Tree Molds	TM	19 - 26.3	155 - 17.3	Quarterly	50.79	NS. and EW.
Sand Spit	SS	19 - 24.1	155 - 16.8	---do---	25.40	Equilateral triangle.
Keamoku	Kea	19 - 25.1	155 - 19.0	---do---	47.55	do
Ahua Kamokukolau	Kam	19 - 22.7	155 - 16.6	---do---	50.79	do
Kipuka Nene	KN	19 - 19.4	155 - 16.7	---do---	47.73	do
Hilina Pali	HP	19 - 18.2	155 - 18.6	---do---	47.73	do
Kapapala Ranch	Kap	19 - 20.5	155 - 23.8	---do---	50.79	do
Mehana	M	19 - 26.2	155 - 14.3	---do---	25.00	do
Uwekahuna	U	19 - 25.5	155 - 17.4	---do---	50.79	do
Uwekahuna Vault		19 - 25.4	155 - 17.6	Daily	3.48	NS. and EW.



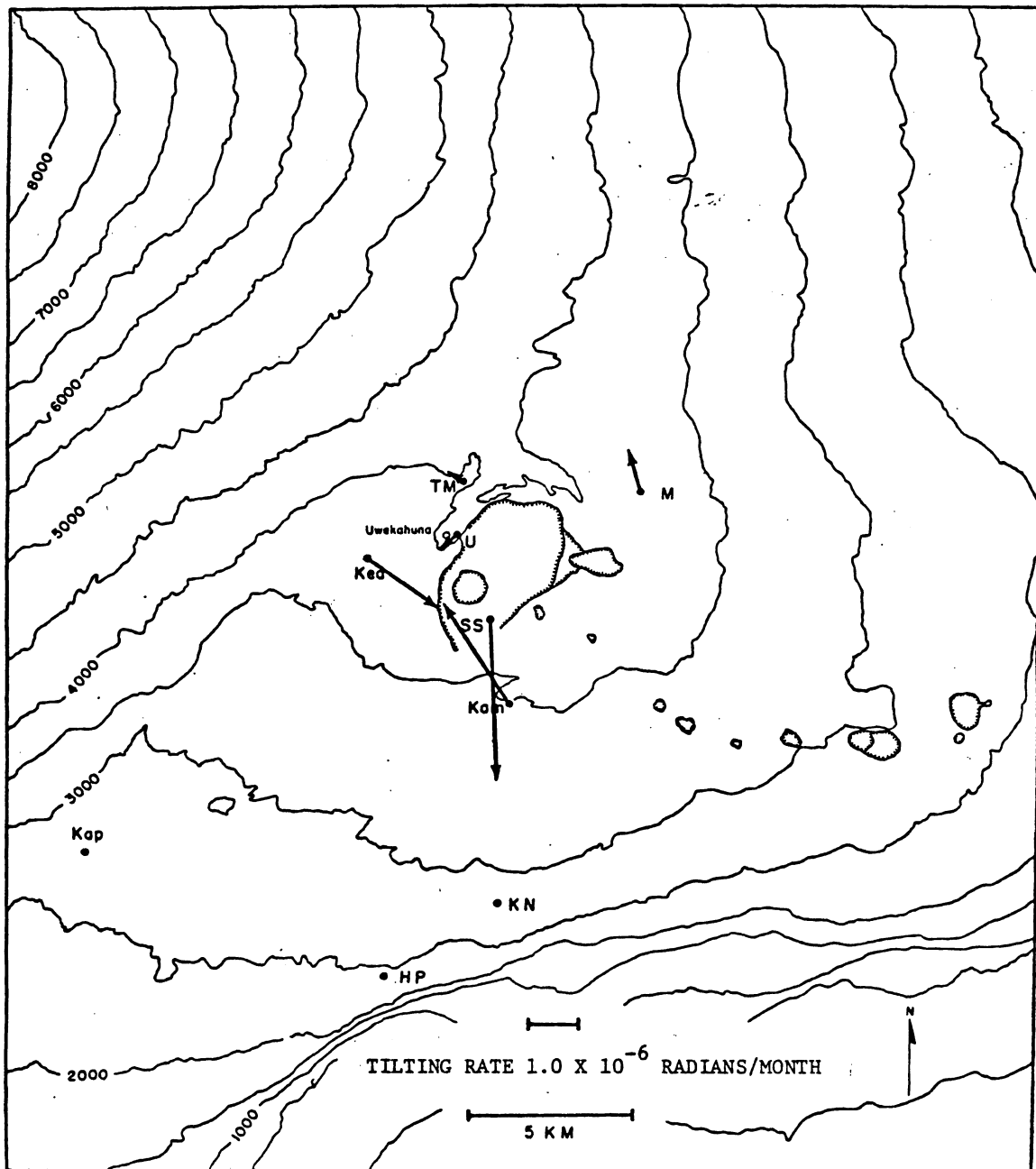


Figure 3.--Tilting of the ground around Kilauea Caldera. The vector depicting tilting at a given tilt base points in the direction of maximum relative subsidence, and its length is proportional to the rate of tilting during the measurement interval. Closed circles represent field tilt bases; open circles, short-base watertube tiltmeters. See Table 7 for explanation of abbreviations.

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UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Hawaiian Volcano Observatory

Summary 70

April, May, and June 1973

By

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Chronological Summary

By

Robert I. Tilling

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### Summary of eruptive events

Eruptive activity during the first month of the quarter basically resembled that of the previous several months. Lava-lake activity continued at Mauna Ulu, with levels fluctuating generally around  $30 \pm 5$  m from the rim; measurements showed that lava levels at Mauna Ulu and Alae tended to vary sympathetically. The Alae vent continued to feed pahoehoe flows, via the south-trending tube system, entering the ocean west of Apua Point. Between March 23 and April 10, the subaerial part of the lava delta grew by an additional  $0.6 \times 10^5 \text{ m}^2$  (15 acres). The state of inflation at Kilauea's summit varied little during this interval of relatively steady activity.

The 6.2-magnitude earthquake of April 26 (see seismic summary) apparently disrupted the lava-tube system, and flow into the ocean ceased within a few days. Presumably because of quake-caused blockages downstream in the tube system, lava gushed out many existing tube openings upstream and broke out at several new sites near Alae, increasing the size of its shield. The activity at Mauna Ulu at first did not show any changes, but during a few hours in the early morning of May 5 lava drained completely from the Mauna Ulu lava lake and the Alae vent. A rubble-choked, 200 m-deep crater was exposed at Mauna Ulu. Shortly afterward, lava erupted from a fissure in the west pit of Pauahi Crater, marking its first activity in historic times; by early afternoon another outbreak began within and near Hiiaka Crater, 800 m uprift, as the activity at Pauahi waned. Late in Hiiaka's activity a small eruptive fissure opened in the eastern end of the Koae fault zone about 1 km west of Hiiaka. Most activity stopped by early evening, but weak lava bubbling in Pauahi persisted until early the next morning. The 7-hour Pauahi-Hiiaka activity erupted a total of about  $1.2 \times 10^6 \text{ m}^3$  of lava, of which  $2.4 \times 10^5 \text{ m}^3$  drained back into vent fissures; the eruption was accompanied by a deflation of approximately 25 microradians at Kilauea's summit region.

Lava moved quietly back into Mauna Ulu within two days and began to refill the emptied crater, and by early June moderate activity resumed. A small pool of lava also reappeared at the Alae vent. On June 9, however, the level of the lake at Mauna Ulu dropped abruptly nearly 100 m, and the lava pool at Alae vent drained and was covered by rubble from collapsing walls. Within several weeks the lava level at Mauna Ulu regained its early-June stands ( $\sim 20$  m below the rim), but Alae never recovered and was inactive for the rest of 1973. The resumed lava-lake activity at Mauna Ulu was mild, and a small "island" of semi-solidified lava was present throughout most of June; field observations and time-lapse photography indicated that the island shifted in size, position, and level as the lava-lake surface fluctuated. Although the lake rose slowly with time, the area of actively circulating lava decreased as the activity became more sluggish toward the end of June. By the end of the quarter, an 8-microradian deflation associated with the abrupt June lowering of Mauna Ulu lava lake had been fully "recovered", but visible eruptive activity was markedly declining.

A deep drill hole south of Halemaumau, funded by NSF and headed by George V. Keller, Colorado School of Mines, was begun on April 6 and continued with brief interruptions throughout the quarter.

## SEISMIC SUMMARY

Events recorded by the U. S. Geological Survey seismograph network in Hawaii fall into two categories:

- 1) Local earthquakes and tremor originating in the region of the Hawaiian Islands (usually within 100 km of at least one seismograph),
- 2) Distant earthquakes originating more than 3,000 km from Hawaii.

As an index of seismic activity at Hawaiian volcanoes, daily counts of earthquakes and minutes of tremor recorded by seismographs in Hawaii are listed in Table 1. The earthquakes are separated in groups on the basis of region of origin as determined by the analysis of records obtained daily at the Observatory (UWE, MLO, MLX, AHU, DES, NPT, WPT, MPH, OTL).

Computer locations of well-recorded events are listed in Table 2. The location of each seismograph station is listed in Table 4, along with a description of the equipment at each station.

Table 1.--Number of earthquakes and minutes of tremor recorded on seismographs around Kilauea

Tremor is separated into three categories: Deep, Intermediate, and Shallow, on the basis of relative amplitude on seismographs in the summit region. Unless otherwise stated, tremor is presumed to be associated with movement of magma within the central complex of Kilauea Volcano.

Earthquake categories are: Kilauea Summit 30 km, earthquakes from a source about 30 km beneath the summit region; Kilauea Summit long-period, earthquakes characterized by low-frequency waves that originate roughly 5 km beneath the summit region; Kilauea Summit Shallow, earthquakes a few km deep in the caldera region; SW Rift and Kaoiki, earthquakes along the southwest rift zone of Kilauea and the adjacent portions of the Kaoiki fault system; Upper East Rift, earthquakes from the upper east rift zone and the adjacent fault systems of Kilauea's south flank; Koae, earthquakes along the northeast-trending Koae fault system south of the caldera; Lower East Rift, earthquakes from the lower east rift zone of Kilauea; Offshore Puu Pili, offshore earthquakes mostly southeast of Puu Pili (PPL) station.

Date (1973)	Tremor (m = minutes h = hours)			Earthquakes									
				Kilauea Summit			SW rift and Kaoiki	Upper east rift	Koae	Lower east rift	Offshore Puu Pili	Remarks	
	Deep	Inter- mediate	Shallow	30KM	Long Period	Shallow							
Apr 1			Low level tremor on the upper east rift through- out the month		46	104	25	24	3		1		
2	12 <sup>m</sup>			1	29	90	19	22	10	1			
3		5 <sup>m</sup>			59	110	30	16	3				
4	10 <sup>m</sup>			2	53	90	29	17	6				
5	21 <sup>m</sup>			1	81	121	27	23	2	1			
6	4 <sup>m</sup>	6 <sup>m</sup>		1	24	118	27	30	8				
7					13	93	23	23	15	1			
8						22	112	23	11	7		1	
9	34 <sup>m</sup>			1	3	73	13	17	5	1		1	
10				2	8	103	16	11	6	1			

Low level tremor on the upper east rift throughout the month

[illegible]



Date (1973)	Tremor (m = minutes h = hours)			Earthquakes								
				Kilauea Summit			SW rift and Kaoiki	Upper east rift	Koae	Lower east rift	Offshore Puu Pili	Remarks
	Deep	Inter- mediate	Shallow	30KM	Long Period	Shallow						
May 1		7 <sup>m</sup>	Strong tremor May 5-11, and low to moderate tremor remainder of the month - upper east rift area		19	106	29	20	5	1		Honomu after- shocks and shallow Mauna Kea earthquakes continue during the month  Upper east rift/ Koae eruption  Many small rock- falls at Mauna Ulu
2				2	16	95	25	8	7			
3					24	131	14	9	1	1		
4				3	14	130	25?	170?	63?	1		
5				1	17?	178?	43?	437?	1380?	2		
6					44	14?	13?	967?	135?	3		
7					37	16	11	649?	86?			
8					83	28	20	279?	55	3		
9				1	117	24	25	165?	36			
10				1	97	36	27	89?	89			

11	12 <sup>m</sup>	5 <sup>m</sup>	5	131	89	33	31	17?		
12	10 <sup>m</sup>	3 <sup>m</sup>	2	68	81	34	50	26	1	1
13				104	157	26	90	58	2	
14			2	49	204	31	46	37	2	
15				20	237	36	25	30		
16			1	26	232	53	46	32	1	
17				10	258	37	63	34	3	1
18		5 <sup>m</sup>		29	203	25	67	7		1
19			3	50	214	30	56	3	1	2
20	10 <sup>m</sup>			25	246	23	36	15		1
21				66	275	12	20	5	1	1
22				49	248	12	27	7	6	1
23				51	310	15	52	4	1	1
24		3 <sup>m</sup>	2	19	180	15	64	8	1	
25			4	3	236	9	67	10	3	
26			2	3	292	11	77	2		2
27			2	11	352	12	95	4	3	
28			1	16	395?	17	82	1		
29		8 <sup>m</sup>	1	23	284	28	57	3		1
30		4 <sup>m</sup>		41	301	18	61	1		
31		4 <sup>m</sup>	1	48	407	21	60	9		

Date (1973)	Tremor (m = minutes h = hours)			Earthquakes								
				Kilauea Summit			SW rift and Kaoiki	Upper east rift	Koae	Lower east rift	Offshore Puu Pili	Remarks
	Deep	Inter- mediate	Shallow	30KM	Long Period	Shallow						
Jun 1		7 <sup>m</sup>	Moderate to weak tremor from the upper east rift throughout the month	2	55	334	26	43	1	2	2	Upper east rift/ Koae swarm and summit collapse; lava drainback and increase of rockfalls at Mauna Ulu
2	61 <sup>m</sup>	15 <sup>m</sup>		1	87	410	15	44	4	1		
3	12 <sup>m?</sup>	13 <sup>m?</sup>			85	588	16	68	2		1	
4		6 <sup>m</sup>			46	302	19	41	5			
5		12 <sup>m</sup>		1	88	438	36	58	5	2	1	
6		5 <sup>m</sup>			51	511	18	72	8		1	
7		11 <sup>m</sup>		1	26	487	29	88	15			
8		10 <sup>m</sup>			23	414	24	55?	1267?			
9				2	48	451	13	80?	590?	3	1	
10				2	27	354	19	59?	56?	2	3	

11					58	328	22	82?	28?		
12					44	356	18	69?	24?	1	
13	20 <sup>m</sup>				21	340	26	41	17		
14		18 <sup>m</sup>			14	428	19	92	18		
15		15 <sup>m</sup>		2	37	452	27	61	15	1	2
16				2	12	433	27	78	11		
17					17	418	16	68	10	1	2
18					14	403	15	50	10	2	
19				2	19	405	7	48	7		
20		13 <sup>m</sup>		1	60	431	14	31	4		
21	36 <sup>m</sup>				13	405	9	62	8	5	1
22		14 <sup>m</sup>		1	21	385	15	45	8	1	
23				2	6	374	14	58	7	2	
24				1	3	351	9	60	7	1	
25					7	?	13	66	8	3	1
26					3	411?	20	63	8	1	
27					4	499	21	66	11	2	
28				1	1	342	21	56	4		
29					8	352	32	61	4	1	4
30	13 <sup>m</sup>				10	470	26	60	4	2	3?

Table 2 is a chronological listing of successfully located earthquakes. For each event the following data are presented:

Origin time in Hawaii Standard Time: date, hour (HR), minute (MN), and second (SEC).

Epicenter in degrees and minutes of North latitude (LAT N) and West longitude (LONG W). Poor convergence of the epicenter solution is indicated by "?".

Depth - depth of focus in km. Assumed depth is indicated by "x".

Mag - magnitude, if determined.

NO - number of stations used in locating earthquakes.

GAP - largest azimuthal separation in degrees between stations.

DMIN - epicentral distance in km to the nearest station.

ERT - standard error of the origin time in seconds.

ERH - standard error of the epicenter in km.

ERZ - standard error of the depth in km.

MD - mean deviation of the time residuals.  $\left[ = \sum_i R_i / NO \right]$  where  $R_i$  is the observed seismic wave arrival time less the computed time at the  $i^{th}$  station.

Q - solution quality of the hypocenter. This measure is intended to indicate the general reliability of each solution:

<u>Q</u>	<u>EPICENTER</u>	<u>FOCAL DEPTH</u>
A	excellent	good
B	good	fair
C	fair	poor
D	poor	poor

Q is based both on the nature of the station distribution with respect to the earthquake and the statistical measures of the solution. These two factors are each rated independently according to the following scheme:

### Station Distribution

	<u>NO</u>	<u>GAP</u>	<u>DMIN</u>
A	<u>&gt;8</u>	<u>&lt;120°</u>	<u>&lt;DEPTH or 5 km</u>
B	<u>&gt;6</u>	<u>&lt;150°</u>	<u>&lt;2 X DEPTH or 10 km</u>
C	<u>&gt;6</u>	<u>&lt;225°</u>	<u>&lt;50 km</u>
	<u>&gt;4</u>	<u>&lt;180°</u>	
D	Others		

### Statistical Measures

	<u>ERH(km)</u>	<u>ERZ(km)</u>	<u>MD(sec)</u>	<u>RMAX(sec)*</u>
A	<u>&lt;1.0</u>	<u>&lt;2.0</u>	<u>&lt;0.10</u>	<u>&lt;0.25</u>
B	<u>&lt;2.5</u>	<u>&lt;5.0</u>	<u>&lt;0.20</u>	<u>&lt;0.50</u>
C	<u>&lt;5.0</u>		<u>&lt;0.30</u>	<u>&lt;0.75</u>
D	Others			

Q is taken as the average of the ratings from the two schemes, that is, an A and a C yield a B, and two B's yield a B. When the two ratings are only one level apart the lower one is used, that is, an A and a B yield a B (Hamilton and others, 1969).

The criteria for Q are the same as used by the Office of Earthquake Research and Crustal Studies, U. S. Geological Survey.

\*RMAX is the maximum residual

# SUMMARY OF SEISMIC EVENTS

	1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
II	APR	1	1	21	38.1	19-18.7	155-14.9	10.2	1.7	11	203	5.0	0.33	1.5	2.6	0.09 C
		1	1	54	18.4	19-52.0	155-31.1	14.1	2.6	14	203	11.4	0.15	1.2	0.9	0.09 C
		1	8	16	58.1	18-41.8	155- 5.0	8.0*	2.9	27	284	64.9	0.68	4.2		0.16 D
		1	9	59	13.3	19-25.0	155-16.6	11.2	1.7	10	118	0.7	0.29	1.1	2.3	0.09 B
		1	17	25	25.4	19-22.6	155-24.3?	8.0	1.0	19	52	4.8	0.08	0.5	0.6	0.14 B
		1	20	53	20.6	19-30.9	155-19.2	8.0*	1.9	10	118	6.5	0.14	1.1		0.20 B
		1	22	52	42.4	19-20.5	155- 3.7	8.0	1.0	12	133	1.8	0.33	2.6	4.2	0.22 C
		2	1	19	31.9	19-26.3	155-17.1	9.4	1.6	8	189	1.8	0.58	2.0	4.7	0.13 C
		2	3	11	27.2	19- 0.9	155-21.5	26.4	1.9	20	234	19.4	0.39	2.3	3.7	0.14 D
		2	9	31	48.2	19-19.8	155-13.8	8.0*	1.9	17	173	5.3	0.06	0.5		0.09 C
		2	10	25	44.0	19-24.8	155-16.7	2.7	0.7	7	107	0.6	0.26	0.9	2.1	0.08 B
		2	11	57	11.4	19-22.9	155-25.4	8.0*	0.5	12	185	6.2	0.23	1.6		0.20 C
		2	13	45	48.2	19-47.1	155-38.4?	3.5	1.8	10	188	19.0	0.28	2.4	2.1	0.20 C
		2	16	16	46.0	19-19.8	155-13.3	7.8	1.6	19	144	5.0	0.09	0.7	0.4	0.11 C
		2	16	38	44.9	19-20.5	155-12.4	8.8	0.0	11	188	5.4	0.28	1.4	2.9	0.11 C
		2	18	1	50.3	19-20.3	155-13.1?	6.2	1.2	14	185	6.6	0.18	1.1	1.0	0.18 C
		2	18	12	53.5	19-18.5	155-46.9	7.4	3.0	23	108	10.4	0.12	1.0	1.5	0.12 B
		2	18	16	55.0	19-19.1	155-13.0	8.0*	0.8	11	213	7.9	0.16	1.1		0.13 C
		3	0	54	26.1	19-19.3	155-10.1?	4.8	1.2	16	176	5.2	0.25	1.6	1.5	0.26 C
		3	3	54	48.1	19-20.1	155- 8.2	3.5	0.7	15	165	4.5	0.17	1.2	1.6	0.21 C
		3	10	17	29.1	19-25.0	155-17.2	9.9	1.6	7	111	0.3	0.27	0.9	2.2	0.05 B
		3	11	3	5.5	19-20.6	155-12.8	8.9	0.8	14	181	5.8	0.13	0.8	1.4	0.09 C
		3	12	29	42.0	19-24.6	155-18.2	9.2	1.7	8	84	1.7	0.12	0.5	1.1	0.04 A
		3	19	20	59.1	19-24.4	155-16.9	10.9	1.3	10	73	1.0	0.28	1.1	2.2	0.08 B
		3	21	15	45.8	19-51.8	155-21.6	32.1	1.4	17	111	3.3	0.22	1.3	2.3	0.10 B
		3	21	28	40.8	19-12.0	155-19.8	26.8	2.2	23	193	11.1	0.23	1.4	2.1	0.15 C
		3	23	27	16.5	19-23.8	155-17.6	6.0	1.3	11	59	1.4	0.36	1.1	2.7	0.18 B
		4	8	48	53.0	19-24.7	155-16.5	0.5	-0.1	7	98	0.9	0.08	0.2	0.2	0.05 B
		4	8	49	23.8	19-20.0	155-10.5	8.2		9	165	4.0	0.05	0.5	0.9	0.05 B
		4	12	21	23.8	19-20.1	155-10.6	8.7		10	164	3.9	0.08	0.7	1.3	0.08 B

## SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
APR	4	12	25	33.7	19-15.0	155-27.1?	7.5	1.5	15	110	2.7	0.17	1.7	1.2	0.31 C
	4	15	21	24.3	19-23.4	155-28.0	7.8	2.4	23	83	10.2	0.17	0.7	1.2	0.17 B
	4	15	36	58.6	19-18.1	155-21.9?	5.8	1.7	11	158	4.7	0.14	1.0	2.0	0.12 C
	4	21	23	32.2	19-19.1	155-15.6?	8.5	0.7	14	186	3.6	0.25	1.3	2.3	0.15 C
	4	22	27	42.6	19-23.5	155-22.0	8.7	0.9	13	110	4.1	0.15	0.9	1.4	0.17 B
	5	8	31	12.2	19-24.7	155-16.1	7.2		10	86	2.8	0.40	1.1	2.3	0.10 B
	5	9	16	13.7	19-16.2	155- 4.0	31.7	1.4	21	242	14.8	0.46	2.7	2.9	0.12 D
	5	16	21	9.4	19-47.4	155-13.9?	31.2	0.9	12	198	16.0	1.02	6.7	10.5	0.34 D
	5	18	37	19.7	19-24.1	155-16.8	9.5	1.2	9	79	2.8	0.20	0.8	1.7	0.05 A
	5	19	18	35.9	19-18.6	155-16.3	33.3	2.5	26	145	3.4	0.15	0.9	1.5	0.13 B
	5	21	14	30.8	19-22.6	155-24.7	8.0*	0.4	14	134	5.1	0.11	0.8		0.14 C
	6	0	44	49.9	19-19.7	155-15.3	5.5	0.7	14	165	3.8	0.15	1.1	0.9	0.19 C
	6	8	18	26.3	19-22.4	155-24.6?	8.3	1.1	10	152	4.5	0.09	0.7	0.8	0.11 C
	6	10	21	5.9	19-19.2	155-11.9	3.6	2.6	26	147	6.1	0.14	0.9	1.0	0.24 C
	6	15	15	40.0	19-34.2	155-43.0?	5.4	1.5	16	152	15.3	0.90	1.4	6.6	0.17 C
	6	19	12	23.7	19-19.9	155-12.1	8.0*-0.0		9	209	5.7	0.19	1.3		0.12 C
	6	19	55	15.0	19-12.6	155- 8.3	38.3	1.2	23	219	16.4	0.31	1.7	2.5	0.12 C
	6	20	32	15.5	19-24.1	155-24.1	8.0*	0.2	10	198	7.4	0.13	0.9		0.12 C
	6	22	5	45.1	19-22.6	155-24.5?	2.9	0.7	16	107	5.0	0.15	1.0	1.9	0.21 C
	6	22	37	56.2	19-18.7	155- 9.1	2.9	0.6	13	188	6.4	0.24	1.5	2.4	0.21 C
	6	23	37	24.1	19-25.5	155-25.0	7.1	1.4	21	64	8.4	0.10	0.7	0.6	0.18 A
	7	13	58	8.3	19-24.5	155-26.8	3.4	1.1	18	73	10.1	0.12	0.8	1.8	0.22 C
	7	20	7	19.9	19-26.0	155-25.9?	8.2	2.0	20	67	8.3	0.08	0.5	0.5	0.12 B
	7	21	47	33.8	19-19.9	155-14.9	8.3	0.4	13	165	4.4	0.13	0.9	1.8	0.12 C
	7	22	37	17.7	19-20.7	155-13.1	4.9	1.1	18	166	3.4	0.15	1.0	1.0	0.21 C
	8	1	30	20.0	19-19.5	155-15.3	6.0	1.4	19	167	3.8	0.12	0.9	0.6	0.18 C
	8	4	35	29.3	19-21.1	155-25.2	4.2	0.9	14	76	3.6	0.14	1.0	1.6	0.23 B
	8	5	9	41.1	19-27.9	154-58.5	7.6	1.7	12	273	28.3	0.56	3.3	1.3	0.08 D
	8	10	16	13.1	19-20.0	155-26.9	6.2	1.6	13	117	6.3	0.13	1.1	1.7	0.21 C
	8	10	18	8.6	19-19.3	155- 8.0?	8.0*	0.7	11	181	6.1	0.21	2.1		0.25 C



# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
APR	8	11	28	15.9	19-19.8	155-13.8	8.0*	0.5	8	175	6.1	0.10	1.0		0.11	C
	8	11	34	43.9	19-23.2	155-22.9	6.1	1.0	13	151	5.6	0.12	1.0	0.9	0.16	C
	8	19	2	21.6	19-21.2	155-24.4	7.3	0.7	12	110	2.7	0.12	1.1	1.0	0.17	B
	8	19	16	0.5	19-12.5	155-27.5	5.6	2.1	18	130	5.6	0.12	1.1	0.9	0.22	C
	8	20	32	53.1	19-19.1	155- 9.0	3.1	2.3	24	160	5.6	0.17	1.0	1.0	0.24	C
	9	1	21	7.4	19-19.6	155-15.7	6.6	0.5	12	163	3.1	0.10	0.8	0.7	0.13	C
	9	4	41	47.3	19-22.6	155-24.0	8.2	2.8	25	44	4.6	0.10	0.6	0.7	0.18	B
	9	6	48	12.1	19-23.3	155-28.1	4.1	1.3	15	109	10.2	0.15	1.1	1.9	0.21	C
	9	13	48	40.9	19- 9.4	155-27.8	44.5	1.6	20	162	0.3	0.62	2.8	5.8	0.26	C
	9	18	58	27.6	19-21.1	155-12.4	6.2	1.6	20	135	2.6	0.10	0.8	0.7	0.21	C
	9	21	31	14.0	19-19.6	155-16.0	8.2	0.6	11	161	2.7	0.12	1.2	0.7	0.15	C
	9	23	13	19.5	19-10.6	155-33.7	6.0	2.3	13	105	9.9	0.16	1.1	1.1	0.20	B
	10	0	9	55.7	19-20.6	155-13.1	4.7	0.9	15	178	5.8	0.20	1.2	1.4	0.23	C
	10	5	55	24.9	19-22.8	155-15.7	27.8	0.8	14	100	0.8	0.24	1.1	2.3	0.10	B
	10	6	19	29.3	19-19.6	155-13.5	7.4	2.8	25	143	5.5	0.09	0.7	0.5	0.16	B
	10	16	16	19.7	19-21.1	155-13.7	4.7	0.8	14	161	4.6	0.15	1.0	1.2	0.18	C
	10	16	23	32.0	19-20.6	155-13.3	8.0*-0.0		9	176	6.5	0.14	1.1		0.12	C
	10	21	42	37.0	19-27.2	155-52.5	8.4	2.9	21	230	20.6	0.23	1.4	1.5	0.12	C
	11	1	0	1.9	19-18.3	155-15.2	7.3	2.4	25	152	5.0	0.10	0.7	0.5	0.16	C
	11	5	19	28.5	19-19.8	155-11.8	3.1	1.6	21	147	5.2	0.16	1.0	1.4	0.26	C
	11	5	47	12.5	19-24.8	155-17.3	13.8	1.1	17	72	0.5	0.06	0.5	0.8	0.10	B
	11	6	45	40.3	19-25.7	155-27.0	5.9	1.2	18	66	9.9	0.09	0.7	0.9	0.18	B
	11	7	27	19.3	19-22.4	155-25.3	8.0*	2.0	11	138	5.3	0.08	0.7		0.12	C
	11	10	1	14.7	20- 3.4	155-21.1	10.3	1.4	8	234	18.5	0.23	1.6	1.1	0.05	C
	11	22	21	58.8	19-24.0	155-16.4	13.0	1.8	24	50	2.0	0.04	0.6	0.4	0.13	B
	12	7	18	35.3	19-18.9	155-15.3	7.4	1.9	21	144	4.3	0.09	0.7	0.6	0.15	B
	12	13	10	27.6	19-22.4	155-24.9?	7.6	1.6	18	69	4.9	0.10	0.7	0.7	0.15	B
	12	15	34	49.9	19-20.6	155-24.8	7.9	1.0	15	109	2.7	0.06	0.7	1.3	0.12	B
	12	23	12	30.3	19-19.9	155-14.3	4.9	1.4	13	183	5.5	0.21	1.2	1.3	0.20	C
	13	2	29	15.4	19- 9.0	155-40.9	5.7	2.7	19	128	12.8	0.24	1.6	1.6	0.25	C

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
APR 13	8	14	43.4	19-23.0	155- 5.0?	8.0*	1.6	9	240	8.7	1.73	9.8		0.28	D
	13	11	22	56.1	19-24.5	155-17.7	7.8	1.2	8	101	1.7	0.26	0.5	1.6	0.04 A
	13	12	16	13.5	19-20.2	155-13.9	4.5	2.2	26	138	4.8	0.12	0.8	0.9	0.27 C
	13	16	13	9.6	19-25.2	155-16.2	1.6	0.5	9	115	1.1	0.11	0.6	0.5	0.14 B
	13	16	58	17.8	19-19.5	155-14.5	8.9	0.4	10	219	5.2	0.51	2.6	3.5	0.12 C
	13	22	30	55.3	19-24.6	155-17.4	8.1	1.5	11	65	8.1	0.07	0.7	0.4	0.07 A
	13	22	32	55.7	19-24.0	155-18.6	7.7	0.8	12	68	2.1	0.12	0.7	0.9	0.09 A
	14	0	8	55.5	19-21.5	155-25.9	7.0	0.5	10	139	5.2	0.16	1.2	0.7	0.15 B
	14	0	37	52.3	19-21.7	155-26.1	8.0*	0.3	9	141	11.8	0.09	0.8		0.10 C
	14	4	56	13.7	20- 4.2	155-32.2	10.0	1.9	23	210	26.2	0.24	2.1	2.0	0.21 C
	14	6	21	55.8	19-24.1	155-17.6	6.8	1.0	7	81	8.4	0.31	0.6	2.2	0.05 B
	14	8	3	47.3	19-11.5	155-17.2	30.5	1.0	12	281	12.2	0.88	4.7	5.1	0.13 D
	14	10	50	46.9	19-20.0	155- 8.4	8.5	1.5	16	167	4.7	0.11	1.0	2.2	0.13 C
	14	17	37	52.0	19-21.1	155-25.1	4.0	2.1	19	76	3.6	0.12	0.9	1.3	0.25 B
	14	19	0	45.0	19-20.4	155- 8.6	7.4	1.3	11	196	3.7	0.28	2.1	1.0	0.16 C
	14	21	42	18.7	19-18.9	155-27.0?	0.0	2.5	24	88	6.9	4.72	0.8	8.9	0.27 C
	15	0	59	38.1	19-18.1	155- 6.5	2.8	4.2	26	190	9.4	0.24	1.2	1.2	0.24 C
	15	1	8	16.6	19-19.9	155- 7.3	8.0*	0.7	11	170	5.9	0.14	1.3		0.13 C
	15	1	15	56.2	19-19.4	155- 8.1?	2.7	1.1	18	177	5.8	0.18	1.2	1.4	0.24 C
	15	1	19	21.5	19-20.6	155- 8.1?	7.7	0.9	13	157	4.1	0.17	1.7	1.0	0.19 C
	15	1	38	16.9	19-20.2	155- 8.0	8.2	1.0	14	236	4.8	0.29	1.9	2.3	0.10 C
	15	1	43	5.0	19-19.2	155- 7.3	8.0*	0.8	13	184	7.0	0.20	1.8		0.24 C
	15	1	43	23.0	19-19.9	155- 8.6	1.0	2.5	23	150	8.5	1.17	0.9	4.2	0.23 C
	15	1	57	54.8	19-19.5	155- 8.6	8.0*	0.9	15	175	5.2	0.11	1.0		0.14 C
	15	1	59	56.4	19-19.5	155- 8.3	3.8	2.0	22	156	5.4	0.15	1.0	1.0	0.23 C
	15	7	16	51.6	19-19.0	155- 7.5?	0.0	1.6	21	190	7.0	5.73	1.5	10.7	0.25 C
	15	7	34	8.8	19-19.7	155- 8.1	8.0*	0.6	11	172	5.3	0.12	1.0		0.11 C
	15	7	36	58.2	19-19.9	155- 8.0	8.8	0.3	10	169	5.2	0.23	1.8	3.6	0.14 C
	15	8	9	27.2	19-24.3	155-28.6	7.4	0.9	13	176	12.0	0.14	0.9	0.7	0.11 C
	15	9	58	2.6	19-43.3	155- 4.7?	83.6*	1.8	13	232	24.1	2.48	27.2		0.74 D

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
APR	15	22	21	12.5	19-20.4	155- 7.9?	8.3	0.7	11	161	4.6	0.14	1.1	1.0	0.16	C
	15	23	50	30.1	19-20.5	155- 8.3	10.2	0.5	13	158	8.4	0.12	0.7	1.7	0.08	B
	16	14	29	57.6	19-19.8	155- 7.4	3.7	3.0	20	172	6.1	0.18	1.2	1.1	0.25	C
	16	14	55	46.8	19-20.3	155- 6.4	8.0*	1.9	14	162	6.2	0.12	1.1		0.12	C
	16	23	42	41.6	19-20.3	155- 8.3	5.7	2.1	19	161	4.1	0.14	1.1	0.9	0.19	C
	17	5	24	54.4	19-25.5	155-25.1	6.0	2.3	23	64	8.5	0.08	0.6	0.6	0.17	B
	18	11	1	40.7	19-10.9	155-33.1	6.8	2.8	16	102	9.6	0.17	1.2	1.1	0.21	C
	18	13	41	46.4	19-10.6	156- 4.2	48.7	3.3	18	266	23.1	0.80	3.7	5.4	0.11	D
	19	2	14	13.1	19-19.6	155-13.6	7.4	0.6	13	196	6.7	0.16	1.2	0.6	0.15	C
	19	2	25	53.2	19-19.4	155-14.1	6.0	0.5	8	196	6.0	0.33	1.9	1.8	0.17	C
	19	13	4	11.5	19-29.3	155-12.2	23.7		10	170	11.8	0.15	0.9	1.6	0.06	B
	19	18	20	27.0	19-20.1	155-14.1	3.8		16	180	5.0	0.19	1.1	1.3	0.22	C
	19	18	51	5.8	19-20.3	155- 8.7	4.7	3.1	20	144	3.7	0.15	1.0	0.9	0.24	C
	19	18	54	4.8	19-12.6	155-27.5?	7.1	2.2	13	127	5.8	0.16	1.4	2.4	0.20	B
	20	12	6	50.7	19-21.6	155-12.8	2.5		8	156	1.6	0.19	1.2	4.1	0.13	C
	20	13	33	25.5	19-21.9	155-25.2?	7.9		10	68	4.6	0.10	0.8	0.7	0.12	B
	20	15	47	9.0	19-19.8	155- 7.8?	3.1		11	171	5.5	0.24	1.7	2.4	0.27	C
	20	22	55	58.5	19-24.3	155-26.7	8.0*		8	217	9.6	0.16	1.1		0.09	C
	21	1	3	43.4	19- 7.2	155-33.9	8.4	2.6	16	147	11.4	0.10	0.9	1.3	0.14	B
	21	2	29	42.1	19-18.7	155- 7.1?	0.9*		11	251	7.9	0.30	1.5		0.25	D
	21	4	2	24.8	19-13.0	155-25.4	31.0		17	154	7.8	0.27	1.4	2.8	0.15	C
	21	6	22	40.6	19-45.3	156- 7.2	38.8		13	247	54.6	0.47	2.4	4.8	0.10	C
	21	7	4	1.0	18-47.5	155-11.6	8.0*		17	290	49.7	1.13	7.2		0.18	D
	21	18	27	33.9	19-19.4	155-13.4	8.0*		9	203	7.1	0.13	1.0		0.10	C
	21	19	20	7.4	19-19.5	155-13.3	8.0	1.7	18	183	5.6	0.11	0.8	0.4	0.10	C
	22	3	1	11.0	19-19.1	155-13.3	8.0*		11	209	7.4	0.13	0.9		0.10	C
	22	3	3	14.2	19-19.8	155-13.6	7.6		16	184	6.3	0.13	0.9	0.6	0.14	C
	22	3	8	53.7	19-19.6	155-13.5	3.6		12	198	6.7	0.26	1.5	2.3	0.24	C
	22	4	23	44.4	19-20.0	155-14.6	26.0		18	138	4.9	0.11	0.7	1.1	0.08	B
	22	21	7	52.1	19-58.3	154-41.1?	47.5*	4.8	22	282	50.6	0.62	4.3		0.24	D

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
APR	23	18	21	19.7	19-20.7	155-12.2	8.0*		10	188	4.8	0.14	1.2		0.13	C
	24	6	16	22.2	19-53.9	155-43.6	40.1	3.9	28	123	26.0	0.18	0.9	2.4	0.14	B
	24	8	7	42.7	19-19.4	155- 0.8?	3.1		14	279	16.6	1.07	4.5	2.5	0.20	D
	24	9	22	45.9	19-22.8	155-27.8	5.6	1.9	15	137	9.2	0.12	0.9	1.1	0.18	B
	24	9	45	36.5	19-20.6	155-13.0	5.7		16	180	6.0	0.16	1.0	0.9	0.17	C
	24	14	12	47.1	19-20.9	155-24.4	8.7		10	123	2.3	0.08	0.8	1.4	0.09	B
	25	3	13	11.5	19-20.1	155-12.9?	0.0		13	194	6.5	9.39	1.5	17.9	0.23	C
	25	4	43	56.7	19-22.8	155-23.2	5.6		11	167	4.7	0.16	1.1	1.4	0.15	C
	25	19	8	5.1	19-56.7	155-33.1	4.8	2.6	11	280	20.6	1.09	4.9	2.8	0.13	D
	26	10	26	30.1	19-53.6	155- 6.2	50.1		27	205	25.2	0.29	1.4	2.6	0.12	C
	26	11	32	7.7	19-38.5	155-13.3	8.0*	0.5	5	264	22.6	0.30	1.8		0.04	D
	26	11	33	23.2	19-56.5	155- 2.9	52.0	2.2	13	291	24.9	2.07	9.0	14.0	0.12	D
	26	11	40	58.9	19-22.1	155-27.9	8.0*		4	302	16.3				0.15	D
	26	11	45	23.0	19-39.6	155-12.8	8.0*	1.7	9	199	14.7	0.30	2.5		0.20	C
	26	11	52	37.8	19-36.8	155-16.5	8.0*	1.9	7	316	17.6	0.35	3.0		0.17	D
	26	11	58	19.6	19-31.1	155-14.3	8.0*	2.0	7	289	12.4	0.22	2.4		0.21	D
	26	12	2	21.2	19-35.9	155-13.4	8.0*	1.7	7	245	19.7	0.12	1.1		0.09	D
	26	12	6	9.4	19-36.9	155-11.5	8.0*	1.9	5	255	24.2	0.65	3.9		0.07	D
	26	12	37	54.4	19-33.5	155-12.3	8.0*		5	221	16.1	0.72	5.8		0.19	D
	26	12	46	48.3	19-35.4	155-11.6	8.0*	1.7	8	242	16.7	0.12	1.2		0.14	D
	26	12	55	10.7	19-35.1	155-12.2	8.0*	1.8	10	238	20.2	0.11	1.2		0.14	D
	26	13	18	55.7	19-35.4	155-13.4?	3.0*	1.8	6	240	19.3	0.67	4.5		0.17	D
	26	13	19	46.4	19-37.8	155-12.0	8.0*		5	261	24.6	1.00	5.9		0.11	D
	26	13	56	4.0	19-37.8	155- 9.4	8.0*	2.6	7	166	12.3	0.21	3.8		0.21	C
	26	14	9	27.1	19-36.6	155-11.3	8.0*	0.9	8	253	17.6	0.44	2.7		0.13	D
	26	14	30	14.4	19-35.7	155-12.5	8.0*	1.6	11	243	18.3	0.40	2.4		0.17	D
	26	14	36	30.7	19-21.2	155-23.7	8.0	-0.0	5	201	2.0				0.01	D
	26	14	39	24.1	19-36.0	155-11.5	8.0*	2.2	9	247	22.3	0.67	4.1		0.20	D
	26	14	40	31.1	19-25.1	155-12.1	8.0*	1.5	6	168	8.6	0.35	3.5		0.22	C
	26	14	43	10.8	19-37.5	155-25.2	20.3*	2.1	6	334	14.6	0.61	5.1		0.07	D

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
APR	26	17	11	21.1	19-38.2	155-11.4	18.7*	2.2	5	277	19.8	0.93	7.4		0.09	D
	26	17	13	18.2	19-43.6	155-12.3	8.0*	0.8	3	292	28.9				0.00	D
	26	17	23	7.6	19-34.5	155- 9.2	8.0*	0.3	4	292	22.9				0.03	D
	26	17	26	17.7	19-53.5	155- 7.3	48.5	3.4	24	221	19.2	0.47	2.1	3.9	0.14	C
	26	17	29	22.6	19-25.3	155-13.8	23.1	0.6	9	125	6.7	0.18	1.1	1.8	0.07	B
	26	17	29	35.7	19-50.9	155- 8.0?	41.8	1.9	19	240	15.0	0.74	3.2	5.6	0.12	D
	26	17	31	1.5	19-48.6	155-11.4	32.0	1.6	13	219	18.3	0.22	1.2	2.6	0.09	C
	26	17	32	0.1	19-24.7	155-13.6	24.8	0.8	7	120	8.2	0.24	1.3	2.7	0.06	B
	26	17	34	7.7	19-48.3	155-20.3?	8.3	2.3	10	174	9.4	0.24	2.4	3.7	0.12	C
	26	17	49	14.9	19-58.0	155- 0.8	52.5	3.2	21	243	28.4	0.66	3.1	5.0	0.16	D
	26	18	26	37.6	19-47.4	155-10.2?	14.0*	1.5	15	219	21.2	0.43	3.5		0.31	D
	26	18	36	45.8	19-46.5	155-12.2	13.2*	1.3	12	203	19.4	0.21	1.9		0.16	C
	26	18	41	31.1	19-52.3	155- 6.9?	38.0		16	256	16.9	0.84	3.9	6.2	0.14	D
	26	19	6	3.8	19-45.8	155-20.7?	79.8*	2.0	17	133	12.0	3.48	31.2		1.21	C
	26	19	7	17.0	19-51.1	155- 9.4	43.9	2.5	18	224	16.1	0.45	1.9	3.7	0.12	C
	26	19	9	22.2	19-55.6	155-10.1	50.1*	3.1	22	231	18.8	0.19	1.9		0.16	D
	26	19	16	24.2	19-20.1	155-17.2	32.5	1.0	8	181	10.7	0.18	0.8	1.7	0.04	B
	26	19	24	15.0	19-32.5	155-12.6	8.0*	0.5	3	315	15.8				0.00	D
	26	19	30	13.6	19-24.1	155-17.3	8.0*		3	272	2.5				0.00	D
	26	19	34	52.2	19-37.4	155- 6.0?	8.0*	1.5	7	205	10.8	0.39	5.4		0.17	D
	26	19	56	52.6	19-34.8	155-10.6	8.0*		5	252	14.6	1.12	7.6		0.15	D
	26	20	9	2.4	19-42.1	155-14.4	8.0*	1.6	11	240	16.1	0.28	1.7		0.16	D
	26	20	35	4.6	19-54.6	155- 8.5?	43.9	1.4	9	247	21.2	0.74	3.1	5.9	0.07	D
	26	20	43	11.6	19-51.0	155-13.1?	41.9	1.3	10	229	41.7	0.96	3.9	8.1	0.13	D
	26	20	47	59.1	19-34.7	155-12.5	8.0*		6	234	17.4	0.76	5.5		0.20	D
	26	20	48	37.2	19-47.2	155-31.6	24.9	1.1	14	226	7.2	0.34	1.7	3.2	0.10	C
	26	21	3	14.3	19-46.6	155-13.4	13.5*		15	196	17.7	0.16	1.4		0.15	C
	26	21	24	49.2	19-19.9	155- 5.3	8.0*		7	263	19.3	0.95	5.9		0.13	D
	26	22	0	34.7	19-55.4	155- 5.2	51.3	2.8	22	230	22.6	0.42	1.9	3.4	0.13	C
	26	22	7	0.4	19-51.9	155- 6.6	44.2*	2.7	20	234	16.1	0.11	1.0		0.10	D

## SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
APR	26	22	8	58.5	19-49.9	155-19.1	8.1	12	139	7.0	0.08	1.2	1.6	0.09	B
	26	23	25	34.1	19-48.3	155- 8.5?	14.3*	1.5	13	210	23.1	0.40		0.31	D
	26	23	25	53.8	19-51.5	154-15.4	120.4*		17	321	93.1	1.09		0.22	D
	26	23	27	26.7	19-48.6	155-18.1	4.0		10	171	9.8	0.28	2.0	3.0	0.19 C
	26	23	27	54.9	19-50.4	155-19.4	10.0	2.5	16	139	5.9	0.10	1.4	1.7	0.11 B
	26	23	33	38.6	19-55.4	155-36.7	8.7	4.0	26	134	22.6	0.10	0.9	1.5	0.14 C
	26	23	40	5.3	19-47.7	155-11.1?	13.7*	0.4	9	215	19.5	0.27	2.2		0.16 C
	26	23	50	21.2	19-47.7	155-10.7	14.2*		7	218	29.4	0.33	2.7		0.13 C
	26	23	56	13.9	19-27.8	155- 8.4	13.5*	0.6	7	181	9.2	0.11	2.3		0.10 C
	27	0	45	17.0	19-50.1	155-18.8	8.6		11	146	6.9	0.09	0.7	1.3	0.10 B
	27	1	11	3.0	19-56.1	155-13.1	45.6	0.8	9	272	13.9	1.96	7.4	15.1	0.11 D
	27	1	16	12.9	19-59.1	155- 0.2	54.9*		10	312	37.0	0.27	2.3		0.07 D
	27	1	56	38.6	19-50.8	155-19.9	31.1		12	186	5.0	0.67	2.8	5.9	0.10 C
	27	2	2	53.8	19-56.6	155- 9.9	63.5*	1.2	12	276	19.5	0.18	2.2		0.10 D
	27	2	46	16.0	20- 0.1	155-12.3	55.0*	1.6	13	296	57.1	0.32	3.3		0.11 D
	27	3	16	24.4	19-45.3	155-13.1	13.4*	0.7	11	232	25.2	0.36	2.6		0.17 D
	27	3	19	53.4	19-46.8	155- 8.9	13.6*		13	223	23.9	0.29	2.3		0.17 C
	27	3	29	20.7	19-21.6	155-24.9?	7.3	0.7	14	67	3.8	0.09	0.9	1.2	0.16 B
	27	3	30	40.8	19-45.8	155-13.3	13.6*	0.6	11	192	18.9	0.21	2.1		0.17 C
	27	3	40	29.3	19-47.0	155-13.5?	13.8*		11	197	17.0	0.20	1.9		0.16 C
	27	3	53	41.7	19-50.0	155-18.1	4.8		13	154	7.7	0.16	1.3	1.6	0.16 C
	27	4	0	36.4	19-28.7	155-45.4?	3.4	0.9	13	254	16.5	1.30	3.1	7.6	0.13 D
	27	4	3	43.5	19-45.6	155-10.7	13.1*	0.8	11	207	22.4	0.24	2.0		0.18 C
	27	4	27	16.2	19-46.3	155-14.9	14.1*		15	184	16.4	0.18	1.6		0.18 C
	27	4	57	41.0	19-47.3	155- 8.1?	38.6	2.5	21	206	9.0	0.29	1.5	2.1	0.12 C
	27	5	28	52.5	19-13.9	155-27.6	8.0*	0.9	11	161	21.2	0.12	1.2		0.15 C
	27	5	42	5.1	19-56.0	155- 4.3	53.6	2.6	19	233	23.7	0.51	2.3	4.2	0.14 C
	27	6	15	51.9	19-46.1	155-10.3?	8.0*	0.6	10	284	30.1	6.43	38.5		0.20 D
	27	6	56	22.3	19-25.1	155-11.6	22.1	0.4	11	173	4.8	0.19	1.1	1.8	0.07 C
	27	6	59	29.0	19-46.2	155-12.8	14.2*	1.3	11	197	19.0	0.22	1.9		0.19 C

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
APR 27	7	43	42.9	19-43.7	155-14.4	8.0*		3	292	30.0				0.00	D
27	7	54	13.6	19-46.6	155-12.4	14.0*		12	201	19.0	0.22	2.0		0.17	C
27	8	54	49.7	19-48.0	155-10.6	25.8	1.3	6	220	20.1	1.06	5.4	10.8	0.13	D
27	10	34	31.0	19-57.3	155- 1.9	53.4	3.0	22	260	33.4	0.77	3.6	5.6	0.12	D
27	10	47	55.5	19-58.2	155-26.3?	11.3	2.8	16	191	13.4	0.22	1.8	1.7	0.17	C
27	11	10	13.3	19-14.3	155-11.8?	0.0*	2.1	16	245	14.5	0.35	1.8		0.22	D
27	11	39	42.9	19-25.5	155-27.1	5.5	1.0	12	106	10.3	0.08	0.7	0.9	0.13	B
27	13	53	5.2	19-49.6	155-10.1?	37.0	1.2	11	232	19.6	0.84	3.4	7.3	0.11	D
27	14	8	40.7	19-20.2	155-17.6	29.6	1.0	11	132	0.4	0.21	1.2	2.0	0.08	B
27	14	14	46.2	19-59.1	155- 0.9	58.8	2.4	16	264	35.9	1.11	5.1	7.7	0.14	D
27	14	25	12.2	19-48.4	155-11.9	37.1	1.6	20	216	17.6	0.22	1.3	2.2	0.12	C
27	14	26	43.1	19-58.4	155-20.7	13.9	2.6	12	205	9.2	0.11	1.0	2.1	0.09	C
27	14	36	2.6	19-25.1	155-15.0	16.5	0.6	12	185	1.3	0.22	1.2	1.6	0.07	C
27	14	43	27.4	19-57.0	155- 9.6	49.7	2.1	13	237	20.4	0.74	3.5	5.9	0.14	D
27	15	20	36.9	19-56.5	155- 7.1	53.4		22	246	24.2	0.85	4.0	6.5	0.18	D
27	16	38	31.7	20- 0.6	155-29.6	4.1	2.2	16	194	20.6	0.33	2.3	1.6	0.28	C
27	16	49	8.7	19-57.8	154-59.5?	59.5	2.3	13	265	37.6	1.30	6.1	8.7	0.12	D
27	17	1	32.8	19-24.4	155-16.2	3.3	0.8	6	93	1.8	0.04	0.1	0.4	0.01	B
27	17	3	12.7	19-16.6	155-23.4	3.7	0.4	14	147	6.5	0.14	0.9	1.3	0.14	B
27	17	33	15.7	19-55.9	155-10.9	51.5	2.3	26	219	17.4	0.48	2.1	4.2	0.15	C
27	17	44	47.6	19-21.8	155-18.6	23.9	0.7	10	121	4.0	0.33	2.0	3.3	0.15	B
27	18	12	55.9	19-50.1	155-20.6	9.5	1.2	8	174	6.0	0.15	3.2	4.8	0.10	C
27	18	30	55.2	19-55.9	155- 6.0	45.4	2.2	15	229	23.4	0.48	2.6	4.8	0.20	D
27	20	6	29.0	19-19.4	155-15.3	5.6	1.3	21	182	3.8	0.14	0.9	0.7	0.18	C
27	20	25	13.6	19-57.6	155- 3.1?	53.4	2.0	20	257	31.4	0.76	3.6	5.8	0.13	D
27	20	51	33.2	19-55.1	155-10.5	46.6	1.8	24	218	17.9	0.44	2.0	3.8	0.15	C
27	21	22	40.7	19-57.5	155- 2.2	53.3	1.5	11	240	33.0	0.65	2.9	5.7	0.14	D
27	23	44	8.4	19-46.2	155-10.5	8.0*	0.8	7	211	22.0	0.25	1.9		0.14	C
27	23	52	4.7	19-19.2	155-15.7	5.6	0.7	18	185	3.4	0.13	0.8	0.6	0.17	C
28	0	47	58.4	19-15.3	155-23.7	27.7	1.0	14	258	9.0	0.34	2.4	2.0	0.14	C

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
APR 28	1	20	8.5	19-43.8	155-11.9	13.6*	1.1	13	191	23.2	0.23	2.2		0.22	C
28	1	36	13.1	19-28.6	155-15.4	23.1	1.8	26	70	5.7	0.09	0.7	1.0	0.10	A
28	1	43	26.9	19-46.9	155-14.2	8.0*	0.8	6	192	16.3	0.21	1.8		0.11	C
28	1	47	42.9	19-22.9	155-27.2?	6.3	1.3	18	85	8.5	0.12	1.1	2.3	0.23	C
28	1	52	8.2	19-56.3	155- 6.7	54.7	2.4	19	228	24.9	0.44	1.8	4.0	0.10	C
28	2	33	27.5	19-50.9	155-14.5?	36.7	1.7	15	220	11.6	1.77	6.5	12.9	0.11	D
28	2	37	25.7	19-53.9	155-15.4?	37.8	1.2	9	251	9.1	0.29	2.4	2.3	0.11	C
28	2	38	22.7	19-22.6	155-22.7	4.2		10	88	4.6	0.12	0.3	1.8	0.06	A
28	2	49	45.2	19-18.8	155-15.1	11.7	0.9	10	201	4.8	0.16	0.6	1.4	0.06	B
28	2	53	26.5	19-56.4	155-10.7	48.6	1.5	22	231	18.2	0.49	2.3	3.9	0.14	C
28	4	49	31.1	19-52.4	155-21.1	12.7	1.6	13	98	2.1	0.10	1.2	0.9	0.13	B
28	4	50	39.0	19-46.0	155-12.2	13.6*	0.8	9	200	20.0	0.39	3.7		0.26	C
28	5	16	41.4	19-54.0	155- 8.5	44.1	1.7	23	233	20.7	0.26	1.7	1.9	0.17	C
28	6	18	44.6	19-35.5	156- 5.8	55.7	2.1	13	242	43.1	0.83	3.0	7.7	0.09	D
28	6	20	24.1	19-56.7	155-12.1	47.6	1.7	20	226	16.0	0.51	2.5	4.1	0.15	C
28	7	42	52.7	19-55.9	155- 7.0	50.0	1.9	25	246	23.6	0.47	2.2	3.7	0.13	C
28	11	31	40.8	19-56.1	155- 7.1	51.0*	1.9	11	245	24.0	0.21	2.2		0.14	D
28	12	7	55.9	19-55.7	155- 5.2	52.0	3.4	27	230	23.0	0.47	2.1	4.1	0.14	C
28	12	18	46.1	19-56.1	155-10.8	46.2	2.0	20	237	17.9	0.41	2.1	3.3	0.12	C
28	12	40	3.1	19-46.6	155-11.7?	13.7*	1.5	8	206	19.9	0.29	2.8		0.18	C
28	13	0	13.8	19-54.1	155-11.6	44.4	2.3	16	231	15.6	0.49	2.4	4.3	0.13	C
28	13	3	20.7	19-23.7	155-30.3?	7.6	1.4	15	91	13.8	0.11	0.9	0.9	0.17	C
28	13	13	44.6	19-59.0	155- 1.0	50.7	3.2	28	246	30.1	0.54	2.6	4.2	0.14	D
28	14	4	18.0	19-24.2	155-25.2	8.1	1.4	18	82	8.1	0.07	0.5	0.5	0.11	B
28	14	37	15.4	19-58.1	155-12.1	54.5	2.0	16	223	17.1	0.48	2.0	4.3	0.13	C
28	14	43	8.6	20- 0.8	155-20.8	23.8	2.3	13	226	47.1	0.28	2.4	3.3	0.12	C
28	14	44	22.1	19-10.9	155-14.8	45.5	2.4	18	220	14.6	0.38	1.6	3.1	0.10	C
28	14	49	49.4	20- 0.8	155-20.3	13.1	2.3	10	228	13.7	0.29	2.4	1.1	0.09	C
28	15	0	13.6	19-51.0	155- 7.5	51.0	1.8	9	236	23.2	0.72	3.3	6.2	0.10	D
28	15	37	53.3	19-27.1	155-29.1	8.0*		14	134	11.3	0.08	0.7		0.11	C



# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
APR	28	17	11	34.7	19-20.5	155-23.2	6.0	0.9	7	158	0.6	0.51	1.6	3.2	0.09 C
	28	17	38	8.5	19-24.1	155-16.0	2.3	0.7	8	106	2.1	0.12	0.5	0.5	0.07 A
	28	20	58	29.6	19-46.9	155-14.3	8.0*	1.1	5	191	23.1	0.10	0.8		0.04 D
	28	21	2	6.8	19-49.7	155-11.1?	40.8	2.2	25	208	15.7	0.51	2.1	4.3	0.11 C
	28	22	20	30.4	19-37.7	156-23.3	7.5	2.4	23	276	67.5	0.41	3.8	5.2	0.16 D
	28	22	35	57.1	19-52.8	155- 6.6	51.7	2.0	20	242	24.5	0.52	2.6	4.0	0.12 D
	28	22	52	17.3	19-55.2	155- 7.3	46.9	3.0	28	224	22.4	0.42	1.9	3.5	0.14 C
	28	23	54	51.8	19-57.7	155- 6.2?	43.2	1.8	14	268	42.2	0.43	3.9	2.2	0.13 D
	29	0	54	17.0	19-53.9	155-10.0	52.6	2.1	20	216	18.4	0.38	1.6	3.6	0.12 C
	29	1	8	31.3	19-18.6	155-15.9	5.6	1.6	22	172	3.8	0.14	0.9	0.7	0.19 C
	29	1	57	26.8	19-56.5	155- 4.0	52.9*	2.2	17	259	29.5	0.20	1.9		0.10 D
	29	1	58	41.1	19-24.1	155-15.9	0.8*-0.4		8	113	2.3	0.08	0.3		0.12 B
	29	2	50	4.8	19-56.6	155-22.0	12.5	2.3	12	212	6.4	0.20	1.8	0.9	0.12 C
	29	3	25	25.7	19-57.8	155- 6.4	15.1*	2.0	21	250	51.0	0.32	2.4		0.18 D
	29	3	40	39.3	19-53.7	155- 5.5	48.3	2.4	22	225	26.4	0.43	1.8	4.0	0.13 C
	29	3	58	3.0	19-55.3	155- 8.6	43.8	2.2	20	222	21.2	0.47	2.2	4.6	0.13 C
	29	4	0	12.6	19-19.6	155-12.3	3.3	2.2	27	169	5.3	0.19	1.1	1.1	0.25 C
	29	6	8	5.7	19-24.6	155-16.7	1.3	1.1	13	95	0.7	0.06	0.3	0.3	0.11 B
	29	6	42	10.1	19-30.4	155-10.6	8.1	1.6	15	184	12.0	0.10	0.8	0.5	0.10 C
	29	7	41	34.5	19-21.0	155- 9.4	9.3	1.5	13	221	2.1	0.15	1.0	1.1	0.08 C
	29	8	7	31.2	19-19.5	155-15.7?	6.5	1.4	12	176	3.2	0.14	0.9	0.8	0.15 C
	29	8	29	40.2	19-51.4	155- 5.3	55.2	1.7	15	243	26.9	0.63	2.8	5.0	0.12 D
	29	9	0	23.6	19-57.1	155- 5.7	56.7	2.1	14	233	26.9	0.46	2.0	4.1	0.10 C
	29	9	15	27.2	20- 1.8	155- 4.1	55.5	2.1	17	245	58.2	0.84	3.7	7.2	0.16 D
	29	9	16	59.2	19-12.3	155-27.0	6.6	2.0	25	137	5.4	0.12	1.0	0.8	0.23 C
	29	9	20	4.1	19-23.1	155-23.3	8.0	1.1	20	61	5.3	0.07	0.6	1.5	0.15 B
	29	10	34	37.6	19-20.6	155-12.7	4.5	1.3	15	184	3.5	0.21	1.2	1.4	0.22 C
	29	13	1	23.0	19-54.7	155- 6.7	50.6	2.3	21	225	21.3	0.38	1.7	3.3	0.13 C
	29	15	49	18.8	18-54.0	155-19.0	14.5*	2.5	25	262	37.8	0.27	1.8		0.16 D
	29	16	43	3.2	20- 3.1	155-10.0?	19.8*	1.8	5	330	25.7	3.62	29.9		0.54 D

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
APR	29	16	56	18.4	20- 0.3	155-27.2	9.3	2.3	17	198	17.1	0.19	1.7	1.8	0.16 C
	29	19	4	39.1	19-47.0	155-13.9	13.5*	1.1	12	195	16.6	0.19	1.8		0.15 C
	29	19	35	28.6	19-24.0	155-15.4	2.6	0.9	8	137	2.3	0.05	0.2	0.8	0.02 B
	29	20	33	38.8	19-48.3	155- 9.9	14.0*	1.4	6	225	20.8	0.41	3.5		0.15 C
	29	21	41	23.0	19-56.3	155-11.6	49.0	2.3	14	235	16.6	0.46	2.5	4.1	0.10 C
	29	22	10	55.4	19-12.6	155-33.6	5.6	2.0	15	135	7.5	0.22	1.6	1.3	0.23 C
	29	22	31	54.1	19-53.9	155- 8.1	60.4	2.2	13	239	21.8	0.68	2.8	5.6	0.09 D
	29	22	58	55.4	19-24.1	155-15.8	1.6	0.4	8	115	2.3	0.07	0.4	0.3	0.08 A
	29	23	6	9.1	19-59.1	155-33.0	2.9	2.4	11	172	24.1	0.16	1.8	1.3	0.13 C
	29	23	10	48.8	19-10.3	155-20.8	47.8	1.9	14	197	14.6	0.56	2.1	5.5	0.11 C
	29	23	43	3.0	19-22.9	155-22.0	6.6	1.0	14	201	6.5	0.18	1.2	0.9	0.16 C
	30	1	3	39.9	19-27.4	155-17.3?	8.0*	1.1	9	281	3.6	0.19	3.1		0.29 D
	30	1	34	34.3	19-54.8	155- 8.6	49.1	2.1	18	239	21.1	0.42	2.2	3.3	0.11 C
	30	2	30	14.1	20- 1.3	155-35.9?	2.5	2.3	10	177	22.2	0.35	4.0	2.5	0.33 D
	30	2	55	50.1	20-12.5	154-59.9	84.2*	2.4	12	319	50.4	0.57	5.3		0.18 D
	30	3	15	29.6	19-50.1	155- 9.1	41.8	2.0	17	218	14.4	0.43	1.9	3.7	0.10 C
	30	3	25	13.6	19-20.8	155-29.6	9.0	1.1	16	107	9.6	0.10	1.1	1.9	0.19 B
	30	3	52	15.5	19-45.8	155-13.1	13.3*	1.5	13	193	19.2	0.19	1.9		0.16 C
	30	5	10	7.6	19-56.2	155- 6.3	46.4	2.3	10	259	25.5	0.65	6.7	3.7	0.19 D
	30	5	13	9.7	19-54.4	155-13.8	52.0	2.2	15	225	11.9	0.38	2.0	3.4	0.09 C
	30	5	14	31.8	19-54.7	155- 3.9?	46.9	2.2	16	252	29.2	0.73	3.5	5.8	0.13 D
	30	6	31	27.9	19-28.3	155-24.7	9.4	1.3	18	77	3.8	0.05	0.4	0.9	0.07 A
	30	6	36	39.9	19-27.7	155-24.3	7.8	2.7	27	58	4.2	0.08	0.5	0.6	0.14 B
	30	10	17	59.1	19-53.3	155-12.4	3.2	2.1	15	226	45.1	0.48	3.2	4.6	0.16 D
	30	13	6	59.8	19-24.6	155-16.7	1.0	1.2	11	93	0.8	0.06	0.3	0.4	0.10 A
	30	17	41	30.2	19-55.6	155- 8.0	51.9		19	243	22.2	0.53	2.5	4.1	0.13 D
	30	19	26	57.7	20- 2.1	155-18.6	12.8	3.0	23	222	16.4	0.26	1.6	1.5	0.14 C
	30	20	6	2.5	19-19.3	155-14.1	8.0*		17	196	5.9	0.08	0.5		0.08 C
	30	22	4	47.6	19-56.0	155- 8.9	57.1	2.7	17	241	20.9	0.67	3.0	5.5	0.13 D
	30	23	0	17.3	19-24.4	155-17.2	1.8	0.8	9	81	1.1	0.03	0.2	0.1	0.04 A

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
MAY	1	0	57	52.4	19-57.1	155- 9.0	48.0	2.3	23	239	21.3	0.46	2.2	3.6	0.11 C
	1	1	35	16.3	19-35.4	155-12.4	8.0*	2.2	5	241	18.0	1.25	9.0		0.22 D
	1	1	38	18.0	19-22.4	155-24.0	5.8	1.4	10	111	4.2	0.23	0.6	2.4	0.07 B
	1	4	33	44.8	19-21.8	155-12.6	5.5	1.6	13	152	1.2	0.18	0.7	1.6	0.14 C
	1	4	52	9.4	19-26.9	155-27.1	8.0*	1.9	9	224	8.2	0.27	1.7		0.13 C
	1	6	14	37.3	19-49.8	155- 8.3	43.9	1.6	22	255	13.3	0.83	3.6	5.9	0.12 D
	1	8	47	53.2	19-47.6	154-55.5	45.9	2.2	17	280	18.9	0.43	2.6	3.9	0.16 D
	1	16	14	8.8	19-55.4	155- 4.2	53.7	3.1	24	232	22.6	0.68	2.9	5.6	0.19 D
	1	17	51	36.3	19-50.1	155-48.9	13.7*	2.6	18	178	16.5	0.13	1.1		0.16 C
	1	23	52	2.2	19-51.8	155- 7.3?	41.4	2.9	23	233	16.2	0.47	2.1	3.8	0.12 C
	2	0	27	47.8	19-21.1	155-12.5	8.0	1.6	18	174	2.6	0.08	0.6	0.3	0.10 C
	2	0	45	1.7	19-18.7	155-15.6	11.1		12	196	4.1	0.12	0.5	1.1	0.05 B
	2	4	15	19.9	19-20.4	155- 8.0	3.3	1.8	19	234	4.4	0.33	1.7	1.1	0.20 D
	2	7	6	40.8	19-53.8	155- 7.8	54.8	2.1	22	220	20.1	0.45	1.9	3.9	0.14 C
	2	16	7	32.0	19-19.6	155-16.0	8.6		10	218	2.6	0.20	1.2	1.5	0.07 C
	2	16	41	36.5	19-57.9	155- 3.5	54.9	1.8	17	258	27.3	1.10	4.7	9.3	0.14 D
	2	22	0	52.9	19-22.9	155-22.5	8.0*		9	88	5.1	0.05	0.5		0.08 B
	3	2	12	10.7	19-24.1	155-15.6	2.1*		6	126	2.6	0.05	0.4		0.05 C
	3	3	14	49.7	19-51.6	155- 3.2	56.0	1.7	23	250	15.9	0.65	2.9	4.8	0.13 D
	3	4	44	48.6	19-20.3	155-17.9	5.6	1.5	17	80	1.0	0.09	0.8	0.5	0.15 B
	3	5	19	35.3	19-21.1	155-14.3	11.1		10	185	3.7	0.19	0.7	1.5	0.06 B
	3	8	54	34.8	19-18.7	155-13.3	8.0*		7	218	7.6	0.21	1.4		0.11 C
	3	13	30	36.9	20- 1.9	155-25.1	12.9	2.7	13	221	17.6	0.31	3.2	2.0	0.14 C
	3	13	35	14.3	19-49.8	155- 8.8?	69.1*		12	230	21.7	0.37	5.4		0.27 D
	3	13	57	12.2	19-46.7	155- 7.9	14.9*	2.1	21	228	25.4	0.34	2.6		0.26 D
	3	15	13	31.6	19-22.3	155-26.7	8.3	2.4	24	57	1.6	0.05	0.5	0.9	0.14 B
	3	15	19	58.0	20-12.6	155-38.2	10.1		16	299	46.9	1.50	9.9	5.6	0.16 D
	3	16	41	45.9	19-52.6	155-20.9	18.5	2.1	19	101	1.7	0.12	0.9	1.5	0.10 B
	3	16	42	10.8	19-54.4	155-15.9	6.6	2.1	11	219	47.1	0.36	1.8	3.1	0.09 C
	3	20	42	21.9	19-51.3	155-10.8	41.7	1.8	12	239	17.5	0.21	1.5	2.4	0.08 C

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
MAY	3	21	40	9.9	19-57.6	155-17.7	14.6	2.0	9	224	9.3	0.26	2.3	3.0	0.11	C
	3	22	6	37.1	19-18.4	155-14.6	10.1	1.1	12	212	5.8	0.24	1.1	2.2	0.09	C
	3	22	16	8.9	19-54.6	155-21.8?	8.0*	1.5	8	290	17.4	2.01	12.5		0.21	D
	4	3	15	39.4	19-21.4	155-23.3	6.8	1.1	13	80	2.2	0.06	0.5	0.5	0.10	A
	4	4	50	53.8	19-56.6	155- 7.9	49.9		23	227	22.9	0.63	2.8	5.8	0.18	D
	4	6	32	53.3	19-20.9	155- 8.5	9.3	0.5	11	227	3.2	0.14	1.0	1.0	0.06	C
	4	6	34	1.9	19-55.6	155- 8.4	54.1	1.3	14	241	37.0	0.80	3.3	7.5	0.14	D
	4	9	1	0.6	19-20.5	155-11.3	9.4		14	209	4.0	0.22	1.2	2.0	0.09	C
	4	9	12	52.7	19-50.3	155- 6.0	44.1	1.8	23	251	26.1	0.68	3.0	5.0	0.10	D
	4	12	19	29.4	19-11.3	155- 7.0?	19.3*		9	291	24.4	0.85	6.5		0.13	D
	4	14	53	9.3	19-23.3	155- 5.4?	0.0	2.4	19	238	8.1	5.25	2.1	9.5	0.21	D
	4	16	41	29.9	19-22.2	155-23.5	7.1		13	77	3.7	0.06	0.5	0.6	0.11	B
	4	18	37	36.0	19-25.9	155-26.0	8.0*		16	85	6.9	0.04	0.3		0.06	B
	4	20	35	38.6	19-56.1	155- 4.8	49.0	2.7	23	232	28.0	0.44	2.0	3.8	0.14	C
	4	22	12	36.0	19-22.5	155-23.2?	7.3		13	80	4.3	0.09	0.9	2.0	0.15	B
	5	4	47	14.8	19-19.8	155-14.9	30.6		8	255	11.3	0.63	2.9	4.9	0.08	D
	5	6	13	13.4	19-59.6	155-19.2	16.0	2.6	14	226	11.7	0.24	2.1	2.9	0.12	C
	5	6	20	10.8	19-45.0	155- 8.9	12.8*		15	215	25.6	0.24	2.0		0.18	C
	5	7	12	10.8	19-18.7	155-14.1	15.9	0.3	10	219	7.5	0.62	4.3	5.6	0.22	C
	5	7	14	27.8	19-21.7	155-12.1	3.3	1.7	9	116	16.5	0.16	1.3	2.6	0.19	C
	5	7	15	2.8	19-22.3	155-12.0?	15.5	2.1	6	157	9.9	1.56	8.4	20.3	0.25	D
	5	7	16	9.9	19-21.4	155-13.2	8.0*	1.5	9	124	7.7	0.08	0.9		0.12	C
	5	7	16	26.7	19-19.9	155-12.5	14.5	1.8	8	152	9.2	0.22	1.7	3.2	0.13	C
	5	7	20	34.8	19-23.1	155-13.1?	4.0	1.0	11	106	9.3	0.12	1.0	1.9	0.15	B
	5	7	24	5.8	19-21.9	155-12.9?	1.3	1.8	13	113	5.3	1.73	0.6	3.3	0.12	B
	5	7	27	51.2	19-22.1	155-13.2	1.4	1.3	8	118	9.6	2.67	0.9	10.2	0.10	C
	5	7	29	17.6	19-21.3	155-13.5?	1.0	2.5	21	101	8.6	0.11	0.8	1.2	0.24	C
	5	7	33	18.1	19-22.6	155-12.9	5.1	1.7	13	102	7.2	0.09	0.8	1.2	0.15	B
	5	7	33	48.3	19-20.6	155-14.1?	0.0	2.4	12	110	9.5	9.15	1.5	17.4	0.30	C
	5	7	35	54.3	19-22.1	155-11.4	5.6	2.0	12	105	9.8	0.12	1.0	1.4	0.19	B

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
MAY	5	7	38	24.5	19-21.2	155-13.9?	0.0	2.0	14	108	8.7	7.36	1.0	14.0	0.21 C
	5	7	39	52.7	19-22.3	155-11.5	4.6	1.8	13	103	2.1	0.10	0.8	1.2	0.16 B
	5	7	42	42.1	19-22.8	155-11.5	3.5	1.4	14	101	2.2	0.11	0.7	2.0	0.17 B
	5	7	44	13.1	19-22.4	155-13.4	5.4	1.8	19	94	4.4	0.06	0.4	0.6	0.12 B
	5	7	44	51.7	19-21.2	155-13.7	1.7	1.3	14	156	3.0	0.15	0.5	0.5	0.09 B
	5	7	47	12.8	19-22.9	155-13.8	4.5	1.3	11	120	2.1	0.30	1.1	2.8	0.14 B
	5	7	49	27.6	19-21.6	155-12.7	2.5	1.7	13	157	1.6	0.11	0.8	2.1	0.14 C
	5	7	53	35.4	19-22.0	155-11.8	1.3		7	162	1.7	0.17	1.1	0.7	0.11 C
	5	8	0	34.0	19-22.9	155-14.6	1.6		5	124	2.4				0.12 D
	5	8	2	40.1	19-22.0	155-14.4	1.7	1.2	14	149	2.8	0.19	0.9	0.7	0.18 B
	5	8	3	59.6	19-22.4	155-14.4	4.2	1.2	10	136	2.7	0.17	0.7	1.6	0.09 B
	5	8	5	22.4	19-23.6	155-13.0	2.9	1.2	7	112	9.6	0.22	1.9	2.4	0.18 B
	5	8	5	52.6	19-23.3	155-15.0	1.4		8	101	2.3	0.08	0.4	0.4	0.08 A
	5	8	6	3.5	19-22.5	155-13.9	4.6	1.3	13	138	2.1	0.19	0.8	2.0	0.16 B
	5	8	7	19.4	19-22.6	155-14.0	5.6	1.6	14	125	2.4	0.10	0.6	0.7	0.11 B
	5	8	10	42.4	19-21.6	155-12.4	5.7	1.5	11	208	6.2	0.17	1.1	0.8	0.10 C
	5	8	13	7.4	19-22.3	155-14.1	3.0		9	142	2.6	0.23	0.8	3.2	0.12 B
	5	8	14	8.6	19-22.3	155-13.8	4.9		9	142	2.1	0.33	1.0	2.5	0.10 B
	5	8	15	21.3	19-22.3	155-14.0	1.9		12	132	2.4	0.19	0.8	1.0	0.13 B
	5	8	17	33.6	19-22.1	155-13.1	3.8		7	142	4.9	0.14	0.5	1.7	0.05 B
	5	8	26	2.1	19-22.2	155-13.3?	1.7		9	138	4.6	0.27	0.8	1.1	0.15 B
	5	8	28	34.6	19-22.1	155-13.2	3.6		6	154	1.1	0.31	1.5	3.4	0.09 C
	5	8	40	3.1	19-22.3	155-14.2?	0.7	1.2	9	140	2.7	0.18	0.8	2.6	0.13 B
	5	8	40	28.7	19-23.1	155-14.3	1.7	1.1	10	113	3.0	0.03	0.2	0.2	0.04 A
	5	8	41	8.6	19-22.5	155-13.8	5.8	1.6	14	129	1.9	0.10	0.5	0.6	0.09 B
	5	8	44	5.3	19-23.3	155-14.9	1.7	1.3	13	100	2.5	0.07	0.3	0.3	0.08 B
	5	8	44	16.6	19-22.5	155-13.0	3.8	1.9	12	103	0.7	0.08	0.6	1.0	0.15 B
	5	8	49	52.0	19-22.9	155-14.1	5.9	1.3	15	114	2.7	0.12	0.4	1.0	0.08 A
	5	8	51	2.6	19-22.2	155-12.9	2.0	1.3	6	139	0.6	0.06	0.5	0.3	0.04 B
	5	8	51	12.9	19-22.2	155-14.3	1.1	1.5	9	153	2.8	0.11	0.6	0.5	0.10 B

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
MAY	5	8	58	22.4	19-22.3	155-14.0	5.8	1.6	15	132	2.4	0.06	0.5	0.4	0.09	B
	5	9	4	42.2	19-22.6	155-14.1	1.1	1.2	8	135	2.6	0.10	0.4	0.4	0.09	B
	5	9	11	20.3	19-22.8	155-14.1	1.1	1.1	10	120	2.6	0.10	0.4	0.5	0.08	A
	5	9	16	53.0	19-22.6	155-14.3	1.1	1.4	15	133	2.8	0.07	0.3	0.3	0.08	B
	5	9	21	49.8	19-22.5	155-13.3	4.5	1.3	9	114	1.2	0.13	0.7	1.5	0.10	A
	5	9	23	55.4	19-23.0	155-14.4	1.3	1.1	11	112	2.8	0.07	0.4	0.4	0.09	A
	5	9	25	30.0	19-22.7	155-14.1	0.9	1.6	11	131	2.5	0.14	0.6	0.6	0.15	B
	5	9	30	26.3	19-22.3	155-14.0	1.6	1.7	18	123	2.3	0.10	0.4	0.4	0.11	B
	5	9	32	25.2	19-22.8	155-14.5?	0.3	3.2	21	114	3.3	0.35	0.4	0.7	0.15	B
	5	9	44	16.1	19-22.4	155-14.2	1.3	1.2	9	130	2.7	0.08	0.4	0.4	0.06	B
	5	9	48	7.3	19-21.9	155-12.6	4.2	1.7	15	99	1.0	0.07	0.4	1.0	0.10	A
	5	9	50	17.8	19-22.2	155-13.4	4.2	1.6	16	127	1.4	0.09	0.6	1.2	0.15	B
	5	9	55	10.3	19-22.8	155-14.6	1.1	1.4	12	116	2.5	0.08	0.4	0.4	0.10	B
	5	9	57	17.7	19-22.7	155-14.0	1.4	1.5	11	124	2.4	0.13	0.6	0.5	0.14	B
	5	10	1	30.9	19-22.7	155-14.8	1.2	3.0	25	88	2.1	0.12	0.5	0.5	0.15	B
	5	10	7	28.6	19-53.7	155- 2.5	52.6	3.8	28	214	20.0	0.34	1.7	3.0	0.14	C
	5	10	11	18.3	19-21.8	155-14.3	0.9	3.4	26	99	3.0	0.15	0.4	0.6	0.15	B
	5	10	21	17.9	19-22.5	155-12.9	3.0	1.3	7	132	0.5	0.38	2.2	4.2	0.19	B
	5	10	36	28.9	19-22.7	155-14.3	1.9	1.6	13	121	2.9	0.08	0.4	0.3	0.08	B
	5	10	41	55.0	19-22.2	155-14.5?	0.7	3.2	24	95	4.7	0.49	0.6	0.9	0.21	B
	5	10	45	16.4	19-22.8	155-14.7	1.4	1.6	15	119	2.2	0.09	0.4	0.4	0.10	A
	5	10	56	13.9	19-21.9	155-14.2?	0.0	2.7	22	100	2.9	0.42	0.6	0.8	0.19	B
	5	11	9	18.7	19-21.9	155-14.1?	0.0	2.0	18	126	5.1	1.91	0.6	3.6	0.16	B
	5	11	15	12.6	19-22.5	155-14.4	2.8	2.8	15	91	4.0	0.09	0.7	3.3	0.21	B
	5	11	21	44.3	19-22.0	155-14.0	4.0	1.9	15	127	5.0	0.08	0.5	1.4	0.11	B
	5	11	25	20.2	19-22.6	155-14.8?	5.4		9	123	3.9	0.13	0.7	1.1	0.09	B
	5	11	25	43.8	19-21.4	155-13.3?	0.4	1.6	12	157	6.1	3.25	1.0	6.2	0.17	C
	5	11	27	43.5	19-21.9	155-14.3	1.2	3.2	26	99	5.1	0.20	0.5	0.8	0.19	B
	5	11	34	53.8	19-22.3	155-14.2	1.9	2.1	11	141	4.4	2.20	0.5	8.4	0.08	C
	5	11	38	51.5	19-22.4	155-15.1	2.0	1.7	11	123	4.2	0.26	0.9	1.0	0.19	B

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
MAY	5	11	40	20.7	19-22.3	155-14.8	1.5	1.6	15	127	3.8	0.11	0.4	0.4	0.11 B
	5	11	40	50.9	19-22.2	155-14.7?	0.0	3.1	15	98	3.5	1.09	0.5	2.1	0.17 B
	5	11	44	33.8	19-22.2	155-14.1	1.4	1.6	18	95	2.6	0.13	0.4	0.6	0.12 B
	5	11	49	17.4	19-21.6	155-14.0?	0.1	1.8	16	147	2.8	1.94	0.8	3.8	0.21 C
	5	11	59	0.4	19-22.3	155-14.6?	0.2	2.6	20	93	3.4	1.71	0.6	3.3	0.20 B
	5	12	3	10.9	19-22.0	155-14.6?	0.4	1.9	20	122	2.3	0.56	0.8	1.0	0.25 C
	5	12	4	28.8	19-22.1	155-14.4	4.8	1.9	13	107	4.8	0.13	0.6	2.0	0.14 B
	5	12	13	29.5	19-22.1	155-14.8	2.0		16	141	3.8	0.15	0.4	0.5	0.11 B
	5	12	14	13.6	19-21.9	155-14.4?	0.0	2.7	11	119	14.0	0.30	1.3	19.6	0.23 C
	5	12	18	56.9	19-21.9	155-14.7?	1.9	1.6	14	135	5.2	0.07	0.5	1.3	0.11 B
	5	12	21	1.6	19-22.2	155-14.2	1.6		10	143	2.8	0.20	0.7	0.9	0.10 B
	5	12	21	45.7	19-21.9	155-14.6?	1.9	2.0	13	156	6.9	0.07	0.5	1.3	0.10 C
	5	12	25	53.0	19-22.4	155-14.9	1.7	2.1	12	124	1.7	0.13	0.6	0.5	0.14 B
	5	12	26	8.4	19-22.1	155-14.6	1.1	2.6	17	98	4.8	0.18	0.5	0.7	0.15 B
	5	12	27	53.5	19-22.0	155-14.2?	0.0	2.1	9	137	3.0	0.83	1.2	1.4	0.19 B
	5	12	28	59.4	19-22.0	155-14.3	1.6	1.7	9	148	3.0	0.07	0.2	0.2	0.03 B
	5	12	30	55.7	19-22.6	155-14.9	1.6	1.6	11	121	1.7	0.09	0.5	0.4	0.09 B
	5	12	36	47.7	19-22.3	155-14.7	1.2		9	129	2.1	0.12	0.5	0.5	0.10 B
	5	12	40	3.0	19-22.3	155-15.1	0.2	2.8	19	92	1.4	0.41	0.7	0.8	0.28 B
	5	12	43	37.5	19-22.3	155-14.7	1.4		11	128	2.1	0.08	0.4	0.3	0.09 B
	5	12	44	14.6	19-22.3	155-14.7	1.6	1.7	15	128	2.1	0.10	0.5	0.4	0.13 B
	5	12	45	44.8	19-22.1	155-14.9	1.6	1.6	15	131	1.9	0.07	0.3	0.3	0.08 B
	5	12	48	17.0	19-22.3	155-15.0	1.6	1.4	10	125	1.5	0.15	0.6	0.5	0.11 B
	5	12	48	40.0	19-22.4	155-14.9	1.7	1.7	12	124	1.7	0.13	0.5	0.4	0.10 B
	5	12	50	53.3	19-22.5	155-14.9	1.9	1.4	15	121	1.7	0.11	0.4	0.4	0.09 B
	5	12	53	53.4	19-21.8	155-14.5?	0.4	3.0	21	101	3.5	0.31	0.4	0.6	0.15 B
	5	12	57	8.1	19-22.3	155-15.0	1.2	1.4	10	126	1.5	0.09	0.4	0.4	0.10 B
	5	12	59	38.0	19-22.9	155-14.6?	1.4	2.5	10	121	2.4	0.10	0.4	0.5	0.10 B
	5	13	1	40.3	19-21.9	155-14.6	0.1	2.3	17	124	2.4	0.33	0.5	0.6	0.16 B
	5	13	2	58.4	19-19.4	155-13.0?	8.0*	1.9	9	142	5.7	0.23	2.1		0.31 C

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
MAY	5	13	6	20.5	19-22.3	155-14.3	1.4	1.5	8	130	2.7	0.17	0.6	0.6	0.07	B
	5	13	8	40.1	19-22.2	155-14.7	1.3	1.7	8	140	2.1	0.16	0.5	0.5	0.06	B
	5	13	11	28.3	19-22.5	155-14.9	1.8	1.6	9	123	1.8	0.17	0.7	0.6	0.10	B
	5	13	13	11.3	19-22.1	155-14.7	0.7	1.6	11	132	4.8	1.30	0.6	2.5	0.12	B
	5	13	16	32.7	19-22.7	155-14.8	1.5	1.8	9	119	2.0	0.05	0.3	0.2	0.04	A
	5	13	21	31.2	19-22.2	155-14.6	1.9	1.5	11	139	2.3	0.18	0.7	0.6	0.12	B
	5	13	27	46.2	19-22.3	155-14.9	0.4	1.6	15	100	1.7	1.06	0.4	2.1	0.12	B
	5	13	32	15.1	19-22.2	155-14.9	1.2	1.9	14	127	1.7	0.19	0.6	0.6	0.13	B
	5	13	37	20.4	19-22.2	155-14.6	1.3	2.1	17	120	2.3	0.11	0.3	0.4	0.09	B
	5	13	39	29.2	19-22.2	155-14.6	0.9	1.6	10	130	2.4	0.16	0.5	0.6	0.10	B
	5	13	42	25.7	19-22.3	155-14.7	1.2	1.6	10	128	2.2	0.17	0.6	0.6	0.11	B
	5	13	44	43.4	19-22.5	155-14.6	1.5	2.0	15	117	2.3	0.10	0.4	0.3	0.09	B
	5	13	59	18.8	19-22.5	155-14.6	1.3	1.6	12	124	2.3	0.10	0.3	0.3	0.07	B
	5	14	14	5.3	19-24.9	155-17.6?	0.9	1.1	12	119	1.1	0.25	0.5	0.5	0.17	B
	5	14	18	56.3	19-22.1	155-14.8	1.4	1.4	8	131	2.0	0.27	1.0	0.9	0.12	B
	5	14	31	20.0	19-24.5	155-17.4	1.2	1.6	11	63	1.1	0.06	0.3	0.4	0.11	B
	5	14	33	12.9	19-22.3	155-16.1	1.2		8	149	0.4	0.05	0.4	0.3	0.05	B
	5	14	34	23.9	19-22.2	155-16.1	1.3	1.3	12	119	0.5	0.03	0.2	0.1	0.04	A
	5	14	35	47.9	19-21.9	155-15.4	1.4	1.4	14	128	1.2	0.11	0.4	0.3	0.09	B
	5	14	36	40.6	19-22.1	155-16.1	1.7	1.3	10	120	0.6	0.11	0.6	0.4	0.10	A
	5	14	43	34.4	19-22.1	155-16.2	1.3	1.3	10	119	0.8	0.07	0.3	0.3	0.09	A
	5	14	44	26.7	19-22.0	155-15.7	1.7		18	92	0.8	0.09	0.3	0.3	0.10	B
	5	14	45	25.0	19-22.3	155-15.7	1.6	1.3	7	185	0.4	0.16	1.0	0.4	0.09	B
	5	14	47	14.2	19-22.5	155-15.7	1.0	1.7	12	116	0.5	0.09	0.5	0.3	0.12	B
	5	14	47	53.2	19-22.1	155-15.4	1.6	1.9	12	131	0.9	0.15	0.7	0.5	0.11	B
	5	14	48	47.5	19-22.0	155-16.2	1.3	1.6	10	173	0.9	0.19	1.2	0.9	0.22	C
	5	14	49	41.9	19-21.9	155-15.6	2.2	1.8	11	103	4.6	0.09	0.4	6.0	0.08	B
	5	14	51	20.4	19-22.5	155-14.6	1.7	1.7	12	125	2.2	0.11	0.4	0.4	0.07	B
	5	14	56	10.6	19-22.1	155-15.8	1.5	1.6	13	122	0.5	0.08	0.4	0.2	0.07	B
	5	14	57	26.1	19-22.1	155-15.7	1.0	1.4	8	188	0.7	0.09	0.4	0.3	0.06	B



# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
MAY	5	14	58	24.8	19-22.1	155-16.3	1.4	1.3	7	117	0.9	0.06	0.4	0.3	0.06 B
	5	15	0	3.9	19-22.3	155-15.9	1.6	1.5	11	179	0.1	0.15	0.9	0.5	0.15 C
	5	15	0	49.5	19-24.6	155-17.3?	0.9	1.4	10	71	0.7	0.18	0.5	0.4	0.13 B
	5	15	4	19.5	19-22.0	155-15.7	2.0	1.4	10	125	0.8	0.09	0.5	0.3	0.07 B
	5	15	6	57.6	19-24.4	155-16.2	1.5	1.5	8	117	1.8	0.10	0.6	0.5	0.10 A
	5	15	8	28.3	19-22.7	155-15.6?	2.5	1.3	5	213	0.8			0.21	D
	5	15	9	9.3	19-22.1	155-15.8	1.8	1.5	11	122	0.5	0.09	0.4	0.3	0.08 B
	5	15	12	48.6	19-22.2	155-16.3	1.5	1.3	9	114	0.8	0.11	0.7	0.5	0.12 B
	5	15	18	43.4	19-22.0	155-15.4	1.5	1.4	10	196	1.1	0.20	0.7	0.5	0.11 C
	5	15	25	7.5	19-22.2	155-15.6	1.5	1.5	16	91	0.7	0.08	0.3	0.3	0.09 A
	5	15	32	24.7	19-21.9	155-15.4	1.2	1.4	11	130	1.2	0.11	0.4	0.4	0.09 B
	5	15	33	25.6	19-22.0	155-15.6	1.6	1.4	12	126	0.9	0.10	0.4	0.3	0.10 B
	5	15	35	0.6	19-22.6	155-14.8	1.5	1.1	8	122	2.0	0.12	0.5	0.5	0.08 B
	5	15	44	25.0	19-22.0	155-15.3	1.2	1.4	10	129	1.3	0.15	0.5	0.5	0.12 B
	5	15	46	48.0	19-22.4	155-14.7	1.2	1.4	12	125	2.1	0.13	0.5	0.4	0.09 B
	5	15	53	30.1	19-21.8	155-15.6	1.1	1.6	10	128	1.1	0.15	0.6	0.5	0.10 B
	5	15	54	9.6	19-21.8	155-15.3	1.1	1.4	10	132	1.5	0.09	0.3	0.3	0.09 B
	5	16	2	28.7	19-22.3	155-15.8	1.5	1.0	6	120	0.3	0.06	0.4	0.2	0.03 B
	5	16	7	49.7	19-22.1	155-15.8	0.8	1.1	8	123	0.7	0.09	0.4	0.4	0.08 B
	5	16	15	37.5	19-21.8	155-15.5	0.8	1.4	7	131	1.3	0.06	0.3	0.2	0.04 B
	5	16	18	39.1	19-24.8	155-17.1?	2.6	0.8	7	135	0.2	0.63	1.7	3.7	0.12 B
	5	16	33	10.1	19-21.8	155-15.4	1.3	1.7	14	131	1.4	0.10	0.4	0.4	0.10 B
	5	16	34	30.8	19-21.6	155-15.3	0.9	1.8	14	136	1.8	0.19	0.6	0.6	0.14 B
	5	16	39	56.6	19-21.8	155-15.7	0.9	1.4	10	130	1.3	0.23	0.8	0.9	0.16 B
	5	16	57	39.6	19-21.7	155-15.5	1.1	1.6	16	133	1.5	0.12	0.4	0.4	0.11 B
	5	17	4	30.0	19-21.8	155-15.5	1.2	1.6	15	95	1.3	0.13	0.5	0.5	0.13 B
	5	17	15	16.1	19-22.3	155-16.0	1.1	1.3	9	118	0.3	0.08	0.6	0.3	0.11 B
	5	17	53	47.7	19-21.9	155-15.8	1.3	1.4	11	189	1.0	0.16	0.8	0.4	0.10 B
	5	17	55	22.5	19-22.0	155-15.7	1.5	1.4	14	124	0.7	0.11	0.4	0.3	0.11 B
	5	17	56	47.2	19-22.1	155-15.7	1.2	1.5	17	124	0.6	0.10	0.4	0.3	0.11 B

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
MAY	5	17	58	7.3	19-22.0	155-15.7	1.6	1.4	13	124	0.8	0.09	0.4	0.3	0.09 B
	5	17	59	23.4	19-21.7	155-15.8	1.5	1.6	16	129	1.3	0.11	0.4	0.3	0.11 B
	5	18	0	16.4	19-22.0	155-15.8	1.1	1.1	8	185	0.7	0.14	0.7	0.4	0.09 B
	5	18	7	0.9	19-21.7	155-15.9	1.3	1.6	14	129	1.3	0.09	0.4	0.3	0.09 B
	5	18	7	45.5	19-21.8	155-16.1	1.8	1.7	13	125	1.2	0.13	0.6	0.5	0.13 B
	5	18	14	3.0	19-21.7	155-16.4	1.5	1.1	9	123	1.5	0.12	0.7	0.5	0.11 B
	5	18	14	23.8	19-21.8	155-16.2	1.0	1.7	15	124	1.3	0.10	0.4	0.4	0.13 B
	5	18	34	37.9	19-21.6	155-15.9	1.2	1.6	15	130	3.8	0.19	0.6	0.7	0.14 C
	5	18	38	49.7	19-22.1	155-16.1	1.8	1.1	6	179	0.7	0.09	0.6	0.4	0.05 B
	5	18	39	57.9	19-21.7	155-16.2	1.8	1.8	17	124	5.3	0.21	0.6	0.8	0.17 C
	5	18	42	51.3	19-21.9	155-16.3	1.6	1.7	16	122	1.2	0.11	0.6	0.5	0.15 C
	5	18	44	30.8	19-21.9	155-16.4	1.3	1.0	11	119	1.3	0.06	0.4	0.3	0.08 A
	5	18	48	18.4	19-21.4	155-16.5	1.6	1.4	13	127	2.9	0.22	0.7	1.0	0.14 C
	5	18	49	3.0	19-21.7	155-15.9	1.6	1.7	15	129	1.4	0.07	0.3	0.3	0.10 B
	5	18	49	44.5	19-21.8	155-16.1	1.3	1.4	12	125	1.2	0.07	0.3	0.3	0.07 B
	5	18	52	20.6	19-22.5	155-16.8?	5.8	1.2	15	73	2.9	0.16	1.0	1.6	0.23 C
	5	18	54	45.1	19-22.2	155-16.6?	0.9	1.4	17	78	4.1	0.21	0.7	0.9	0.19 B
	5	18	57	22.6	19-21.5	155-16.0	4.2	1.8	15	131	3.5	0.09	0.4	1.2	0.10 B
	5	19	0	37.4	19-21.9	155-16.7	1.1	1.3	7	147	1.7	0.03	0.2	0.2	0.02 B
	5	19	1	34.2	19-21.7	155-16.3	1.4	1.6	13	125	1.5	0.11	0.6	0.5	0.11 B
	5	19	14	55.7	19-24.6	155-16.1	0.7*	1.0	5	128	1.8	0.07	0.3		0.05 C
	5	19	34	1.1	19-21.7	155-16.5	1.3	1.1	12	122	3.2	0.07	0.3	0.3	0.08 B
	5	19	42	21.9	19-21.8	155-17.0	0.9		6	132	2.3	0.22	1.0	1.3	0.08 B
	5	19	53	21.5	19-21.8	155-16.9	0.4		8	113	3.3	0.31	0.5	0.7	0.10 A
	5	20	40	34.1	19-21.6	155-16.4	1.3	1.9	17	124	1.7	0.12	0.5	0.4	0.13 C
	5	20	48	37.4	19-21.9	155-16.4	1.3		4	165	1.4				0.00 D
	5	20	56	24.9	19-22.2	155-16.7?	0.9		5	126	1.4				0.08 D
	5	21	16	7.4	19-24.3	155-16.8	2.2	1.3	13	59	1.1	0.04	0.3	0.2	0.08 A
	5	21	37	27.1	19-21.6	155-16.5	1.2	1.9	21	123	1.9	0.12	0.4	0.4	0.14 C
	5	21	48	32.1	19-21.5	155-17.2	1.7	1.1	7	168	2.7	0.09	0.5	0.4	0.06 B

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
MAY	5	21	53	2.7	19-21.9	155-16.2	1.4		7	179	1.1	0.10	0.5	0.4	0.08 B
	5	22	37	4.5	19-21.5	155-16.5	1.4	1.1	10	177	1.9	0.09	0.5	0.4	0.11 C
	5	22	40	44.3	19-21.7	155-16.7	1.3	1.1	8	155	1.9	0.13	0.7	0.6	0.13 C
	5	22	49	48.0	19-21.6	155-16.9	1.3	1.6	18	113	2.3	0.07	0.3	0.3	0.11 B
	5	22	54	42.2	19-21.5	155-16.9	1.2	1.4	20	115	2.4	0.09	0.4	0.4	0.13 B
	5	23	0	14.3	19-21.7	155-17.0	1.4	1.1	14	108	2.3	0.05	0.2	0.2	0.07 A
	5	23	0	29.3	19-55.8	155- 5.9	46.6	3.8	24	208	23.2	0.24	1.3	2.4	0.12 C
	5	23	3	28.4	19-21.6	155-17.1	1.3	1.1	11	103	2.6	0.06	0.3	0.3	0.07 A
	5	23	5	26.2	19-21.5	155-17.0	1.4	1.4	14	110	2.7	0.06	0.3	0.2	0.08 A
	5	23	6	27.1	19-21.6	155-16.9	1.4	1.4	17	112	2.2	0.06	0.2	0.2	0.10 A
	5	23	7	7.0	19-21.6	155-17.0	1.3	1.7	20	79	2.4	0.11	0.4	0.4	0.14 B
	5	23	9	48.9	19-21.5	155-16.8	1.3	1.4	19	118	2.3	0.11	0.4	0.4	0.15 B
	5	23	11	8.8	19-21.5	155-17.0	1.6	1.4	14	110	2.7	0.05	0.2	0.2	0.08 A
	5	23	15	1.4	19-21.5	155-16.9?	0.7	1.1	11	121	2.7	0.30	0.8	2.5	0.14 B
	5	23	15	56.8	19-21.5	155-16.7	1.5	1.4	18	121	2.2	0.06	0.3	0.2	0.10 B
	5	23	17	0.9	19-21.5	155-16.7?	0.6	1.1	10	121	2.1	0.20	0.7	1.9	0.13 B
	5	23	18	16.2	19-21.8	155-17.2?	0.0	1.0	7	123	2.6	0.33	0.5	0.8	0.10 B
	5	23	18	27.8	19-21.5	155-17.0	1.6	1.6	14	108	2.6	0.09	0.4	0.4	0.11 B
	5	23	21	3.5	19-21.6	155-17.2	1.7	1.1	13	100	2.7	0.04	0.2	0.2	0.07 A
	5	23	21	41.4	19-21.6	155-17.1	1.3	1.1	13	103	2.8	0.08	0.4	0.3	0.11 B
	5	23	22	54.2	19-21.5	155-16.9	1.5	1.1	12	120	2.4	0.09	0.3	0.3	0.07 A
	5	23	23	50.9	19-21.5	155-16.9	1.6	1.1	11	115	2.4	0.04	0.2	0.2	0.06 A
	5	23	26	24.0	19-21.5	155-16.9	1.4	1.6	16	114	2.4	0.06	0.2	0.2	0.08 A
	5	23	28	8.8	19-21.3	155-17.0	1.2	1.1	13	114	2.7	0.08	0.3	0.3	0.09 A
	5	23	29	59.7	19-21.5	155-17.1	1.5	1.1	9	113	2.6	0.04	0.2	0.2	0.05 A
	5	23	31	30.4	19-21.6	155-17.0	1.4	1.4	16	109	2.5	0.06	0.3	0.3	0.10 A
	5	23	32	6.7	19-21.6	155-17.0	1.6	1.4	10	115	2.5	0.08	0.5	0.4	0.09 B
	5	23	33	40.0	19-21.5	155-17.0	1.5	1.1	14	110	2.5	0.05	0.2	0.2	0.06 A
	5	23	35	24.0	19-21.7	155-16.9	1.3	1.4	11	118	2.1	0.07	0.4	0.3	0.09 A
	5	23	39	23.1	19-21.5	155-16.9	1.2	1.4	18	115	2.4	0.15	0.6	0.6	0.16 B

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
MAY	5	23	41	6.7	19-21.4	155-17.0	1.8	1.4	15	114	2.4	0.13	0.6	0.5	0.16 B
	5	23	44	31.6	19-21.6	155-17.1	1.4	1.4	14	104	2.6	0.05	0.2	0.2	0.08 A
	5	23	45	30.6	19-21.6	155-17.1	1.7	1.1	10	139	2.6	0.06	0.4	0.4	0.08 B
	5	23	46	17.9	19-21.6	155-17.0	1.3	1.6	17	109	2.5	0.10	0.4	0.4	0.13 B
	5	23	47	22.1	19-21.6	155-17.1	1.3	1.1	12	103	2.6	0.06	0.3	0.3	0.09 A
	5	23	48	30.6	19-21.6	155-17.1	1.4	1.4	15	103	2.7	0.05	0.2	0.2	0.08 A
	5	23	49	7.5	19-21.3	155-17.1	1.4	1.4	17	111	2.3	0.08	0.4	0.3	0.13 B
	5	23	54	2.8	19-21.5	155-17.8	1.3	1.1	10	86	2.6	0.12	0.5	0.6	0.14 B
	5	23	57	17.2	19-21.5	155-17.2	1.6	1.4	16	103	2.7	0.06	0.3	0.2	0.09 A
	5	23	58	1.4	19-21.5	155-17.1	1.7	1.4	14	108	2.6	0.06	0.3	0.3	0.10 A
	6	0	0	12.1	19-21.6	155-17.2	1.4	1.1	14	100	2.7	0.05	0.2	0.2	0.07 A
	6	0	0	49.3	19-21.1	155-17.6	3.0		6	115	2.0	0.23	0.8	3.1	0.06 B
	6	0	2	2.1	19-21.5	155-17.8	1.3	1.1	9	104	2.7	0.10	0.5	0.5	0.08 A
	6	0	9	43.6	19-21.5	155-17.0	1.7		8	146	2.6	0.09	0.5	0.4	0.11 B
	6	0	10	9.4	19-21.3	155-17.1	1.3	2.3	17	110	2.3	0.08	0.3	0.3	0.11 B
	6	0	15	38.4	19-21.6	155-17.3	1.6	1.1	9	124	2.8	0.05	0.3	0.3	0.07 B
	6	0	19	56.4	19-21.5	155-17.1	1.3	1.1	16	107	2.6	0.07	0.3	0.3	0.11 B
	6	0	23	54.9	19-21.5	155-17.1	1.4	1.4	17	108	2.6	0.05	0.2	0.2	0.08 A
	6	0	26	8.7	19-21.4	155-16.5	1.4	3.1	28	94	2.1	0.13	0.5	0.5	0.19 B
	6	0	34	1.9	19-21.3	155-17.4	0.9	1.1	15	95	2.3	0.10	0.4	0.5	0.12 B
	6	0	38	57.4	19-21.4	155-17.2	1.3	1.4	12	111	2.3	0.07	0.3	0.3	0.08 A
	6	0	43	17.0	19-21.5	155-17.1	1.5	1.7	17	105	2.6	0.05	0.2	0.2	0.08 A
	6	0	47	23.9	19-21.6	155-17.3	1.4	1.4	14	99	2.8	0.05	0.2	0.2	0.08 A
	6	0	53	4.5	19-21.6	155-17.3	1.4	1.1	12	105	2.7	0.06	0.3	0.3	0.09 A
	6	1	7	33.6	19-21.5	155-17.3	1.5	1.7	20	100	2.6	0.07	0.3	0.3	0.12 B
	6	1	21	26.3	19-21.4	155-17.3	1.4	1.8	18	101	2.4	0.06	0.2	0.2	0.10 A
	6	1	32	29.8	19-21.5	155-17.3	1.5	1.4	15	99	2.6	0.06	0.3	0.2	0.09 A
	6	1	40	5.3	19-21.4	155-17.3	1.4	1.7	16	99	2.5	0.06	0.3	0.3	0.10 A
	6	1	46	28.1	19-21.6	155-17.3	1.4	1.1	13	100	2.8	0.06	0.3	0.3	0.10 A
	6	1	47	45.9	19-21.7	155-16.2	1.3		7	181	1.4	0.14	0.6	0.5	0.11 C

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
MAY	6	2	22	24.9	19-22.1	155-16.7	1.1	6	130	1.5	0.05	0.2	0.3	0.03	R
	6	2	23	14.2	19-21.4	155-17.2	1.6	19	105	2.4	0.07	0.3	0.3	0.12	B
	6	3	10	20.4	19-21.7	155-16.2	1.3	8	180	1.3	0.11	0.6	0.4	0.10	B
	6	3	47	44.3	19-21.9	155-16.5	1.1	7	156	1.4	0.10	0.5	0.5	0.08	B
	6	4	20	5.9	19-21.8	155-16.3	1.2	9	177	1.3	0.11	0.5	0.4	0.10	B
	6	5	0	30.6	19-21.7	155-16.2	1.4	9	181	1.4	0.12	0.6	0.4	0.12	C
	6	5	14	58.1	19-21.1	155-16.8	1.8	12	127	2.2	0.09	0.5	0.4	0.12	P
	6	5	49	45.4	19-24.3	155-17.1	2.1	7	82	1.1	0.06	0.3	1.3	0.05	B
	6	5	55	8.3	19-21.7	155-16.0	1.3	9	128	1.3	0.09	0.4	0.3	0.08	B
	6	6	10	22.1	19-24.5	155-16.1	1.5	12	75	1.7	0.04	0.2	0.2	0.08	A
	6	6	34	30.1	19-21.6	155-16.1	1.3	8	184	1.5	0.13	0.6	0.5	0.11	C
	6	7	31	5.2	19-21.9	155-16.5	1.3	7	159	1.4	0.10	0.6	0.5	0.09	P
	6	9	11	43.6	19-16.7	155-13.5	12.9	12	209	9.2	0.08	0.7	0.5	0.06	B
	6	18	7	35.9	19-53.6	155- 7.0	52.7	29	203	19.4	0.33	1.6	3.0	0.13	C
	6	20	18	10.1	19-21.7	155-16.1	1.4	6	140	1.4	0.12	0.8	0.5	0.07	B
	6	22	8	19.1	19-23.9	155-28.0	11.0	17	91	2.6	0.06	0.6	0.8	0.12	B
	7	1	0	29.9	19-20.5	155- 1.7?	0.0	20	217	14.6	5.24	1.8	9.6	0.23	C
	7	1	6	59.8	19-21.6	155- 2.0	3.1	13	209	13.8	0.24	1.5	1.1	0.17	C
	7	2	43	5.3	19-53.5	155-47.0	31.4	19	166	23.3	0.20	0.9	2.5	0.09	C
	7	4	13	52.3	19-20.8	155-16.3	25.0	23	140	2.3	0.16	1.0	1.4	0.13	B
	7	17	20	11.3	19-54.3	155- 7.9	53.4	28	203	21.0	0.30	1.5	2.9	0.15	C
	8	2	54	6.1	19-55.2	155- 9.9	44.1	29	219	19.0	0.89	4.2	8.1	0.21	D
	8	13	49	41.4	19-23.4	154-54.8	3.1	20	244	10.5	0.28	1.5	1.0	0.13	C
	8	15	41	49.9	19-18.6	155-14.8	8.0*	15	181	5.3	0.19	1.3		0.17	D
	8	22	7	31.1	19-22.9	155-14.3	6.2	9	121	2.9	0.29	0.9	2.2	0.12	B
	9	1	58	40.5	19-55.4	155- 7.7	48.2	24	225	22.8	0.47	2.1	4.1	0.15	C
	9	8	30	22.7	19-52.5	155-10.8	51.4	12	247	17.2	1.74	5.1	14.7	0.06	D
	9	14	19	10.1	19-46.8	155-11.0?	30.8*	12	211	20.7	0.13	1.3		0.10	C
	9	15	41	44.8	19-47.9	155-20.9	31.0	24	122	10.2	0.18	0.9	2.2	0.12	B
	9	17	19	38.3	19-19.0	155-13.0	8.0*	8	214	7.9	0.21	1.7		0.12	C

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
MAY	9	19	10	37.4	19-58.6	155- 4.4	50.6	1.6	20	256	29.9	0.64	3.1	4.8	0.12 D
	9	21	12	51.3	19-24.3	155-15.9	15.9	2.9	28	59	2.2	0.06	0.6	0.8	0.12 B
	9	21	59	3.3	19-22.3	155-25.5?	7.4	2.1	19	55	3.7	0.05	0.5	0.4	0.10 B
	10	0	1	43.1	19-24.0	155-17.9?	0.7		11	91	1.1	0.28	1.8	3.8	0.39 C
	10	1	55	2.2	19-50.7	155- 7.5	50.1	1.8	22	213	14.3	0.46	2.0	4.2	0.17 C
	10	6	52	8.5	19-50.5	155- 6.6	41.3	3.1	22	228	13.6	0.43	1.7	3.6	0.10 C
	10	12	56	57.6	20- 0.9	155-49.0	8.0*	1.3	17	282	45.7	0.74	4.7		0.16 D
	11	0	21	47.8	19-23.9	155-17.0	11.9	0.8	16	74	1.8	0.06	0.5	0.5	0.08 A
	11	4	12	57.3	19-57.5	155- 7.3	50.4	1.7	25	248	24.4	0.54	2.6	4.3	0.12 D
	11	4	36	26.8	19-25.9	155-26.1	8.0*	1.5	11	193	6.9	0.09	0.6		0.07 C
	11	5	3	22.8	19-23.5	155-13.9	10.7	1.5	9	127	2.3	0.49	1.9	4.1	0.17 B
	11	6	13	33.5	19-22.9	155-14.0	1.8		9	120	2.5	0.07	0.4	0.3	0.07 A
	11	6	36	0.5	19-24.6	155-24.6	8.0*		13	140	6.5	0.05	0.4		0.06 C
	11	7	34	49.1	19-24.0	155-23.9	8.0*	1.8	18	71	7.0	0.05	0.5		0.11 B
	11	7	41	16.0	19-13.5	155-28.7	45.0	1.2	19	104	6.4	0.33	1.2	3.0	0.09 B
	11	12	27	59.1	19-54.6	155- 9.1	47.9	1.7	20	238	20.2	0.44	2.2	3.6	0.14 C
	11	16	8	31.9	19-18.4	155-15.0	8.0*	0.6	13	161	5.2	0.08	0.6		0.10 C
	11	16	43	52.1	19-57.2	155-18.4	36.1	1.8	25	208	8.1	0.32	1.7	2.9	0.13 C
	11	17	45	18.0	19-11.1	155-26.9	34.1	1.7	15	137	3.5	0.36	1.4	3.2	0.09 B
	12	0	4	22.2	19-20.0	155-17.4	29.1	1.1	22	103	0.2	0.25	1.4	2.2	0.16 B
	12	5	12	11.4	19-53.5	155-19.7	14.7	3.4	31	188	1.6	0.13	1.0	2.0	0.14 C
	12	5	44	34.1	19-24.8	155-24.4	8.7	1.6	22	79	7.1	0.06	0.5	1.4	0.13 B
	12	7	16	11.0	19-18.6	155-13.6	8.0*	1.1	12	160	7.3	0.08	0.6		0.08 C
	12	7	32	13.9	19- 0.5	154-50.6	13.1*	2.0	20	273	41.9	0.68	4.4		0.19 D
	12	7	33	33.3	19-22.8	155-25.0?	11.0	2.3	17	71	5.6	0.12	1.2	3.1	0.26 C
	12	10	17	52.2	19-53.0	155-20.6	13.1	2.5	11	137	0.8	0.14	1.7	1.1	0.13 B
	12	10	30	13.5	19-42.1	155-15.1?	8.0*	3.1	33	108	17.3	6.01	40.4		2.02 D
	12	12	14	41.4	19-19.9	155-18.2	9.9	1.6	15	89	1.4	0.10	0.5	0.9	0.08 A
	12	13	37	27.6	19-20.3	155- 9.2	9.0	1.8	15	97	3.4	0.09	0.7	1.3	0.10 A
	12	19	18	13.1	19-13.6	155-20.3	32.6	1.2	13	168	12.9	0.54	2.1	4.7	0.11 C

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
MAY	12	20	0	33.8	19-22.9	155-14.4	2.4	1.1	7	121	2.8	0.05	0.1	1.9	0.02 B
	12	20	27	52.4	19-22.4	155-23.2?	7.0	2.4	31	47	4.0	0.08	0.8	1.6	0.25 B
	12	21	47	6.1	19-23.2	155-13.2?	2.0		7	144	1.6	0.22	1.2	1.0	0.15 B
	12	22	4	23.1	19-28.1	155-24.5?	8.4	1.2	17	143	3.8	0.13	1.0	0.8	0.18 B
	13	0	38	58.4	19-23.0	155-14.4	6.4	1.8	18	109	2.9	0.04	0.4	0.4	0.08 B
	13	1	46	24.1	19-21.0	155-15.8	7.8	0.9	11	141	2.5	0.14	1.0	0.7	0.13 B
	13	4	47	19.6	19-57.8	155-21.0	13.6	1.4	10	203	8.2	0.19	1.8	2.7	0.11 C
	13	13	26	19.8	19-20.6	155-19.7	1.6*	0.1	10	106	4.2	0.04	0.3		0.06 B
	13	16	44	15.5	19-24.4	155-16.9	0.8*		9	74	0.9	0.04	0.2		0.06 B
	13	17	11	31.1	19-23.7	155-23.6	8.0*	0.9	16	110	6.5	0.05	0.5		0.09 B
	13	17	15	45.3	19-22.0	155-11.3	5.5		14	107	2.5	0.11	0.6	1.2	0.12 B
	13	17	25	35.7	19-21.4	155-15.7	30.0	0.9	13	100	1.9	0.23	1.1	2.2	0.09 B
	13	17	35	12.2	19-24.2	155-17.4	1.8		9	92	1.5	0.03	0.2	0.1	0.04 A
	13	22	50	37.7	19-28.0	155-52.8?	9.5	3.0	24	190	22.2	0.21	1.6	2.1	0.18 C
	14	2	17	22.4	19-21.9	155-24.1?	8.0	0.9	11	123	3.5	0.22	0.6	2.0	0.08 B
	14	2	29	47.8	19-36.9	155- 5.7	9.8	1.9	18	162	11.6	0.10	0.8	1.1	0.14 C
	14	4	33	48.4	19-22.2	155-24.4?	8.1	1.0	10	125	4.2	0.24	0.6	2.3	0.08 B
	14	11	30	0.6	19-20.9	155-16.1	29.8	2.6	28	103	2.7	0.10	0.7	1.0	0.10 B
	14	15	38	59.5	19-37.1	155- 5.6	8.0*	1.8	16	123	11.3	0.08	0.6		0.13 C
	14	18	7	39.4	19-18.4	155-14.4	8.0*	1.5	11	163	6.0	0.08	0.6		0.10 C
	14	20	3	36.4	19-55.7	155- 8.4	47.9	2.1	25	224	21.6	0.40	1.8	3.4	0.14 C
	14	20	7	20.4	19-25.5	155-24.6	8.0*		13	129	7.6	0.07	0.6		0.11 C
	14	22	8	15.6	19-26.6	155-26.9	7.0	1.7	17	97	7.6	0.10	0.8	0.7	0.18 C
	14	23	46	3.4	19-19.2	155-13.4	9.0*	1.8	10	206	6.1	0.11	0.8		0.09 C
	15	2	0	42.4	19-21.6	155-25.0?	7.9	1.2	18	62	3.9	0.06	0.6	1.4	0.15 B
	15	3	48	1.4	19-20.4	155-12.9	8.0*	1.3	9	123	6.1	0.07	0.7		0.11 C
	15	4	48	31.7	19-36.9	155- 5.5?	8.7	1.8	16	164	11.6	0.10	1.7	2.3	0.14 C
	15	4	49	46.9	19-37.1	155- 6.7	8.0*	0.9	15	110	11.5	0.16	1.3		0.20 C
	15	5	39	50.2	19-43.9	156- 2.6	8.0*	2.9	18	252	52.0	0.42	3.1		0.17 D
	15	5	40	15.4	19-25.0	155-27.0?	7.9	1.7	21	92	4.8	0.09	0.7	0.6	0.16 B

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
MAY	15	7	11	55.1	20- 7.9	154-39.2?	140.0*	2.5	10	330	77.0	0.24	7.4	0.13	D
	15	9	10	44.2	19-26.6	155-24.1	8.0*		10	154	6.2	0.06	0.5	0.06	C
	15	17	40	4.6	19-20.1	155-12.8	8.0*	1.4	11	129	6.4	0.07	0.6	0.11	C
	15	19	45	38.1	19-24.5	155-17.0	1.5	0.7	10	68	0.8	0.03	0.2	0.2	0.06 A
	15	21	42	11.7	19-21.9	155-16.5	1.3		9	155	1.3	0.05	0.3	0.2	0.06 B
	15	22	36	54.5	19-22.4	155-10.0	8.3	1.5	18	97	0.7	0.06	0.5	0.5	0.11 B
	15	22	49	58.7	19-53.5	155-20.0	15.0	2.6	25	188	1.0	0.12	0.9	1.7	0.13 C
	15	23	58	51.4	19-25.9	155-23.6	7.5	1.4	14	100	6.0	0.06	0.5	0.4	0.11 B
	16	1	43	40.3	19-59.4	154-55.9	8.0*	2.2	18	274	44.6	1.21	8.0	0.26	D
	16	4	29	10.2	19-23.6	155-23.4	8.0*	1.5	11	105	6.3	0.03	0.3	0.05	B
	16	8	19	44.1	19-20.3	155-17.9?	8.9	0.6	13	86	0.8	0.41	2.5	3.3	0.36 C
	16	8	46	32.4	19-20.8	155-17.1	23.4	1.3	14	150	1.4	0.22	1.0	1.9	0.07 B
	16	9	16	6.9	19-24.2	155-30.1	12.7	0.5	13	97	5.4	0.05	0.5	0.4	0.07 A
	16	10	2	3.4	20- 0.5	154-59.7	50.0	3.1	26	265	33.3	0.67	3.4	4.7	0.15 D
	16	10	44	32.2	19-16.0	155-25.8	53.2		19	144	1.7	0.47	1.4	4.2	0.11 B
	16	13	59	41.5	19-21.6	155-22.6	8.2	0.2	11	77	2.8	0.06	0.5	0.4	0.08 A
	16	20	35	44.1	19-49.8	156- 6.5	48.1		21	248	32.4	0.29	1.4	2.6	0.08 C
	16	21	24	34.8	19-20.8	155-27.1?	8.0	2.1	18	84	3.3	0.07	0.6	0.5	0.14 B
	16	23	34	3.0	19-15.8	154-60.0	38.9	2.4	30	221	9.2	0.25	1.4	1.9	0.12 C
	17	1	57	42.3	19-22.5	155-24.3?	6.0	0.9	11	112	4.7	0.16	0.9	2.4	0.09 B
	17	2	29	30.1	19-55.8	155- 6.6	8.0*	1.5	16	247	47.3	0.50	3.8	0.19	D
	17	5	36	54.3	19-39.7	155-10.2?	8.6	1.5	13	94	10.7	0.33	2.3	4.2	0.30 C
	17	6	44	41.8	19-20.6	155-20.1	0.1	0.2	9	109	4.8	0.61	0.2	1.3	0.07 A
	17	6	48	13.4	19-21.8	155-23.0	7.4	0.5	11	90	3.0	0.23	0.6	1.9	0.09 A
	17	6	56	40.2	19-23.1	155-22.5	8.0*	0.8	10	91	5.1	0.05	0.5	0.09	B
	17	12	0	12.7	19-56.1	155-14.6	57.3	1.6	25	215	11.7	0.55	2.3	4.6	0.17 C
	17	18	55	26.5	19-56.0	155- 8.6	49.0	1.4	16	224	21.5	0.36	1.7	3.3	0.11 C
	17	21	37	19.3	19-23.3	155-15.6	2.2*	1.2	9	91	1.7	0.12	0.9	0.23	B
	17	22	25	32.8	19-21.9	155-24.1	8.3	0.3	13	86	3.4	0.08	0.6	1.5	0.10 A
	18	1	54	32.1	19-20.2	155-10.7	9.7	1.8	11	117	3.8	0.16	1.0	2.8	0.08 B



# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
MAY	18	3	33	37.7	19-19.3	155-18.8	5.7	0.9	15	112	2.5	0.08	0.5	0.5	0.11	R
	18	14	20	10.8	19-40.8	155-10.7?	31.3*		16	280	22.8	0.25	2.1		0.09	D
	18	20	11	28.6	19-21.9	155-16.4	27.6		16	89	1.4	0.19	0.9	1.8	0.11	R
	18	20	19	5.6	19-22.8	155- 4.4?	3.5		14	149	5.9	0.14	0.9	1.3	0.17	H
	19	1	37	51.4	19-12.6	155-22.5	30.1		23	160	10.9	0.21	1.1	2.1	0.14	C
	19	1	41	18.5	19-20.9	155- 7.9?	5.4		14	79	4.1	0.18	1.4	1.6	0.28	B
	19	3	12	23.8	19-54.4	155-10.6	46.5	3.4	33	197	17.5	0.30	1.5	3.1	0.17	C
	19	4	44	4.8	19-56.0	155-10.0	48.8	1.7	26	238	19.1	0.39	1.9	3.2	0.12	C
	19	7	28	36.9	19-20.6	155- 7.2	8.0*		9	159	5.3	0.21	2.2		0.24	C
	19	8	5	53.6	19-22.5	155-24.0	7.4	2.0	27	51	4.5	0.07	0.7	0.5	0.20	C
	19	15	42	16.6	19-22.3	155-24.4	6.9	1.9	23	51	4.3	0.09	0.8	0.7	0.22	B
	19	17	5	39.8	18-56.2	155-25.9	28.7		17	276	24.8	0.81	5.0	4.8	0.16	D
	19	19	18	22.0	19-20.5	155-14.5	24.5	3.2	30	111	4.3	0.10	0.7	1.0	0.12	H
	19	23	55	7.9	19-18.4	155-13.2	8.0*		11	224	8.0	0.16	1.0		0.09	C
	20	1	18	40.8	19-22.1	155-23.6	7.8		12	75	3.5	0.08	0.8	0.5	0.13	H
	20	2	3	10.1	19-20.7	155- 9.2	2.1		20	92	2.8	0.12	0.9	1.5	0.21	B
	20	3	45	11.9	19-52.9	155- 8.7	43.5	2.5	31	217	18.9	0.35	1.6	3.2	0.15	C
	20	4	43	44.1	19-23.0	155- 5.1?	0.0		17	85	6.9	6.14	0.8	11.7	0.20	C
	20	5	23	12.6	19-21.4	155-24.5?	7.9	2.3	29	60	3.0	0.08	0.7	0.6	0.23	C
	20	6	22	36.5	19-52.5	155-10.6	16.0*		15	273	31.3	0.82	5.3		0.19	D
	20	8	25	37.1	19-26.1	155-28.6?	7.6		16	79	6.8	0.09	0.6	0.9	0.13	R
	20	15	36	21.4	19-21.0	155-24.0	8.8	1.7	14	85	1.9	0.07	0.5	1.2	0.09	A
	20	17	16	10.8	19-24.9	155-25.2	7.8	1.6	20	65	6.1	0.06	0.5	0.4	0.12	R
	20	20	52	59.0	19-11.1	155-31.8?	7.8	2.5	27	100	7.4	0.12	0.8	0.8	0.20	R
	20	21	57	53.4	19-20.7	155- 6.8	8.0*		19	96	5.9	0.15	1.3		0.21	B
	20	23	39	44.6	19-37.3	156-11.3	54.4		15	255	37.3	0.54	2.4	4.5	0.09	C
	21	0	36	17.5	19-19.9	155-12.2	5.6	1.6	24	113	4.8	0.09	0.7	0.7	0.20	B
	21	0	43	25.6	19-19.3	155-13.4	6.1	1.9	27	124	5.9	0.08	0.6	0.5	0.19	R
	21	0	44	44.2	19-19.3	155-13.6	6.8		18	124	6.0	0.10	0.8	0.6	0.15	B
	21	1	40	48.6	19-24.5	155-17.4	9.0	1.2	11	65	1.0	0.09	0.4	0.8	0.05	A

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q	
MAY	21	1	46	10.2	19-10.9	155-19.6	41.7	10	200	14.8	1.11	3.0	10.1	0.12	C	
	21	1	47	24.5	19-12.2	155-17.5?	8.0*	11	194	14.6	0.30	2.2		0.31	D	
	21	1	48	45.8	19-10.6	155-15.9	36.9	14	211	14.4	0.73	3.0	5.9	0.18	C	
	21	7	34	36.8	19-22.0	155-27.0	4.4	2.2	23	78	1.4	0.11	0.9	1.0	0.27	B
	21	9	27	17.6	19-23.4	155-14.9	3.4		9	194	2.5	0.08	0.3	0.7	0.02	B
	21	10	11	26.5	19-19.3	155-12.5	8.0*	14	142	5.8	0.09	0.7		0.13	C	
	21	16	49	47.6	19-24.3	155- 9.4	8.0*	9	199	8.6	0.20	2.1		0.15	C	
	22	5	37	11.4	19-20.1	155-11.8	8.0	1.6	20	126	4.7	0.08	0.8	0.5	0.12	C
	22	14	28	52.1	19-22.5	155- 3.9?	2.0	2.2	15	159	5.1	4.29	1.3	8.4	0.21	C
	22	18	28	8.7	19-19.4	155- 9.9	1.4	1.7	17	122	4.8	2.26	1.0	8.6	0.23	C
	22	21	45	50.4	19-56.2	155-31.3	25.2	2.3	24	157	18.4	0.19	1.1	2.7	0.13	C
	22	22	31	25.7	19-19.4	155-13.5	6.2	1.6	27	122	5.7	0.07	0.6	0.5	0.17	B
	22	23	11	25.3	19-25.2	155-17.7	4.5	1.0	11	79	0.4	0.25	0.9	1.9	0.15	B
	22	23	43	51.1	19-24.1	155-15.9	2.0	0.7	12	62	2.3	0.07	0.4	0.3	0.10	A
	23	13	10	47.2	19-20.6	155-11.3	7.0	1.6	23	99	3.7	0.08	0.8	0.6	0.17	B
	23	14	9	8.8	19-15.6	155-22.0	8.0*	11	170	7.3	0.16	1.2		0.15	C	
	23	16	35	9.3	19-19.8	155- 9.4	9.4		13	107	4.3	0.09	0.6	1.2	0.07	A
	23	20	37	8.2	19-22.9	155-13.1	7.7		8	165	1.1	0.14	0.7	0.6	0.05	B
	23	21	11	13.0	19-16.0	155-47.8	7.8	1.5	10	161	7.9	0.11	2.7	3.1	0.09	C
	23	21	18	37.3	19-23.0	155-14.3	1.9	0.4	8	114	3.0	0.11	0.6	0.6	0.09	A
	24	2	45	22.6	19-22.8	155-14.4	4.3		8	126	2.7	0.25	0.9	2.6	0.10	B
	24	4	31	2.8	19-24.0	155-15.9	1.9	0.5	10	113	2.5	0.05	0.4	0.3	0.07	A
	24	5	3	31.1	19-23.3	155-15.1	4.7	2.6	16	77	2.1	0.10	0.4	1.0	0.09	B
	24	6	51	28.3	19-32.9	155- 4.6	10.4	2.0	17	146	5.1	0.12	1.0	1.2	0.14	C
	24	12	50	20.7	19-57.2	155- 1.4	50.3	2.7	26	258	34.3	0.71	3.4	5.7	0.17	D
	24	21	29	5.8	19-20.7	155-13.2	8.0*	0.6	16	82	5.7	0.05	0.5		0.10	B
	24	21	38	41.7	19-34.1	155- 4.4	8.3	2.2	27	121	7.1	0.09	0.8	1.3	0.13	B
	24	21	40	27.9	19-21.2	155-12.5	11.6		12	76	2.3	0.17	0.7	1.6	0.09	A
	24	23	27	0.1	19-21.9	155-12.8	3.3	0.9	16	52	1.0	0.08	0.5	1.3	0.12	B
	25	1	0	36.9	19-20.2	155- 8.5	3.4	2.1	30	77	4.3	0.12	0.8	1.0	0.29	B

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
MAY	25	1	51	25.1	19- 8.9	155-30.4	33.4	1.6	24	143	5.4	0.25	1.3	2.3	0.14	R
	25	5	51	28.0	19-21.4	155-17.0	24.8	1.2	23	55	2.4	0.14	0.8	1.4	0.11	R
	25	14	13	20.5	19-33.2	155- 5.0	9.9	1.7	24	160	5.8	0.12	0.9	1.1	0.13	C
	26	1	27	2.9	19-22.6	155-22.1	8.0	0.8	19	60	4.7	0.04	0.4	0.3	0.10	B
	26	3	53	5.3	19-23.3	155-14.9	4.5	0.8	18	84	2.4	0.09	0.3	0.8	0.08	R
	26	4	8	32.7	19-14.8	155- 7.1	42.4		31	200	5.0	0.26	1.3	2.0	0.13	C
	26	5	46	25.7	19-22.8	155-14.5	3.6	0.4	10	124	2.5	0.26	1.0	3.1	0.15	R
	26	9	12	10.8	19-23.2	155-15.1	2.9	1.0	13	110	2.1	0.08	0.4	1.4	0.08	A
	26	18	22	53.3	19-24.0	155-15.9	4.0	1.4	13	91	1.3	0.12	0.5	1.0	0.06	A
	27	0	50	57.4	19-20.0	155-13.5	4.6	0.8	21	68	4.7	0.11	0.7	1.2	0.23	B
	27	1	9	21.2	19-57.1	155- 4.4	46.7	2.4	32	235	25.6	0.42	2.0	3.4	0.13	D
	27	3	10	48.1	19-19.0	155-12.3	6.8	1.7	24	98	4.2	0.08	0.6	0.5	0.16	B
	27	5	4	10.0	19- 3.5	155-26.4	30.0	1.8	25	208	11.3	0.38	2.0	3.7	0.18	C
	27	14	46	15.0	19-27.1	154-53.3	8.0	1.2	13	234	3.4	0.26	2.8	1.6	0.12	D
	27	17	19	10.9	19-20.5	155- 7.9?	7.5	1.1	16	109	4.5	0.09	1.0	0.5	0.16	R
	27	17	31	10.1	19-24.4	155-17.1	1.2	0.6	12	59	0.9	0.04	0.2	0.3	0.09	A
	27	17	59	33.5	19-24.0	155-15.9	3.6	0.4	14	91	1.1	0.09	0.4	0.9	0.08	B
	27	18	10	38.8	19-24.2	155-16.0	1.9	0.4	8	186	1.2	0.06	0.3	0.9	0.04	R
	28	2	20	45.9	19-20.1	155- 8.0	9.6	1.4	17	88	4.9	0.09	0.5	1.2	0.08	A
	28	2	47	46.5	19-18.9	155-14.7	4.8	0.9	15	109	4.1	0.10	0.7	1.1	0.14	R
	28	2	52	28.9	19-18.7	155-14.7	7.1	0.9	18	114	3.7	0.09	0.5	0.6	0.12	R
	28	7	6	26.4	18-48.0	155-11.1	8.0*	1.3	21	283	49.4	0.72	4.6		0.18	D
	28	9	22	0.4	19-21.8	155-24.8	14.4	0.5	10	102	3.9	0.33	2.2	4.6	0.24	R
	28	10	21	19.8	19-17.5	155- 0.3	35.3	2.2	26	223	6.4	0.38	2.1	2.7	0.15	C
	28	12	10	58.3	19-21.4	155- 8.3?	1.9	1.4	17	98	3.0	0.17	1.5	2.1	0.20	C
	28	13	22	25.0	19-24.0	155-15.8	2.3	0.8	7	87	2.3	0.21	0.9	6.2	0.11	C
	28	22	32	11.3	19-21.9	155-14.8	2.4*		8	170	3.9	0.06	0.4		0.05	C
	29	4	7	2.3	19-56.4	155- 4.0	8.0*	1.9	14	263	44.7	0.83	5.7		0.22	D
	29	9	31	6.6	19-23.3	155-24.2	8.0*	0.8	12	99	5.9	0.09	0.9		0.15	R
	29	10	28	0.8	19-34.0	155- 3.4	8.3	2.4	17	218	17.3	0.25	2.0	1.4	0.11	C

## SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MIN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
40	MAY	29	15	22	1.6	19-23.4	155-14.9	13.7	3.4	28	44	0.1	0.05	0.6	0.9	0.14 B
		29	17	50	38.9	19-26.8	155-36.1	7.1	0.5	11	244	4.5	0.63	4.7	2.6	0.10 D
		29	21	19	16.1	19- 2.3	155-14.8	13.4*	1.3	18	277	27.3	0.55	3.6		0.15 D
		29	23	10	18.6	19-24.9	155-28.2?	7.6	3.0	27	52	4.6	0.06	0.5	1.0	0.14 B
		30	0	36	28.1	19-24.6	155-14.6?	1.1		10	131	2.5	0.11	0.5	0.5	0.11 B
		30	0	52	37.4	19-27.9	155-47.5	10.8	1.3	10	242	36.2	0.55	4.1	2.8	0.15 D
		30	2	24	9.1	19-22.5	155-13.3	2.9	1.7	22	74	1.1	0.05	0.4	0.7	0.13 B
		30	4	23	26.5	19-19.4	155-13.9	6.2	1.2	22	83	6.1	0.09	0.7	0.6	0.17 B
		30	5	1	59.9	19-19.4	155-15.3	6.5	0.7	20	102	3.8	0.09	0.6	0.6	0.15 B
		30	5	50	18.6	19-19.2	155-11.8	8.0*	1.0	13	99	5.0	0.10	0.9		0.17 B
		30	8	49	56.4	19-23.7	155-16.8	15.0	1.0	17	46	0.5	0.07	0.7	0.8	0.10 B
		30	11	17	41.5	19-58.8	155-34.7	2.4		13	164	25.4	0.14	1.7	1.4	0.17 C
		30	11	21	53.7	19-32.6	155-43.0?	7.9	2.4	13	251	13.7	0.32	1.6	0.9	0.07 C
		30	11	22	17.3	19-31.5	155-42.2	8.3	2.4	12	133	11.6	0.06	0.6	0.9	0.08 B
		30	11	28	17.3	19-32.1	155-41.6	8.0*	1.8	9	152	11.1	0.08	0.8		0.09 C
		30	11	29	54.3	19-31.5	155-42.2	8.4	1.0	11	158	11.6	0.08	0.9	1.1	0.08 B
		30	12	32	35.8	19-19.7	155-12.1	8.0*	1.2	12	87	5.3	0.07	0.6		0.10 B
		30	16	3	48.5	19-18.9	155-22.2	3.3	2.1	9	200	3.1	0.13	0.5	1.4	0.07 B
		30	18	28	34.7	19-22.0	155-24.8	3.7	1.1	12	98	4.2	0.12	1.0	1.7	0.26 B
		30	20	42	59.7	19-55.8	155-10.1	45.0	3.2	31	201	18.8	0.21	1.2	2.3	0.14 C
		30	21	28	33.1	19-14.1	155-21.9	6.4	1.1	16	152	9.1	0.11	0.9	0.8	0.18 C
		31	1	8	36.4	19-23.3	155-14.5	2.9		10	109	2.6	0.10	0.3	1.4	0.05 A
		31	2	4	41.0	19-20.2	155- 8.9	9.3		10	120	3.9	0.11	0.6	1.3	0.06 A
		31	3	47	27.3	19-24.1	155-15.5	3.2		8	130	1.9	0.12	0.4	1.1	0.05 B
		31	17	59	46.6	19-23.3	155-14.9	4.0	1.1	10	102	2.4	0.06	0.2	0.5	0.03 A
	JUN	1	0	15	59.0	19-20.9	155- 9.0	4.6	2.0	21	65	7.0	0.09	0.7	0.8	0.17 B
		1	0	18	29.9	19-19.2	155-13.2	7.9		16	77	4.0	0.11	0.7	1.8	0.11 B
		1	1	7	36.3	19-23.0	155-14.4	2.0*	1.1	12	110	2.9	0.08	0.6		0.13 B
		1	2	46	3.9	19-22.9	155-14.5	1.8	1.1	10	120	2.7	0.07	0.4	0.3	0.09 A
		1	3	3	21.4	19-23.5	155-15.0	5.0	1.8	17	53	2.5	0.06	0.2	0.5	0.06 A

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
JUN	1	3	48	9.1	19-59.1	155- 1.8	46.9	3.6	31	244	34.4	0.52	2.5	4.5	0.16 D
	1	4	57	26.2	19-22.2	155-13.3	5.8	1.4	12	90	1.2	0.25	0.8	2.1	0.12 B
	1	8	27	8.2	19-23.2	155-14.7	2.1	1.0	10	109	2.5	0.10	0.4	0.4	0.05 A
	1	9	13	36.7	19-19.7	155-12.0	8.0*		15	85	5.2	0.06	0.5		0.09 B
	1	9	22	46.8	19-25.8	155-16.3	24.8		12	129	6.3	0.21	1.0	2.1	0.08 B
	1	10	31	42.9	19-22.6	155-24.9	9.1	1.8	20	52	4.8	0.06	0.6	0.9	0.14 B
	1	14	15	15.3	19-40.4	155- 3.3	2.2	2.9	14	231	18.8	0.42	2.2	2.2	0.14 C
	1	17	0	10.9	19-20.6	155-24.6?	7.4	1.9	23	91	2.4	0.08	0.8	1.4	0.22 B
	1	23	46	29.6	19-23.7	155-15.3	2.6	0.9	8	157	2.3	0.27	0.8	3.1	0.08 C
	2	5	34	1.6	18-57.8	155-17.0	16.4*		17	252	28.8	0.49	3.3		0.21 D
	2	11	15	43.7	19-13.6	155- 6.2	5.6	2.9	26	221	7.6	0.25	1.3	0.8	0.17 C
	2	17	51	29.4	19-18.8	155-22.0	3.8		12	138	3.5	0.12	0.5	1.6	0.09 B
	2	19	55	31.4	19-24.1	155-15.6	4.4	1.4	14	128	1.8	0.11	0.5	0.8	0.09 B
	3	0	0	29.7	19-24.2	155-16.0	3.8	0.9	7	105	1.2	0.08	0.2	0.6	0.02 B
	3	5	45	38.5	19- 9.1	155-28.3?	8.0*		9	166	22.3	0.27	3.0		0.21 C
	3	7	49	22.7	19-12.4	155-24.4	32.2	2.3	22	180	8.1	0.23	1.2	2.3	0.14 C
	3	17	31	46.8	19-37.5	155-22.0	8.0*		8	131	14.3	0.10	1.2		0.15 C
	3	17	40	6.6	19-23.3	155-15.2	3.4	1.5	13	103	2.0	0.11	0.5	1.4	0.11 B
	3	19	46	50.6	19-19.6	155- 9.2	9.0		15	125	4.7	0.15	0.8	1.7	0.09 B
	4	2	52	5.7	19-18.8	155-28.3	6.7		19	68	5.3	0.11	1.0	0.9	0.25 B
	4	4	36	13.7	19-22.7	155- 4.9?	0.0	2.2	26	85	6.3	2.75	0.8	5.3	0.24 C
	4	4	43	12.4	19-22.6	155-13.2	5.6	1.5	14	124	1.1	0.11	0.6	0.9	0.12 B
	4	4	46	35.9	19-22.2	155- 4.7?	1.9	1.9	21	86	5.3	0.44	1.0	2.0	0.22 C
	4	5	10	21.4	19-24.1	155-15.8	1.9	0.9	9	120	1.5	0.06	0.3	0.3	0.07 A
	4	9	24	54.3	19-23.5	155-15.5	3.9		11	93	2.0	0.11	0.5	1.0	0.09 A
	4	13	6	2.6	19-59.9	155-14.4	91.6*	3.7	14	314	57.7	2.94	27.8		0.30 D
	4	14	2	33.0	19-23.8	155-15.2	2.7	0.9	7	167	2.1	0.15	0.5	2.2	0.05 C
	4	19	27	48.2	19-27.1	155-14.1?	9.4	1.6	15	145	4.0	0.12	1.0	1.9	0.15 C
	5	4	9	55.6	19-24.3	155-24.8	8.0*	1.6	16	80	6.0	0.05	0.4		0.10 B
	5	6	20	47.6	19-22.4	155-24.6?	7.5		18	51	4.6	0.07	0.6	0.6	0.18 B

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
JUN	5	11	35	25.8	19-17.9	155-13.5?	6.5	1.7	11	92	1.7	0.17	1.4	2.6	0.16 B
	5	17	49	5.1	19-21.2	155-24.1?	8.4		17	101	2.3	0.07	0.7	0.4	0.14 B
	5	18	52	48.3	19-23.3	155-14.8	2.0		12	105	2.6	0.05	0.2	0.2	0.04 A
	5	20	23	4.7	19-20.4	155-19.6	4.9	2.0	22	63	4.0	0.05	0.4	0.5	0.13 B
	5	22	54	18.4	19-23.7	155-15.3	3.1	1.5	20	55	2.3	0.06	0.3	0.9	0.09 B
	6	2	10	0.0	19-36.8	155-48.7	9.6	1.6	11	153	8.8	0.09	1.1	1.8	0.10 C
	6	2	19	28.6	19-24.2	155-15.8	1.8	1.0	12	110	1.5	0.08	0.5	0.3	0.11 B
	6	5	38	24.1	19-24.0	155-15.6	3.0	1.5	19	64	1.7	0.06	0.3	0.9	0.10 A
	6	5	50	25.6	19-50.6	155-18.4	1.9	2.4	23	170	6.4	1.83	1.2	6.4	0.15 C
	6	6	1	4.1	19-24.2	155-16.0	3.0	0.8	7	104	1.1	0.03	0.2	0.4	0.02 B
	6	6	44	13.6	19-22.9	155-14.3?	1.2	1.1	8	143	2.9	0.09	0.4	0.6	0.10 B
	6	8	4	48.8	19-9.8	155-36.8?	0.0	2.3	17	103	9.4	6.63	1.1	12.5	0.27 C
	6	13	23	22.5	19-20.3	155-12.6	9.6	1.6	19	71	4.0	0.08	0.5	1.0	0.08 A
	6	13	31	22.3	19-23.3	155-14.7	1.1	1.0	11	104	2.6	0.06	0.3	0.3	0.08 A
	6	16	16	3.7	19-22.7	155-14.2	5.6	1.6	21	103	2.7	0.07	0.4	0.6	0.10 B
	6	18	7	3.5	19-51.6	155-7.3	45.1	2.1	33	217	15.8	0.40	1.9	3.7	0.15 C
	6	20	22	47.7	19-23.4	155-14.2	4.3	1.2	14	113	2.4	0.24	0.8	2.3	0.13 B
	6	20	54	37.8	19-20.0	155-10.8	9.1		17	102	4.2	0.11	0.6	1.4	0.08 A
	6	21	43	34.3	20-3.8	155-54.0	32.4	2.4	12	249	42.1	0.31	1.9	3.2	0.10 C
	6	23	40	56.3	19-24.2	155-15.9	2.7		8	106	1.3	0.05	0.2	0.7	0.03 A
	7	0	12	24.4	19-24.1	155-15.7	3.5	2.2	21	62	1.7	0.05	0.3	0.5	0.09 B
	7	1	1	32.6	19-24.0	155-15.4	3.9	1.3	16	76	2.2	0.08	0.4	0.8	0.09 A
	7	4	21	6.0	19-23.2	155-14.9	3.2	1.1	13	103	2.4	0.07	0.3	1.0	0.05 A
	7	7	30	26.5	19-23.1	155-14.8	4.2	1.4	15	106	2.4	0.10	0.4	1.0	0.08 A
	7	12	41	45.7	19-20.0	155-12.9	4.7	1.5	23	71	4.5	0.08	0.6	0.7	0.19 B
	7	17	1	30.3	19-21.6	155-5.6	1.4	2.6	28	113	5.6	0.92	0.7	3.3	0.18 C
	7	20	13	41.9	19-49.1	155-6.9	14.3*		13	220	25.1	0.24	1.9		0.14 C
	7	21	17	27.2	19-34.1	156-17.2	1.9	2.5	7	299	48.8	0.80	17.0	10.2	0.15 D
	7	22	33	51.3	19-18.4	155-19.9	6.1	1.6	12	188	2.4	0.07	0.4	0.4	0.07 B
	8	1	18	44.2	19-21.9	155-16.7	22.2	1.9	23	102	1.7	0.12	0.8	1.2	0.14 B

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
JUN	8	1	49	37.6	19-22.5	155-14.1	4.4	1.3	16	99	2.4	0.13	0.4	1.3	0.08 B
	8	3	7	0.3	19-23.1	155-14.3	1.8	1.1	10	111	3.0	0.06	0.4	0.3	0.08 A
	8	4	49	33.0	19-19.4	155-16.3	6.5	1.5	16	105	2.3	0.07	0.5	0.4	0.10 A
	8	6	14	54.4	19-22.4	155-13.0	8.0*	1.5	10	125	4.8	0.07	0.7		0.07 C
	8	23	16	56.0	19-44.6	155- 9.1	14.3*		20	212	25.9	0.31	2.4		0.25 C
	8	23	57	5.3	19-22.9	155-14.4?	0.7		8	121	2.7	0.23	0.7	3.0	0.09 B
	9	0	4	13.5	19-23.1	155-14.4	4.4	2.2	24	52	2.9	0.06	0.4	0.7	0.13 B
	9	0	5	25.0	19-22.8	155-13.9	5.3	1.6	14	70	2.3	0.10	0.6	1.0	0.14 B
	9	0	31	48.2	19-23.2	155-14.8	3.6	1.6	11	109	2.8	0.13	0.5	1.8	0.07 A
	9	0	37	42.9	19-22.9	155-14.7	3.2	2.1	16	66	5.1	0.07	0.5	1.3	0.12 B
	9	0	47	30.9	19-22.9	155-14.5	1.5	2.4	20	67	3.3	0.08	0.4	0.3	0.11 B
	9	1	0	27.4	19-22.6	155-13.5	3.3	1.6	17	80	1.6	0.09	0.6	1.3	0.17 B
	9	1	9	58.4	19-23.0	155-15.0	5.4	2.0	15	62	4.2	0.06	0.5	0.6	0.11 B
	9	1	10	54.1	19-22.4	155-15.0	4.2	1.9	18	71	4.1	0.09	0.6	1.2	0.17 B
	9	1	15	17.4	19-22.9	155-14.9	4.1	1.6	17	83	3.4	0.06	0.4	0.8	0.10 B
	9	1	27	0.8	19-22.6	155-15.0	2.5	1.7	16	77	4.1	0.07	0.5	1.7	0.14 B
	9	1	29	52.6	19-23.0	155-14.8	4.8	2.0	19	48	3.8	0.06	0.4	0.7	0.09 B
	9	1	33	44.8	19-22.8	155-15.2	2.2*	1.6	16	66	4.5	0.05	0.4		0.11 B
	9	2	2	34.3	19-22.6	155-15.5	6.2	1.7	15	66	4.4	0.05	0.3	0.4	0.07 A
	9	2	36	17.2	19-22.9	155-15.3	6.0	1.5	13	53	3.8	0.06	0.4	0.6	0.09 A
	9	2	50	16.2	19-22.8	155-15.1	3.5	1.6	18	50	3.8	0.06	0.4	1.1	0.12 B
	9	3	1	32.3	19-22.3	155-15.9	3.1	1.1	13	121	4.7	0.07	0.4	1.1	0.08 B
	9	3	4	32.7	19-22.6	155-14.7	4.2	1.2	12	123	2.2	0.10	0.4	1.0	0.06 B
	9	3	7	0.4	19-22.1	155-16.0	5.0	1.5	16	65	4.5	0.10	0.4	1.1	0.10 B
	9	3	16	45.4	19-22.3	155-15.7?	5.8	2.2	19	55	5.4	0.06	0.5	0.7	0.13 B
	9	3	26	34.0	19-22.7	155-15.3	5.4	1.2	11	121	3.2	0.12	0.5	1.0	0.07 B
	9	3	27	32.1	19-23.1	155-15.2	6.4	1.5	14	109	3.0	0.07	0.4	0.6	0.09 B
	9	3	36	47.8	19-22.1	155-16.1	5.8	1.5	16	64	4.2	0.06	0.3	0.6	0.08 B
	9	3	37	18.2	19-22.9	155-14.9	3.5	1.1	16	115	1.9	0.11	0.5	1.3	0.09 A
	9	3	41	46.7	19-22.6	155-15.5	5.0	1.2	15	66	2.9	0.09	0.4	0.9	0.09 B

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MIN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
JUN	9	3	42	49.6	19-22.9	155-15.0	5.7	1.2	17	65	1.7	0.06	0.3	0.5	0.07 A
	9	3	46	53.2	19-22.7	155-15.0	5.2	1.7	15	68	3.8	0.07	0.5	0.7	0.11 B
	9	3	51	45.7	19-22.7	155-15.3	3.9	1.1	16	117	1.3	0.11	0.5	1.2	0.10 B
	9	3	52	58.2	19-22.9	155-14.9	4.6	1.2	16	115	3.5	0.12	0.4	1.2	0.09 B
	9	3	54	22.8	19-22.7	155-15.1	5.1	1.2	13	76	1.5	0.12	0.4	1.0	0.06 A
	9	3	55	4.2	19-23.1	155-15.4	3.1	1.3	15	69	1.6	0.12	0.6	2.1	0.16 B
	9	3	56	45.5	19-22.7	155-14.7	3.6	1.1	13	120	2.2	0.15	0.6	2.0	0.11 B
	9	3	57	27.8	19-22.7	155-15.3	3.7		14	117	1.2	0.13	0.6	1.5	0.11 B
	9	3	59	57.6	19-23.0	155-14.5	4.2	2.0	19	64	3.1	0.05	0.3	0.6	0.08 B
	9	4	2	22.8	19-22.9	155-15.0	5.6	1.2	17	79	1.8	0.10	0.3	0.9	0.07 A
	9	4	5	7.5	19-23.0	155-14.8	3.9	1.1	12	114	2.2	0.11	0.4	1.2	0.07 A
	9	4	7	59.4	19-23.1	155-14.8	4.2	1.1	12	112	2.2	0.09	0.3	0.8	0.05 A
	9	4	9	27.6	19-22.3	155-16.1	3.6	1.1	14	117	0.4	0.09	0.4	1.0	0.10 B
	9	4	12	23.2	19-22.8	155-15.2	5.6	1.5	19	86	1.4	0.05	0.3	0.5	0.08 A
	9	4	13	21.7	19-22.8	155-14.8?	1.3		13	116	2.1	0.08	0.4	0.4	0.13 B
	9	4	14	9.7	19-23.0	155-14.6	2.0	1.1	14	44	2.5	0.05	0.2	0.2	0.05 A
	9	4	15	24.6	19-22.8	155-14.9	4.9	1.2	16	117	1.8	0.09	0.3	0.8	0.07 A
	9	4	21	9.4	19-22.7	155-15.4	5.9	1.2	14	116	1.1	0.06	0.2	0.5	0.05 A
	9	4	23	50.0	19-23.2	155-15.1	3.1	1.0	12	111	2.0	0.09	0.4	1.3	0.07 A
	9	4	28	14.3	19-23.1	155-14.8	3.5	1.1	14	109	2.2	0.09	0.4	1.2	0.08 A
	9	4	29	21.9	19-22.9	155-15.1	5.8	1.2	16	113	1.6	0.13	0.4	1.0	0.08 B
	9	4	30	44.9	19-22.8	155-15.1	4.1	1.1	15	116	1.6	0.11	0.4	1.1	0.10 B
	9	4	32	9.1	19-22.7	155-14.9	5.7	1.5	16	120	1.8	0.10	0.4	0.8	0.08 A
	9	4	34	17.9	19-22.8	155-14.7	3.4	1.1	15	118	2.2	0.13	0.5	1.9	0.13 B
	9	4	37	3.9	19-22.8	155-15.3	4.3		14	115	1.2	0.12	0.5	1.2	0.10 B
	9	4	38	10.2	19-22.9	155-14.8	4.9	1.5	18	65	2.2	0.10	0.4	1.0	0.11 B
	9	4	40	31.1	19-22.9	155-15.1	5.9	1.2	17	78	1.7	0.08	0.3	0.6	0.07 A
	9	4	45	39.9	19-22.8	155-14.9	4.3		12	117	1.8	0.15	0.6	1.5	0.10 B
	9	4	45	58.0	19-22.7	155-14.9	4.4	1.2	15	120	1.9	0.11	0.5	1.2	0.10 A
	9	4	46	59.8	19-22.9	155-14.6	4.1	1.5	17	91	2.4	0.09	0.3	0.9	0.08 B



# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MO	Q
JUN	9	4	44	21.6	19-22.6	155-15.3	5.5	1.2	15	116	1.1	0.10	0.4	0.8	0.08 B
	9	4	52	46.2	19-22.8	155-14.9	6.8		15	116	1.9	0.13	0.7	0.9	0.14 B
	9	4	56	5.1	19-23.3	155-15.0	4.8	1.1	16	103	2.3	0.20	0.7	1.8	0.13 B
	9	5	1	26.2	19-22.5	155-15.1	3.9	1.1	15	127	1.4	0.13	0.5	1.3	0.10 B
	9	5	4	56.3	19-22.9	155-14.8	2.2		10	122	2.2	0.12	0.5	0.5	0.07 B
	9	5	5	30.6	19-22.8	155-14.9	4.4		11	118	1.8	0.06	0.2	0.6	0.04 A
	9	5	7	46.1	19-23.0	155-14.9	4.7	1.1	14	111	2.0	0.13	0.5	1.2	0.09 B
	9	5	11	13.9	19-22.6	155-15.1	5.3	1.2	14	120	1.4	0.09	0.3	0.7	0.06 A
	9	5	16	37.7	19-22.4	155-15.8	4.2		13	123	0.2	0.10	0.4	0.9	0.07 B
	9	5	17	11.2	19-22.9	155-14.9	5.1	1.2	16	114	1.9	0.12	0.4	1.0	0.08 A
	9	5	18	20.6	19-22.8	155-15.1	5.4		16	77	1.6	0.15	0.5	1.2	0.10 B
	9	5	20	15.3	19-22.7	155-15.3	5.5	1.5	21	51	1.1	0.04	0.2	0.4	0.07 A
	9	5	22	26.6	19-23.4	155-14.9	2.0		10	101	2.5	0.06	0.3	0.2	0.07 A
	9	5	25	30.0	19-24.6	155-24.3	8.0*	1.5	10	171	7.1	0.07	0.6		0.08 C
	9	5	32	4.9	19-22.7	155-14.7	3.4	1.1	13	120	2.2	0.06	0.2	0.8	0.05 A
	9	5	43	23.8	19-22.9	155-15.0	4.4	1.1	15	113	1.9	0.06	0.2	0.6	0.05 A
	9	5	37	32.4	19-22.9	155-14.9	6.3	1.5	16	82	2.0	0.05	0.3	0.3	0.07 A
	9	5	45	28.9	19-22.9	155-14.9	4.0	1.1	11	113	1.9	0.09	0.3	0.9	0.05 A
	9	5	46	19.2	19-23.0	155-14.9	4.5	1.1	15	111	2.0	0.13	0.5	1.3	0.10 B
	9	5	50	3.7	19-22.1	155-13.1	3.0		8	153	1.0	0.11	0.7	1.3	0.05 B
	9	5	50	24.8	19-22.7	155-14.9	3.9	1.1	15	119	1.9	0.13	0.5	1.4	0.11 B
	9	5	51	14.9	19-22.8	155-15.2	5.5	1.2	15	116	1.4	0.08	0.3	0.6	0.05 A
	9	5	55	46.0	19-23.0	155-14.7	2.0		9	117	2.4	0.11	0.5	0.5	0.06 A
	9	6	2	9.4	19-22.9	155-15.0	5.5	1.2	16	114	1.8	0.11	0.4	0.9	0.07 A
	9	6	7	26.6	19-22.9	155-15.0	5.1	1.2	11	117	1.8	0.13	0.4	1.1	0.07 A
	9	6	12	54.7	19-22.4	155-14.4	5.9		12	142	2.6	0.33	0.9	2.2	0.11 B
	9	6	15	41.4	19-22.8	155-15.2?	6.7	1.3	13	120	1.4	0.28	1.4	2.6	0.14 B
	9	6	20	0.4	19-23.1	155-14.6	3.0	1.1	9	111	2.5	0.07	0.2	1.0	0.04 A
	9	6	25	0.3	19-23.2	155-15.0	1.3		13	108	2.2	0.05	0.3	0.2	0.09 A
	9	6	50	53.9	19-22.6	155-15.4	5.2	1.2	12	121	1.0	0.09	0.3	0.7	0.04 B

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MIN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
JUN	0	7	4	36.9	19-22.9	155-14.7	8.2								
	9	7	5	26.7	19-22.9	155-14.4	5.2	1.7	21	64	2.0	0.06	0.4	0.6	0.10 R
	9	7	16	51.9	19-22.8	155-15.2	4.0	1.1	17	75	1.4	0.07	0.3	0.8	0.08 A
	9	7	31	51.7	19-23.0	155-14.6	1.1	1.1	15	111	2.5	0.06	0.3	0.3	0.07 A
	9	7	37	58.7	19-22.9	155-14.8	5.0	1.2	15	114	2.2	0.10	0.4	0.8	0.07 A
	9	7	59	26.8	19-22.9	155-15.1	5.3	1.2	13	113	1.7	0.15	0.5	1.3	0.10 A
	9	8	7	7.0	19-22.9	155-15.0	5.3	1.2	16	113	1.9	0.12	0.4	1.0	0.09 R
	9	8	15	23.4	19-23.0	155-14.8?	1.7		10	115	2.2	0.07	0.3	0.2	0.07 B
	9	8	28	16.6	19-22.9	155-14.5	1.3		11	114	2.6	0.08	0.4	0.4	0.09 R
	9	8	41	21.8	19-22.8	155-15.1	5.4		14	116	1.5	0.11	0.4	0.9	0.07 A
	9	9	25	23.4	19-22.9	155-14.5	1.0	1.1	14	113	2.5	0.07	0.3	0.3	0.09 R
	9	9	41	42.4	19-22.3	155-15.0	2.8	1.1	12	125	0.2	0.10	0.5	1.1	0.10 R
	9	9	46	0.8	19-22.8	155-15.0	5.1		13	116	1.7	0.08	0.3	0.7	0.05 A
	9	11	24	47.8	19-22.9	155-15.0	4.6	1.1	14	114	1.8	0.05	0.2	0.5	0.04 A
	9	11	31	44.0	19-23.1	155-14.5	1.1	1.1	14	106	2.8	0.07	0.3	0.3	0.10 R
	9	11	34	47.3	19-23.1	155-15.0	4.2	1.1	12	111	2.0	0.06	0.2	0.6	0.03 A
	9	12	38	43.8	19-22.8	155-15.1	6.0		14	76	1.5	0.15	0.4	1.1	0.08 A
	9	12	49	46.7	19-23.0	155-14.5	2.0	1.1	12	118	2.7	0.06	0.2	0.2	0.04 A
	9	15	4	0.4	19-22.8	155-15.0	5.0	1.2	12	118	1.8	0.10	0.3	0.9	0.06 A
	9	15	24	28.6	19-22.7	155-14.3	6.2	1.3	10	125	1.9	0.18	0.4	1.2	0.04 R
	9	15	27	54.2	19-22.9	155-14.5	1.3	1.4	15	113	2.6	0.05	0.2	0.2	0.06 A
	9	18	0	13.1	19-23.1	155-14.6	6.6		10	109	2.6	0.28	0.8	1.8	0.08 A
	9	18	10	57.6	19-22.9	155-14.7	4.3	1.6	20	66	2.3	0.06	0.3	0.6	0.09 R
	9	18	11	49.9	19-22.8	155-14.5	5.2	1.2	13	118	2.5	0.24	0.7	1.8	0.09 R
	9	18	27	50.1	19-20.6	155-19.5	1.8	1.3	12	102	3.8	0.09	0.3	0.4	0.06 A
	9	19	38	12.4	19-22.7	155-15.0	5.9	1.2	15	118	1.6	0.15	0.5	1.2	0.09 A
	9	20	0	22.1	19-10.3	155-36.1	6.1	2.9	27	102	8.6	0.13	0.8	0.8	0.16 R
	9	20	3	40.3	19-20.5	155- 9.3	4.4	2.0	26	71	3.0	0.09	0.7	0.7	0.22 R
	9	20	38	23.9	19-19.2	155-13.5?	8.0	3.2	28	70	4.0	0.04	0.4	0.3	0.12 R
	9	20	39	34.5	19-19.6	155-13.3	7.5	2.7	22	70	4.8	0.03	0.3	0.6	0.08 A

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
JUN	9	21	14	24.8	19-22.9	155-14.7	6.4	1.3	12	121	2.2	0.24	0.5	1.5	0.06 R
	9	23	11	57.7	19-17.4	155-15.5	6.4	1.6	16	177	3.6	0.09	0.6	0.6	0.12 C
	10	0	25	35.1	19-22.8	155-15.1	6.0	1.2	16	117	1.6	0.13	0.5	1.0	0.08 R
	10	9	20	35.6	19-23.5	155-23.0	8.0*		11	100	5.7	0.06	0.5		0.11 R
	10	10	5	0.6	19-21.2	155-13.4	13.4	1.7	12	193	4.8	0.23	0.6	1.7	0.04 R
	10	12	44	28.2	19-23.0	155-15.4	5.4	1.4	15	110	1.3	0.14	0.5	1.0	0.09 R
	10	19	36	27.3	19-20.4	155-19.4	28.1	3.0	32	53	3.5	0.11	0.7	1.2	0.14 P
	10	20	28	34.4	19-22.2	155-24.8	10.0		10	95	4.5	0.13	0.8	1.8	0.11 R
	11	1	4	34.9	19-21.3	155-15.7	30.1		17	67	2.1	0.24	1.1	2.2	0.11 R
	11	3	38	47.0	18-52.7	155-11.5	14.2*	2.8	20	272	42.3	0.35	2.4		0.15 D
	11	5	0	2.8	19-21.3	155-17.8	23.0	0.7	13	101	2.4	0.22	1.3	2.1	0.12 R
	11	9	25	54.9	19-19.2	155-21.6	1.9*	0.3	12	186	3.5	0.04	0.3		0.05 C
	11	11	18	8.9	19-18.7	155-13.2	7.8	2.1	20	82	3.1	0.06	0.5	0.3	0.11 R
	11	21	32	21.2	19-50.5	155-16.5	12.2	2.1	20	177	8.8	0.12	1.3	1.5	0.11 C
	12	4	13	8.5	19-22.8	155-14.3	1.2		14	101	2.9	0.07	0.3	0.3	0.10 R
	12	7	49	53.8	19-18.6	155-26.2	27.6	2.3	21	95	4.2	0.17	0.9	1.9	0.10 R
	12	23	35	31.6	19-21.1	155-11.9	6.1	1.5	24	68	2.8	0.09	0.7	0.6	0.21 R
	13	7	43	1.2	19-20.0	155-13.1	8.9	1.6	19	68	4.6	0.09	0.6	1.3	0.10 R
	13	23	59	22.9	19-25.7	156- 2.9?	43.7	2.8	22	256	25.8	0.61	2.6	4.7	0.12 D
	14	1	45	19.1	19-20.4	155- 8.0	4.5	1.8	17	83	4.5	0.11	0.8	1.1	0.19 R
	14	5	18	50.4	19-55.2	155-14.0	49.3	2.7	27	227	12.0	0.39	1.8	3.4	0.12 C
	14	9	37	48.0	19-21.6	155- 6.5	8.0*		18	99	5.9	0.09	0.8		0.13 R
	14	12	42	40.6	19-18.2	155-13.2	6.6	2.6	23	93	2.2	0.07	0.6	0.5	0.14 R
	14	12	45	34.5	19-18.5	155-12.9?	7.0		11	95	2.9	0.23	1.4	3.5	0.20 R
	14	21	39	49.7	19-16.1	155-10.6?	1.5		14	221	5.1	0.49	1.7	1.5	0.22 C
	14	23	51	37.9	19-17.8	155- 8.8	7.4		8	140	1.6	0.15	1.4	1.0	0.12 R
	15	0	23	58.7	19-18.6	155-13.7	9.2		10	127	2.9	0.32	1.5	3.3	0.15 R
	15	0	30	34.1	19-20.1	155- 9.4	3.1		15	104	3.7	0.14	1.2	1.8	0.24 R
	15	0	31	25.3	19-11.0	155-40.8	1.0	2.7	31	119	9.7	1.18	1.0	4.2	0.24 C
	15	2	2	1.1	19-17.2	155-12.7?	7.6	2.0	28	154	1.4	0.08	0.6	0.4	0.14 C

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
JUN	15	2	26	20.2	19-17.5	155-12.5?	8.0		14	149	1.8	0.08	0.6	0.5	0.10	B
	15	3	47	17.7	19-22.1	155-15.8	3.4		13	136	0.7	0.14	0.6	1.2	0.09	B
	15	11	45	50.1	19-20.4	155-20.1	3.0	2.3	21	116	4.8	0.10	0.7	1.0	0.19	B
	15	21	3	2.3	18-41.5	155-15.2	8.0*	2.8	16	308	54.0	2.01	12.5		0.19	D
	16	1	29	44.7	19-22.4	155-24.4	3.7		13	116	4.5	0.10	0.7	1.4	0.13	B
	16	2	51	32.1	19-25.6	155-23.3	8.0*	1.6	19	62	5.8	0.05	0.4		0.11	B
	16	3	14	48.3	19-53.9	155- 7.8	43.0	3.0	33	222	20.3	0.37	1.7	3.3	0.14	C
	16	4	53	4.2	19-50.7	154-58.9?	77.5*		11	262	38.7	0.43	4.8		0.13	D
	16	6	6	55.0	19-22.4	155-25.3	7.9	2.3	28	52	4.1	0.07	0.6	0.5	0.15	B
	16	7	45	20.8	19-21.8	155-25.4	8.9		16	108	4.2	0.08	0.7	1.4	0.11	B
	16	9	1	21.8	19-18.9	155-28.9	8.0*		12	84	10.0	0.15	1.4		0.24	C
	16	11	44	12.0	19-20.6	155-13.6	4.5	1.6	24	111	3.9	0.11	0.7	0.8	0.22	B
	16	12	56	2.4	19-51.1	155-32.2	33.2	2.6	15	118	11.4	0.23	1.3	3.0	0.12	B
	16	14	7	40.6	19-24.2	155-23.3	7.5		11	103	6.4	0.08	0.5	0.5	0.10	A
	16	17	25	51.1	19-18.7	155-14.0	6.4		12	117	4.0	0.11	0.5	0.9	0.09	A
	16	22	39	5.0	19-18.3	155-12.6	1.8		21	112	2.9	0.25	0.9	1.2	0.22	B
	16	23	12	46.7	19-22.4	155-13.2	4.2	1.5	15	75	0.9	0.10	0.5	1.2	0.10	A
	17	0	47	4.1	19-17.9	155-12.2	6.8	1.8	24	136	2.8	0.08	0.5	0.5	0.15	B
	17	1	48	20.0	19-55.2	155- 8.3	48.1		30	225	21.6	0.39	1.8	3.3	0.13	C
	17	3	2	24.1	19-16.7	155-11.9?	7.9		12	201	2.8	0.13	0.9	0.5	0.10	C
	17	3	9	24.3	19-23.0	155-27.4	9.7		14	110	1.0	0.13	1.0	1.6	0.11	B
	17	3	33	24.8	19-25.6	155-21.6	7.6		10	98	3.9	0.06	0.4	0.5	0.05	A
	17	4	26	7.8	19-17.0	155-11.8?	8.0	1.9	21	185	2.9	0.10	0.7	0.4	0.11	C
	17	4	34	52.6	19-17.9	155-12.4?	0.9		15	129	2.4	2.10	0.8	8.0	0.18	C
	17	4	48	3.5	19-17.1	155-11.8	7.8	1.8	21	181	2.9	0.11	0.8	0.4	0.12	C
	17	5	31	44.6	19-58.0	154-59.8	43.7		24	246	37.3	0.54	2.7	4.6	0.15	D
	17	7	48	0.3	19-17.1	155-11.9?	7.5		12	178	2.7	0.14	0.9	0.8	0.12	C
	17	8	7	20.6	19-21.4	155-24.2	8.0*		11	166	6.3	0.08	0.6		0.07	C
	17	13	54	3.5	19-20.6	155- 8.1	4.3	1.8	16	82	4.2	0.11	0.9	1.0	0.18	B
	17	15	0	6.9	19-17.7	155-12.4	5.9	1.8	25	142	2.3	0.09	0.6	0.5	0.17	B

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MIN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q	
JUN	17	17	19	55.1	19-19.1	155-13.8	6.8	17	84	3.8	0.08	0.6	0.6	0.13	R	
	17	17	23	23.4	19-55.9	155-39.7?	0.0	11	127	25.0	3.62	0.9	6.8	0.10	C	
	17	17	58	14.5	19-23.5	155-25.9	10.3	1.7	14	144	3.4	0.09	0.5	1.0	0.06	R
	17	18	29	32.7	19-10.0	155-40.0	4.1	2.4	22	117	10.3	0.15	1.2	1.3	0.24	C
	17	18	39	4.5	19-16.8	155-12.0	7.9	1.8	16	196	2.7	0.10	0.7	0.4	0.11	C
	18	1	9	23.4	19-31.4	155-41.9	8.3	2.9	19	109	11.1	0.05	0.5	0.7	0.09	R
	18	2	12	53.2	19-20.3	155- 8.5	9.0		11	86	4.0	0.08	0.6	1.1	0.06	A
	18	2	27	47.1	19-21.8	155- 7.1	3.6	1.8	13	95	4.8	0.09	0.7	1.0	0.15	R
	18	6	26	38.4	19-18.3	155-13.3	5.6	1.6	12	87	2.4	0.11	0.8	0.8	0.13	R
	18	7	18	19.4	19-58.0	155-25.1	9.8		11	202	11.7	0.30	2.5	2.3	0.20	C
	18	7	22	33.4	19-19.8	155- 4.0	33.2		18	235	11.0	0.34	1.5	2.6	0.07	C
	18	11	9	50.6	19-32.8	155-36.5	9.2	2.9	25	81	6.5	0.08	0.7	1.0	0.16	R
	18	15	46	39.6	19-21.8	155-12.7	4.6	1.4	13	150	1.2	0.15	0.8	1.6	0.13	R
	18	17	31	28.6	19-55.1	155- 8.5	60.9		12	241	36.5	0.94	3.8	8.8	0.12	D
	18	19	44	8.8	19-22.9	155-27.4?	8.8	2.1	25	54	0.7	0.10	0.7	0.7	0.20	R
	19	1	25	21.5	19-22.3	155-11.3	5.9	1.5	20	93	2.5	0.05	0.4	0.5	0.10	R
	19	5	0	45.2	19-16.8	155-12.4	5.4		17	197	2.0	0.10	0.6	0.7	0.13	C
	19	5	53	43.5	19-27.6	155-27.8?	8.5		20	141	8.8	0.12	0.8	0.7	0.16	R
	19	6	28	58.0	19-20.6	155-14.0	10.1		18	67	4.2	0.13	0.7	1.7	0.16	R
	19	11	10	17.5	19-18.7	155-13.2	6.1		11	83	3.1	0.09	0.7	0.7	0.09	R
	19	13	11	20.5	19-18.4	155-13.5	6.3		14	86	2.6	0.13	0.7	1.0	0.13	R
	19	14	40	55.3	19-18.3	155-13.6	6.7	1.9	18	75	2.3	0.08	0.5	0.6	0.12	R
	19	19	11	20.9	19- 5.8	156- 4.1	17.8*		14	301	27.9	0.51	3.8		0.21	D
	20	3	30	7.4	19-37.7	155- 8.6	11.4	2.1	22	92	14.6	0.07	0.6	0.7	0.10	R
	20	16	40	53.9	19-19.7	155-13.3	8.0*	1.6	19	68	5.0	0.04	0.4		0.08	R
	20	19	1	58.5	19-22.4	155-26.5	5.4	1.7	16	109	1.9	0.12	0.9	0.9	0.20	R
	20	19	12	50.6	19-20.6	155- 8.0	6.3	3.3	30	81	4.3	0.09	0.7	0.5	0.20	R
	20	19	20	8.5	19-20.6	155-11.1	9.5	1.7	17	79	3.5	0.07	0.5	0.9	0.07	A
	20	21	0	10.0	19-25.3	155-24.2	8.2	1.8	23	62	7.5	0.06	0.5	2.4	0.16	R
	20	23	28	30.6	19-18.1	155-18.4	29.0	2.1	26	124	0.5	0.18	1.0	1.7	0.14	R

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
JUN	21	0	31	34.9	19-19.5	155-13.9	6.4	1.5	18	79	4.7	0.10	0.7	0.8	0.17 R
	21	7	24	9.3	19-20.6	155-12.1	6.9	2.9	31	71	3.6	0.06	0.6	0.4	0.17 R
	21	14	26	5.9	19-17.4	155-15.9	7.1	4.0	30	136	4.2	0.07	0.5	0.4	0.15 B
	21	15	32	34.0	19-19.3	155-15.7	6.8	1.6	20	142	4.4	0.07	0.5	0.4	0.11 R
	21	16	51	33.6	19-21.3	155-24.0	7.2	1.6	22	51	2.3	0.06	0.6	0.5	0.17 R
	21	17	43	11.2	19-20.3	155- 9.6	9.8		14	123	3.3	0.10	0.6	1.1	0.08 R
	21	17	50	13.5	19-24.5	155-24.5	7.4	1.9	25	59	6.6	0.08	0.7	0.6	0.18 R
	21	20	1	30.9	19-19.0	155-13.6	6.2	1.6	18	81	3.7	0.10	0.7	0.7	0.14 R
	22	4	5	53.5	19-18.0	155-15.8	7.0	1.6	16	155	4.5	0.10	0.6	0.5	0.13 C
	22	7	8	0.0	19-23.3	155-23.4?	7.4	1.5	21	92	5.7	0.06	0.6	1.4	0.15 B
	22	17	46	6.4	19-22.4	155-13.3	6.1	1.7	16	77	1.2	0.06	0.5	0.6	0.11 R
	22	18	44	13.2	19-37.6	156-12.6	7.2	2.9	17	258	53.4	0.38	3.5	4.7	0.18 D
	22	22	37	58.3	19-19.1	156-27.1	15.0*	3.1	26	253	61.3	0.42	2.7		0.15 D
	23	14	5	15.8	19-22.1	155-24.0	6.6	2.0	21	50	3.7	0.07	0.7	0.6	0.18 R
	23	17	52	40.8	19-19.8	155-11.7	8.0*		13	88	5.2	0.08	0.7		0.14 F
	23	18	24	39.5	19-19.3	155-13.8?	6.2	1.7	27	63	4.3	0.07	0.6	0.5	0.19 R
	23	18	45	26.8	19-22.1	155-24.3	7.1	1.6	14	85	4.0	0.08	0.7	0.7	0.14 R
	24	1	35	6.4	19-38.4	156-19.6	10.5	3.0	16	271	63.3	0.45	3.8	9.6	0.15 D
	24	2	41	25.6	19-57.0	155-18.5	48.5	3.4	33	201	7.5	0.32	1.3	3.0	0.13 C
	24	9	12	18.6	19-20.3	155- 8.1	7.6		14	100	4.5	0.10	1.1	0.7	0.16 R
	24	18	9	21.9	19-46.6	155-12.1	13.7*		24	204	19.4	0.17	1.4		0.17 C
	24	18	57	51.4	19-19.5	155-15.5	5.9	1.5	19	100	3.4	0.09	0.6	0.6	0.15 R
	25	0	27	27.5	19-24.6	155-27.5?	7.9	1.8	22	65	3.9	0.08	0.7	1.3	0.18 R
	25	7	1	10.0	19-18.6	155-14.8	6.0		15	94	3.7	0.07	0.5	0.5	0.11 R
	25	7	39	31.0	19-13.2	155-19.9	40.5		25	163	9.0	0.24	1.0	2.2	0.12 C
	25	12	52	14.4	19-20.0	155-12.1	6.2	1.9	25	80	4.7	0.07	0.6	0.6	0.20 R
	25	17	32	54.7	19-23.1	155-13.4	6.6		8	135	3.4	0.40	1.0	3.1	0.10 R
	25	18	0	7.4	19-12.9	155-19.7	40.5		16	166	9.5	0.32	1.4	3.0	0.12 C
	25	18	7	20.3	19-54.2	155-55.1	0.7	2.8	26	214	28.9	0.38	1.6	0.8	0.14 C
	26	0	32	13.0	19-20.2	155- 8.9	4.3	1.7	18	72	3.6	0.10	0.8	1.0	0.21 R

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
JUN	26	4	15	7.4	19-22.4	155-13.1	5.6	1.4	11	88	0.8	0.17	0.7	1.5	0.12	B
	26	6	50	51.1	19-18.5	155-14.4	6.4	1.6	17	115	3.1	0.08	0.5	0.5	0.11	B
	26	15	58	44.2	19-18.9	155-15.7	6.1	1.5	16	119	3.7	0.10	0.7	0.7	0.16	B
	26	22	44	46.0	19-20.1	155-11.5	9.3		13	90	4.8	0.06	0.3	0.8	0.05	A
	27	0	12	27.1	19-22.0	155-13.2?	8.3	1.5	10	95	1.3	0.09	0.5	0.6	0.07	B
	27	3	22	46.0	19-13.3	155-19.9	40.9		23	162	8.8	0.25	1.1	2.3	0.12	C
	27	5	17	51.0	19-20.9	155-13.6	6.0		16	61	3.3	0.11	0.8	0.9	0.17	B
	27	8	6	52.2	19-18.5	155-13.0	8.0*		8	162	8.3	0.10	0.9		0.10	C
	27	8	30	39.8	19-25.9	155-27.3?	8.1	1.7	22	67	6.2	0.08	0.6	0.5	0.14	P
	27	9	59	4.5	19-25.9	155-16.7	3.6	0.7	8	235	1.9	0.37	1.3	1.9	0.08	C
	27	10	16	6.6	19-17.4	155-15.6	6.9		14	137	3.8	0.10	0.8	0.8	0.17	B
	27	20	28	40.5	19-20.4	155-12.1	7.5	2.6	31	73	3.9	0.05	0.5	0.3	0.15	B
	27	21	28	8.6	19-42.2	155-17.8	34.0	2.3	21	98	21.2	0.28	1.1	3.5	0.14	B
	27	21	57	23.9	19-17.0	155-22.0	8.0*		13	144	6.1	0.09	0.8		0.15	C
	27	22	16	23.8	19-22.6	155-27.4	8.4	1.8	22	55	0.5	0.07	0.7	1.2	0.18	B
	28	2	48	3.4	19-16.6	155-11.8	4.5		15	167	3.1	0.09	0.6	0.8	0.11	C
	28	21	27	6.2	19-19.3	155-13.7?	1.9	1.8	27	65	4.3	0.16	1.3	2.2	0.31	C
	28	22	43	44.0	19-51.4	155-15.9	34.7	2.5	26	218	8.9	0.39	1.8	3.2	0.12	C
	29	4	12	55.4	19-19.3	155-15.6	6.9	1.5	17	106	3.5	0.09	0.6	0.6	0.15	B
	29	4	34	44.7	19-23.6	155-25.7	7.8	2.0	23	61	4.0	0.07	0.5	0.5	0.11	B
	29	8	22	27.2	19-20.4	155-11.4	5.4	1.7	24	77	4.1	0.09	0.7	0.7	0.21	B
	29	8	25	41.9	19-20.6	155-11.2?	7.3	1.8	12	96	3.7	0.14	1.0	1.2	0.16	B
	29	8	34	26.9	19-20.4	155-11.3	6.5	2.0	28	77	4.0	0.08	0.6	0.5	0.19	B
	29	13	33	49.5	19-18.2	155-28.4	47.7		18	108	4.5	0.41	1.3	3.7	0.11	B
	29	14	56	57.1	19-25.9	155-24.1	8.0*	2.0	17	81	7.4	0.04	0.4		0.09	B
	29	18	32	8.5	19-17.8	155-25.1	41.2		11	164	5.4	1.00	2.4	9.1	0.12	C
	29	19	14	15.4	19-13.1	155-19.7	41.2		24	165	9.2	0.32	1.4	2.9	0.13	C
	29	19	28	30.7	19-20.0	155-11.1	5.1	1.8	26	86	4.4	0.09	0.7	0.7	0.23	B
	29	20	6	4.4	19-20.5	155-18.2	3.7		10	77	1.5	0.09	0.4	1.1	0.07	A
	29	22	49	6.5	19-21.1	155-13.5	7.5	3.0	31	54	3.0	0.05	0.5	0.3	0.14	B

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
JUN	29	23	10	46.0	19-46.6	155-11.8	13.7*	2.4	22	166	19.4	0.15	1.3		0.20 C
	29	23	21	32.6	19-57.5	155-59.0	15.5*	3.5	32	237	28.4	0.23	1.6		0.15 D
	30	0	46	34.1	19-18.3	155-13.4	6.4	1.8	27	81	2.3	0.09	0.7	0.5	0.18 B
	30	3	8	53.0	19-49.1	155- 5.3?	48.4*	2.9	33	216	14.2	0.10	1.1		0.14 C
	30	3	36	59.0	19-18.3	155-13.4	6.2	1.8	23	81	2.4	0.09	0.7	0.5	0.17 B
	30	6	9	3.0	19-26.2	155-22.4	8.1	1.4	11	113	3.9	0.11	0.6	1.5	0.06 A
	30	10	38	52.1	19-20.7	155-11.2	5.0		18	74	3.5	0.11	0.9	1.1	0.23 B
	30	14	7	18.0	19-22.6	155-23.2	6.5	2.3	29	51	4.3	0.08	0.7	0.6	0.23 B
	30	14	8	51.1	19-22.6	155-22.8	6.4	1.6	16	81	4.6	0.09	0.8	0.7	0.16 B
	30	17	23	39.9	19-26.0	155-21.4	9.3	1.7	17	96	3.1	0.07	0.5	0.9	0.10 A
	30	18	13	55.9	19-19.6	155-15.9	5.2		18	100	2.8	0.08	0.6	0.5	0.13 B
	30	21	20	5.7	19-23.4	155-26.5	8.6	1.7	22	82	2.5	0.08	0.7	1.3	0.16 B
	30	22	45	11.4	19-19.4	155-13.4	6.2	1.6	26	70	4.4	0.08	0.6	0.5	0.18 B
	30	23	10	33.7	19-21.6	155- 6.1?	0.0	2.0	25	105	6.5	4.05	0.7	7.7	0.18 C
	30	23	34	51.3	19-21.4	155- 6.1	2.3	2.0	27	102	6.3	0.11	0.7	1.0	0.19 C
	30	23	39	9.9	19-21.5	155- 6.2?	0.0	1.8	26	102	6.4	4.70	0.8	8.9	0.21 C



Table 3. Felt earthquakes

<u>Date</u>	<u>Time</u>			<u>Magnitude</u>	<u>Felt report</u>
	H	M	S		
Apr 15	00	59	38.1	4.2	Volcano, Keaau, Mauna Kea Observatory, Kapapala
22	21	07	52.1	4.8	Island-wide Hawaii, Maui
24	06	16	22.2	3.9	Kamuela, Honokaa, Volcano, Mauna Kea Observatory
26	10	26	30.1	6.2	Throughout Hawaiian Islands, considerable damage in Hilo
26	23	33	38.6	4.0	Kamuela, Honokaa
27	10	34	31.0	3.0	Honokaa
May 5	10	07	28.6	3.8	Hilo
5	10	11	18.3	3.4	Volcano
5	10	56	13.9	2.7	Volcano
5	11	34	53.8	2.1	Volcano
5	11	38	51.5	1.7	Volcano
5	11	40	50.9	3.1	Volcano
5	11	49	17.4	1.8	Volcano
5	11	59	00.4	2.6	Volcano
5	12	03	10.9	1.9	Volcano
5	12	04	28.8	1.9	Volcano
5	12	14	13.6	2.7	Volcano
5	23	00	29.3	3.8	Hilo
7	17	20	11.3	3.5	Laupahoehoe
9	21	12	51.3	2.9	Kulani Camp
10	06	52	08.5	3.1	Laupahoehoe
19	03	12	23.8	3.4	Kamuela, Honokaa
29	15	22	01.6	3.4	Volcano
30	20	42	59.7	3.2	Hilo, Kamuela, Honokaa
Jun 10	19	36	27.3	3.0	Kapapala
20	19	12	50.6	3.3	Kapapala
21	07	24	09.3	2.9	Kapapala
21	14	26	05.9	4.0	Kapapala, Hilo, Volcano, Ainahou Ranch
24	02	41	25.6	3.4	Honokaa
29	22	49	06.5	3.0	Honokaa, Kapapala, Volcano

May 5 upper east rift/Koae swarm---many small shocks felt near Pauahi and  
Hiiaka Craters area.

# HVO APRIL 1-JUNE 30, 1973

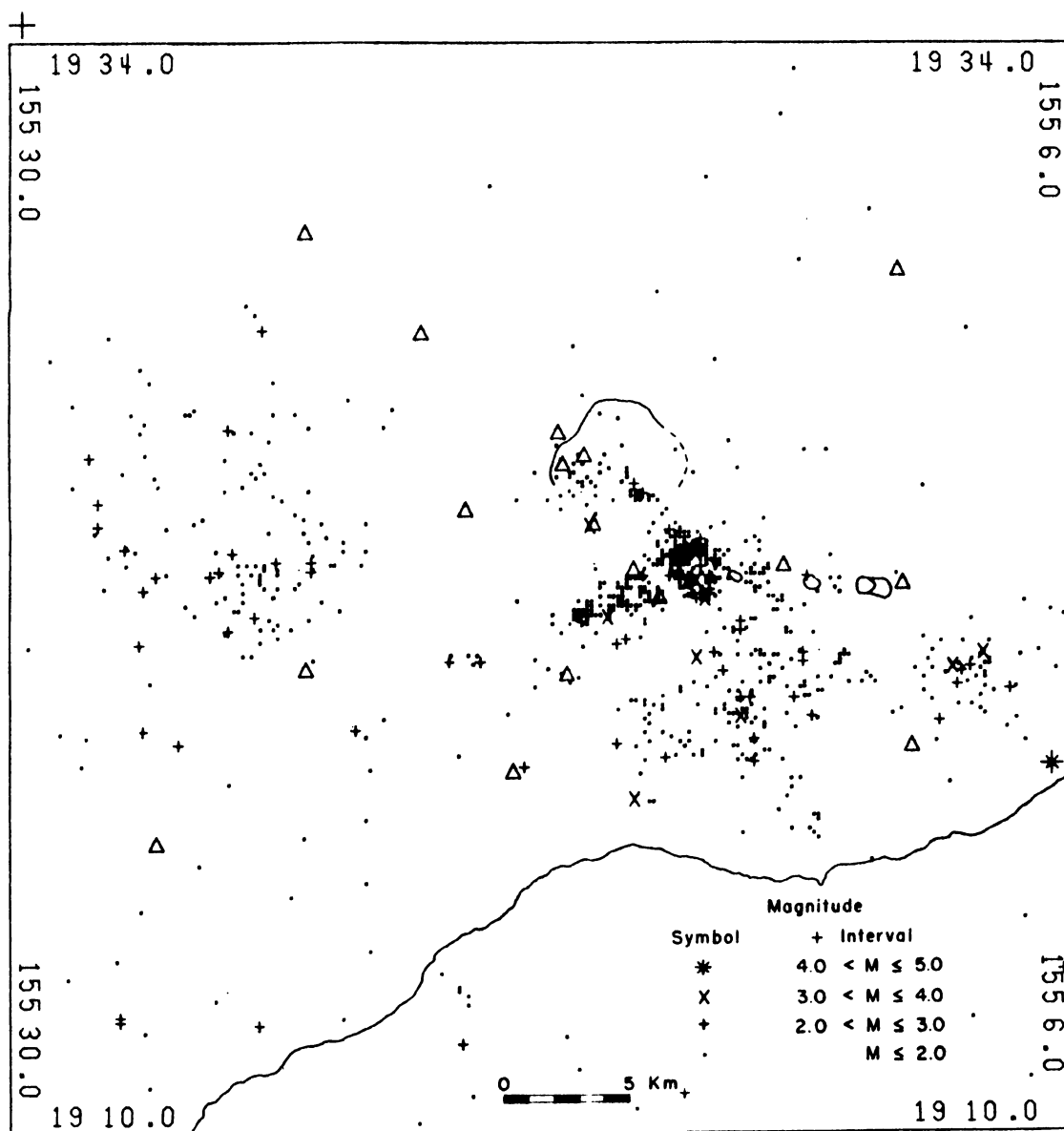


Figure 1.--Plot of epicenters in the Kilauea region. Triangles are seismometer locations. Kilauea Caldera and the major pit craters on the east rift are shown in outline. The Pacific Ocean lies in the lower right portion of the illustration.

Table 4 . Seismometer stations in Hawaii operated by the U. S. Geological Survey.

STATION NAME	CODE	LAT-N	LONG-W	ELEV	TYPE	CAL	VCO	RADIO	REMARKS
AHUA	AHU	19 22.40	155 15.90	1070	3	6.0	2380		
CONE PEAK	CPK	19 23.70	155 19.70	1038	3	1.34			
DESERT	DES	19 20.20	155 23.30	815	3	1.34			
EAST KOAE	EKO	19 22.17	155 14.99	1009	3				
HALE POHAU	HPU	19 46.85	155 27.50	3396	1	5.6	1360	RF6	
HILINA PALI	HLP	19 17.96	155 18.63	707	3	6.0	2040		
KAHUKU	KHU	19 14.90	155 37.10	1939	1	5.7	1700	RF3	
KEANAKOLU	KKU	19 53.39	155 20.58	1863	1	4.8	2380	RF7	Installed 3/23/71
KIPUKA NENE	KPN	19 20.10	155 17.40	924	3	1.34			
MAUNA LOA	MLO	19 29.80	155 23.30	2010	3	6.5	1360		
MAUNA LOA X	MLX	19 27.60	155 20.70	1475	3	1.34			
MAKAOPUHI	MPR	19 22.07	155 9.85	881	1	5.7	2720	RF5	
MOUNTAIN VIEW	MTV	19 30.25	155 3.75	409	1	6.2	680	RF8	Installed 3/4/71
NORTH PIT	NPT	19 24.90	155 17.00	1115	3	1.34			
OUTLET	OTL	19 23.38	155 16.94	1038	3	5.0			
PUU HULUHULU	PHH	19 22.45	155 12.66	988	3				
PUU HONUAULA	PHO	19 28.90	154 53.40	215	1	6.5	2720	RF1	
PUU PILI	PPL	19 9.50	155 27.87	35	1	4.4	1360	RF11	Installed 2/17/71
SOUTH POINT	SPT	18 58.91	155 39.92	244	1	7.8	2040	RF7	Installed 3/10/71
WAHAULA	WHA	19 19.90	155 2.92	29	1	6.0	680	RF9	Installed 3/2/71
WEST PIT	WPT	19 24.70	155 17.50	1115	3	1.34			
OPTICAL SEISMOGRAPHS									
HALEAKALA Z	HAL	20 46.00	156 15.00	2090	3	0.71			
HALEAKALA EW	HAE	20 46.00	156 15.00	2090	0	1.0			Wood-Anderson
HALEAKALA NS	HAN	20 46.00	156 15.00	2090	0	1.0			Wood-Anderson
HILO Z	HIL	19 43.20	155 5.30	20	3	1.0			
HILO EW	HIE	19 43.20	155 5.30	20	0	1.0			Wood-Anderson
HILO NS	HIN	19 43.20	155 5.30	20	0	1.0			Wood-Anderson
KAMUELA	KAM	20 1.90	155 42.00	740	2	0.7			
KEALAKEKUA Z	KLK	19 31.20	155 55.30	505	2	1.0			
KEALAKEKUA EW	KLE	19 31.20	155 55.30	505	2	0.34			
KEALAKEKUA NS	KLN	19 31.20	155 55.30	505	2	0.34			
KIPAPA	KIP	21 25.40	158 .90	76	3	0.56			
UWEKAHUNA Z	UWE	19 25.40	155 17.60	1240	3	0.7			
UWEKAHUNA Z	USZ	19 25.40	155 17.60	1240	4	1.0			
UWEKAHUNA EW	USE	19 25.40	155 17.60	1240	4	1.0			
UWEKAHUNA PEZ		19 25.40	155 17.60	1240					15-90 Press Ewing
UWEKAHUNA PEE		19 25.40	155 17.60	1240					
UWEKAHUNA PEN		19 25.40	155 17.60	1240					

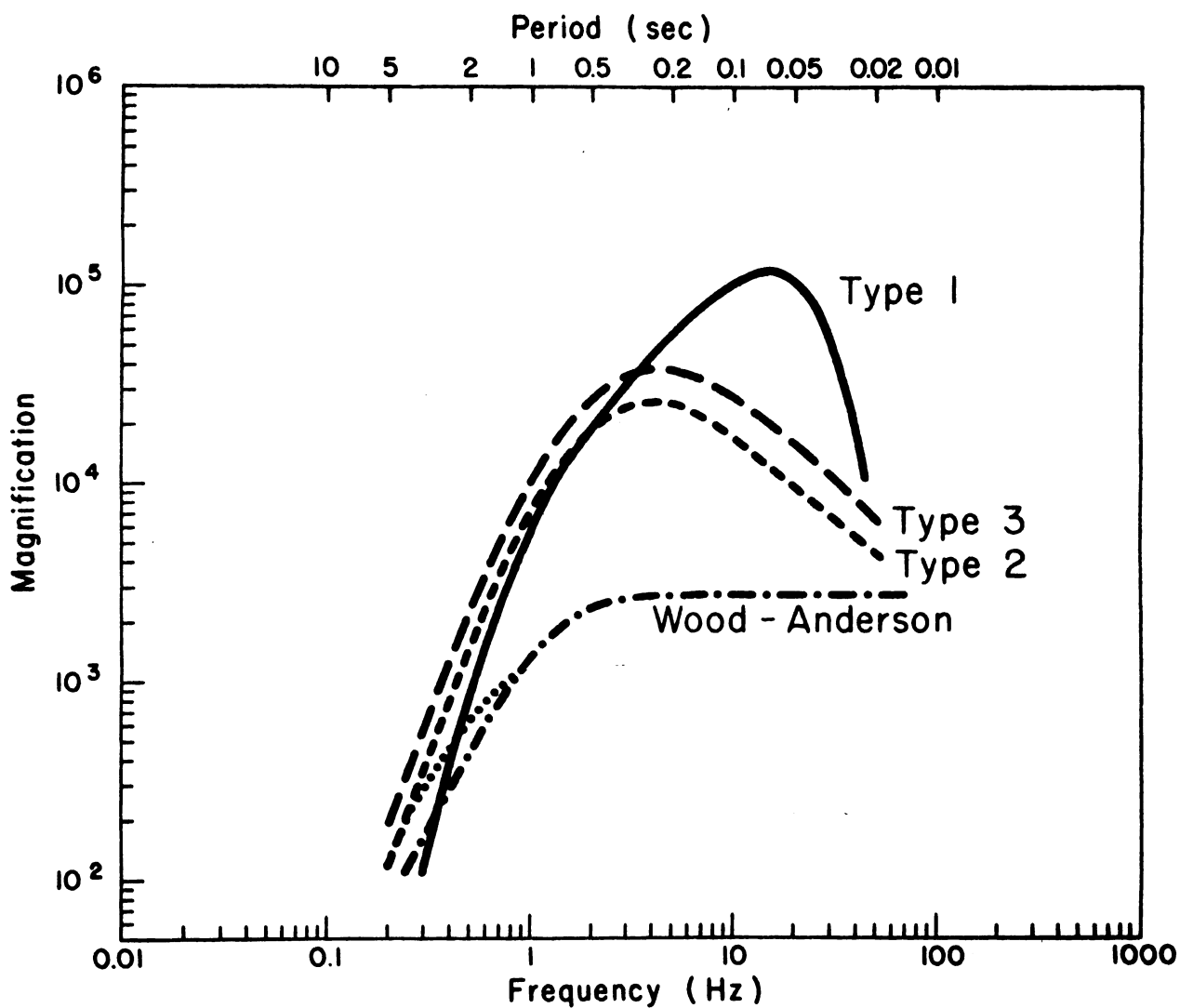


Figure 2.--System response curves for the Wood-Anderson torsion seismograph and for the four different types of seismometer-amplifier (or galvanometer) combinations in use by the Hawaiian Volcano Observatory.

Table 5.--Seismic Instrumentation Types

Type 1. Consists of:

- a) EV-17 - Electrotech EV-17 1.0 sec. period moving magnet vertical component seismometer or horizontal component adjusted for an output of 0.5 volts/cm/sec. and 0.8 critically damped.
- b) Preamp/VCO - Develco Model 6202 voltage controlled oscillator or a USGS/NCER Model JE202. 3 db points for bandpass filter at 0.1 Hz and 30 Hz. Signals are transmitted on audio FM carrier over cable or FM radio link to HVO.

Type 2. Consists of:

- a) EV-17 - Electrotech EV-17 1.0 sec. period moving magnet vertical or horizontal component seismometer.
- b) 3.5 Hz galvanometer with appropriate shunt resistances for critical damping. System is poorly calibrated.

Type 3. Consists of:

- a) EV-17 Electrotech EV-17 (as described above), Hall-Sears HS-10 0.5 sec. period moving coil seismometer or Observatory-built 0.8 sec. period moving coil seismometer with HVO-built solid state seismic preamplifier (voltage gain, 200X), direct signal transmission over cable to HVO and HVO-built solid state amplifier and galvanometer driver, or Observatory-built electromagnetic seismometer with 2 Hz galvanometer. Peak magnification approximately 40,000 at 4 Hz.

Type 4. Consists of:

Sprengnether short period vertical and horizontal seismometers (E-W) with 1.5 sec. galvanometers, coupling factor = 0.25, 2X critically damped. Peak magnification approximately 1500X at 2 Hz.

Experimental type amplifier systems are not given type numbers.

# TILTING OF THE GROUND AROUND KILAUEA CALDERA

Tilting of the ground around the summit of Kilauea is monitored daily by a short-base water-tube tiltmeter in the Uwekahuna Vault, and at irregular intervals it is measured on a regional scale by means of a network of field tilt-bases and a portable water-tube tiltmeter. The attitude of the ground surface at each tilt-base is reported in terms of north-south and east-west tilt coordinates. Both coordinates at each station were arbitrarily set equal to 500 when measurements at that station were begun. Increasing tilt coordinates correspond to northward and eastward tilting of the earth's surface; that is, to a relative subsidence toward the north and east. A one-unit change in coordinate corresponds to a tilting of 1 microradian (1 mm per km) in the direction indicated.

Location of and essential data on each tiltmeter station are listed in Table 8, Summary 69.

Table 6.--Tilt Coordinates at Uwekahuna,  
April, May, and June 1973

Date	N-S	E-W	Date	N-S	E-W
April 1	718	322	June 3	726	310
8	718	321	10	727	313
15	717	324	17	730	310
22	717	324	24	730	306
29	726	308			
May 6	722	307			
13	721	324			
20	724	317			
27	725	312			

Table 7.--Tilt coordinates and changes at bases around Kilauea caldera. (See fig. 3)

Tilt base	Date (1973)	Tilt N-S	Coordinates E-W	Rate ( $10^{-6}$ rad/mo) and direction of tilting since last reading	Date of last reading
Uwekahuna (U on fig. 3)	14 May	735.6	327.7	14.78 S68.2°W	21 Mar '73
Tree Molds (TM)	15 May	574.7	483.2	3.24 S 6.8°E	21 Mar '73
Sand Spit (SS)	16 May	1013.6	738.2	6.37 N83.1°E	22 Mar '73
Mehana (M)	15 May	613.9	600.1	0.83 S31.6°W	21 Mar '73
Keamoku (Kea)	15 May	771.5	242.7	5.33 S75.5°E	22 Mar '73
Ahua Kamokukolau (Kam)	14 May	407.8	527.2	14.14 N 8.5°W	22 Mar '73
Kipuka Nene (KN)	16 May	279.8	496.6	0.36 S87.0°W	7 Dec '72
Hilina Pali (HP)	Not occupied this epoch				
Kapapala Ranch (Kap)	Not occupied this epoch				

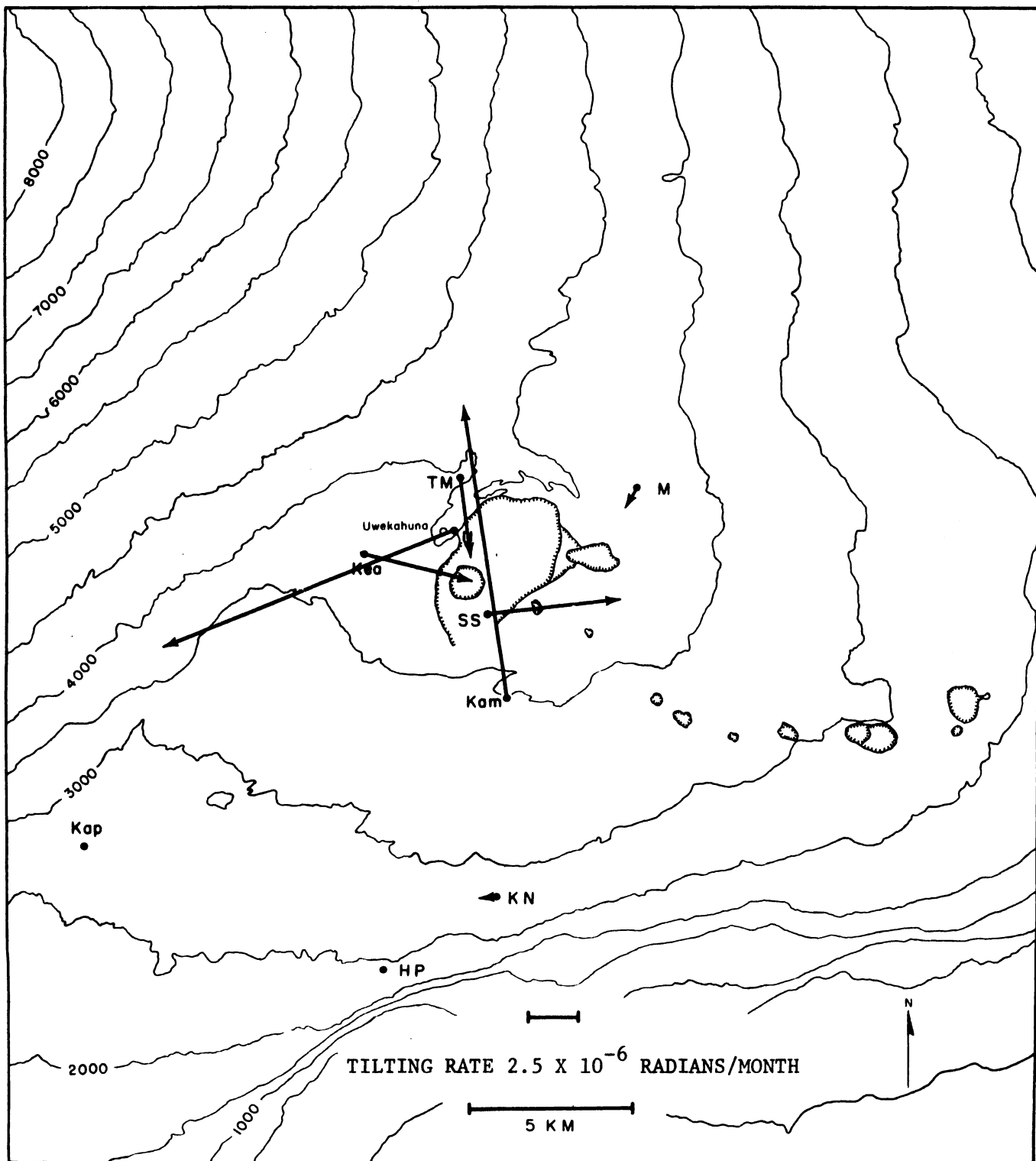


Figure 3.--Tilting of the ground around Kilauea Caldera. The vector depicting tilting at a given tilt base points in the direction of maximum relative subsidence, and its length is proportional to the rate of tilting during the measurement interval. Closed circles represent field tilt bases; open circles, short-base water-tube tiltmeters. See Table 7 for explanation of abbreviations.



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UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

HAWAIIAN VOLCANO OBSERVATORY

SUMMARY 71

July, August, and September 1973

By

Arnold T. Okamura, Marie S. Onouye,  
and Akira Yamamoto

Chronological Summary

By

Robert I. Tilling

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## CHRONOLOGICAL SUMMARY

Visible eruptive activity during this quarter was minimal and confined entirely to Mauna Ulu. The declining pattern of lava-lake activity at the end of the last quarter continued, and by early July the western part of the lake had become completely crusted and characterized by a jumble of tilted "islands" or blocks above the solidified surface. The eastern part of the lava lake containing the still-active vent also became progressively more crusted. Though gradually decreasing in surface area, the active eastern part of the lava lake continued periodically to overflow its levee. By July 20, visible active lava rose to within nearly 10 m of the rim but was restricted to two small, roughly circular areas, about 10 m and 15 m in diameter respectively, one of which included the active vent. By July 25 no live lava was visible, and the crusted floor began to subside measurably.

This subsidence continued throughout the next several weeks, although its rate tapered off. By the end of August, the floor in the main (western) part of the crater sank to about 85 m below the rim, and the vent area in the eastern part to about 40 m. During this interval of subsidence and no visible activity, low-level harmonic tremor persisted, and Kilauea's summit tilt varied within a very narrow range, showing a net deflation of only a few microradians.

An increase in tremor amplitude marked the return of visible lava to Mauna Ulu on September 4. A small active lava lake reappeared in the crater, and its level soon rose to within about 60 m of the rim; low (5 m) fountains played along its eastern end. Later that day the tremor abruptly decreased, coinciding with the cessation of the low fountaining. The lake, however, persisted for a few more days, but circulation became progressively more sluggish. By September 7, the lake became entirely crusted, and by September 9 even the incandescence in the vent and in cracks on the lake surface disappeared. Mauna Ulu then remained lifeless until toward the end of the quarter, when visible activity again returned sometime during September 25-26. By the end of September, a full-fledged lava lake was again in operation, with circulating currents, random bubblers, and crustal overturns. Kilauea's summit tilt, which showed only small variations throughout nearly all of the quarter, began to show a marked inflation trend with the revival of substantial eruptive activity at September's end.

Drilling operations on an NSF-funded research drill hole south of Halemaumau ended on July 9 after reaching a depth of 1,262 m. Periodic thermistor logs, however, were run until August 23 to monitor the thermal recovery of the hole after drilling disturbance.

## SEISMIC SUMMARY

Events recorded by the U. S. Geological Survey seismograph network in Hawaii fall into two categories:

- 1) Local earthquakes and tremor originating in the region of the Hawaiian Islands (usually within 100 km of at least one seismograph), and
- 2) Distant earthquakes originating more than 3,000 km from Hawaii.

As an index of seismic activity at Hawaiian volcanoes, daily counts of earthquakes and minutes of tremor recorded by seismographs in Hawaii are listed in Table 1. The earthquakes are separated in groups on the basis of region of origin as determined by the analysis of records obtained daily at the Observatory (UWE, MLO, MLX, AHU, DES, NPT, WPT, MPH, OTL).

Computer locations of well-recorded events are listed in Table 2. The location of each seismograph station is listed in Table 4, along with a description of the equipment at each station.

Table 1.--Number of earthquakes and minutes of tremor recorded on seismographs around Kilauea

Tremor is separated into three categories: Deep, Intermediate, and Shallow, on the basis of relative amplitude on seismographs in the summit region. Unless otherwise stated, tremor is presumed to be associated with movement of magma within the central complex of Kilauea Volcano.

Earthquake categories are: Kilauea Summit 30 km, earthquakes from a source about 30 km beneath the summit region; Kilauea Summit Long-Period, earthquakes characterized by low-frequency waves that originate roughly 5 km beneath the summit region; Kilauea Summit Shallow, earthquakes a few km deep in the caldera region; SW Rift and Kaoiki, earthquakes along the southwest rift zone of Kilauea and the adjacent portions of the Kaoiki fault system; Upper East Rift, earthquakes from the upper east rift zone and the adjacent fault systems of Kilauea's south flank; Koae, earthquakes along the northeast-trending Koae fault system south of the caldera; Lower East Rift, earthquakes from the lower east rift zone of Kilauea; Offshore Puu Pili, offshore earthquakes mostly southeast of Puu Pili (PPL) station.

Date (1973)	Tremor (m = minutes h = hours)			Earthquakes								Remarks
	Deep	Inter- mediate	Shallow	Kilauea Summit			SW Rift and Kaoiki	Upper East Rift	Koae	Lower East Rift	Offshore Puu Pili	
				30 KM	Long Period	Shallow						
July 1				3	5	389	12	52	2	2		
2		4m		2	6	551	10	62	4	2	3	
3	35m			1	25	635	15	55	11	4	9	
4	36m			2	40	645	21	72	9	3	10	
5		3m			20?	291?	18	62?	5			
6					23?	195?	13	46?	3		1	
7		3m			19	157?	16	33	5	1	6	
8		8m			15	188	24	31	11	1	9	
9				1	15	257	49	34	11	3	1	
10	17m	10m			15	256	31	67	9	10	1	
11					6	277	18	54	7	1	1	
12	30m			2	24	266	33	46	8	2	2	
13				1	15	276	16	49	7	7	4	
14	9m	9m		3	64	247	20	67	11	1	2	
15				3	44	244	26	77		2	6	
16					7	295	26	57	3	1	2	
17		3m		1	8	223	14	57	8	1	1	
18					6	249	11	37	5	2	2	
19					4	181	9	55	4	4		
20		3m			10	149	19	54	4	1		
21					5	134	17	68	7	3		
22		3m		1	7	126	10	38	3	1		
23					20	101	5	112	1		1	
24				1	5	107	17	703	10	2		
25				1	4	76	21	703?	7	3		Small Mauna Ulu rockfalls during last week of the month.
26					20	105	26	323	5		1	
27				1	20	102	34	199	7	2	1	
28				1	12	111	21	197	3	7	10	
29				1	12	124	16	204				
30					29	134	13	233	3			
31					6	95	10	206	3	9		

Date (1973)	Tremor (m = minutes h = hours)			Earthquakes								Remarks
	Deep	Inter- mediate	Shallow	Kilauea Summit			SW Rift and Kaoiki	Upper East Rift	Koae	Lower East Rift	Offshore Puu Pili	
				30 KM	Long Period	Shallow						
August 1				1	8	138	12	134	3	1		Mauna Ulu rockfalls during first half of month.
2				1	26	116	19	197	3		2	
3		3m			23	?	17	215	3	1		
4					19	?	14	148	1	5		
5					1	?	13	76				
6					16	73?	16	48	2			
7				1	12	161	27	87	7	1	2	
8	37m			1	24	154	21	108	1	3	1	
9		3m			31	148	17	61?	7	2		
10		11m		1	22	188	27	84	2	1	1	
11		13m			30	223	28	95	6	5	1	
12					15	153	16	67	4	3		
13		3m			12	140	8	63	8	3	1	
14		3m			12	94	14	46	4	1	2	
15	8m				46	117	15	46	2	1	1	
16				2	29	101	21	69	3	3		
17				1	33	98	30	63	8	3		
18				2	34	110	19	47	1	1	2	
19		21m		1	57	149	18	26	4	3	2	
20					21	125	15	61	5	2		
21	21m				15	137	5	64	5	48		
22		4m		1	23	118	18	62	5	43	1	
23				1	29	93	22	43	4	203		
24				1	17	87	15	54	2	255		
25		34m			47	94	13	71	3	172		
26	6m	3m			68	91	8	61	5	132	1	
27	6m				43	95	11	72	3	75		
28	3m	7m			13	118	10	74	1	50		
29				1	48	186	15	79	9	78		
30		4m			42	168	8	41	4	61		
31		?			25	426	11	101	5	71		



Date (1973)	Tremor (m = minutes h = hours)			Earthquakes								
	Deep	Inter- mediate	Shallow	Kilauea Summit			SW Rift and Kaoiki	Upper East Rift	Koae	Lower East Rift	Offshore Puu Pili	Remarks
				30 KM	Long Period	Shallow						
Sept. 1		2m			105	507	13	85	3	21		
2		3m			15	170	9	50	4	25		
3					7	259	16	120	5	17	12?	
4	15m	11m			6	139	17	38	4	14	1	
5		24m		1	32	92	9	63	5	23		
6	4m				8	104	12	31	3	7	2	
7		14m			8	105	32	57	6	6		
8		7m			19	93	13	33	6	30	1	
9		6m			67	139	21	64	8	111	1	
10				3	55	160	23	77	11	63	4	
11	39m	7m			47	113	21	43	4	32		
12				1	23	126	26	56	8	63	6	
13				1	8	165	19	38	7	41		
14	41m	3m			16	185	10	66	9	67		
15				21	24	184	17	56	5	58		
16		6m		15	12	168	18	75	7	83		
17		11m?		3?	25	142	17	75	5	37	1	
18				4	20	132	12	69	2	36	3?	
19	12m	15m		1	62	112	10	58	2	57	2?	
20		17m		3	126	136	23	34	3	47	2	
21		3m		2	93	128	10	54	6	44		
22				5?	378	164	21	93	6	144	5	
23				8	24	131	18	42	2	45		
24		8m		3	22	144	11	34	3	43	1	
25				1	27	152	12	31	2	20		
26		10m			19	138	39	27	2	10	1	
27				1	10	153	12	24	1	10	1	
28					9	236	13	40	11	7		
29					21	155?	12	42	4	2		
30				3	4	182?	22	43	4	10		

Table 2 is a chronological listing of successfully located earthquakes. For each event the following data are presented:

Origin time in Hawaii Standard Time: date, hour (HR), minute (MN), and second (SEC).

Epicenter in degrees and minutes of north latitude (LAT N) and west longitude (LONG W). Poor convergence of the epicenter solution is indicated by "?".

Depth - depth of focus in km. Assumed depth is indicated by "x".

Mag - magnitude, if determined.

NO - number of stations used in locating earthquakes.

GAP - largest azimuthal separation in degrees between stations.

DMIN - epicentral distance in km to the nearest station.

ERT - standard error of the origin time in seconds.

ERH - standard error of the epicenter in km.

ERZ - standard error of the depth in km.

MD - mean deviation of the time residuals.  $\left[ = \sum_i R_i / NO \right]$  where  $R_i$  is the observed seismic wave arrival time less the computed time at the  $i^{th}$  station.

Q - solution quality of the hypocenter. This measure is intended to indicate the general reliability of each solution:

<u>Q</u>	<u>Epicenter</u>	<u>Focal Depth</u>
A	Excellent	Good
B	Good	Fair
C	Fair	Poor
D	Poor	Poor

Q is based both on the nature of the station distribution with respect to the earthquake and the statistical measures of the solution. These two factors are each rated independently according to the following scheme:

### Station Distribution

	<u>NO</u>	<u>GAP</u>	<u>DMIN</u>
A	$\geq 8$	$\leq 120^\circ$	$\leq \text{DEPTH or } 5 \text{ km}$
B	$\geq 6$	$\leq 150^\circ$	$\leq 2 \times \text{DEPTH or } 10 \text{ km}$
C	$\geq 6$	$\leq 225^\circ$	$\leq 50 \text{ km}$
	$\geq 4$	$\leq 180^\circ$	
D	Others		

### Statistical Measures

	<u>ERH(km)</u>	<u>ERZ(km)</u>	<u>MD(sec)</u>	<u>RMAX(sec)*</u>
A	$\leq 1.0$	$\leq 2.0$	$\leq 0.10$	$\leq 0.25$
B	$\leq 2.5$	$\leq 5.0$	$\leq 0.20$	$\leq 0.50$
C	$\leq 5.0$		$\leq 0.30$	$\leq 0.75$
D	Others			

Q is taken as the average of the ratings from the two schemes, that is, an A and a C yield a B, and two B's yield a B. When the two ratings are only one level apart the lower one is used, that is, an A and a B yield a B (Hamilton and others, 1969).

The criteria for Q are the same as used by the Office of Earthquake Research and Crustal Studies, U. S. Geological Survey.

\*RMAX is the maximum residual.

# SUMMARY OF SEISMIC EVENTS

1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MO	Q
JUL	1	0	31	31.4	19-22.1	155-48.4	9.2	2.8	23	188	13.3	0.17	1.4	1.5	0.16 C
	1	2	38	42.2	19-20.7	155-13.2	5.8		19	60	3.4	0.12	0.7	1.1	0.18 H
	1	3	45	39.4	19-24.3	155-24.9	8.0*		10	141	5.8	0.07	0.6		0.09 C
	1	9	26	23.1	19-19.2	155-15.1	6.3		24	88	4.3	0.06	0.5	0.5	0.14 F
	1	15	17	15.3	19-19.0	155-13.6	6.2		19	81	3.6	0.10	0.7	0.7	0.15 H
	1	17	4	50.6	19-22.3	155-13.5	3.0		10	100	1.5	0.08	0.4	1.1	0.06 A
	1	21	2	26.8	19-48.3	155-19.9?	11.4	3.2	32	128	9.9	0.08	0.9	1.3	0.13 H
	1	23	12	58.3	19-50.3	155-19.6	16.7	3.6	36	133	5.9	0.10	0.7	2.0	0.13 F
	2	1	10	40.3	19-10.6	155-13.4	41.9	2.4	30	198	11.9	0.27	1.3	2.3	0.12 C
	2	2	35	48.4	19-20.5	155-17.2	28.9	2.4	28	72	0.8	0.13	0.7	1.2	0.12 H
	2	2	47	9.7	19-13.9	155-17.9	27.9		21	195	7.6	0.18	1.2	1.7	0.11 C
	2	12	49	22.7	19-21.5	155- 5.1	2.9		11	118	4.8	0.11	0.8	1.3	0.15 F
	2	14	49	47.6	19-20.3	155-12.5	6.1	1.9	27	72	4.0	0.07	0.6	0.5	0.19 H
	2	15	13	56.8	19-26.8	156- 2.0	14.0*		8	305	48.8	0.37	2.7		0.09 D
	2	16	0	51.2	19-22.1	155-13.3	3.2	2.3	12	92	1.4	0.15	0.7	2.1	0.12 H
	2	17	19	11.8	19-47.6	155-10.7	13.8*	2.3	19	181	18.8	0.16	1.3		0.17 C
	2	19	23	29.4	19-18.0	155-16.8	6.3	2.5	29	125	3.2	0.08	0.6	0.5	0.18 C
	2	20	51	23.2	18-57.3	155-18.9	14.6*		23	251	27.6	0.29	2.0		0.20 D
	3	6	37	57.2	19-24.6	155-16.4	2.0	0.5	10	89	1.2	0.02	0.1	0.1	0.03 A
	3	6	43	39.2	19-20.8	155-12.0?	7.8	1.6	24	68	3.2	0.06	0.6	0.4	0.14 F
	3	12	17	49.7	19-18.3	155-14.7	5.7	1.7	22	123	3.3	0.11	0.7	0.7	0.19 H
	3	16	42	36.3	19-19.6	155-14.2	8.0*	1.7	15	84	5.0	0.04	0.4		0.08 H
	3	21	36	53.9	19- 8.8	155-32.8	51.4		21	210	8.8	0.59	2.7	5.0	0.15 C
	3	22	9	50.5	18-50.0	155- 9.6	8.0*		27	275	48.2	0.67	4.3		0.19 D
	3	23	33	8.8	19-20.6	155-12.2	6.1	1.8	28	70	3.5	0.07	0.6	0.6	0.20 H
	4	2	59	31.6	19-12.1	155- 7.7	37.8		18	263	13.6	0.55	3.0	3.5	0.12 D
	4	3	58	26.4	18-53.8	155- 8.3	8.0*	3.0	33	258	43.4	0.41	2.6		0.17 D
	4	6	53	47.1	19-11.6	155-21.5	42.5		17	168	11.7	0.39	1.6	3.6	0.13 C
	4	6	54	10.5	19-11.3	155-21.4	37.1		21	170	11.8	0.37	1.6	3.7	0.16 C
	4	6	59	22.0	19-53.4	155- 6.5	48.2*	3.6	35	222	18.9	0.12	1.2		0.14 C

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MIN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
JUL	4	8	55	7.5	19-13.9	155-31.2	33.1		13	131	10.0	0.60	3.0	5.8	0.17	C
	4	9	28	31.1	19-19.4	155-15.3	4.8		17	102	3.9	0.10	0.7	0.9	0.19	B
	4	9	49	39.2	19-27.3	155-25.5	8.0*	1.6	15	78	6.0	0.07	0.5		0.12	B
	4	16	32	13.2	19-20.7	155-11.4?	7.0		16	87	3.8	0.11	1.0	1.8	0.16	B
	4	17	42	33.6	19-20.6	155-19.5?	1.0	1.3	13	101	3.9	0.16	0.5	6.4	0.10	B
	4	18	43	20.9	19-19.8	155-11.8	8.0*		14	85	5.1	0.06	0.5		0.10	B
	4	18	58	35.7	19-23.7	155-24.8	9.1	1.6	20	89	5.3	0.05	0.5	1.2	0.08	A
	4	19	9	48.4	19-19.1	155-14.0?	8.6		11	88	4.0	0.22	1.3	3.1	0.16	B
	4	19	59	20.4	19-27.9	155-51.3	4.1	2.5	21	224	22.1	0.28	1.6	1.2	0.14	C
	4	22	21	28.4	19-25.0	155-23.9	8.0*		18	116	7.5	0.05	0.4		0.09	B
	4	22	56	3.1	19-25.7	155-26.7	5.0		14	96	6.1	0.12	1.0	1.6	0.21	C
	5	1	37	52.4	19-22.1	155-13.6	2.6		11	88	1.7	0.16	0.8	3.2	0.13	B
	5	2	17	35.1	19-22.3	155-13.1	5.9	1.4	18	74	0.8	0.07	0.5	0.6	0.11	B
	5	6	33	7.0	19-28.4	155-15.0	33.6		9	221	10.1	0.68	3.2	5.5	0.11	C
	5	7	29	53.4	19-29.0	155-10.8	17.1		14	227	10.1	0.24	1.7	2.3	0.09	C
	5	7	51	32.3	19-54.9	155- 8.9	49.5		27	222	20.5	0.39	1.8	3.3	0.14	C
	5	9	3	21.7	19-22.4	155-23.0	7.2	1.5	11	87	4.1	0.09	0.6	1.6	0.09	A
	6	7	7	23.6	19-22.2	155-12.5	4.9	1.7	13	72	0.5	0.10	0.5	1.2	0.11	B
	6	17	17	16.0	19-10.4	155-35.3	6.4	2.3	12	138	8.8	0.21	1.5	1.3	0.22	C
	7	12	12	28.4	19-21.5	155- 7.9	11.3		11	172	3.5	0.37	1.9	3.4	0.15	C
	7	23	54	40.3	19-25.5	155-26.4	8.0*		6	193	6.0	0.14	1.1		0.08	C
	8	4	17	40.7	18-57.6	155-28.3	31.1	3.7	33	230	20.5	0.35	1.9	2.9	0.15	C
	8	4	36	46.8	19-19.9	155-13.0	8.0*		14	70	5.4	0.06	0.6		0.13	B
	8	4	50	28.1	19-22.3	155-23.3	6.2	2.1	29	58	3.9	0.07	0.6	0.5	0.21	B
	8	8	6	9.9	18-56.1	155-28.0	32.4	2.6	22	239	21.5	0.35	1.8	2.9	0.12	C
	8	11	9	34.8	19-18.5	155-15.1	9.7		10	135	5.0	0.11	1.0	1.6	0.08	B
	8	18	27	22.0	19-24.7	155-23.7	8.0*	1.6	14	126	7.3	0.04	0.3		0.07	C
	8	19	46	19.4	19-51.0	156- 7.6	53.0	3.0	22	290	68.3	0.54	2.5	4.5	0.08	C
	8	20	15	42.6	18-54.4	155-17.0	9.7	2.7	16	254	33.7	0.70	3.5	3.5	0.17	D
	8	20	36	10.2	18-52.1	155-15.0	1.5*	2.6	13	290	39.3	0.83	5.2		0.17	D

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ER7	MO	Q
JUL	8	21	44	8.4	19-22.8	155-45.3?	4.2	2.8	26	171	17.6	0.85	1.4	6.0	0.23 C
	8	23	13	55.1	19-21.9	155-24.3	6.6	2.1	31	45	3.5	0.08	0.7	0.6	0.25 B
	9	2	46	56.1	19-11.8	155-47.3?	0.0	2.6	16	241	18.9	0.41	4.0	18.8	0.22 D
	9	3	18	13.6	19-25.7	155-16.0	19.1		11	127	3.5	0.15	0.9	2.0	0.07 B
	9	4	18	39.8	19-24.8	155-27.4	5.9	1.8	26	94	4.2	0.11	0.8	0.7	0.23 B
	9	14	28	17.5	19-16.6	155-23.4	3.8	1.9	25	124	5.9	0.09	0.7	1.0	0.23 C
	9	14	57	30.3	19-35.6	155- 6.0	8.0*		7	267	10.6	0.21	1.2		0.04 D
	9	17	17	22.0	19-16.4	155-23.1	3.2		18	127	6.4	0.10	0.7	1.3	0.19 B
	10	0	25	15.7	19-18.4	155-14.4	5.8		18	118	2.9	0.10	0.6	0.7	0.14 B
	10	1	27	26.7	19-22.6	155-22.6	3.2		14	80	4.6	0.08	0.6	1.4	0.12 B
	10	2	57	11.5	19-19.9	155-15.4	6.1	1.6	26	81	3.6	0.06	0.5	0.4	0.14 A
	10	4	18	14.8	19-17.6	155-22.9	3.7	2.5	31	116	4.8	0.09	0.7	0.8	0.23 B
	10	4	48	31.4	19-20.4	155- 8.6?	8.0		17	144	3.8	0.11	1.0	0.7	0.15 C
	10	7	42	55.4	19-12.9	155-19.8	37.2		21	166	9.6	0.35	1.7	3.2	0.14 C
	10	15	37	10.8	19-34.5	155- 6.8	8.0*		11	139	9.5	0.08	0.7		0.07 C
	10	16	48	7.7	19-20.6	155-12.0?	7.7	1.7	22	106	3.5	0.08	0.7	0.4	0.14 B
	10	21	8	11.6	19-22.2	155-30.1?	9.8		15	99	4.3	0.10	0.9	1.3	0.14 B
	11	3	49	38.8	18-57.1	155-28.1	29.4		15	254	20.9	0.77	4.1	6.1	0.16 D
	11	4	38	5.3	19-19.8	155-15.1	6.9		15	132	4.1	0.09	0.6	0.6	0.11 B
	11	5	17	40.5	19-18.6	155-13.4	5.8		14	82	2.9	0.13	0.9	1.0	0.16 B
	11	6	23	7.2	19-22.7	155-24.0	8.0*		10	102	4.8	0.06	0.5		0.09 B
	11	11	41	37.7	19-20.2	155-10.7	5.4		20	105	3.7	0.12	0.8	1.0	0.23 B
	11	12	37	23.8	19-20.7	155-11.6	6.9		20	72	3.7	0.10	0.9	0.7	0.21 B
	11	12	56	11.7	19-22.0	155-23.0	7.6		10	86	3.4	0.13	0.7	1.7	0.07 A
	11	13	43	20.9	20- 1.4	155-29.2	50.0	3.3	33	195	21.1	0.34	1.5	3.2	0.13 C
	11	14	56	11.7	19-39.6	155- 3.7	0.9	2.6	16	227	33.1	2.45	1.8	8.1	0.16 D
	11	16	27	24.1	19-20.9	155-24.4	8.0		12	82	2.3	0.09	1.0	0.8	0.15 B
	11	20	46	10.2	19-22.3	155-11.6	3.7	1.9	24	72	1.8	0.08	0.5	1.1	0.17 B
	11	20	50	26.2	19-20.5	155-19.5	5.0	2.3	27	54	3.7	0.05	0.4	0.4	0.12 B
	11	20	51	44.6	19-25.4	155-27.1	8.0*		9	209	5.4	0.22	1.4		0.15 C

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
JUL	11	21	34	11.1	19-22.7	155-22.4	3.8	1.3	17	81	4.9	0.08	0.6	0.8	0.15 B
	12	1	58	32.1	19-22.6	155-22.3?	2.7	1.4	14	83	4.7	1.18	0.5	2.3	0.12 B
	12	2	49	17.3	19-22.4	155-23.3	4.9		12	93	4.0	0.17	0.5	2.1	0.09 B
	12	3	43	51.7	19-22.2	155-13.0	4.6	1.4	15	93	0.7	0.13	0.6	1.4	0.12 B
	12	4	31	34.4	19-22.5	155-22.5	5.6		10	83	4.4	0.19	0.5	2.1	0.09 B
	12	7	35	5.9	19-19.4	155-16.0	5.7		24	95	2.8	0.07	0.5	0.5	0.17 B
	12	11	23	30.5	19-22.8	155-17.1	15.1		15	64	2.2	0.09	0.9	1.4	0.14 B
	12	11	57	49.7	19-20.7	155-19.6	1.6	1.4	11	102	4.0	0.13	0.4	0.6	0.07 A
	12	14	37	34.5	19-19.3	155-13.0	5.2		15	78	4.2	0.10	0.8	0.9	0.17 B
	12	15	3	47.9	19-18.7	155-16.8	6.1	1.7	20	128	2.7	0.08	0.6	0.5	0.14 B
	12	22	0	7.6	19-13.5	155-26.6	8.0*		9	136	5.4	0.21	2.1		0.26 C
	12	22	28	50.0	19-23.0	155-14.3	22.6		19	55	3.0	0.16	0.8	1.7	0.10 B
	12	23	0	49.8	19-22.3	155-24.4?	1.5		13	120	4.4	0.20	0.8	1.2	0.12 B
	13	3	7	57.6	19-18.6	155-13.6	4.8	1.6	17	86	2.8	0.09	0.7	0.7	0.15 B
	13	4	41	56.8	19-20.3	155-19.8	1.9*		10	112	4.1	0.05	0.3		0.07 B
	13	6	15	19.1	19-55.5	155- 5.8	49.5	2.6	27	229	22.7	0.33	1.5	2.8	0.10 C
	13	6	29	50.8	19-22.4	155-13.1	4.3	1.5	16	74	0.9	0.07	0.4	0.9	0.09 A
	13	6	43	15.5	19-53.3	155- 5.1	43.2	3.0	33	226	18.6	0.37	1.8	3.2	0.15 C
	13	8	4	31.1	19-23.7	155-24.0	8.0*		9	196	6.6	0.12	0.9		0.10 C
	13	11	37	14.4	19-27.4	155-23.6	6.8	1.6	14	87	4.4	0.11	0.9	0.8	0.20 B
	13	11	51	45.9	19-25.5	155-15.9	1.4	2.4	22	50	0.3	0.08	0.4	0.3	0.12 B
	13	11	55	46.1	19-19.7	155-20.2	3.9	1.6	10	139	4.2	0.12	0.4	2.3	0.08 B
	14	4	0	36.0	19-21.1	155-24.9?	7.3		16	80	3.2	0.10	0.8	0.9	0.17 B
	14	4	29	53.9	19-52.7	155- 4.6	39.4		20	243	20.2	0.69	3.0	5.4	0.12 C
	14	4	30	7.2	19-19.3	155-13.6	6.8	2.4	28	68	4.2	0.06	0.5	0.4	0.16 B
	14	5	48	31.1	19-20.6	155-13.6	9.5		11	188	5.2	0.30	1.3	2.5	0.10 C
	14	6	57	6.7	19-18.6	155-15.1	9.8		14	122	4.2	0.23	0.9	2.1	0.10 B
	14	10	15	25.7	19-23.6	155-25.5?	8.0	2.1	22	60	4.2	0.07	0.5	0.5	0.13 B
	14	14	23	4.0	19-56.9	155-35.6	46.6	3.7	33	148	23.4	0.29	1.1	2.9	0.13 B
	14	15	5	28.3	19-47.6	155-26.0	23.4	2.5	19	89	3.0	0.14	1.0	2.0	0.12 B

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
JUL	14	17	12	40.2	19-30.2	155-52.0	6.8	2.6	14	275	28.1	1.56	4.4	8.5	0.15 D
	15	1	27	20.3	19-25.0	155-26.0	7.7	1.9	21	62	5.4	0.03	0.3	0.2	0.07 A
	15	16	12	17.1	19- 9.7	155-23.5	35.9		17	216	7.6	0.68	2.4	5.8	0.11 C
	15	20	14	28.7	19-23.7	155-17.7	13.2		18	60	1.4	0.05	0.6	0.4	0.11 H
	15	22	37	29.2	19-20.9	155-20.6	25.4		15	64	4.9	0.22	1.0	2.1	0.12 B
	15	23	9	48.8	19-20.3	155-12.7	5.0	1.6	16	68	3.9	0.09	0.7	0.7	0.18 H
	16	0	52	24.1	19-24.4	155-24.8	8.0*	1.6	10	141	6.0	0.06	0.5		0.08 C
	16	6	10	21.9	19-23.9	155-24.4?	0.0	1.6	14	125	6.2	2.72	0.7	5.4	0.13 C
	16	17	21	56.4	19-55.3	155- 6.3	50.7		18	234	25.2	0.50	2.2	4.1	0.11 C
	16	18	22	37.4	19-21.0	155- 8.4	5.1	2.4	25	71	3.1	0.10	0.8	0.7	0.24 B
	16	21	44	15.6	19-19.0	155-15.4	8.7		13	113	4.1	0.17	0.9	1.9	0.12 H
	17	0	54	2.4	20- 2.6	155-22.3	12.8	2.6	24	215	17.3	0.21	1.3	1.4	0.14 C
	17	3	16	6.1	19-22.4	155- 4.7	3.3	1.8	19	139	5.6	0.11	0.7	0.8	0.16 H
	17	5	20	6.9	19-21.7	155-26.1	4.3	2.0	21	117	3.1	0.10	0.8	0.9	0.25 B
	17	5	21	28.2	19-21.8	155-25.6	7.5	2.9	28	64	3.8	0.08	0.6	0.5	0.19 B
	17	6	53	45.4	19-32.1	155-42.9?	5.7	2.4	12	161	13.2	0.63	1.0	4.7	0.12 C
	17	10	34	54.1	19-37.1	156- 1.5	7.9	3.1	22	227	42.3	0.41	1.7	3.3	0.16 C
	17	20	50	32.3	19-35.9	155-40.7	8.0*	2.4	6	324	14.6	1.63	8.2		0.04 D
	18	0	45	24.4	19-50.8	155-19.9	17.1	2.4	13	130	5.0	0.14	1.2	2.3	0.13 H
	18	4	41	25.4	19-27.7	155-26.7	7.0	2.5	30	78	7.1	0.09	0.7	0.6	0.20 C
	19	1	17	23.4	19-22.0	155-12.5	3.6	1.4	11	101	0.9	0.10	0.5	1.2	0.09 A
	19	4	58	28.4	19-19.0	155-21.1	4.1	1.8	23	101	4.5	0.08	0.7	0.8	0.17 H
	19	6	11	59.4	19-23.1	155-22.6	8.0*	1.5	16	91	5.2	0.05	0.4		0.09 H
	19	12	55	14.7	19-20.3	155-13.2	5.9	1.5	20	64	4.0	0.08	0.6	0.7	0.19 B
	19	16	12	57.4	19-58.2	155-25.2	13.1	2.9	29	191	12.0	0.14	1.1	1.2	0.14 C
	19	16	14	46.7	19-57.8	155-25.8	11.7	2.5	20	189	12.2	0.13	0.9	0.9	0.13 C
	20	1	14	11.7	19-30.8	155-19.7?	8.4	2.0	25	70	6.1	0.09	0.6	0.6	0.18 H
	20	4	27	49.8	19-57.5	155-25.5	12.0	3.5	32	187	11.5	0.12	0.8	0.8	0.12 C
	20	7	44	23.9	19-21.6	155-29.1?	8.1	1.9	23	58	3.2	0.12	0.8	0.8	0.24 B
	20	13	10	59.5	19-23.6	155-26.1?	7.1	2.5	30	49	3.3	0.07	0.7	1.3	0.23 B



# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	G
JUL	21	2	7	40.4	19-17.8	155- 0.4	35.6	2.4	28	221	6.0	0.27	1.4	2.0	0.11 C
	21	8	57	8.5	19-21.1	155-24.4	8.5	2.4	28	66	2.6	0.05	0.6	1.1	0.16 B
	21	17	5	34.8	20- 5.5	155-23.0	9.8	2.9	29	223	22.8	0.27	1.4	1.6	0.15 C
	22	5	13	4.6	19-24.3	155-23.2	8.0*	1.5	17	112	6.2	0.07	0.5		0.12 B
	22	9	32	39.2	19-16.1	155-23.2	8.0*		13	130	7.5	0.10	0.9		0.18 C
	22	9	35	16.5	19-16.2	155-23.3	4.8		18	128	6.0	0.10	0.8	1.6	0.22 C
	22	22	21	35.3	19-22.2	155-11.4	5.8	1.5	18	146	2.3	0.08	0.6	0.6	0.14 B
	22	23	31	16.8	19-25.8	155-14.9	28.7	2.6	31	48	1.5	0.11	0.7	1.1	0.12 B
	23	2	3	57.5	19-23.0	155-17.2	2.1		9	173	0.9	0.06	0.3	0.1	0.04 B
	23	13	16	10.0	19-25.8	155-22.3	6.9	2.0	12	110	4.5	0.08	0.5	0.7	0.10 A
	23	20	26	58.2	20- 2.9	155-28.6	31.7	2.7	23	203	22.4	0.28	1.5	3.2	0.14 C
	24	4	55	52.9	19-22.3	155-11.4	6.6	1.5	16	91	2.2	0.05	0.5	0.5	0.11 B
	24	9	37	1.5	19-23.8	155-23.8	8.0*		8	114	6.7	0.12	1.1		0.15 B
	24	10	0	17.4	19-30.5	155-27.5	7.2	2.8	27	75	7.4	0.08	0.5	0.5	0.15 B
	24	11	13	27.7	19-22.5	155-11.4	5.4	1.5	21	95	2.3	0.08	0.6	0.7	0.13 B
	24	12	24	48.0	19-23.6	155-15.8	8.0*		10	109	10.8	0.13	1.3		0.26 C
	24	14	23	4.3	19-20.0	155-11.8	5.4		17	83	4.8	0.09	0.7	0.7	0.18 B
	24	14	25	38.6	19-20.5	155- 9.4	4.8		13	76	3.0	0.12	0.9	1.2	0.20 B
	24	14	41	40.6	19-18.7	155-16.0	4.6		17	128	3.5	0.12	0.7	1.1	0.17 B
	24	15	54	35.4	19-20.5	155-12.4	6.1		14	69	3.6	0.12	0.8	1.0	0.15 B
	24	16	50	7.0	19-18.6	155-16.0	5.2		15	133	3.7	0.12	0.7	0.9	0.17 B
	24	18	29	44.6	19-24.0	155-23.2	8.2	1.5	20	96	6.2	0.05	0.5	0.3	0.11 B
	25	2	26	10.0	19-22.3	155-11.3	4.8	1.5	14	92	2.4	0.13	0.6	1.4	0.13 B
	25	3	2	42.1	19-22.3	155-11.0	3.6		10	93	2.1	0.05	0.3	0.7	0.05 A
	25	5	16	26.9	19-22.2	155-10.3	2.5	1.6	15	105	0.8	0.13	1.0	1.6	0.18 B
	25	6	3	16.8	19-27.1	155-16.6	26.4	2.3	30	51	3.3	0.09	0.6	1.0	0.12 B
	25	7	37	31.6	19-57.1	155-26.5	11.1		12	183	12.4	0.14	1.2	1.1	0.11 C
	25	11	26	36.1	19-20.6	155-12.1	5.3		22	73	3.4	0.11	0.8	0.9	0.22 B
	25	13	42	46.0	19-21.9	155-11.6	2.7		14	128	2.1	0.12	0.7	3.0	0.11 B
	25	18	18	29.1	19-21.0	155-10.9	8.4		8	106	2.7	0.04	0.3	0.6	0.04 A

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MP	Q
JUL	25	19	32	32.7	19-22.5	155- 9.1?	1.4	1.6	15	99	1.5	0.12	0.9	1.8	0.17 B
	25	21	44	52.6	19-22.3	155-11.5	5.7	1.8	20	92	2.1	0.07	0.5	0.7	0.13 H
	25	23	44	14.8	19-21.8	155- 9.1	7.4		10	190	1.4	0.13	1.4	0.7	0.16 C
	26	0	15	57.1	19-25.3	155-28.7?	7.8	1.8	21	70	5.5	0.10	0.9	1.5	0.18 H
	26	18	10	55.3	19-22.2	155- 9.5	4.8	1.6	14	94	0.6	0.08	0.5	0.9	0.11 B
	26	19	34	33.7	19-23.0	155-10.2?	8.2	1.6	15	119	1.9	0.11	0.7	0.9	0.13 B
	27	0	31	51.8	19-19.3	155-24.4	7.9	3.0	31	95	2.5	0.06	0.6	0.4	0.14 H
	27	1	2	47.1	19-11.4	155-27.4	6.0	2.1	20	120	3.6	0.10	0.9	0.7	0.18 B
	27	3	13	18.2	19-21.0	155- 8.3?	2.9		18	77	3.4	0.10	0.7	1.2	0.19 B
	27	7	16	56.9	19-22.2	155-11.6	4.5	2.0	22	71	2.0	0.07	0.5	0.8	0.16 B
	27	10	26	54.0	19-21.1	155- 7.8	2.8		17	82	4.1	0.11	0.8	1.5	0.19 B
	27	16	35	54.8	19-21.9	155- 9.6?	2.2	2.4	26	74	0.6	0.08	0.6	0.8	0.20 H
	27	21	13	39.9	19-21.1	155- 8.2	3.7	1.7	20	73	3.4	0.10	0.8	1.2	0.21 H
	27	23	5	26.7	19-20.5	155-12.1	9.5		17	74	3.7	0.08	0.4	1.0	0.08 A
	28	0	0	16.3	19-19.8	155-12.9	5.6	2.0	25	73	4.9	0.08	0.6	0.6	0.19 B
	28	2	18	54.2	19-20.3	155-13.3	5.5		22	63	4.2	0.09	0.7	0.6	0.20 H
	28	3	3	48.9	19-20.4	155-12.3	7.2		15	72	3.8	0.10	0.7	0.7	0.15 B
	28	4	5	44.2	19-20.7	155- 8.6	3.8		15	73	3.3	0.11	0.8	1.2	0.19 H
	28	9	26	18.5	19-25.4	155-21.8	5.0	1.5	16	100	4.5	0.09	0.7	0.9	0.17 B
	28	9	38	33.8	19-59.9	155-34.0	52.4	2.9	28	174	26.4	0.44	1.6	4.3	0.13 C
	28	11	58	35.2	19-19.6	155-13.0	8.0*		17	75	4.9	0.06	0.5		0.12 B
	28	14	21	7.7	19-19.5	155-13.1?	7.8	1.7	20	75	4.6	0.07	0.6	0.4	0.13 H
	28	14	30	23.2	19-19.2	155-13.6	6.6	1.9	16	77	4.1	0.11	0.8	0.8	0.18 B
	28	16	17	5.1	19-20.2	155-20.5	28.3	2.1	19	71	4.9	0.17	0.9	1.7	0.12 B
	28	18	22	58.9	19-22.8	155- 4.8	2.5		16	139	6.3	0.13	0.9	1.7	0.19 B
	28	18	39	18.2	18-52.8	155-15.3	4.1	3.2	23	262	37.8	1.54	2.4	9.0	0.12 D
	28	19	7	19.4	19-13.0	155-31.9	5.6	2.3	15	76	9.6	0.10	0.8	0.8	0.17 H
	29	9	33	45.8	19-21.0	155- 9.3	4.7	1.7	18	70	2.2	0.10	0.7	1.1	0.19 B
	29	19	22	1.1	19-20.3	155-10.8	5.0		16	103	3.7	0.11	0.7	0.9	0.18 B
	30	5	34	35.3	19-21.5	155- 7.6?	0.0	1.7	22	75	7.6	3.00	0.5	5.7	0.14 C

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
JUL	30	5	59	37.5	19-24.4	155-16.3	13.0	2.6	32	34	1.1	0.03	0.5	0.3	0.11	B
	30	13	0	51.0	19-20.4	155-12.3	5.7		14	72	3.9	0.10	0.7	0.8	0.16	B
	30	18	34	23.8	19-21.6	155- 8.0	10.1		8	173	3.4	0.04	0.3	0.5	0.02	B
	30	19	19	14.5	19-24.2	155-26.2	7.3	2.0	13	166	4.0	0.09	0.6	0.4	0.10	B
	30	22	22	32.5	19-22.1	155- 9.6	2.9	2.2	24	75	0.4	0.07	0.5	0.6	0.16	B
	31	6	33	23.3	19-20.5	155-12.2	7.6	3.2	31	71	3.7	0.05	0.5	0.3	0.16	B
	31	9	26	40.0	19-20.1	155- 9.4	3.1	2.0	21	78	3.7	0.11	0.8	1.2	0.23	B
AUG	1	2	10	9.1	19-22.5	155- 9.7	3.1	2.1	25	76	0.8	0.09	0.7	0.8	0.18	B
	1	2	59	5.1	19-57.9	155-30.0	45.0	3.1	33	175	18.4	0.27	1.1	2.7	0.13	C
	1	8	34	43.9	19-21.9	155- 9.5	4.6		17	78	0.8	0.06	0.5	0.7	0.13	B
	1	16	41	50.4	19-21.6	155-16.9	26.1	2.3	24	57	2.2	0.10	0.6	1.0	0.10	B
	2	0	55	27.0	19-18.2	155-14.4	9.1		12	122	2.7	0.14	0.7	1.6	0.10	B
	2	4	5	51.6	19-23.9	155-25.3	7.5	2.2	25	57	4.9	0.07	0.5	0.5	0.11	B
	2	6	32	55.3	19-22.1	155- 9.3	7.1	2.3	16	170	0.9	0.07	0.6	0.4	0.09	C
	2	10	33	38.3	19-22.4	155- 9.4	4.4	1.9	17	95	1.0	0.11	0.7	1.1	0.16	B
	2	13	9	45.4	19-22.1	155- 9.4	6.9	1.7	13	93	0.7	0.07	0.7	0.5	0.12	B
	2	15	54	20.2	19-19.3	155-11.1?	7.6		15	135	5.5	0.10	0.9	0.6	0.14	C
	3	2	25	20.1	19-17.5	155-11.7	4.0	2.0	23	161	3.3	0.13	0.8	1.0	0.22	C
	3	2	39	17.9	19-12.3	155-31.7	5.7		19	87	8.4	0.11	0.9	0.8	0.18	B
	3	3	17	51.0	19-17.0	155-11.9	5.0	1.8	18	188	2.8	0.17	1.0	0.9	0.19	C
	3	8	18	14.0	19-17.0	155-11.5	7.0	1.8	17	187	3.5	0.11	0.8	0.5	0.13	C
	3	9	14	50.1	19-16.6	155-11.2	7.5		16	203	4.0	0.12	0.8	0.4	0.11	C
	3	11	39	26.3	19-16.8	155-11.3	7.1		17	194	3.8	0.15	1.0	0.6	0.16	C
	3	15	37	39.8	19-17.6	155-11.7	3.4		18	157	3.3	0.14	0.9	1.4	0.20	C
	3	15	54	24.4	19-17.2	155-11.3	4.3		15	178	3.8	0.17	1.1	1.3	0.18	C
	3	16	20	58.9	19-17.4	155-11.9?	2.5	1.7	18	162	2.9	0.25	0.9	1.1	0.20	C
	3	17	58	1.4	19-16.7	155-11.5	7.6		13	203	3.5	0.11	0.8	0.4	0.10	C
	3	17	59	59.1	19-17.5	155-11.2?	0.7		16	164	4.0	2.15	0.9	8.2	0.21	C
	3	18	37	50.1	19-17.5	155-11.4	6.6	2.1	22	151	3.7	0.07	0.5	0.4	0.14	C
	4	4	38	25.1	19-17.6	155-11.4	4.0	1.7	21	148	3.8	0.12	0.8	1.1	0.22	C

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
AUG	4	21	41	19-21.1	155- 8.1?	0.0	1.7	24	73	6.9	3.82	0.6	7.3	0.16	C
	5	1	7	19-18.6	155-14.5	6.1	1.6	17	113	3.4	0.11	0.6	0.8	0.14	B
	5	2	26	19-19.8	155- 9.3	3.7		12	106	4.4	0.10	0.8	1.2	0.15	B
	5	7	21	19-20.2	155- 9.8	9.1		14	78	3.4	0.07	0.5	1.0	0.07	A
	5	8	49	19-53.8	156- 5.7	0.4	3.4	33	251	41.8	0.33	2.6	1.0	0.17	D
	5	11	22	19-19.2	155-13.8	7.5	1.6	19	83	4.1	0.09	0.7	0.5	0.16	B
	5	14	24	19-22.5	155- 9.1	7.7		10	181	1.6	0.15	1.4	0.7	0.13	C
	5	21	26	19-21.4	155-11.0	8.2		16	102	2.4	0.12	1.0	1.8	0.12	B
	7	9	38	19-20.4	155-19.6	2.0*		6	109	4.0	0.08	0.6		0.08	C
	7	14	20	19-25.9	155-19.2?	6.3		8	177	4.1	0.38	3.4	5.0	0.39	D
	7	18	32	19-19.6	155-12.4	8.0*		11	158	5.2	0.09	0.7		0.09	C
	7	21	34	19-24.5	155-24.0	8.4	2.5	25	58	7.4	0.07	0.6	0.5	0.15	B
	8	3	11	19-10.2	155- 3.6?	41.8	2.2	32	225	15.3	0.25	1.4	1.8	0.12	C
	8	3	20	19-25.0	155-39.4	8.0*	2.3	10	229	10.0	0.17	1.0		0.08	D
	8	3	59	19-23.9	155-23.2	7.5	2.6	28	56	6.1	0.05	0.5	0.4	0.17	B
	8	4	21	19-23.8	155-23.2	8.0*		8	106	6.1	0.04	0.4		0.06	B
	8	4	23	19-23.9	155-23.1	8.0*		8	106	6.0	0.06	0.6		0.09	B
	8	4	26	19-24.0	155-23.1	8.0*		7	107	5.9	0.05	0.5		0.07	C
	8	4	29	19-23.9	155-23.1	8.0*		7	106	5.9	0.04	0.4		0.05	C
	8	4	41	19-23.7	155-22.7	8.0*	1.4	14	60	5.2	0.05	0.5		0.12	B
	8	4	45	19-23.9	155-23.1	8.0*		7	106	6.0	0.04	0.4		0.06	C
	8	5	19	19-23.9	155-24.5	8.0	1.6	20	109	6.1	0.06	0.5	0.8	0.09	A
	8	5	50	20- 0.9	155-27.9?	9.2		13	196	18.9	0.24	2.8	3.3	0.19	C
	8	6	14	19-19.8	155-11.5	8.0*		10	91	5.1	0.04	0.3		0.04	B
	8	6	16	19-18.4	155-12.4?	0.0		9	186	3.1	7.83	2.4	15.9	0.13	C
	8	9	48	19-22.2	155-26.0	8.3	2.0	14	107	2.9	0.06	0.5	1.1	0.09	A
	8	9	53	19-20.5	155-12.2	6.2	2.3	28	72	3.7	0.07	0.6	0.5	0.21	B
	8	11	16	19-20.4	155-12.7	8.2		14	69	3.9	0.09	0.6	1.4	0.09	A
	8	11	42	19-18.9	155-15.9	6.5	1.5	26	102	3.5	0.06	0.5	0.4	0.14	B
	8	16	42	19-20.7	155- 9.8	5.5		12	70	2.5	0.12	0.7	1.2	0.16	B

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
AUG	8	18	11	37.1	19-23.9	155-29.9	11.1	1.9	17	96	4.7	0.08	0.7	1.0	0.12 B
	8	19	27	12.4	19-21.9	155- 9.9	3.0	1.6	14	78	0.2	0.07	0.5	0.9	0.12 B
	8	19	44	26.1	19-23.0	155-24.0	8.0*	1.6	17	66	5.3	0.06	0.5		0.12 B
	8	22	28	56.0	20- 0.7	155- 0.5	51.8	2.7	32	264	33.4	0.56	2.7	3.9	0.13 D
	8	23	34	12.6	19-25.1	155-52.4	10.8		5	261	16.8				0.02 D
	9	2	29	53.2	19-34.5	155-53.4	14.4*		14	246	31.9	0.22	1.6		0.13 D
	9	6	30	31.3	19-19.7	155-20.0	5.2		13	136	4.0	0.15	0.5	1.5	0.09 B
	9	7	6	56.5	19-19.4	155-13.4	6.2	1.6	23	72	4.4	0.09	0.7	0.6	0.19 B
	10	8	20	8.1	19-12.3	155-16.2	43.9		16	180	9.9	0.54	2.1	5.1	0.15 C
	10	8	20	37.4	19-11.8	155-16.2	43.7		17	183	10.7	0.43	1.6	4.0	0.12 C
	10	8	25	12.2	19-10.8	155-14.9	36.8		20	192	11.8	0.40	1.8	4.0	0.15 C
	10	8	44	44.9	19-21.1	155- 8.0	3.4		21	80	3.7	0.10	0.7	1.0	0.20 B
	10	9	28	22.5	19-22.3	155-24.8	9.1		13	96	4.6	0.12	0.7	1.7	0.12 B
	10	18	27	43.3	19-22.7	155-25.7	9.7	1.8	14	75	3.4	0.09	0.5	1.3	0.08 A
	10	23	49	53.8	19-23.5	155-25.0	8.0*		14	128	4.9	0.07	0.7		0.11 C
	11	3	18	4.3	19-56.9	155-30.3	43.8	3.7	33	166	18.2	0.28	1.1	2.8	0.13 C
	11	9	26	30.2	19-23.0	155-49.2	10.5		23	154	14.1	0.11	1.0	1.2	0.12 C
	11	11	34	0.0	19-22.0	155-24.0?	8.3		27	49	3.5	0.06	0.5	0.4	0.17 P
	11	13	9	50.3	19-19.2	155-13.9	5.8		21	66	4.2	0.07	0.6	0.6	0.16 B
	11	19	17	32.4	19-20.6	155- 8.4	3.7		20	81	3.8	0.11	0.8	1.0	0.20 B
	11	19	22	37.7	19-20.6	155- 9.4	4.9		23	77	2.9	0.08	0.7	0.6	0.17 B
	11	22	43	24.4	19-23.5	155-23.2?	8.2		13	94	6.1	0.09	0.6	0.6	0.12 B
	11	23	25	5.8	19-19.5	155-16.6	4.6		13	103	1.8	0.16	0.9	1.4	0.21 B
	12	13	42	55.0	19-25.0	155-21.9	6.3	1.8	23	91	4.4	0.07	0.6	0.5	0.18 B
	13	2	46	35.0	19-22.0	155-19.8?	1.2	1.1	12	77	3.2	0.13	0.4	0.5	0.10 B
	13	2	47	31.9	19-27.9	155-23.9	7.2	2.1	20	154	3.7	0.09	0.7	0.4	0.14 C
	13	8	46	1.7	19-21.3	155-15.3	7.7	3.1	26	66	2.3	0.05	0.5	0.3	0.15 B
	13	13	43	7.8	19-19.6	155-13.5?	5.0		15	71	4.8	0.12	0.8	1.1	0.19 B
	13	23	32	20.5	19-11.8	155-27.4?	5.4		10	138	4.2	0.16	1.4	1.1	0.18 B
	14	5	30	26.7	19-19.0	155-13.6	6.5	1.6	23	68	3.6	0.07	0.6	0.5	0.16 B

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
AUG	14	6	17	20.0	19-20.2	155- 9.1	4.1	17	73	3.6	0.10	0.7	1.1	0.19	B
	14	23	49	40.7	19-25.1	155-27.2?	7.3	3.1	32	47	4.9	0.07	0.6	1.2	0.20 B
	15	6	48	18.8	19-24.9	155- 4.8?	0.0	2.3	20	90	9.8	4.68	0.7	8.9	0.18 C
	15	9	44	28.6	19-23.4	155-28.8?	6.3	1.9	20	88	2.7	0.13	1.3	1.9	0.28 C
	15	11	8	24.2	19-14.8	155-32.9	5.5	2.1	14	75	7.3	0.17	1.3	1.4	0.29 C
	15	20	41	20.9	19-33.5	155-40.9?	8.4	2.9	18	99	11.6	0.11	0.6	0.7	0.11 B
	15	22	24	17.7	19-54.1	155-10.5	49.4	3.1	32	213	17.7	0.37	1.6	3.4	0.15 C
	16	1	17	13.4	19-20.1	155-13.4	4.4		15	123	4.5	0.16	0.9	1.4	0.19 C
	16	10	19	40.0	19-10.7	155-17.2?	8.0*		15	207	17.3	0.31	2.1		0.33 D
	16	22	16	34.2	19-20.9	155- 8.9	3.9		16	72	2.7	0.11	0.8	1.1	0.21 B
	17	0	53	35.1	19-19.9	155-10.4	4.4		16	118	4.0	0.15	1.0	1.5	0.24 B
	17	1	0	16.8	19-20.2	155-13.4?	5.7	1.5	21	65	4.4	0.10	0.8	0.9	0.22 B
	17	2	44	53.2	19-19.6	155-10.7	4.4		12	128	4.8	0.14	1.2	1.5	0.23 C
	17	2	45	32.1	19-19.6	155-14.6	3.1		11	184	4.9	0.18	1.1	1.7	0.14 C
	17	3	2	38.5	19-19.8	155-10.8	5.0		19	91	4.6	0.12	0.8	1.1	0.22 B
	17	4	57	56.8	19-20.7	155-13.1	5.7		26	61	3.3	0.08	0.6	0.6	0.22 B
	17	14	11	19.6	19-25.3	155-14.5	28.6	2.0	29	52	1.2	0.11	0.6	1.1	0.12 B
	18	10	28	15.2	19-31.1	155-48.3?	8.0	2.5	13	202	35.8	0.21	2.1	2.1	0.13 C
	18	15	12	34.4	19-24.6	155-15.6	12.9	1.5	16	165	2.4	0.06	0.7	0.4	0.09 B
	18	18	20	38.1	19-27.2	155-51.6?	3.0		11	226	20.7	0.29	2.1	2.9	0.09 C
	18	19	27	49.8	18-59.9	155-18.0	3.0	2.4	20	243	24.7	0.52	1.9	2.2	0.14 C
	18	19	34	30.5	19-26.4	155-49.4	8.0	2.5	12	242	19.8	0.26	1.8	1.3	0.10 C
	18	20	20	26.2	19-18.7	155-14.6?	6.0		19	112	3.6	0.12	0.8	0.8	0.19 B
	19	9	44	23.8	19-25.2	155-24.3	8.0*	1.6	12	143	7.7	0.07	0.5		0.10 C
	19	23	2	25.6	19-20.6	155- 9.4	5.2		15	78	2.8	0.12	0.9	1.2	0.19 B
	20	16	30	31.0	19-19.8	155-24.2	7.7		9	166	1.8	0.07	0.6	0.4	0.07 B
	20	21	6	8.2	19-20.3	155- 7.7	8.5		13	143	5.0	0.21	1.6	3.0	0.19 B
	20	23	9	28.7	19-19.5	155-12.2	8.0*		7	182	6.2	0.10	0.9		0.06 C
	21	4	15	41.7	19-20.1	155-19.3	5.1	2.8	28	54	3.3	0.04	0.3	0.3	0.12 B
	21	5	20	5.2	19-23.4	155- 4.4	3.3	1.9	16	150	6.9	0.13	0.9	1.0	0.18 B

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	EPT	ERH	EPZ	MD	Q	
AUG	21	6	15	12.3	19-22.5	155-24.0	9.4	13	94	4.3	0.12	0.7	1.7	0.11	B	
	21	7	9	22.9	19-18.2	155-16.5?	8.3	14	152	3.7	0.21	1.1	1.9	0.12	C	
	21	7	11	9.3	19-23.9	155-15.9	14.8	15	106	2.7	0.07	0.7	1.0	0.09	A	
	21	7	42	1.7	19-24.7	155-23.6	8.0*	7	124	7.1	0.08	0.7		0.11	C	
	21	9	28	56.7	19-23.6	155-16.4	14.5	17	69	1.1	0.08	0.7	1.0	0.12	B	
	21	12	51	48.9	19-28.5	155-24.9	10.7	18	78	3.8	0.06	0.6	0.7	0.10	B	
	21	14	15	47.4	19-19.5	155-15.9	5.8	1.5	21	102	2.9	0.09	0.7	0.6	0.18	B
	21	15	5	30.1	19-40.9	154-57.9	5.0	2.7	16	268	22.1	1.11	6.5	2.8	0.21	D
	21	16	20	14.3	19-19.3	155-13.4	6.5	18	73	4.2	0.09	0.6	0.6	0.13	B	
	21	19	0	15.8	19-14.4	155-27.4	9.5	2.3	29	105	3.8	0.07	0.7	1.0	0.20	B
	21	22	38	43.3	19-20.1	155-12.1	6.8	2.6	30	77	4.4	0.07	0.6	0.4	0.20	B
	21	23	30	16.8	19-13.2	155- 4.0	49.0*	21	279	19.4	0.17	1.8		0.09	D	
	22	1	9	38.6	19-56.4	155- 2.2	49.2	2.7	25	238	25.0	0.49	2.3	3.9	0.13	D
	22	5	25	14.3	19-19.3	155-10.4	8.0*	9	120	5.2	0.06	0.5		0.06	B	
	22	5	36	20.6	19-19.8	155-11.0?	2.1	20	98	4.6	0.13	0.8	1.4	0.22	B	
	22	5	50	42.3	19-21.7	155-26.0	11.1	17	80	3.3	0.13	0.7	1.6	0.11	B	
	22	15	12	24.4	19-54.1	156-26.6	5.6	2.7	14	289	67.8	0.43	5.6	7.1	0.15	D
	22	20	57	49.8	19-20.9	155-14.6	25.6	2.0	28	64	3.5	0.10	0.7	1.0	0.11	B
	23	3	39	1.7	19-23.3	155-23.0	7.0	15	91	5.8	0.09	0.6	0.7	0.12	B	
	23	4	29	43.8	19-18.3	155-13.3?	8.4	15	88	2.4	0.08	0.6	0.4	0.11	B	
	23	5	34	56.5	19-23.3	155-23.1	7.9	12	90	5.6	0.07	0.6	1.3	0.10	A	
	23	5	36	54.8	19-21.3	155- 8.8	4.1	1.7	18	76	2.2	0.10	0.8	1.0	0.20	B
	23	6	58	55.2	19-19.4	155-16.1	6.4	17	106	2.6	0.12	0.8	0.8	0.18	B	
	23	9	2	16.4	19-24.2	155-19.4	9.8	14	87	1.1	0.14	1.2	1.4	0.18	B	
	23	9	23	32.4	19-23.0	155-23.3	6.7	2.0	23	63	5.2	0.07	0.7	0.7	0.18	C
	23	9	27	22.3	19-23.2	155-23.3	8.0*	10	100	5.5	0.05	0.5		0.08	B	
	23	9	53	29.9	19-23.4	155-25.6	12.4	14	111	3.9	0.11	1.1	1.1	0.16	B	
	23	10	24	49.3	19-22.8	155-14.0	9.6	14	71	2.4	0.12	1.0	1.3	0.16	B	
	23	20	18	27.3	19-19.4	155-15.9	8.7	12	137	3.0	0.14	1.0	1.8	0.13	B	
	23	22	49	25.6	19-23.1	155-23.3	8.0*	9	128	5.4	0.04	0.4		0.05	C	

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q	
AUG	24	2	7	49.1	19-21.6	155-47.3?	6.1	13	194	13.6	0.10	0.8	0.8	0.09	C	
	24	3	57	10.2	19-22.4	155-23.3	5.5	12	92	4.0	0.11	0.7	1.1	0.14	B	
	24	6	32	50.5	19-23.1	155-22.9?	0.5	12	94	5.4	1.46	0.5	5.5	0.12	C	
	24	17	45	40.3	19-18.3	155-16.1	5.6	15	164	3.9	0.16	0.9	1.1	0.19	C	
	24	21	23	13.0	19-22.5	155- 3.8	3.5	13	157	5.0	0.12	0.8	1.1	0.15	C	
	24	22	51	56.6	19-21.2	155-25.0	9.4	12	120	3.4	0.12	0.9	1.3	0.13	B	
	24	23	21	23.6	19-20.4	155- 7.8?	5.0	19	86	4.7	0.13	1.0	1.2	0.25	B	
	25	4	58	42.5	19-19.4	155-16.4?	7.5	10	214	2.1	0.34	2.1	0.9	0.13	C	
	25	8	13	20.0	19-21.3	155-16.2	24.9	16	98	2.0	0.16	0.8	1.7	0.10	A	
	25	11	5	44.0	19-19.7	155-14.8	5.0	1.6	18	182	4.7	0.15	0.8	0.9	0.18	C
	25	18	28	7.4	19-23.7	155- 3.6?	0.0	2.1	16	109	7.1	5.57	0.9	10.6	0.23	C
	26	6	1	10.3	19-22.4	155-23.1?	1.4		11	87	4.1	0.07	0.5	1.0	0.11	B
	26	17	35	52.5	19-23.3	155-25.1	9.0	1.9	21	54	4.7	0.05	0.5	0.8	0.12	B
	26	22	31	7.3	19-24.5	155-17.0	14.0	2.0	30	36	0.7	0.05	0.6	0.7	0.12	B
	27	1	9	41.6	19-18.6	155-15.9	7.0	1.6	17	132	3.8	0.06	0.5	0.4	0.09	B
	27	2	20	22.7	19-24.4	155-17.0	14.4	2.5	30	35	0.8	0.05	0.6	0.8	0.12	B
	27	2	53	41.9	19-18.2	155-16.1	8.2		10	169	4.2	0.14	1.1	1.8	0.10	C
	27	6	45	23.2	19-22.8	155- 4.8?	0.1	2.2	24	141	6.3	3.76	0.8	7.1	0.20	C
	27	11	52	8.3	19-22.6	155-15.4	29.6		19	80	1.0	0.14	0.9	1.4	0.11	B
	27	13	59	53.9	19-19.0	155-10.1	8.0*	1.8	18	110	4.8	0.05	0.4		0.09	B
	27	15	8	26.9	19-19.4	155-15.6	6.4	1.8	24	102	3.4	0.08	0.6	0.5	0.18	B
	27	18	22	25.0	19-19.2	155-16.0	5.8		15	113	3.1	0.10	0.6	0.9	0.15	B
	28	3	10	9.6	19-20.1	155- 7.3	8.0*		15	100	5.2	0.12	1.1		0.24	B
	28	3	36	59.2	19-25.6	155-21.8	8.7	1.9	21	56	4.2	0.05	0.5	0.9	0.12	B
	28	5	22	54.5	18-44.3	155-23.9	11.0*	2.7	23	285	38.9	0.53	3.4		0.14	D
	28	9	34	37.8	19-11.0	155-38.0?	8.8		10	101	7.4	0.30	1.7	1.9	0.22	B
	28	9	41	52.7	19-24.6	155-17.3	13.8	2.1	27	44	0.8	0.05	0.5	0.6	0.10	B
	28	14	9	25.1	19-18.9	155-13.4	6.1	1.9	27	74	3.6	0.07	0.6	0.5	0.19	B
	28	14	13	24.6	19-18.5	155-13.7	6.8	2.9	32	70	2.7	0.07	0.6	0.4	0.19	B
	28	14	41	49.5	19-19.1	155-13.6	6.7		15	79	3.8	0.10	0.7	0.8	0.11	B



# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MIN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q	
AUG	28	14	56	43.7	19-19.0	155-13.7	6.9	15	84	3.6	0.09	0.6	0.6	0.13	B	
	28	15	36	8.4	19-18.8	155-13.4	7.8	18	79	3.3	0.07	0.5	0.4	0.11	B	
	28	20	25	57.3	19-19.0	155-13.3?	8.0	1.6	17	77	3.7	0.06	0.5	0.4	0.10	B
	29	2	20	39.1	19-29.3	155-52.5	8.8	2.9	12	191	24.7	0.22	1.8	2.2	0.15	C
	29	2	56	37.0	19-26.7	155-25.9	8.0*	2.0	17	83	7.3	0.05	0.4		0.09	B
	29	12	6	41.6	19-13.5	154-39.6	10.2*	3.1	31	292	37.3	0.88	5.4		0.17	D
	29	19	18	57.5	19-24.6	155-16.9	14.1	1.7	16	89	1.5	0.05	0.5	0.6	0.07	A
	30	2	7	21.2	19-20.0	155-15.5	5.6	1.6	23	81	3.4	0.07	0.6	0.6	0.17	B
	30	2	36	44.1	19-25.4	155-26.9?	6.4		19	64	5.4	0.10	0.9	2.2	0.22	B
	30	4	9	1.5	19-22.4	155-25.4	6.5	2.2	26	52	4.0	0.08	0.7	0.6	0.20	B
	30	10	46	55.1	19-28.9	155-55.7	8.1	2.9	11	282	34.5	1.35	7.6	3.3	0.17	D
	30	14	50	37.8	19-19.7	155-12.9	7.0		15	74	5.0	0.10	0.8	0.7	0.16	B
	30	23	9	26.2	19-48.9	155- 0.2	49.2	3.4	34	229	12.7	0.44	1.9	3.5	0.15	C
	31	1	54	39.1	19-21.7	155- 7.3	3.3	2.1	23	91	4.5	0.10	0.7	1.0	0.21	B
	31	17	22	4.7	19-24.3	155-17.6	1.5	1.4	9	105	1.6	0.08	0.5	0.4	0.09	A
	31	17	41	30.1	19-19.9	155-11.6	5.8	2.1	26	85	5.0	0.09	0.7	0.7	0.22	B
	31	21	45	11.6	19-16.2	155-24.8	28.9	2.3	28	118	3.4	0.20	1.1	2.1	0.18	B
	31	21	58	44.1	19-20.8	155-13.8	5.9		20	102	4.7	0.10	0.7	0.6	0.18	B
SEP	1	4	43	35.2	19-22.9	155- 5.4?	0.0	2.1	25	130	6.9	3.59	0.7	6.8	0.20	C
	1	5	1	23.5	18-50.2	155-14.9	8.0*	2.6	27	275	42.3	0.72	4.6		0.20	D
	1	9	56	26.2	19-24.4	155-24.3	7.2	2.7	31	58	6.7	0.07	0.6	0.5	0.19	B
	1	11	2	32.5	19-25.9	155-25.1?	6.0	2.4	28	66	7.7	0.10	0.8	0.8	0.25	C
	1	15	46	8.6	19-19.2	155-13.6	6.2		23	78	4.1	0.08	0.6	0.6	0.16	B
	1	20	56	28.7	19-20.1	155- 9.4	6.8	2.9	27	77	3.6	0.09	0.7	0.5	0.20	B
	1	23	10	44.9	19-24.4	155-24.6	8.4		21	59	6.4	0.08	0.9	2.2	0.16	B
	2	1	3	39.4	19-21.6	155-16.4	25.8	2.1	20	61	1.7	0.16	0.8	1.6	0.11	B
	2	3	15	58.9	19-24.5	155-16.9	1.9	1.7	10	71	0.7	0.07	0.5	0.3	0.09	A
	3	14	5	35.3	19-42.6	156- 5.0?	0.0	3.4	24	238	25.8	0.82	3.7	1.8	0.25	D
	3	14	46	13.3	19-19.3	155-14.1	5.8	1.7	15	88	4.3	0.09	0.6	0.9	0.15	B
	3	16	28	9.3	19-27.7	155-29.3	8.0*	2.0	11	146	10.1	0.05	0.5		0.06	C

## SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MIN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	FRT	ERH	ERZ	MD	Q
SEP	3	16	48	0.6	19-19.1	155-15.4	8.8		13	112	4.0	0.16	0.9	1.8	0.11	B
	3	18	25	5.9	18-45.7	155-24.8	11.4*	2.8	25	286	36.1	0.61	3.9		0.14	D
	3	18	32	22.2	18-42.6	155-24.4	11.3*		12	307	40.6	2.47	15.5		0.17	D
	3	20	6	5.7	19-16.6	155-14.2	38.4		13	205	1.5	1.75	7.0	13.7	0.24	D
	4	1	57	44.3	19-19.8	155-13.6	8.0*		12	72	5.2	0.05	0.4		0.08	B
	4	2	49	30.7	19-19.9	155-11.9	4.6		17	83	4.9	0.10	0.8	0.9	0.19	B
	4	8	37	8.3	19-21.2	155-19.3	2.0		8	86	3.9	0.14	0.4	0.6	0.07	A
	4	12	2	53.0	19-19.4	155-14.7	10.2		10	95	4.9	0.35	1.5	3.3	0.16	B
	4	19	45	39.0	19-18.3	155-13.1?	8.1	1.7	14	94	2.4	0.09	0.6	0.5	0.10	B
	5	0	32	21.8	19-22.9	155-50.8	7.5		10	234	13.0	0.30	3.1	2.6	0.10	D
	5	10	56	7.1	19-24.9	155-16.3	12.9		15	97	1.2	0.07	0.6	0.6	0.09	B
	5	12	33	59.0	19-24.8	155-17.2	14.7		25	64	0.4	0.05	0.5	0.6	0.10	B
	5	20	15	31.3	19-34.2	155-40.2?	7.3	2.8	17	97	11.6	0.06	0.5	0.9	0.10	B
	5	21	41	13.1	19-11.0	155-24.1	32.3		13	186	7.1	0.27	1.4	2.8	0.11	C
	6	4	56	23.1	19-24.6	155-16.9	6.6	1.2	10	111	0.7	0.11	0.7	0.6	0.08	A
	6	9	42	32.1	19-19.9	155-12.4	5.9	1.9	19	79	4.8	0.08	0.6	0.6	0.17	B
	6	14	16	55.3	19-20.0	155- 8.5	5.4		12	100	4.5	0.16	1.4	1.2	0.24	B
	6	14	17	48.6	19-48.1	156- 3.2	23.9	3.2	20	236	25.8	0.24	1.6	3.8	0.12	C
	6	18	22	19.8	19-19.2	155-15.6	9.0		14	109	3.6	0.11	0.6	1.2	0.08	A
	7	13	0	21.7	19-18.3	155-14.2	7.8	1.7	13	115	2.6	0.11	0.8	1.7	0.11	B
	7	13	8	38.2	19-22.7	155-24.6?	7.8	2.4	19	69	5.1	0.05	0.6	1.1	0.13	B
	7	15	53	13.9	19-44.0	156- 9.9	42.6	2.9	12	254	34.6	0.47	2.3	4.5	0.11	C
	8	1	23	14.6	19-23.6	155-24.7	7.9	1.6	21	74	5.6	0.06	0.6	1.5	0.13	B
	8	2	40	7.8	19-17.2	155-15.4	6.6	1.7	25	143	3.4	0.08	0.6	0.5	0.16	B
	8	2	54	44.3	19-20.2	155- 8.6	8.6		16	75	4.1	0.06	0.5	1.0	0.07	A
	8	7	31	29.8	19-19.5	155-13.4	8.0		15	72	4.5	0.07	0.6	2.1	0.09	B
	8	7	43	16.1	19-20.6	155-13.6	8.1		18	64	3.8	0.08	0.6	1.4	0.11	B
	8	10	43	50.9	19-20.4	155-12.3	10.5		13	73	3.8	0.12	0.6	1.5	0.08	A
	8	12	7	29.4	19-23.8	155-24.9	8.0*		13	133	5.3	0.09	0.7		0.12	C
	9	5	53	0.4	19-28.5	154-54.3	2.6	2.3	13	250	16.9	0.51	2.6	1.3	0.15	D

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
SEP	9	15	38	10.0	19-20.5	155-12.7	6.3	1.7	24	67	3.6	0.08	0.7	0.6	0.21 B
	10	2	0	37.3	19-20.8	155- 8.1	2.9	1.9	25	78	3.9	0.10	0.7	1.0	0.23 B
	10	3	3	53.7	19-26.0	155-36.5	19.3	2.7	29	83	6.0	0.07	0.5	1.5	0.11 B
	10	10	19	58.0	19-22.2	155-27.8	8.6	2.4	27	57	0.6	0.08	0.8	1.2	0.21 B
	10	12	17	4.2	19-21.2	155-25.0?	8.5		14	119	3.5	0.09	0.8	0.7	0.16 B
	10	12	48	10.9	19-20.5	155-12.1	4.6		14	75	3.7	0.12	0.8	1.1	0.14 B
	10	16	46	50.5	19-16.0	155-18.3	30.0		23	148	3.7	0.15	0.9	1.6	0.13 B
	10	17	5	57.2	19-23.3	155-26.4	9.1		18	54	2.6	0.06	0.6	1.1	0.14 B
	10	21	23	34.3	19-23.8	155-24.4	7.6		13	106	6.1	0.09	0.7	0.5	0.13 B
	10	21	26	3.7	19-18.8	155-16.9	5.7		12	124	2.5	0.14	0.9	0.9	0.17 B
	10	21	40	40.1	19-19.9	155-46.3	7.8	2.6	12	171	12.7	0.65	1.0	4.7	0.10 C
	10	23	25	17.3	19-20.7	155- 6.4	8.0*	2.0	14	102	6.2	0.15	1.3		0.27 B
	10	23	51	53.8	19-18.2	155-15.3	7.1		13	142	3.8	0.13	0.8	0.9	0.15 B
	11	1	25	48.8	19-21.1	155-18.0	25.2		22	41	2.0	0.18	1.0	1.8	0.14 B
	11	3	41	45.6	19-20.4	155- 9.2	4.4		11	131	3.2	0.18	1.2	1.6	0.21 C
	11	5	59	6.2	19-21.1	155- 7.6	8.0	1.8	19	166	4.4	0.07	0.6	0.4	0.09 C
	11	12	5	47.6	19-20.3	155-10.7	9.4		18	81	3.7	0.08	0.5	1.1	0.08 A
	11	20	11	0.0	19-24.5	155-16.3	12.8	1.5	22	54	1.2	0.04	0.5	0.3	0.08 B
	12	2	0	57.9	19-19.4	155-13.6	6.2	1.6	23	65	4.4	0.09	0.6	0.6	0.18 B
	12	8	5	29.5	19-21.1	155- 6.0	8.0*	1.9	14	173	5.9	0.16	1.4		0.18 C
	12	12	38	20.6	19-11.6	155-30.1?	5.4		13	81	5.6	0.12	0.9	1.0	0.18 C
	12	18	31	46.5	19-21.1	155- 5.9	8.0*		12	175	5.7	0.13	1.2		0.15 C
	12	19	16	38.6	19- 9.2	155-19.7	31.1		14	206	14.4	0.30	1.9	3.3	0.13 C
	13	0	38	16.2	19-21.1	155-24.3	4.8	1.6	15	74	2.4	0.09	0.8	0.9	0.18 B
	13	1	14	0.2	19- 5.6	155-26.4	31.2		12	202	7.6	0.35	1.8	3.4	0.11 C
	13	4	4	15.4	19-18.3	155-14.4	7.8		11	98	2.9	0.16	1.0	2.0	0.13 B
	13	4	4	57.7	19-18.2	155-14.5	6.3	1.9	25	97	2.8	0.09	0.7	0.6	0.18 B
	13	4	18	0.8	19-18.2	155-14.9	4.5	1.7	17	103	3.3	0.12	0.9	1.1	0.23 B
	13	4	18	59.6	19-18.3	155-14.6	7.1		11	97	3.1	0.15	0.9	1.2	0.15 B
	13	16	37	33.8	19-18.2	155-14.1	7.9	2.0	22	83	2.5	0.04	0.4	0.2	0.09 B

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
SEP	14	1	26	8.6	19-57.1	155-26.5	11.5	2.6	12	184	12.4	0.10	0.9	0.8	0.08	B
	14	3	59	6.2	20- 2.3	155-42.6	27.0	2.8	18	149	12.4	0.64	3.0	6.6	0.16	C
	14	5	26	19.3	19-24.0	155-28.3?	8.1	1.8	25	56	3.1	0.10	0.7	0.6	0.18	B
	14	6	27	17.9	19-12.1	155-34.9	6.6	3.3	32	89	6.4	0.15	1.0	0.9	0.25	B
	14	6	47	30.8	19-12.8	155-36.1	8.1		18	87	4.2	0.12	1.1	2.2	0.20	B
	14	12	24	30.6	19-26.1	155-29.9	8.0*		13	88	7.8	0.06	0.5		0.09	B
	14	12	12	53.1	19-13.4	155-31.9	5.7		21	80	9.5	0.12	0.9	0.9	0.22	C
	14	14	49	11.4	19-20.8	155- 8.3	4.2		16	80	3.5	0.10	0.7	1.0	0.18	B
	14	17	1	51.2	19-17.4	155-21.7	7.1	3.1	27	124	5.5	0.07	0.6	0.5	0.19	B
	14	20	37	20.6	19-22.0	155-16.5	19.2		12	152	1.2	1.00	3.5	8.5	0.14	C
	15	12	10	57.2	19-20.4	155-12.3?	5.6	1.6	16	72	3.9	0.15	1.1	1.2	0.24	B
	15	13	22	58.9	19-52.8	155-17.1	18.4	2.4	17	188	6.3	0.22	1.4	2.9	0.16	C
	15	14	41	47.0	19-58.4	155-17.0	43.2	2.5	23	210	11.2	0.30	1.3	2.8	0.12	C
	15	16	28	4.4	19-11.4	155-21.6	33.9		18	188	16.4	0.29	1.3	2.9	0.11	C
	15	23	49	11.1	19-21.4	155-16.0	30.0	3.8	35	64	1.8	0.14	0.8	1.4	0.15	B
	16	0	8	21.2	19-21.4	155-17.8	26.9	2.0	21	50	3.8	0.31	1.7	2.9	0.17	C
	16	0	47	10.5	19-19.5	155-14.8	34.4		13	168	5.7	0.56	2.4	4.8	0.12	C
	16	1	21	2.2	19-21.9	155-16.2	26.7		13	90	1.2	0.43	1.7	3.8	0.12	B
	16	4	31	14.8	19-19.3	155-19.1?	8.0*		12	143	7.6	0.25	2.0		0.41	C
	16	6	5	44.2	19-21.3	155-16.4	27.6	2.3	30	66	2.3	0.11	0.7	1.1	0.12	B
	16	6	30	27.5	19-20.6	155-26.9	9.2	1.8	17	82	3.7	0.10	1.0	1.5	0.19	B
	16	7	27	13.4	19-20.9	155- 8.0	4.2	1.8	17	78	3.8	0.11	0.8	1.1	0.18	B
	16	7	53	0.9	19-12.4	155-18.6	40.2		16	195	10.3	0.41	1.7	4.0	0.11	C
	16	9	38	12.7	19-20.7	155- 8.4	5.2		13	93	3.5	0.14	1.0	1.4	0.20	B
	16	10	8	31.3	19-27.2	155-49.6?	4.1		12	248	39.5	0.69	4.7	4.6	0.14	D
	16	10	12	36.5	19-24.9	155-23.8	8.0*	1.5	11	129	7.3	0.05	0.4		0.07	C
	16	12	0	40.3	19-20.1	155-14.2?	0.8	1.4	18	76	5.2	2.33	0.8	8.9	0.27	C
	16	15	14	20.7	19-14.0	155-19.3	34.0		22	200	7.3	0.40	2.0	3.2	0.15	C
	16	15	28	47.4	19-28.0	154-54.1?	2.5	2.5	15	189	2.0	0.19	1.4	1.3	0.19	C
	16	17	20	9.7	19-21.3	155-17.4	28.1	2.5	26	51	2.2	0.16	0.9	1.6	0.14	B

## SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MIN	SEC	LAT. N	LONG. W	DEPTH	MAG	NC	GAP	CMIN	ERT	ERF	ERZ	MC	Q
SEP	16	20	23	8.5	19-20.9	155-16.5	28.2		18	110	2.1	0.20	1.0	2.0	0.12	B
	16	21	48	7.2	19-28.3	154-54.2	1.1		11	252	17.1	2.13	3.1	6.8	0.12	D
	17	0	37	28.7	19-12.6	155-19.4	41.6		16	183	10.1	0.35	1.7	3.2	0.12	C
	17	2	18	55.4	19-22.4	155-16.4	27.9		14	95	4.5	0.24	1.3	2.5	0.14	B
	17	6	17	9.8	19-21.3	155-25.4	6.3		12	107	4.3	0.10	0.6	0.9	0.13	B
	17	6	37	33.9	19-12.8	155-19.8	38.3		28	166	9.8	0.24	1.2	2.2	0.14	C
	17	12	44	49.5	19-20.2	155- 9.6	4.8		13	79	3.5	0.11	0.8	1.2	0.18	B
	17	13	18	32.4	19-24.4	155-23.2	4.2		11	113	6.3	0.08	0.5	1.1	0.11	B
	17	18	58	41.1	19-19.3	155-16.0	5.1		17	108	2.9	0.10	0.7	0.7	0.18	B
	17	19	0	10.6	19-19.1	155-15.8	5.7		16	112	3.3	0.10	0.8	0.7	0.17	B
	17	19	52	10.5	19-25.9	154-58.1	2.7		6	161	9.9	0.27	2.0	4.0	0.12	C
	17	21	45	46.3	19-19.2	155-15.5	5.6		14	107	3.6	0.14	0.8	1.1	0.18	B
	18	1	22	26.9	19-20.9	155- 9.1	4.5		15	82	2.4	0.11	0.9	1.0	0.19	B
	18	2	57	9.5	19-12.9	155-19.8	38.5		29	166	9.5	0.23	1.1	2.1	0.14	C
	18	4	37	0.3	19-25.7	154-58.3	2.5		7	161	10.4	0.16	1.2	2.0	0.09	C
	18	6	12	37.8	19-12.5	155-18.8	40.1		14	236	10.0	0.48	2.1	4.3	0.11	C
	18	7	17	30.6	19-24.2	154-57.3	4.0		11	223	11.0	0.31	1.8	1.9	0.12	C
	18	18	0	18.5	19-24.0	155-16.4	13.3	2.2	32	31	0.4	0.04	0.5	0.3	0.12	B
	18	18	35	15.3	19-21.6	155- 7.2	4.5		9	91	4.7	0.15	1.2	2.4	0.13	B
	18	18	35	57.5	19-21.8	155- 7.6?	3.6	1.8	20	71	4.0	0.27	0.6	0.9	0.19	B
	18	23	57	7.1	19-20.6	155-14.0	6.7	1.5	21	67	4.2	0.07	0.6	0.5	0.16	B
	19	0	19	42.5	19-20.1	155- 9.8	5.1	2.0	22	81	3.7	0.11	0.8	0.8	0.23	B
	19	0	23	44.4	19-20.1	155- 8.9	8.6		10	117	3.9	0.04	0.3	0.5	0.03	A
	19	0	24	54.8	19-20.4	155- 9.1	4.4		11	70	3.4	0.10	0.8	1.1	0.16	B
	19	0	51	19.7	19-20.3	155- 9.5	4.9	1.7	18	75	3.3	0.11	0.8	1.1	0.21	B
	19	0	54	10.3	19-19.8	155- 9.4	7.8	1.8	18	83	4.2	0.08	0.8	0.6	0.14	B
	19	0	57	55.2	19-57.0	155-59.3	15.3*		10	237	29.5	0.30	2.3		0.12	D
	19	1	59	28.4	19- 9.5	155-43.0	4.7		11	141	14.3	0.24	1.8	1.9	0.23	C
	19	11	40	20.1	19-13.1	155-19.9	39.7	2.4	25	164	9.3	0.22	1.1	2.1	0.13	C
	19	12	29	0.5	19-10.9	155-32.1	5.3	3.5	31	103	7.7	0.15	0.9	0.9	0.24	C

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NC	GAP	CMIN	ERT	EFF	ERZ	MC	Q
SEP	19	15	57	11.4	19-19.6	155-10.5	4.0		13	113	4.7	0.13	0.5	1.3	0.18	B
	19	16	45	32.4	19-24.8	155-26.9?	8.1	1.7	19	61	4.4	0.07	0.7	0.9	0.15	B
	19	19	22	39.0	19-49.3	155-36.5	12.5	3.0	25	103	16.2	0.18	1.1	1.9	0.19	C
	19	19	26	10.0	19-24.3	155-17.5	7.2	1.6	16	80	1.5	0.09	0.6	0.6	0.12	B
	19	20	1	41.1	19-18.9	155-15.0	9.5		11	112	4.3	0.18	0.8	1.8	0.08	A
	20	0	5	16.8	19-21.5	155-24.3?	7.7	1.6	20	60	2.9	0.08	0.8	1.7	0.18	B
	20	0	52	1.6	19-59.7	155- 0.8	51.8		14	247	22.4	0.40	1.9	3.2	0.08	C
	20	3	5	53.2	19-23.9	155-29.0	8.4	2.1	23	152	3.6	0.12	1.0	1.6	0.18	C
	20	4	27	41.2	19-24.8	155- 2.6	8.0*	2.0	10	119	9.1	0.03	0.3		0.04	C
	20	10	10	8.9	19-25.1	155-22.8	8.0*	1.4	17	65	5.9	0.05	0.5		0.11	B
	20	14	3	43.6	19-12.6	155-20.1	37.1		23	166	10.2	0.28	1.4	2.5	0.15	C
	20	16	50	28.1	19-22.8	155- 5.4	4.2		17	130	6.9	0.09	0.7	1.0	0.16	B
	20	18	7	8.9	20-52.3	156-11.8	63.0*		19	328	53.1	1.90	12.0		0.17	D
	20	18	13	21.6	19-11.2	155-32.4	7.0	2.2	15	98	8.5	0.09	0.7	0.7	0.14	B
	20	19	55	41.2	19-20.6	155-11.3	9.9	2.0	12	94	3.6	0.09	0.5	1.0	0.07	A
	21	3	59	21.9	19-22.1	155-37.0	9.9	3.6	35	46	5.4	0.06	0.5	0.7	0.15	E
	21	4	24	45.2	19-13.5	155-20.1	39.0		27	160	8.6	0.18	0.9	1.7	0.12	C
	21	8	14	20.1	19-21.7	155-24.3?	8.1	2.7	32	48	3.3	0.07	0.7	0.5	0.22	C
	21	16	5	34.6	19-13.3	155-20.2	40.3		17	162	9.1	0.35	1.5	3.4	0.14	C
	22	10	32	20.3	19-22.5	155- 4.1	40.9		13	180	10.0	0.92	3.3	7.8	0.15	C
	22	13	41	34.4	19-19.7	155-11.5	8.0*		13	90	5.2	0.06	0.6		0.10	B
	22	17	59	23.8	19-23.8	155-28.4	8.9		18	73	2.7	0.10	1.0	1.5	0.16	B
	22	19	8	47.7	19-23.5	155-28.9?	8.8	2.3	25	60	3.0	0.15	1.0	0.9	0.24	B
	22	19	14	16.2	19-23.7	155- 2.5	5.0		15	127	7.0	0.20	1.6	1.6	0.27	C
	22	20	9	1.7	19-20.8	155- 7.9?	2.3		19	80	4.1	0.10	0.7	1.1	0.17	B
	23	4	2	48.6	19-20.7	155-11.9	5.6		18	77	3.5	0.11	0.8	0.9	0.18	B
	23	7	14	9.6	19-20.5	155- 9.2	2.6		16	70	3.1	0.13	1.0	1.6	0.22	B
	23	10	48	4.1	19-13.4	155-19.6	41.5		24	163	8.5	0.27	1.3	2.4	0.13	C
	23	11	3	36.9	19-19.1	155-15.8	5.5		22	115	3.3	0.09	0.6	0.7	0.19	B
	23	12	14	49.5	19-24.6	155-17.4	8.7	1.5	15	60	1.0	0.13	0.8	1.2	0.12	B

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	CMIN	ERT	EFF	ERZ	MC	Q
SEP	23	12	35	6.9	19-36.1	155-18.9	47.7		20	106	14.0	C.40	1.3	4.1	C.15	B
	23	13	39	44.5	19-19.7	155-10.4	5.0	2.0	22	92	4.5	C.10	0.7	0.8	0.23	E
	23	15	51	36.9	19-18.9	155-13.6	6.4	1.9	28	69	3.5	C.07	C.6	C.5	C.19	B
	23	19	6	1.6	19-13.2	155-19.9	39.6		20	163	9.1	C.28	1.3	2.6	C.12	C
	23	19	46	24.5	19-21.3	155-15.8	29.5	2.8	33	67	2.1	C.13	C.8	1.3	0.15	B
	23	23	23	41.2	19-21.4	155- 8.2?	6.8		10	226	3.2	C.23	1.4	1.0	0.12	C
	24	0	50	3.9	19-19.9	155-10.9	4.0		15	100	4.3	C.13	C.9	1.5	C.19	B
	24	0	52	49.7	19-13.7	155-20.1	39.4		25	159	8.2	C.22	1.1	2.0	0.13	C
	24	0	53	51.5	19-22.0	155-24.1	8.1	2.5	31	39	3.6	C.06	C.5	C.5	C.16	B
	24	1	0	31.5	19-13.1	155-19.2	39.9	2.4	30	166	5.1	C.17	C.9	1.6	C.12	C
	24	2	12	5.6	19-22.7	155-26.2	10.1		16	118	2.5	C.11	C.7	1.5	C.12	B
	24	3	50	55.9	19-20.3	155- 9.4	4.7	1.7	18	75	3.3	C.11	C.8	1.1	C.21	B
	24	6	13	10.0	19-21.7	155-17.2	32.0	2.1	19	47	2.7	0.20	1.0	1.9	C.12	B
	24	6	24	34.9	20- 1.5	155-47.4?	8.7		9	211	11.4	C.28	2.9	4.1	C.10	C
	24	14	45	20.4	19-23.1	155- 5.3?	0.0	2.6	29	82	7.2	4.03	C.8	7.6	C.23	C
	24	15	6	31.4	19-21.1	155-16.6	27.4	2.5	27	68	2.3	C.13	C.8	1.3	C.14	B
	24	15	12	17.2	19-25.5	155- 3.8?	0.3	2.5	21	100	8.7	0.62	0.9	2.4	0.24	C
	24	18	18	37.8	19-22.9	155-25.0?	6.8	1.6	24	66	4.7	0.07	C.8	1.6	C.21	E
	24	21	36	0.5	19-23.9	155- 7.3?	0.0		6	111	5.5	4.02	1.2	7.7	C.11	C
	24	22	55	24.8	19-19.0	155-15.5	6.7		16	115	4.0	C.09	0.6	C.5	0.11	B
	25	6	7	26.1	19-20.3	155-12.0	7.7		22	76	4.2	C.08	C.7	C.5	C.16	B
	25	10	36	19.7	19-30.6	155-46.7	7.4	2.8	17	142	18.9	0.46	0.7	3.4	C.10	C
	25	11	26	56.5	19-19.0	155-14.4	6.1	1.6	19	99	3.9	0.10	C.7	C.7	C.16	B
	25	16	19	36.0	19-19.8	155-12.8	7.3	1.6	19	75	5.2	0.09	C.7	C.5	C.16	B
	25	18	3	10.0	19-22.5	155-23.2	7.9	1.5	23	52	4.2	C.06	C.6	C.5	C.14	B
	25	18	15	6.4	19-19.0	155-13.4?	7.6		19	77	3.6	0.07	0.5	C.5	0.12	B
	26	0	6	58.4	19-20.2	155-26.6	12.7	1.9	17	136	4.6	C.20	1.9	1.7	C.26	C
	26	4	38	47.2	19-58.2	155-44.8	1.6		14	193	17.8	C.32	1.2	1.1	C.11	C
	27	2	20	23.2	19-25.7	155-28.7?	8.0	1.8	20	66	6.2	0.08	0.7	1.8	0.16	B
	27	3	20	37.4	19-19.8	155-12.1	5.8	2.0	30	83	4.9	C.08	C.6	C.6	C.23	B

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
SEP	27	17	23	58.5	19-22.3	155-11.7	3.6	1.8	22	56	1.7	0.06	0.5	0.9	0.15 B
	27	21	16	28.9	19-19.3	155-24.1	7.6	1.7	21	96	2.2	0.07	0.7	0.5	0.18 B
	28	1	21	50.7	19-20.4	155- 8.3	5.6		16	78	4.1	0.12	1.0	1.1	0.21 B
	28	1	35	7.1	19-22.6	155-23.2?	7.0		9	92	4.5	0.14	0.8	2.6	0.09 B
	28	2	9	26.4	19-20.7	155- 9.1	5.6	1.7	24	65	2.8	0.09	0.7	0.7	0.21 B
	28	2	37	47.1	19-22.1	155- 7.4	2.9	1.8	22	95	8.9	0.08	0.6	0.8	0.14 B
	28	17	26	58.6	19-25.2	155- 3.9?	0.0		17	101	9.3	6.79	0.9	12.9	0.23 C
	28	18	15	38.2	19-18.5	155-16.3	5.5		14	136	3.6	0.16	0.9	1.4	0.18 B
	28	22	38	50.3	19-25.6	155-24.8?	6.1	2.0	26	64	7.5	0.08	0.7	2.2	0.21 C
	29	3	37	59.1	19-20.4	155-46.1?	3.4		20	161	13.5	0.28	2.2	3.7	0.20 C
	29	4	40	42.6	19-24.1	155-24.1	7.5	2.9	31	58	6.9	0.06	0.5	0.4	0.17 B
	29	5	14	25.7	19-23.4	155-23.0	6.5		16	99	5.7	0.10	0.8	1.0	0.18 B
	29	6	28	5.8	19-21.3	155- 8.4	5.2		19	79	2.9	0.10	0.8	0.9	0.18 B
	29	7	55	58.3	19-21.4	155-12.9	6.0	1.5	18	56	5.5	0.15	1.1	1.1	0.25 B
	29	10	21	10.4	19-31.0	155-51.9	2.7		20	188	19.1	0.20	1.3	1.1	0.15 C
	30	1	5	14.3	19-19.8	155-10.7	8.1		13	114	4.4	0.06	0.6	1.7	0.08 A
	30	5	59	24.1	19-26.3	155-23.9?	7.5	1.9	18	127	6.0	0.13	1.0	0.7	0.21 C
	30	15	15	38.5	19-10.8	155-34.3	6.5	2.3	12	123	9.0	0.17	1.2	1.2	0.20 B
	30	20	27	17.4	19-20.1	155- 8.1	7.8	2.1	25	84	4.7	0.08	0.8	0.6	0.16 B
	30	20	44	41.2	19-20.1	155-12.4	5.8		16	74	5.8	0.11	0.8	0.9	0.20 B
	30	22	55	37.4	19-13.6	155-20.2	38.5	2.3	28	160	8.5	0.17	0.9	1.6	0.12 C



Table 3. Felt earthquakes

<u>Date</u>	<u>Time</u>			<u>Magnitude</u>	<u>Felt report</u>
	<u>H</u>	<u>M</u>	<u>S</u>		
Jul 1	21	02	26.8	3.2	Laupahoehoe, Honokaa
1	23	12	58.3	3.6	Laupahoehoe, Honokaa, Hilo, Mauna Kea Observatory
4	06	59	22.0	3.6	Honokaa, Honomu, Kapapala
10	04	18	14.8	2.5	Kapapala
13	11	51	45.9	2.4	Hawaii National Park
14	14	23	04.0	3.7	Honokaa
17	00	54	02.4	2.6	Honokaa
19	16	12	57.4	2.9	Honokaa
20	04	27	49.8	3.5	Honokaa, Volcano, Hilo
27	00	31	51.8	3.0	Kapapala
Aug 11	03	18	04.3	3.7	Honokaa
Sep 3	14	05	35.3	3.4	Kealahou, Honokahau, Holualoa
14	06	27	17.9	3.3	Kapapala
15	23	49	11.1	3.8	Kapapala, Honokaa, Volcano
19	12	29	00.5	3.5	Kapapala, Pahala
19	19	22	39.0	3.0	Honokaa
29	10	21	10.4	?	Holualoa

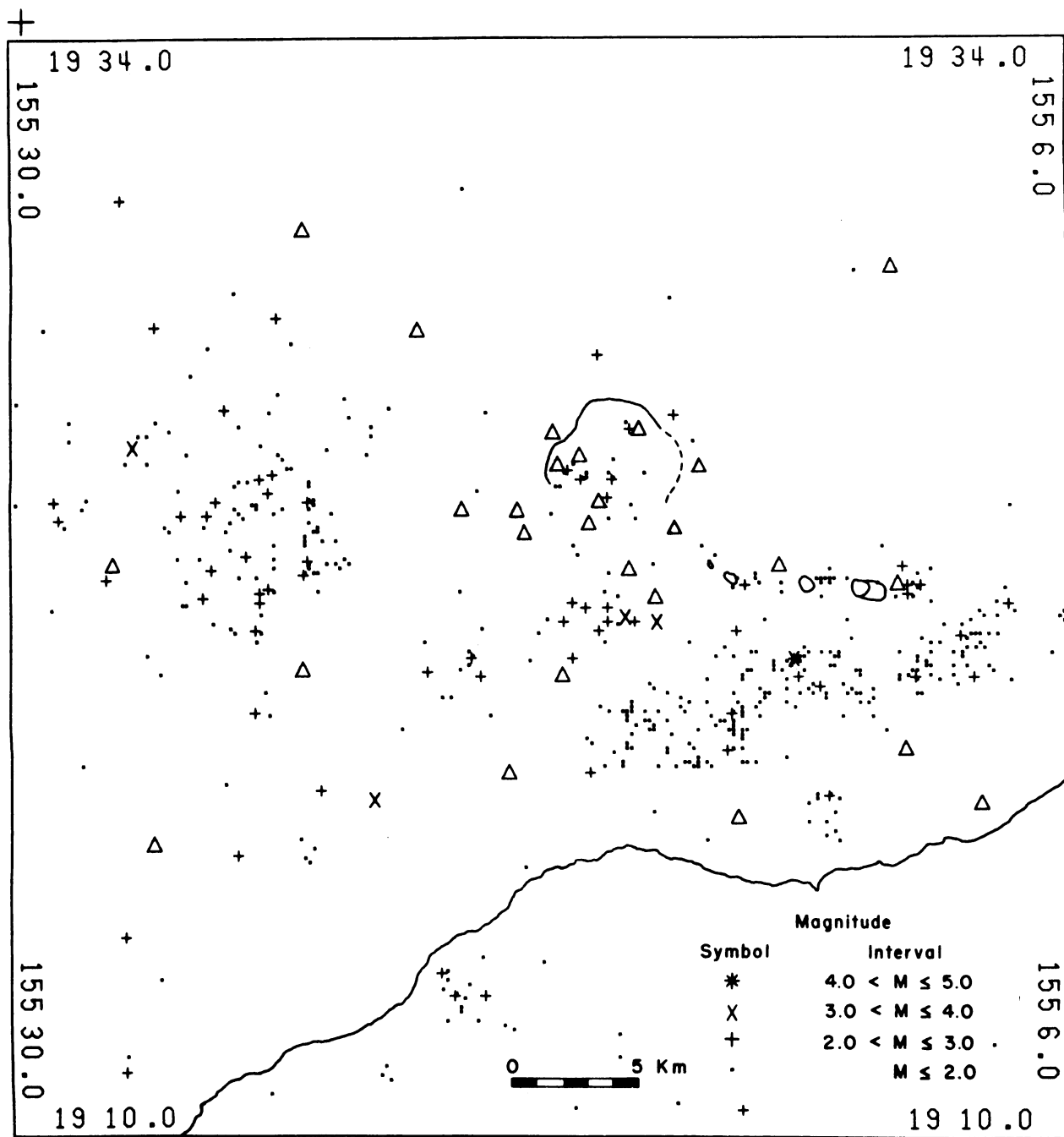


Figure 1.--Plot of epicenters in the Kilauea region. Triangles are seismometer locations. Kilauea Caldera and the major pit craters on the east rift are shown in outline. The Pacific Ocean lies in the lower right portion of the illustration.

Table 4. Seismometer stations in Hawaii operated by the U. S. Geological Survey.

STATION NAME	CODE	LAT-N	LONG-W	ELEV	TYPE	CAL	VCO	RADIO	REMARKS
AHUA	AHU	19 22.40	155 15.90	1070	3	6.0	2380		
AINAHO	AIN	19 22.50	155 27.62	1524	1	6.0	1700	RF9	
CAPTAIN COOK	CAC	19 29.29	155 55.09	323	1	6.0	2720	RF8	Installed 9/20/73
CONE PEAK	CPK	19 23.70	155 19.70	1038	3	1.34			
DESERT	DES	19 20.20	155 23.30	815	3	1.34			
ESCAPE ROAD	ESR	19 24.68	155 14.33	1177	1	6.0	1360		
HALE POHAU	HPU	19 46.85	155 27.50	3396	1	5.6	1360	RF6	
HILINA PALI	HLP	19 17.96	155 18.63	707	3	6.0	2040		
HUALALAI	HUA	19 41.25	155 50.32	2189	1	5.2	1700	RF4	
KAAPUNA	KAA	19 15.98	155 52.28	524	1	5.5	1020	RF12	
KAENA	KAE	19 17.35	155 7.95	37	1	6.0	2380	RF6	
KAHUKU	KHU	19 14.90	155 37.10	1939	1	5.7	1700	RF3	
KAPAPALA RANCH	KPR	19 16.40	155 26.70	610	1	6.5	1700	RF1	
KEANAKOLU	KKU	19 53.39	155 20.58	1863	1	4.8	2380	RF7	
KIPUKA NENE	KPN	19 20.10	155 17.40	924	3	1.34			
KOHALA	KOH	20 7.69	155 46.77	1166	1	1.5	2380	RF2	
M12	M12	19 23.69	155 18.45	1116	1	6.0	2040		
MAUNA LOA	MLO	19 29.80	155 23.30	2010	1	6.5	1360		
MAUNA LOA X	MLX	19 27.60	155 20.70	1475	3	1.34			
MAKAOPUHI	MPR	19 22.07	155 9.85	881	1	5.7	2720	RF5	
MOKUAWEOWEO	MOK	19 29.28	155 35.98	4104	1	6.5	2040	RF3	
MOUNTAIN VIEW	MTV	19 30.25	155 3.75	409	1	6.2	680	RF8	
NATIONAL GUARD	NAG	19 42.12	155 1.72	18	1	6.0	1360	RF3	
NORTH PIT	NPT	19 24.90	155 17.00	1115	3	1.34			
NOSE	NOS	19 23.20	155 18.28	1083	1	6.0	1700		Discontinued 7/18/73
OUTLET	OTL	19 23.38	155 16.94	1038	3	5.0			
POLIOKEAWE PALI	POL	19 17.02	155 13.47	169	1	6.0	1360	RF12	
PUU HULUHULU	PHH	19 22.45	155 12.66	988	3				
PUU HONUAULA	PHQ	19 28.90	154 53.40	215	1	6.5	2720	RF1	
PUU PILI	PPL	19 9.50	155 27.87	35	1	4.4	1360	RF11	
RIM	RIM	19 23.90	155 16.60	1128	1	6.0	1020		
SOUTH POINT	SPT	18 58.91	155 39.92	244	1	7.8	2040	RF7	
WAHAULA	WHA	19 19.90	155 2.92	29	1	6.0	680	RF9	
WALDRON LEDGE	WLG	19 25.49	155 15.69	1067	3				

## OPTICAL SEISMOGRAPHS

HALEAKALA Z	HAL	20 46.00	156 15.00	2090	3	0.71			
HALEAKALA EW	HAE	20 46.00	156 15.00	2090	0	1.0			Wood-Anderson
HALEAKALA NS	HAN	20 46.00	156 15.00	2090	0	1.0			Wood-Anderson
HILO Z	HIL	19 43.20	155 5.30	20	3	1.0			
HILO EW	HIE	19 43.20	155 5.30	20	0	1.0			Wood-Anderson
HILO NS	HIN	19 43.20	155 5.30	20	0	1.0			Wood-Anderson
KIPAPA	KIP	21 25.40	158 .90	76	3	0.56			
UWEKAHUNA Z	UWE	19 25.40	155 17.60	1240	3	0.7			
UWEKAHUNA Z	USZ	19 25.40	155 17.60	1240	4	1.0			
UWEKAHUNA EW	USE	19 25.40	155 17.60	1240	4	1.0			
UWEKAHUNA PEZ		19 25.40	155 17.60	1240					15-90 Press Ewing
UWEKAHUNA PEE		19 25.40	155 17.60	1240					
UWEKAHUNA PEN		19 25.40	155 17.60	1240					

Table 5.--Seismic Instrumentation Types

Type 1. Consists of:

- a) EV-17 - Electrotech EV-17 1.0 sec. period moving magnet vertical component seismometer or horizontal component adjusted for an output of 0.5 volts/cm/sec and 0.8 critically damped.
- b) Preamp/VCO - Develco Model 6202 voltage controlled oscillator or a USGS/NCER Model JE202. 3 db points for bandpass filter at 0.1 Hz and 30 Hz. Signals are transmitted on audio FM carrier over cable or FM radio link to HVO.

Type 2. Consists of:

- a) EV-17 - Electrotech EV-17 1.0 sec. period moving magnet vertical or horizontal component seismometer.
- b) 3.5 Hz galvanometer with appropriate shunt resistances for critical damping. System is poorly calibrated.

Type 3. Consists of:

- a) EV-17 Electrotech EV-17 (as described above), Hall-Sears HS-10 0.5 sec. period moving coil seismometer or Observatory-built 0.8 sec. period moving coil seismometer with HVO-built solid state seismic preamplifier (voltage gain, 200X), direct signal transmission over cable to HVO and HVO-built solid state amplifier and galvanometer driver, or Observatory-built electromagnetic seismometer with 2 Hz galvanometer. Peak magnification approximately 40,000 at 4 Hz.

Type 4. Consists of:

Sprengnether short period vertical and horizontal seismometers (E-W) with 1.5 sec. galvanometers, coupling factor = 0.25, 2X critically damped. Peak magnification approximately 1500X at 2 Hz.

Experimental type amplifier systems are not given type numbers.

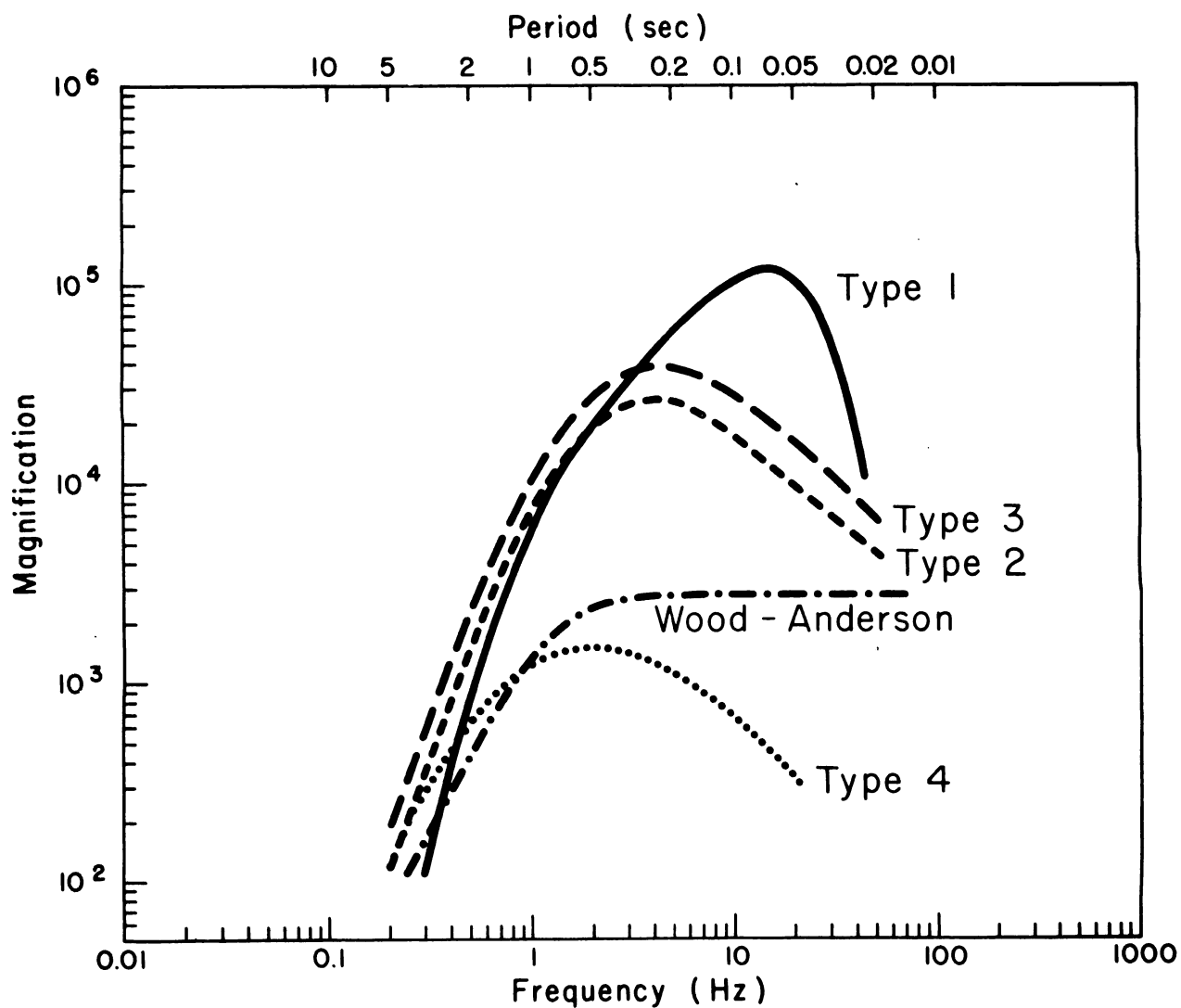


Figure 2.--System response curves for the Wood-Anderson torsion seismograph and for the four different types of seismometer-amplifier (or galvanometer) combinations in use by the Hawaiian Volcano Observatory.

# TILTING OF THE GROUND AROUND KILAUEA CALDERA

Tilting of the ground around the summit of Kilauea is monitored daily by a short-base water-tube tiltmeter in the Uwekahuna Vault, and at irregular intervals it is measured on a regional scale by means of a network of field tilt-bases and a portable water-tube tiltmeter. The attitude of the ground surface at each tilt-base is reported in terms of north-south and east-west tilt coordinates. Both coordinates at each station were arbitrarily set equal to 500 when measurements at that station were begun. Increasing tilt coordinates correspond to northward and eastward tilting of the earth's surface; that is, to a relative subsidence toward the north and east. A one-unit change in coordinate corresponds to a tilting of 1 microradian (1 mm per km) in the direction indicated.

Location of and essential data on each tiltmeter station are listed in Table 8, Summary 69.

Table 6.--Tilt Coordinates at Uwekahuna,  
July, August, and September 1973

Date	N-S	E-W	Date	N-S	E-W
July 1	731	304	Sept. 2	729	304
8	731	304	9	728	306
15	731	304	16	727	300
22	731	303	23	726	299
29	729	307	30	727	299
Aug. 5	728	309			
12	729	304			
19	728	304			
26	726	308			

Table 7.—Tilt coordinates and changes at bases around Kilauea caldera. (See fig. 4)

Tilt base		Date (1973)	Tilt N-S	Coordinates E-W	Rate ( $10^{-6}$ rad/mo) and direction of tilting since last reading	Date of last reading
Uwekahuna	(U on fig. 4)	26 Sep	745.8	308.2	4.89 N62.4°W	14 May '73
Tree Molds	(TM)	25 Sep	577.8	481.3	0.82 N31.5°W	14 May '73
Sand Spit	(SS)	27 Sep	1001.9	727.9	3.49 S41.4°W	16 May '73
Mehana	(M)	25 Sep	619.1	602.2	1.27 N22.0°E	15 May '73
Keamoku	(Kea)	25 Sep	772.6	235.6	1.62 N81.2°W	15 May '73
Ahua Kamokukolau	(Kam)	27 Sep	393.0	516.8	3.99 S35.1°W	14 May '73
Kipuka Nene	(KN)	28 Sep	276.9	494.8	0.76 S31.8°W	16 May '73
Hilina Pali	(HP)	28 Sep	462.0	480.4	0.82 N57.1°W	7 Dec '72
Kapapala Ranch	(Kap)	26 Sep	478.4	523.8	0.20 S21.3°E	6 Dec '72

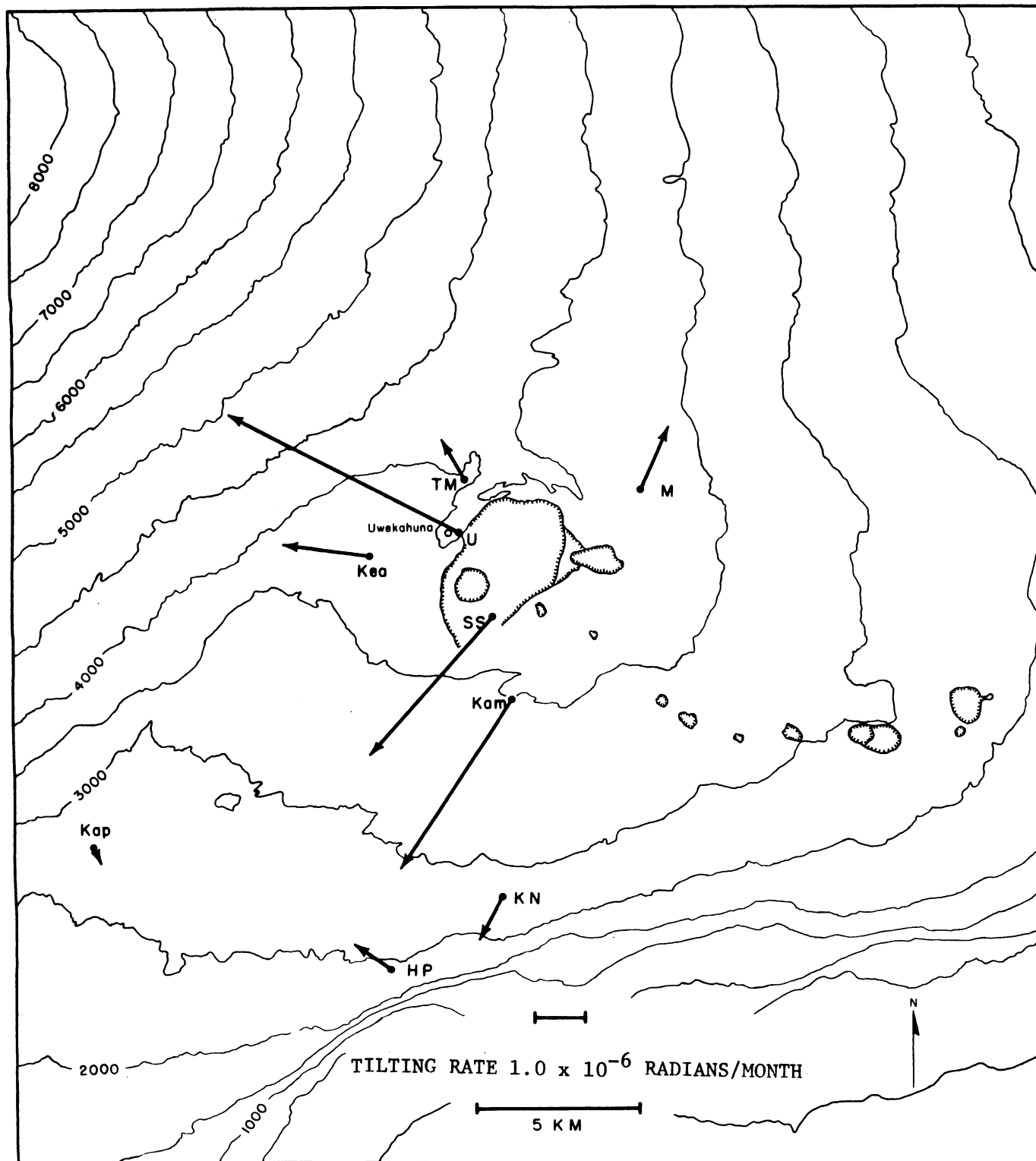


Figure 3.--Tilting of the ground around Kilauea Caldera. The vector depicting tilting at a given tilt base points in the direction of maximum relative subsidence, and its length is proportional to the rate of tilting during the measurement interval. Closed circles represent field tilt bases; open circles, short-base watertube tiltmeters. See Table 7 for explanation of abbreviations.



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UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

HAWAIIAN VOLCANO OBSERVATORY

SUMMARY 72

October, November, and December 1973

By

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Chronological Summary

By

Robert I. Tilling

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## CHRONOLOGICAL SUMMARY

Lava-lake activity at Mauna Ulu's summit crater, which resumed at the end of September, continued through the early part of this quarter. The sluggish but persistent influx of lava during October and early November slowly raised the level of the lake, despite intermittent, brief periods of complete stagnation and crusting. By mid-October, the eastern part containing the active vent was only 15 m below the crater rim, and the deepest area of the western part was about 32 m below the rim. The gradual rise of the lake was paralleled by a steady inflation of Kilauea's summit region, ultimately recording the greatest tumescence since tilt measurements have been made at Uwekahuna.

On November 4, lava overflowed the western end of Mauna Ulu, the first overflow since March 1972. The overflow continued until November 8 and formed a pahoehoe-aa flow that advanced about 2.5 km south of the crater. Sudden draining of Mauna Ulu during the early evening of November 10, accompanied by high-amplitude tremor and sharp deflation at Kilauea's summit, preceded a major breakout at Pauahi Crater later that evening. An eruptive fissure first opened in its east pit, and the fountain-fed lava ponded to form a rapidly rising lake. Soon lava burst from eruptive fissures within the west pit and from outside of the crater in a series of en echelon, N 70° E-trending fissures both west of Pauahi and from its east rim to north of Puu Huluhulu. At the height of the activity, lava from the lake in the east pit and from flows and fissures west of Pauahi cascaded into the west pit. All activity in the east pit and outside of Pauahi ceased by early morning of November 11, and drainback lowered the level of the new floor in the east pit about 20 m. Minor activity continued in the west pit for nearly another month, building a spatter cone. Lava from this cone fed, via surface or tubed-over streams, a small perched lava lake on the crater floor; overflows from this lake ultimately raised the floor to the level of the septum between the two pits.

Like the Pauahi-Hiiaka eruption earlier in the year (May 5), the November 10-11 activity in and near Pauahi resulted in a deflation of about 25 microradians at Kilauea's summit. The flows and crater filling at Pauahi and vicinity totalled approximately  $2.8 \times 10^6 \text{ m}^3$  in volume, and about  $1.1 \text{ km}^2$  (272 acres) were covered by lava. Immediately upon cessation of the major activity on November 11, the Kilauea summit region began to reinflate at a moderately rapid rate. The 25-microradian deflation was recovered within about a week, and by December 22 the recorded tilt (E-W component of the Ideal-Aerosmith tiltmeter at Uwekahuna) peaked, surpassing the previous high reached in early November.

Mauna Ulu was inactive after November 10, marking an end to its second period of eruptive activity that had begun in February 1972. All visible activity in Pauahi stopped on December 9, coinciding with the complete cessation of harmonic tremor in the Pauahi-Mauna Ulu area



from December 9 to 12. Lava quietly returned to Mauna Ulu's summit crater on December 13 and low-level tremor resumed, and this can be considered the beginning of the third eruption of Mauna Ulu since 1969. The ensuing activity at Mauna Ulu was restricted to sporadic low fountaining from a spatter cone complex in a small, occasionally active lava lake. At year's end, activity at Mauna Ulu was intermittent and feeble, but Kilauea's summit region remained highly inflated.

## SEISMIC SUMMARY

Events recorded by the U. S. Geological Survey seismograph network in Hawaii fall into two categories:

- 1) Local earthquakes and tremor originating in the region of the Hawaiian Islands (usually within 100 km of at least one seismograph),
- 2) Distant earthquakes originating more than 3,000 km from Hawaii.

As an index of seismic activity at Hawaiian volcanoes, daily counts of earthquakes and minutes of tremor recorded by seismographs in Hawaii are listed in Table 1. The earthquakes are separated in groups on the basis of region of origin as determined by the analysis of records obtained daily at the Observatory (UWE, MLO, MLX, AHU, DES, NPT, WPT, MPH, OTL).

Computer locations of well-recorded events are listed in Table 2. The location of each seismograph station is listed in Table 4, along with a description of the equipment at each station.

Table 1.--Number of earthquakes and minutes of tremor recorded on seismographs around Kilauea

Tremor is separated into three categories: Deep, Intermediate, and Shallow, on the basis of relative amplitude on seismographs in the summit region. Unless otherwise stated, tremor is presumed to be associated with movement of magma within the central complex of Kilauea Volcano.

Earthquake categories are: Kilauea Summit 30 km, earthquakes from a source about 30 km beneath the summit region; Kilauea Summit Long-Period, earthquakes characterized by low-frequency waves that originate roughly 5 km beneath the summit region; Kilauea Summit Shallow, earthquakes a few km deep in the caldera region; SW Rift and Kaoiki, earthquakes along the southwest rift zone of Kilauea and the adjacent portions of the Kaoiki fault system; Upper East Rift, earthquakes from the upper east rift zone and the adjacent fault systems of Kilauea's south flank; Koae, earthquakes along the northeast-trending Koae fault system south of the caldera; Lower East Rift, earthquakes from the lower east rift zone of Kilauea; Offshore Puu Pili, offshore earthquakes mostly southeast of Puu Pili (PPL) station.

Date (1973)	Tremor (m = minutes) h = hours)			Earthquakes								Remarks
	Deep	Inter- mediate	Shallow	Kilauea Summit			SW Rift and Kaoiki	Upper East Rift	Koae	Lower East Rift	Offshore Puu Pili	
				30 KM	Long Period	Shallow						
Oct. 1		6m		3	7	147?	8	44	2	6	1	"30 km" aftershocks.
2		5m			8	209	13	20	2	2	1	
3				5	21	219	14	36	8	3		
4					16	324	15	42	3	6		
5		5m		1	19	324	8	41	6			
6		12m		1	20	253	13	18	11	2	?	
7				5	36	349	9	16	7	1	1	
8				73	51	411	14	32	8	4	2	
9		5m		33	52	711	10	21	5	5		
10	14m	10m		11	29	639	16	46	5	9	1	
11		3m		3	32?	537?	6	26		7		
12		19m		3	130	1245	21	35	8	6		
13		8m		11	109	1212	14	58	5	4		
14		22m		1	141	1244	18	56	13	11		
15	5m	29m		1	180	1340	15	44	10	11		
16		4m		2	113	1136	14	36	5	9		
17		3m		3	96	1095	17	36	9	13		
18		6m		1	81	1124	19	28	1	4		
19	10m			8	25	1023?	21	46	8	5	9	
20		92m?		7	35	1096	26	79	21	2	3	
21				6	65	1372	47	58	11	7	10	
22		8m		1	33	1108	22	30	3		2	
23		3m		2	33	1450	24	27	4	1		
24		11m		5	34	1295?	14	42	5		2	
25	20m				18	1190	19	32	5	4	2	
26		10m			37	1250	21	34	5	1	3?	
27	2m?	3m?		2	57	1494	16	49	4	1		
28					56	1245	21	33	6	5		
29		8m		1	27	1226	11	28	8	3	2	
30		7m		1	139	1100	17	50	3	5	1	
31	5m			1	113	1066	15	33	3	4	1	



Date (1973)		Tremor (m = minutes h = hours)		Earthquakes									
				Kilauea Summit			SW Rift and Kaoiki	Upper East Rift	Koae	Lower East Rift	Offshore Puu Pili	Remarks	
		Deep	Inter- mediate	Shallow	30 KM	Long Period							Shallow
Nov.	1		6m		3	92	1000	11	60	3	8	?	
	2		9m			62	865	17	40	8	3	2	
	3					33	697	15	44	2	4		
	4		8m		1	36	370	10	31	3			
	5		17m			19?	181?	8?	26?	7?	?		
	6		24m			24?	175?	3?	9?	3?	1		
	7				2	44	204	9	20	3	3	1	
	8				1	24	251	22	25	4	2	2	
	9	?				12	359	9	23	2	2		
	10				1	44?	156?	7?	569?	6?	2?		Small upper east rift quakes and Pauahi rockfalls- Pauahi eruption.
	11					23?	29?	8?	29?	?	2		
	12					86?	31?	10?	21?	?	3		
	13					161?	69?	21?	28?	6?		2	Many small L-P summit quakes.
	14				2	216?	161?	14	61?		3		
	15		10m			513?	83	10	83?	9	1		
	16	35m			1	559?	110?	7?	67?	6?		1	
	17		10m		1	159?	115	25	55?	1		5	
	18		3m			82?	99	7	36?	3	6	1	
	19					20?	164?	11?	101?	3?	9		
	20					11?	129?	2?	32?	6?	1		
	21					21	149	14	38?			1?	
	22				3	10	140	11	33?	1	4		
	23				2	21	254	4	32?	29?			
	24		2m?			26	140	2	27	3	5	5?	
	25				1	34	165	12	24	2			
	26					60	142	8	25		2		
	27					36?	133?	7?	22?	1?		1	
	28					38	109?	11	8?	3	2		
	29				1	56	162	9?	21	5			
	30					21	212	9	17	2	3	1?	

Date (1973)	Tremor (m = minutes h = hours)			Earthquakes								
	Deep	Inter- mediate	Shallow	Kilauea Summit			SW Rift and Kaoiki	Upper East Rift	Koae	Lower East Rift	Offshore Puu Pili	Remarks
				30 KM	Long Period	Shallow						
Dec. 1				2	28	204	7	28	2	4		Small rockfalls at Hilina Pali, Halemaumau, and Pauahi during heavy rain.
2				1	24	193?	9	16	11	4	1	
3				2	21	218	18	22	2		1	
4		3m		1	23	177	8	25	2	2	2?	
5				1	22	212	10	15		1	1	
6	5m				37	234	16	11	3	1	1	
7					61	311	13	51	6	2	1	
8	166m?			1	58	431	10	33	2		33?	
9					24	268	3	24	5	1		
10	5m			1	51	409	16	36	8	1	1	
11					22	265	24	24	10	1	?	
12				23	17	274	23	26	9	6	3	"30 KM" aftershocks.
13				18	18	250	9	13	4	7	1	
14		5m		5	11	224	18	42	4	4		
15				3	2	148	17	20	3		1	
16		3m		1	14	157	7	20		1	2	
17				2	24	223	20	24	4	2	3	
18				1	7	240	5	20	3	2	1	
19					6	240	14	17	1	5	3	
20		7m		2	15	250	10	24	3	2		
21		7m		3	35	267	18	18	6	1	4	
22				4	7	313	33	18	10	2	2	
23					38	327	13	30	5	4	4	
24					27	196	14	84	7		2	
25		4m			14	181	19	78			1	
26				1	5	172	14	51	1	5	1	
27	6m				19	277	12	58	2	1		
28	42m	3m			31	319	8	59	1	5	1	
29		3m		2	26	315	17	35	3	1		
30		19m			9	190	9	83	3	3		
31	2m?	2m?			4	137	8	51	1	1		

Table 2 is a chronological listing of successfully located earthquakes. For each event the following data are presented:

Origin time in Hawaii Standard Time: date, hour (HR), minute (MN), and second (SEC).

Epicenter in degrees and minutes of North latitude (LAT N) and West longitude (LONG W). Poor convergence of the epicenter solution is indicated by "?".

Depth - depth of focus in km. Assumed depth is indicated by "x".

Mag - magnitude, if determined.

NO - number of stations used in locating earthquakes.

GAP - largest azimuthal separation in degrees between stations.

DMIN - epicentral distance in km to the nearest station.

ERT - standard error of the origin time in seconds.

ERH - standard error of the epicenter in km.

ERZ - standard error of the depth in km.

MD - mean deviation of the time residuals.  $\left[ = \frac{\sum R_i}{NO} \right]$  where  $R_i$  is the observed seismic wave arrival time less the computed time at the  $i^{th}$  station.

Q - solution quality of the hypocenter. This measure is intended to indicate the general reliability of each solution:

<u>Q</u>	<u>EPICENTER</u>	<u>FOCAL DEPTH</u>
A	excellent	good
B	good	fair
C	fair	poor
D	poor	poor

Q is based both on the nature of the station distribution with respect to the earthquake and the statistical measures of the solution. These two factors are each rated independently according to the following scheme:



### Station Distribution

	<u>NO</u>	<u>GAP</u>	<u>DMIN</u>
A	$\geq 8$	$\leq 120^\circ$	$\leq \text{DEPTH or } 5 \text{ km}$
B	$\geq 6$	$\leq 150^\circ$	$\leq 2 \times \text{DEPTH or } 10 \text{ km}$
C	$\geq 6$	$\leq 225^\circ$	$\leq 50 \text{ km}$
	$\geq 4$	$\leq 180^\circ$	
D	Others		

### Statistical Measures

	<u>ERH(km)</u>	<u>ERZ(km)</u>	<u>MD(sec)</u>	<u>RMAX(sec)*</u>
A	$\leq 1.0$	$\leq 2.0$	$\leq 0.10$	$\leq 0.25$
B	$\leq 2.5$	$\leq 5.0$	$\leq 0.20$	$\leq 0.50$
C	$\leq 5.0$		$\leq 0.30$	$\leq 0.75$
D	Others			

Q is taken as the average of the ratings from the two schemes, that is, an A and a C yield a B, and two B's yield a B. When the two ratings are only one level apart the lower one is used, that is, an A and a B yield a B (Hamilton and others, 1969).

The criteria for Q are the same as used by the Office of Earthquake Research and Crustal Studies, U. S. Geological Survey.

\* RMAX is the maximum residual

# SUMMARY OF SEISMIC EVENTS

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q	
OCT	1	5	19	33.9	19-21.8	155- 6.6	3.7		17	77	5.7	0.10	0.7	1.3	0.18	B
	1	6	43	6.6	20- 6.5	155-50.9	32.8	3.9	33	149	7.6	0.11	0.8	1.8	0.12	R
	1	8	43	30.8	19-10.4	155-22.9	8.0*	2.1	14	213	8.9	0.34	2.8		0.27	D
	1	11	37	38.1	19-19.8	155-10.3	7.5		14	90	4.3	0.09	0.9	0.7	0.14	B
	1	11	37	59.7	19-20.0	155-10.3	7.4		14	84	3.8	0.11	0.9	0.7	0.14	B
	1	11	55	51.6	19-20.3	155- 5.8?	8.0*		12	118	5.0	0.20	1.8		0.31	C
	1	12	9	7.3	19-20.6	155- 8.4	5.9	1.8	19	74	3.7	0.10	0.8	0.8	0.20	R
	1	15	17	52.3	19-22.5	155- 5.6?	0.0	1.8	16	75	6.8	2.10	1.2	23.0	0.27	C
	1	16	59	39.9	19-21.2	155- 8.8	5.9	2.2	24	65	2.5	0.10	0.8	0.8	0.24	R
	1	18	33	1.3	19-14.8	155-19.9	35.8		22	158	6.3	0.27	1.2	2.3	0.12	C
	1	23	58	15.9	19-20.2	155- 8.9?	8.4		17	72	3.8	0.09	1.0	0.8	0.16	H
	2	0	32	51.8	19-13.4	155-25.4	3.4	2.3	23	133	5.9	0.15	1.0	1.2	0.29	C
	2	0	43	48.8	19-20.2	155-11.4	4.2		17	92	4.4	0.16	1.0	1.8	0.28	R
	2	0	46	47.0	19-19.7	155-11.6	8.0*		16	90	5.2	0.06	0.5		0.09	R
	2	1	5	49.5	19-22.6	155- 9.6	2.3	1.9	22	77	1.1	0.09	0.6	1.2	0.16	F
	2	1	50	47.8	19-20.3	155-12.0?	7.9		18	78	5.1	0.09	0.9	0.7	0.14	H
	2	2	0	59.0	19-13.6	155-26.3	5.5	2.0	15	139	8.0	0.11	0.9	0.9	0.20	B
	2	2	7	25.3	19-22.9	155- 8.9?	1.6	1.6	11	109	2.3	0.65	1.0	1.3	0.15	R
	2	6	51	14.9	20-13.4	155-30.3	4.0	3.3	27	249	30.7	0.86	2.2	6.1	0.14	D
	2	7	18	14.4	20-13.8	155-30.2	6.1	3.1	26	251	31.1	0.93	2.4	6.5	0.14	D
	2	14	9	55.4	19-23.9	155-23.9	8.0*		12	77	6.9	0.06	0.6		0.11	R
	2	15	24	58.3	19-21.8	155- 8.6	4.2		17	80	2.2	0.11	0.9	1.1	0.22	B
	2	16	35	54.8	19-24.5	155-24.0	8.0*		14	127	7.4	0.05	0.4		0.08	C
	2	18	1	31.3	19-22.4	155-24.7	8.0	1.6	17	89	4.6	0.05	0.5	0.4	0.11	R
	2	19	20	39.9	19-11.8	155-31.7	8.0*		17	88	7.9	0.10	0.9		0.18	R
	3	2	5	46.8	19-19.6	155-16.4	6.9	1.5	23	94	2.0	0.05	0.4	0.4	0.12	R
	3	4	44	33.7	19-24.9	155-24.2	8.0*	1.5	12	136	7.4	0.05	0.4		0.08	C
	3	16	14	8.1	19-18.1	155-14.1	8.1	1.7	19	84	2.3	0.06	0.5	0.3	0.10	R
	3	16	14	51.4	19-18.3	155-14.3	7.6	1.9	22	89	2.7	0.04	0.4	0.3	0.09	A
	4	2	24	58.1	19-18.4	155-14.1	7.9	1.6	19	105	2.9	0.05	0.5	0.3	0.10	B



## SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
OCT	4	2	40	10.5	19-24.9	155-16.5?	2.0		9	122	0.8	0.03	0.2	0.1	0.03	B
	4	6	8	20.2	19-20.4	155- 8.9	4.5	1.7	13	69	3.6	0.10	0.7	1.0	0.16	B
	4	9	9	5.6	19-19.1	155-15.7	5.6		22	112	3.5	0.09	0.6	0.6	0.18	B
	4	17	53	21.0	19- 8.0	155- 7.5	8.7	3.0	32	221	17.3	0.34	1.9	1.6	0.24	C
	4	20	37	45.4	19-21.9	155- 8.1?	0.0	1.7	16	86	8.4	3.98	0.5	7.6	0.10	C
	4	20	56	4.2	19-20.6	155- 7.8?	8.0	1.8	16	83	4.4	0.09	0.9	0.7	0.16	B
	4	21	6	41.2	19-20.6	155- 7.4	8.0*	1.8	12	91	5.1	0.18	1.5		0.26	B
	5	15	54	16.4	19-20.3	155-12.2	5.9		23	75	4.0	0.10	0.8	0.7	0.20	B
	5	15	55	10.1	19-20.3	155- 9.2?	7.0		24	74	3.5	0.09	0.8	0.5	0.19	B
	5	20	59	2.6	19-23.2	155-23.1	8.0*		12	99	5.6	0.04	0.4		0.07	B
	6	0	46	29.6	19-22.9	155-15.9	20.3		18	41	0.8	0.09	0.5	0.9	0.06	A
	6	5	15	19.2	19-19.1	155-13.5	7.2	1.6	24	70	3.8	0.09	0.7	0.5	0.16	B
	6	5	42	26.4	19-22.2	155-10.4	7.2		16	164	1.0	0.13	0.8	0.4	0.10	C
	6	9	58	54.9	19-21.8	155-16.2	27.6		25	60	1.3	0.15	0.8	1.3	0.11	B
	6	10	12	18.6	19-21.1	155-27.1?	6.7		22	103	2.8	0.11	0.8	0.7	0.21	B
	6	12	35	44.5	19-22.8	155- 4.9	2.6		22	138	6.4	0.11	0.7	1.0	0.17	B
	6	20	54	12.3	19-22.3	155- 7.2?	0.0		22	99	8.7	3.25	0.5	6.2	0.13	C
	7	3	12	57.7	19-18.9	155-13.5	6.8		22	81	3.4	0.09	0.8	0.5	0.17	B
	7	3	14	46.8	19-18.6	155-13.6	6.7		20	87	3.0	0.11	0.8	0.6	0.18	B
	7	3	33	27.6	19-18.9	155-13.6	7.2		21	84	3.4	0.09	0.7	0.5	0.15	B
	7	14	12	38.1	19- 0.9	155-27.3	37.2		17	222	16.0	0.52	2.6	4.4	0.16	C
	7	15	10	51.4	19-18.5	155-10.8?	7.6		17	128	5.4	0.15	1.1	0.8	0.21	C
	7	21	43	18.6	19-21.7	155-18.4	22.0		17	66	3.5	0.26	1.4	2.4	0.15	B
	8	6	18	57.5	19-19.7	155-13.0	3.5		23	73	5.0	0.10	0.7	1.0	0.22	B
	8	16	21	16.6	19-18.1	155-25.8	49.4	2.5	20	111	3.5	0.23	0.9	2.1	0.10	B
	8	18	17	42.2	19-20.6	155- 8.6	7.6	3.2	27	72	3.5	0.08	0.7	0.5	0.16	B
	8	21	16	22.8	19-18.5	155-24.9?	8.0		21	99	4.3	0.08	0.7	0.6	0.19	B
	9	1	53	45.2	19-19.1	155-15.9	29.6	4.6	35	98	3.2	0.14	0.8	1.3	0.16	B
	9	1	59	34.6	19-19.5	155-15.7	28.0	2.4	21	140	3.2	0.12	0.8	1.2	0.11	B
	9	2	1	2.4	19-18.7	155-16.3	29.6	4.3	35	106	3.2	0.13	0.8	1.2	0.16	B

## SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
OCT	9	2	16	54.5	19-18.3	155-16.4	28.4	2.4	31	114	3.8	0.12	0.8	1.2	0.14	B
	9	2	19	43.4	19-18.5	155-16.3	29.3	2.7	33	110	3.5	0.13	0.8	1.3	0.15	B
	9	2	20	39.3	19-18.6	155-16.2	28.7	2.1	28	108	3.5	0.11	0.7	1.1	0.12	B
	9	2	23	47.5	19-16.9	155-17.7	30.6	2.5	29	142	2.6	0.13	0.8	1.3	0.13	B
	9	2	27	24.1	19-19.4	155-16.3	28.9	2.1	22	97	2.3	0.16	0.9	1.6	0.11	B
	9	2	50	36.8	19-19.0	155-16.3	29.5	2.7	35	101	2.9	0.12	0.8	1.2	0.14	B
	9	3	1	13.2	19-23.9	155-10.0	42.5		19	132	3.4	0.29	1.4	2.5	0.12	B
	9	3	17	59.5	19-19.4	155-16.3	28.0	2.1	24	97	2.3	0.15	1.0	1.3	0.12	B
	9	3	27	28.9	19-18.8	155-16.0	29.0	2.6	32	102	3.4	0.13	0.8	1.3	0.15	B
	9	4	35	39.9	19-18.8	155-15.4	30.1	2.1	24	97	4.3	0.15	0.9	1.4	0.12	B
	9	4	59	49.1	19-19.9	155-15.5	29.3	2.9	34	81	3.3	0.12	0.7	1.2	0.14	B
	9	5	57	45.1	19-17.3	155-17.6	32.6		15	135	2.3	0.29	1.2	2.9	0.11	B
	9	9	7	46.1	19-19.3	155-13.5	8.0*		14	123	6.0	0.06	0.5		0.10	C
	9	10	48	17.0	19-19.5	155-16.7	28.9		19	98	1.7	0.24	1.2	2.2	0.12	B
	9	11	17	27.0	19-20.4	155-16.7	27.3	2.0	18	78	1.3	0.15	0.8	1.4	0.10	B
	9	18	12	17.8	19-19.9	155-16.3	29.6	2.1	21	90	4.6	0.17	1.0	1.7	0.14	B
	10	4	25	38.2	19-20.0	155-11.8	5.9	1.6	27	82	4.8	0.08	0.6	0.6	0.19	B
	10	10	5	7.6	19-19.4	155-16.0	5.9		15	104	2.7	0.10	0.7	0.7	0.15	B
	10	10	7	31.8	19-21.8	155-15.5	23.0		16	68	1.3	0.17	0.8	1.6	0.07	A
	10	12	29	15.4	19-21.3	155-16.3	25.2		19	66	2.1	0.13	0.6	1.2	0.07	A
	10	14	20	48.0	19-20.4	155- 8.8	5.6	1.7	22	69	3.6	0.11	0.8	0.8	0.22	B
	10	15	19	23.6	19-24.6	155-16.2	11.3		19	59	1.4	0.07	0.5	0.6	0.09	A
	10	19	4	19.6	19-23.8	155-24.2	4.4	1.5	18	120	6.5	0.13	0.8	1.4	0.18	B
	10	19	28	28.3	19-11.1	155-20.0	38.7	2.4	30	175	12.8	0.19	0.9	1.7	0.13	C
	10	21	14	21.9	19-19.6	155-15.0	31.4		23	78	4.3	0.14	0.8	1.4	0.10	B
	10	22	14	6.2	19-20.5	155- 6.2?	8.0*	1.9	15	106	5.8	0.13	1.2		0.24	B
	11	2	1	29.0	19-51.0	155-44.1	16.8*	2.6	20	181	29.9	0.18	1.7		0.22	C
	11	2	29	30.8	19-19.7	155-10.0	7.3	1.7	17	90	4.4	0.10	0.8	0.6	0.16	B
	11	5	3	39.3	19-21.4	155- 8.4	4.0	1.7	22	79	2.8	0.11	0.8	0.9	0.22	B
	11	11	7	11.8	19-22.4	155-22.6?	6.6		11	84	4.2	0.10	0.8	2.0	0.11	B



# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
OCT	11	11	10	55.2	19-20.2	155-16.9	27.9	2.1	26	82	0.8	0.13	0.7	1.3	0.11	B
	11	17	53	52.6	19-18.4	155-25.8	8.3		20	96	4.1	0.08	0.7	1.4	0.18	B
	11	19	55	37.3	19-28.7	155-27.9	8.0*	2.1	16	87	8.4	0.04	0.4		0.07	C
	11	20	40	18.7	19-20.7	155-12.7	6.3	1.5	24	65	3.3	0.09	0.7	0.6	0.20	B
	11	21	5	1.1	19-13.9	155-58.9	25.4*		7	342	12.2	0.31	4.4		0.09	D
	11	22	24	43.0	19-27.9	155-27.0	7.8	2.0	26	80	7.3	0.08	0.5	0.5	0.13	B
	11	22	30	1.7	19-22.1	155-11.4	6.9	1.5	17	89	2.2	0.06	0.6	0.5	0.13	B
	11	23	12	41.2	19-19.1	155-16.5	28.6	2.1	31	102	2.5	0.12	0.8	1.2	0.14	B
	11	23	55	38.6	19-25.4	155-52.1	9.4		10	143	8.8	0.20	2.7	3.7	0.17	C
	12	0	22	56.3	19-19.7	155-13.4	8.0*		20	69	5.0	0.04	0.3		0.08	B
	12	10	45	58.5	19-27.4	155-24.3	12.0	2.3	22	72	4.7	0.05	0.6	0.5	0.11	B
	12	22	5	24.5	19-23.6	155-25.6?	7.5	1.9	23	60	4.1	0.08	0.6	0.6	0.12	B
	13	4	56	23.3	19-21.2	155-6.6	8.0*	1.9	16	87	5.8	0.12	1.1		0.22	B
	13	5	10	14.5	19-19.8	155-15.4	28.0	2.1	26	82	3.5	0.15	0.9	1.5	0.15	B
	13	5	11	13.2	19-23.7	155-16.7	12.5	1.8	21	44	0.4	0.05	0.6	0.4	0.11	B
	13	6	11	11.6	20-37.9	155-55.6	14.7*	4.3	37	204	36.8	0.10	1.2		0.13	C
	13	13	2	39.0	19-20.5	155-15.6	31.2	2.1	20	78	3.3	0.21	1.1	2.0	0.11	B
	13	16	1	18.9	19-20.2	155-17.0	23.1		18	81	0.7	0.27	1.1	2.6	0.12	B
	13	17	19	31.3	19-20.2	155-11.3	8.9	1.7	15	95	4.3	0.08	0.7	2.0	0.09	A
	13	21	29	30.1	19-21.1	155-12.9	8.0*		17	91	5.7	0.07	0.6		0.12	B
	13	22	43	12.6	19-20.6	155-16.4	28.2		19	76	2.0	0.25	1.2	2.3	0.13	B
	13	23	20	2.7	19-19.5	155-15.2	29.5		23	83	4.0	0.16	1.0	1.6	0.13	B
	14	11	42	28.9	19-45.3	155-47.9	18.4	2.9	25	154	8.5	0.11	0.8	2.1	0.11	C
	14	13	40	1.4	19-19.0	155-13.6	6.7		17	83	3.6	0.10	0.7	0.7	0.17	B
	14	17	18	55.5	19-20.9	155-11.4	5.0	2.5	28	69	3.5	0.09	0.7	0.7	0.25	B
	14	18	57	11.9	19-52.4	155-33.7	29.5	2.6	23	125	15.0	0.20	1.0	2.5	0.11	B
	15	0	32	12.8	19-20.0	155-12.0	5.6	1.6	25	80	4.6	0.09	0.7	0.6	0.22	B
	15	1	15	7.5	19-24.4	155-17.9	6.8	1.1	15	59	1.2	0.07	0.6	0.5	0.12	B
	15	3	39	34.0	19-23.9	155-17.9	8.7	1.5	13	61	1.0	0.16	1.1	1.5	0.13	B
	15	6	25	36.7	19-17.1	155-29.0	7.0	2.0	16	87	10.3	0.10	0.9	0.9	0.21	C



# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
OCT	15	8	25	13.9	19-24.9	155-17.4	9.0	0.8	13	88	0.7	0.13	0.8	1.2	0.10 B
	15	8	26	9.2	19-25.4	155-27.3?	7.5	1.7	20	108	5.4	0.06	0.5	1.3	0.09 B
	15	12	24	58.6	19-25.0	155-17.0	9.5	0.9	13	120	0.1	0.14	0.7	1.1	0.08 A
	15	14	54	17.3	19-24.6	155-17.0	0.7	0.4	11	69	0.5	0.07	0.2	0.2	0.09 A
	15	15	10	59.7	19-19.6	155-15.9	6.1	1.5	20	99	2.7	0.10	0.8	0.6	0.21 B
	15	15	29	19.8	19-20.1	155-13.1	5.7	1.5	22	66	4.3	0.09	0.7	0.6	0.19 B
	15	17	26	20.3	19-24.5	155-16.8	8.9	0.7	14	78	0.8	0.11	0.7	0.9	0.08 A
	15	18	15	46.2	19-24.7	155-16.9	8.1	1.0	11	95	0.4	0.10	0.5	0.8	0.06 A
	15	22	47	29.7	20- 6.8	156- 2.6	2.3*	3.0	22	278	27.7	0.34	2.1	0.14	D
	16	0	15	33.0	19-24.8	155-17.0	8.8	0.8	13	63	0.2	0.12	0.6	1.0	0.06 A
	16	1	6	12.4	19-24.6	155-17.4	7.7	0.9	12	60	0.9	0.04	0.4	0.3	0.05 A
	16	2	17	12.2	19-25.2	155-16.8	9.1	0.7	13	126	0.7	0.13	0.8	1.1	0.09 B
	16	4	14	53.6	19-20.8	155- 5.7	5.5	1.0	14	102	5.2	0.16	1.3	1.2	0.24 B
	16	6	40	39.5	19-54.5	155- 5.5	52.2	3.3	30	227	23.8	0.41	1.8	3.5	0.12 C
	16	6	58	16.0	19-20.5	155-13.6	8.0*	1.4	13	76	5.3	0.08	0.7	0.13	B
	16	10	13	35.8	19-25.3	155-16.8	11.5	1.3	9	135	0.9	0.25	0.9	1.9	0.04 B
	16	22	57	37.8	19-23.6	155- 5.4	38.4	2.6	32	83	8.1	0.23	1.1	1.9	0.15 B
	16	23	56	56.1	19- 1.5	155-22.0	21.6		15	232	18.0	0.33	2.1	4.8	0.14 C
	17	0	12	49.8	19-20.4	155- 9.7	6.5	1.7	22	75	3.1	0.07	0.6	0.6	0.17 B
	17	5	59	38.8	19-21.4	155-10.5	5.5	1.6	23	68	1.8	0.09	0.7	0.7	0.18 H
	17	6	53	25.3	19-52.3	155- 8.9	47.2	3.0	27	213	20.5	0.32	1.4	2.9	0.12 C
	17	10	53	44.1	19-24.8	155-17.0	9.0	0.9	14	87	0.1	0.07	0.5	0.6	0.06 A
	17	11	19	48.2	19-20.1	155- 9.3	5.9		21	78	3.8	0.09	0.7	0.7	0.18 B
	17	12	55	18.3	19-20.1	155-12.2	8.0*		15	92	5.5	0.05	0.5	0.11	B
	17	15	1	25.2	19-24.6	155-16.5	10.7	1.4	11	92	1.1	0.14	0.5	1.1	0.04 A
	17	17	22	15.0	19-25.8	155-24.2	7.4	2.1	23	65	7.0	0.06	0.5	0.4	0.14 B
	17	19	50	51.1	19-13.5	155- 9.7?	39.9		24	224	9.3	0.26	1.5	2.0	0.12 C
	17	23	1	36.3	19-32.0	155- 7.9?	8.0*		12	150	17.5	0.26	2.9	0.31	D
	18	2	31	50.0	19-20.4	155-15.1	25.8	3.6	32	73	3.9	0.11	0.8	1.1	0.14 B
	18	10	5	54.4	19-24.7	155-17.6	7.0	0.9	15	64	1.2	0.09	0.7	0.7	0.15 B



# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
OCT	18	13	37	42.6	19-24.3	155-17.6	8.5	1.2	16	57	1.5	0.06	0.5	0.6	0.06	A
	18	14	19	59.5	19-25.0	155-17.4	7.8	1.1	13	117	0.7	0.05	0.6	0.4	0.09	A
	18	16	48	43.2	19-24.4	155-17.3	8.1	1.0	16	55	1.1	0.09	0.7	0.9	0.12	B
	18	21	55	50.3	19-24.3	155-18.0	5.5	0.7	14	59	1.0	0.09	0.3	0.7	0.06	A
	19	2	3	56.3	19-21.1	155-13.8	5.0		18	100	4.4	0.12	0.7	0.9	0.17	B
	19	3	45	35.3	19-54.4	155-29.9	35.6	2.3	25	147	14.6	0.21	1.0	2.4	0.13	B
	19	13	28	53.0	19-17.6	155- 3.0	32.4		26	248	4.3	0.26	1.4	1.8	0.10	C
	19	18	38	40.0	19-21.0	155-11.2	5.8	1.7	23	69	3.1	0.07	0.6	0.6	0.19	B
	19	19	16	0.4	19-20.3	155-11.9	8.0*		15	81	4.9	0.09	0.8		0.13	B
	19	19	49	33.8	19-19.3	155-13.2	6.5		18	74	4.2	0.10	0.7	0.7	0.15	B
	19	21	54	8.8	19-22.3	155-23.6	6.7	2.2	21	51	4.0	0.08	0.7	0.6	0.16	B
	19	23	59	22.4	19-10.5	155-37.0	6.8	2.5	18	97	8.1	0.16	1.0	1.0	0.20	B
	20	1	59	47.5	18-55.1	155- 8.4	8.0*		18	280	43.3	0.76	4.9		0.15	D
	20	2	3	22.2	19-24.3	155-15.8	7.2	1.2	11	111	1.6	0.66	1.7	3.7	0.15	B
	20	3	0	49.8	19-19.8	155-11.6	8.0*		14	89	5.3	0.06	0.6		0.09	B
	20	5	3	28.5	19-20.3	155-16.0	28.8		17	115	2.5	0.27	1.2	2.7	0.12	B
	20	7	44	57.6	19-22.5	155-15.6	24.3		12	131	0.5	0.28	1.2	2.8	0.10	B
	20	8	9	30.0	19- 1.2	155-19.3	14.1*	2.5	29	221	30.9	0.22	1.6		0.18	C
	20	9	8	5.4	19-26.0	155-14.7	28.5	2.2	28	54	1.9	0.11	0.7	1.2	0.12	B
	20	9	52	27.4	19-18.4	155-13.3	6.0		13	83	2.6	0.12	0.8	0.9	0.14	B
	20	12	30	41.5	19-25.9	155-29.2?	8.9	2.0	22	118	6.9	0.18	0.9	1.1	0.20	B
	20	17	8	0.5	19-23.9	155-16.7	12.6	1.6	19	47	0.2	0.04	0.5	0.3	0.07	A
	20	20	41	17.6	19-21.8	155-17.4	20.4		14	90	2.9	0.17	0.9	1.6	0.08	A
	20	21	4	9.7	19-20.0	155-11.7	5.3		23	82	4.8	0.10	0.7	0.8	0.22	B
	20	21	21	31.7	19-25.0	155-27.6	4.5	1.7	16	94	11.6	0.09	0.7	1.0	0.14	C
	20	22	12	24.3	19-22.4	155-28.4	8.3	1.8	20	108	1.3	0.11	1.1	1.4	0.17	B
	20	22	37	19.2	19-27.5	155-58.0	10.9	2.8	17	220	23.5	0.41	2.9	4.1	0.20	C
	21	0	6	49.0	19-56.9	155-27.4	10.1	3.0	18	177	13.5	0.16	1.2	1.4	0.15	C
	21	1	5	3.8	19-20.5	155- 9.1	4.5		12	70	3.2	0.13	1.0	1.3	0.22	B
	21	2	46	6.5	19-57.0	155-26.6	11.5	2.6	11	183	12.4	0.12	1.1	1.0	0.09	C



## SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
OCT	21	6	8	24.7	19-20.5	155- 9.2	9.2	1.9	14	70	3.1	0.09	0.6	1.4	0.09	A
	21	6	18	59.3	19-20.3	155- 9.7	7.2	2.4	25	76	3.2	0.06	0.6	0.4	0.16	B
	21	8	57	33.9	19-10.5	155-27.1?	6.3		19	151	2.3	0.09	0.8	0.6	0.13	C
	21	9	0	12.5	19-22.4	155-23.6?	7.5		10	97	4.1	0.15	0.7	2.1	0.09	B
	21	9	0	36.9	19-22.6	155-23.3	7.8		11	91	4.4	0.17	1.2	3.4	0.14	B
	21	9	5	54.6	19-10.1	155-27.6	5.8		10	154	1.2	0.10	1.0	0.7	0.10	C
	21	9	33	45.5	19-19.7	155-21.0	0.9	1.4	11	157	4.1	0.06	0.4	0.4	0.05	B
	21	11	13	22.6	19-21.0	155- 8.3	4.2		14	79	3.3	0.12	0.9	1.4	0.20	B
	21	16	4	40.0	19-21.3	155-24.1?	8.4	3.3	28	54	2.5	0.06	0.5	0.4	0.14	B
	21	16	13	5.8	19-22.0	155-23.6	5.1	1.6	17	84	3.3	0.11	0.7	1.0	0.20	B
	21	16	26	7.1	19-21.9	155-23.6	6.3		12	73	3.1	0.09	0.6	0.8	0.12	B
	21	16	30	43.8	19-20.7	155-25.4	8.5	2.0	23	83	3.8	0.06	0.6	1.0	0.15	B
	21	17	26	50.0	19-22.0	155-23.4	6.1		11	101	3.4	0.08	0.5	0.7	0.09	A
	21	18	56	14.3	19-20.7	155-18.5	28.8	2.1	22	55	5.1	0.14	0.9	1.5	0.13	B
	21	19	51	53.9	19-18.3	155-15.1?	7.8		20	104	3.7	0.06	0.5	0.4	0.12	B
	21	20	25	55.2	19-20.2	155-15.5	25.3	2.1	26	78	3.3	0.11	0.7	1.1	0.13	B
	21	22	3	25.4	19-25.8	155-15.8	1.5	1.4	12	129	3.2	0.08	0.3	0.3	0.07	B
	22	4	4	55.4	19-19.5	155-15.6	6.3	1.6	23	88	3.4	0.08	0.6	0.6	0.17	B
	22	5	19	47.6	19-55.3	155-21.4	26.5	2.9	30	188	3.8	0.16	1.0	1.9	0.12	C
	22	10	34	10.7	19-19.2	155-13.4	5.6	1.4	20	76	4.0	0.10	0.8	0.8	0.22	B
	22	14	46	39.9	19-34.9	155- 5.9	8.0*	2.0	9	136	9.4	0.09	0.9		0.10	C
	22	16	35	20.2	19-18.7	155-13.6	6.8	0.4	13	84	3.1	0.10	0.7	0.8	0.13	B
	22	18	56	53.3	19-19.9	155- 8.5	7.8	1.8	18	78	4.6	0.09	1.0	0.7	0.16	B
	22	21	18	43.2	19-19.7	155-12.4	8.0*		14	83	5.3	0.06	0.5		0.09	B
	22	23	54	15.3	19-21.9	155-23.7?	7.9	1.6	20	73	3.2	0.08	0.7	0.5	0.16	B
	23	0	6	16.6	19-23.5	155-46.1	6.2	1.6	10	216	17.5	0.25	2.3	3.6	0.13	C
	23	1	42	38.0	19-20.8	155- 7.5?	5.2	1.8	21	85	4.7	0.12	0.9	0.9	0.23	B
	23	10	30	24.5	19-20.4	155- 8.9	4.3	1.7	18	69	3.4	0.09	0.7	0.9	0.18	B
	23	10	49	42.2	19-20.5	155- 8.9	3.7	1.7	16	70	3.4	0.09	0.7	1.0	0.17	B
	23	19	5	10.8	19-19.7	155-16.7	30.9	2.1	26	95	1.4	0.15	0.8	1.5	0.11	B



# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
OCT	23	20	32	10.6	19-24.7	155-16.6	1.3	-0.0	11	99	0.8	0.06	0.3	0.4	0.11	B
	23	20	44	55.1	19-24.7	155-16.6	1.4	0.4	10	101	0.8	0.05	0.2	0.3	0.08	A
	23	22	34	7.1	19-16.9	155-22.3	6.6	2.5	25	126	6.3	0.08	0.7	0.6	0.21	C
	23	22	36	52.6	19-17.3	155-22.2	6.0	1.7	20	123	5.6	0.08	0.7	0.8	0.20	B
	23	22	37	3.3	19-17.1	155-22.4	8.0*	1.8	18	123	7.7	0.09	0.8		0.17	C
	23	22	38	42.7	19-15.4	155-22.0	8.0*	0.5	10	230	7.5	0.32	2.0		0.18	D
	23	22	39	30.6	19-16.9	155-22.6	3.8	1.7	26	125	6.2	0.08	0.6	0.9	0.20	B
	23	22	41	6.6	19-17.7	155-14.7	5.9	0.7	14	153	2.5	0.14	0.8	0.9	0.18	C
	24	3	28	2.6	19-17.9	155-13.4	8.0*	0.4	14	245	8.0	0.18	1.1		0.09	D
	24	7	23	10.7	19-18.2	155-15.7	10.7		7	210	4.6	0.10	0.5	0.9	0.03	B
	24	13	40	54.7	19-24.2	155-16.0	2.6	1.0	9	105	1.1	0.03	0.1	0.4	0.03	A
	24	16	43	44.5	18-46.3	155-24.2	14.3*	3.4	30	275	36.1	0.43	2.8		0.15	D
	24	17	28	37.8	19-19.8	155-16.7	22.0		16	118	1.4	0.29	1.6	3.0	0.17	B
	24	18	45	29.0	19-21.5	155-17.9	21.3		11	73	2.7	0.38	1.2	3.5	0.08	B
	25	3	16	31.9	19-25.8	155-16.8	2.5	0.6	8	219	1.6	0.11	0.6	3.4	0.05	C
	25	4	49	44.9	19-23.3	155- 5.9	0.8	1.8	17	123	7.2	1.51	0.8	5.6	0.17	C
	25	5	28	32.1	19-18.1	155-13.4	7.1	2.2	25	140	7.9	0.09	0.6	0.5	0.15	C
	25	8	51	14.6	19-18.4	155-13.4?	5.3	2-9#	11	82	2.6	.1	0.4	.	0.0	B
	25	18	25	9.6	19-19.5	155-13.8	6.2	1.5	27	63	4.6	0.07	0.5	0.5	0.18	B
	25	23	14	53.5	19-20.8	155-12.8	26.9	1.0	19	94	5.7	0.22	1.0	2.2	0.12	B
	26	1	56	39.5	19-26.7	155-59.2	13.1	0.9	10	297	8.7	0.47	4.2	1.6	0.08	D
	26	3	27	42.6	19-17.6	155- 2.2	30.9	0.9	20	231	4.4	0.53	2.5	4.1	0.13	D
	26	5	24	56.1	19-41.5	156-23.4	4.5		22	277	54.4	0.39	3.8	5.1	0.14	D
	26	7	53	19.5	19-12.9	155-30.3	7.0	4.3	27	68	7.5	0.10	0.8	0.8	0.20	B
	26	11	29	27.6	19-21.7	155-24.3?	7.1	2.6	28	68	3.3	0.07	0.7	1.2	0.19	B
	26	15	49	57.3	19-20.3	155- 9.5	6.0	2.3	26	75	3.4	0.09	0.7	0.6	0.21	B
	26	18	21	9.2	19-23.6	155-23.0	8.0*		12	100	5.7	0.05	0.5		0.09	B
	26	22	43	26.1	19-20.2	155-15.1	8.5		17	104	4.1	0.11	0.8	1.7	0.11	B
	26	23	19	26.5	19-20.9	155-13.9	6.5	2.1	29	106	3.6	0.09	0.7	0.5	0.21	B
	27	2	34	11.6	19-24.4	155-25.6?	8.3	1.9	21	126	5.1	0.06	0.5	0.4	0.11	B

## SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
OCT	27	8	12	1.8	19-25.0	155-16.6	1.8	1.7	14	113	0.8	0.09	0.5	0.3	0.15	B
	27	12	51	12.9	19-21.9	155-27.0?	8.7		21	118	1.6	0.16	1.3	1.0	0.27	B
	27	15	6	29.6	19-19.1	155-11.7	8.0*		15	140	5.0	0.08	0.7		0.12	C
	27	16	27	18.6	19-21.1	155- 8.2	3.6		22	79	3.3	0.10	0.7	1.0	0.18	B
	27	19	20	44.4	19-22.6	155- 3.1	3.5		21	120	5.0	0.15	1.0	1.2	0.27	B
	27	19	42	2.4	19-22.6	155- 4.5?	0.6		21	143	5.7	0.43	1.0	2.0	0.18	C
	27	23	47	51.5	19-20.9	155-29.4	8.3		21	107	4.3	0.09	0.9	1.4	0.16	B
	28	1	13	56.5	19-24.3	155-16.7?	1.3	1.5	12	77	0.8	0.12	0.6	1.0	0.20	B
	28	10	20	34.1	19-24.1	155-15.9	2.3		10	110	1.3	0.05	0.3	0.8	0.06	A
	28	21	6	4.6	19-24.8	155-17.4	9.2	0.8	18	89	0.6	0.06	0.5	0.6	0.09	A
	29	3	31	44.1	19-25.2	155- 0.4?	8.0*	1.6	7	143	10.6	0.27	2.5		0.27	C
	29	6	44	49.0	19-19.7	155-24.6?	8.2	1.3	18	90	2.5	0.08	0.7	0.6	0.17	B
	29	11	48	26.3	19-24.3	155-16.4	2.3		6	103	0.9	0.05	0.6	0.4	0.04	B
	29	12	10	37.3	19-24.2	155-15.9	2.0	0.7	9	108	1.3	0.05	0.3	0.2	0.05	A
	29	14	44	51.7	19-10.0	155-30.9	6.5	2.2	18	118	5.5	0.12	0.9	0.8	0.17	B
	29	19	11	58.7	19-24.1	155-16.0	2.5	0.7	8	106	1.2	0.03	0.2	0.9	0.04	A
	30	1	31	38.0	19-25.4	155-16.9	2.3	0.4	8	174	0.9	0.08	0.6	0.3	0.08	B
	30	6	44	9.6	19-24.3	155-23.1	6.3	1.7	19	111	6.0	0.09	0.7	0.6	0.15	B
	30	18	17	42.7	19-20.1	155- 7.6	8.0*	0.7	13	93	5.2	0.10	0.9		0.20	B
	30	18	58	48.5	19-24.9	155-16.3	9.4	0.7	11	101	1.2	0.11	0.5	0.8	0.05	A
	30	19	6	23.4	19-24.2	155-15.9	2.4	0.3	7	109	1.4	0.11	0.5	1.7	0.06	B
	30	19	36	44.6	19-23.5	155-25.0	8.0*	1.1	19	125	4.9	0.06	0.6		0.12	C
	30	22	23	2.6	19-18.8	155-13.2	6.7		16	82	3.2	0.11	0.7	1.9	0.11	B
	30	23	5	8.4	19-23.5	155- 2.3	0.3*	2.0	17	132	6.7	0.15	1.0		0.26	C
	31	2	18	50.4	20-14.9	155-59.2	47.7*	2.0	9	333	25.4	0.39	3.8		0.09	D
	31	4	35	6.3	19-16.5	155-23.4	5.7	1.0	17	124	5.7	0.09	0.8	0.9	0.18	B
	31	6	40	52.1	19-25.4	155-24.1	8.0*	1.2	18	122	7.2	0.05	0.4		0.10	C
	31	16	53	20.1	19-24.7	155-16.9	8.1	1.2	13	71	0.4	0.07	0.7	0.7	0.09	A
	31	17	35	26.4	19-24.8	155-17.1	8.0	0.8	13	75	0.4	0.06	0.6	0.4	0.10	B
	31	18	15	31.6	19-24.6	155-17.3	8.1	0.9	12	68	0.8	0.07	0.7	0.5	0.11	B



## SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
OCT	31	19	39	41.0	19-19.9	155-10.2	9.4	0.7	15	86	4.0	0.07	0.4	1.1	0.07	A
	31	20	33	31.9	19-24.6	155-17.1	9.4	0.9	12	67	0.6	0.10	0.6	0.9	0.07	A
	31	21	10	7.2	19-24.6	155-17.6	7.3	1.4	10	72	1.2	0.18	0.4	1.1	0.05	A
	31	22	3	44.5	19-24.8	155-17.2	7.5	1.1	10	88	0.5	0.09	0.7	0.6	0.06	A
	31	22	22	1.6	19-24.8	155-16.7	8.9	0.3	12	106	0.6	0.14	0.7	1.2	0.07	A
	31	23	27	0.4	19-24.8	155-17.4	7.4	1.0	12	82	0.8	0.09	0.8	0.6	0.11	B
NOV	1	0	5	4.4	19-19.8	155-16.7	30.5	1.7	24	92	1.3	0.18	1.0	1.8	0.13	B
	1	1	44	56.5	19-23.2	155-26.6	8.4	1.7	23	102	2.2	0.06	0.6	1.0	0.14	B
	1	3	22	35.2	19-25.0	155-17.0	7.6	0.8	11	121	0.2	0.09	0.8	0.6	0.10	B
	1	4	33	14.9	19-24.8	155-17.2	7.3	1.1	9	99	0.4	0.03	0.3	0.2	0.02	A
	1	5	16	16.0	19-25.0	155-17.1	8.5	0.8	11	122	0.3	0.14	0.8	1.3	0.08	B
	1	5	40	1.7	19-24.9	155-16.9	9.0	0.7	11	117	0.1	0.14	0.7	1.2	0.06	A
	1	6	5	2.7	19-24.9	155-16.1	13.2	1.1	16	84	1.3	0.05	0.7	0.4	0.10	B
	1	6	10	36.7	19-25.9	155-16.5	3.1	0.6	8	239	1.6	0.27	1.0	1.5	0.06	C
	1	6	14	48.1	19-25.0	155-16.8	8.6	1.2	11	117	0.3	0.09	0.5	0.7	0.04	A
	1	7	54	36.4	19-24.7	155-17.5	7.5	1.1	12	77	0.9	0.06	0.5	0.4	0.06	A
	1	10	48	4.9	19-24.1	155-16.8	9.4	1.6	12	72	0.5	0.09	0.6	0.8	0.07	A
	1	12	3	0.8	19-24.0	155-15.4	3.5	0.9	10	87	2.1	0.09	0.3	0.8	0.05	A
	1	14	51	32.8	19-25.6	155-25.0?	8.0	2.3	20	104	7.3	0.06	0.5	0.4	0.12	B
	1	17	14	59.9	19-23.5	155-29.2	8.5	1.9	16	111	3.4	0.11	1.0	1.7	0.16	B
	1	17	55	14.8	19-18.6	155-13.3	6.9		13	82	3.0	0.14	0.9	2.2	0.11	B
	1	19	19	23.7	19-24.1	155-15.9	1.8	0.7	7	113	2.3	0.07	0.4	0.4	0.07	B
	1	20	19	49.9	19-26.9	155-53.1	8.2		11	147	5.6	0.14	1.8	2.6	0.14	B
	1	21	16	51.9	19-25.1	155-18.0	6.3	1.0	12	96	0.8	0.21	0.9	1.6	0.14	B
	1	21	41	32.8	19-17.2	155-11.4	29.3	1.0	18	236	3.6	0.32	1.4	2.4	0.07	C
	1	22	50	25.0	19-22.0	155-16.2	27.7		19	58	1.0	0.18	0.9	1.7	0.11	B
	2	2	57	36.4	19-23.8	155-15.4	1.6	0.4	8	148	2.6	0.06	0.3	0.3	0.06	B
	2	3	17	38.2	19-23.2	155-25.0?	7.7	1.9	21	73	4.8	0.07	0.6	1.5	0.15	B
	2	4	29	37.6	19-25.1	155-16.6	9.4	1.0	13	123	0.8	0.11	0.7	0.9	0.09	B
	2	5	8	53.6	19-24.6	155-16.9	8.6	1.5	10	107	0.7	0.20	1.1	1.6	0.09	B

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
NOV	2	6	13	51.5	19-22.1	155-11.4	5.6	1.8	19	72	2.3	0.07	0.5	0.7	0.14 B
	2	19	18	58.7	19-22.7	155-22.3	5.5	1.4	11	80	4.9	0.06	0.4	0.6	0.09 A
	3	0	8	14.0	19-21.1	155- 7.7	4.4	0.4	14	82	4.2	0.12	1.0	1.5	0.22 B
	3	1	55	21.6	19-20.0	155-12.1	9.1	0.8	18	128	4.7	0.10	0.6	1.4	0.09 B
	3	2	44	36.3	18-53.4	155- 9.9	8.0*	2.6	28	257	43.3	0.50	3.3		0.22 D
	3	4	41	58.5	19-24.5	155-23.5?	8.5	1.5	23	58	6.8	0.06	0.5	0.4	0.15 B
	3	6	33	39.7	19-20.1	155-11.6	7.5	0.6	17	87	4.7	0.09	0.7	0.5	0.14 B
	3	11	12	41.7	19-23.3	155-26.0?	8.2	4.0	28	55	3.2	0.04	0.4	0.3	0.11 B
	3	12	49	48.2	19-23.0	155- 5.7	3.9	2.4	21	125	7.4	0.13	0.9	1.1	0.20 C
	3	14	1	59.0	19-20.9	155- 7.7	4.2	2.1	21	81	4.3	0.11	0.8	0.9	0.22 B
	3	16	5	28.7	19-20.6	155- 7.3	8.0*		11	91	5.2	0.12	1.1		0.20 B
	4	7	22	20.5	19-23.1	155-14.6	25.0	1.8	17	85	2.6	0.18	0.9	1.7	0.10 B
	4	23	36	25.1	19-20.9	155-15.6	28.2	2.1	27	108	2.8	0.11	0.7	1.1	0.12 B
	5	1	52	5.2	19-19.6	155-12.0	5.7	1.6	20	135	6.0	0.13	0.9	0.8	0.22 C
	5	2	3	2.2	19-19.4	155-15.7	8.5	1.4	13	179	3.2	0.15	1.0	1.7	0.12 C
	5	2	48	18.3	19-23.2	155-24.0	6.3	2.1	20	68	5.7	0.08	0.7	0.7	0.18 B
	5	4	41	11.3	19-26.1	155-27.1?	6.8	2.1	23	114	6.8	0.10	0.7	0.7	0.20 B
	5	14	59	50.1	19-29.9	155-27.3	8.0*	2.8	20	93	7.0	0.06	0.6		0.11 B
	5	18	41	1.0	19-19.6	155-11.1	7.5	1.8	17	94	5.0	0.09	0.7	0.5	0.15 B
	5	22	5	57.6	19-16.5	155-23.4	4.4	2.5	27	124	5.8	0.08	0.6	0.8	0.21 C
	6	1	4	24.5	19-20.8	155- 8.6?	7.8	1.8	20	109	3.2	0.10	0.9	0.7	0.15 B
	6	1	19	42.8	19-20.6	155- 9.4	4.7	1.7	21	70	2.8	0.08	0.6	0.7	0.19 B
	6	8	7	7.7	19-20.2	155-14.3	8.0*	1.5	8	127	7.5	0.15	1.6		0.21 C
	6	14	16	35.6	19-21.8	155-25.5?	7.3		14	118	3.9	0.10	0.9	0.7	0.18 B
	6	20	22	34.5	19-22.3	155-23.4	5.6	1.6	15	79	6.9	0.08	0.6	0.8	0.17 B
	7	11	9	18.8	19-18.9	155-16.7	27.7	2.8	31	107	2.6	0.12	0.7	1.2	0.13 B
	7	12	16	47.3	19-22.8	155-24.7?	2.2		11	111	5.2	0.10	0.7	1.2	0.13 B
	7	13	20	14.0	19- 9.2	155-41.7	3.2		13	133	13.2	0.20	1.4	1.5	0.19 C
	7	13	47	9.9	19-24.1	155- 0.8	4.9		20	150	8.7	0.16	1.2	1.2	0.22 C
	7	15	24	46.2	19-22.4	155-25.1	8.1	1.8	17	70	4.5	0.04	0.5	0.3	0.09 B



# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
NOV	7	20	0	31.4	19-24.1	155-15.9	2.3		6	109	1.2	0.07	0.4	1.6	0.04	B
	7	22	21	48.6	19-25.1	155-44.8	6.6		8	149	19.6	0.35	1.8	2.4	0.13	C
	8	8	27	43.9	19-17.5	155- 9.5	38.4		20	214	7.0	0.22	1.3	1.7	0.10	C
	8	9	18	19.1	20-15.9	155-52.0?	73.3*	3.1	13	307	68.8	0.44	3.6		0.12	D
	9	0	7	23.3	19-18.7	155-15.3	11.5	1.1	13	124	4.4	0.11	0.4	1.0	0.05	B
	9	1	30	48.3	19-24.0	155-24.6	7.3	2.2	28	57	6.0	0.06	0.6	0.5	0.18	B
	9	1	41	18.0	19-20.3	155-10.7	3.9		16	106	3.6	0.12	0.8	1.2	0.20	B
	9	2	8	25.5	19-25.4	155-16.1	1.6	2.8	24	97	0.7	0.05	0.3	0.2	0.10	B
	9	2	58	32.8	19-30.1	155-46.6	5.8	1.6	11	108	14.9	0.07	0.7	0.8	0.10	C
	9	4	40	10.9	19-25.1	155-16.7	2.2	0.7	10	124	0.7	0.04	0.4	0.2	0.07	B
	9	6	22	53.7	19-22.7	155-24.8	8.0*	2.2	20	69	5.0	0.04	0.4		0.10	B
	9	6	34	56.8	19-22.7	155-24.8	7.7	1.9	21	85	5.0	0.04	0.4	0.3	0.10	B
	9	7	10	39.8	19-18.4	155-13.4	5.8		10	83	2.6	0.20	1.1	1.8	0.17	B
	9	7	26	31.4	19-21.6	155-24.3?	8.1	1.5	14	95	3.2	0.08	0.8	0.5	0.14	B
	9	7	56	40.7	19-22.7	155-24.9?	8.9		11	117	4.7	0.33	0.8	3.1	0.10	B
	9	14	24	45.1	19-22.8	155-24.6?	8.0		16	81	5.3	0.08	0.8	1.6	0.16	B
	9	21	44	14.7	19-25.6	155-38.0	8.0*		12	170	19.1	0.20	3.1		0.25	D
	10	0	57	11.4	19-22.9	155- 5.3	3.4		12	131	7.0	0.10	0.7	1.0	0.12	B
	10	2	27	46.4	19-20.5	155-11.7	8.2		17	83	4.4	0.05	0.4	0.3	0.08	A
	10	3	43	6.2	19-16.6	155-23.9	4.0		15	133	6.6	0.12	0.9	1.4	0.16	B
	10	7	20	28.6	20- 5.8	155-28.6?	0.0		16	217	26.9	7.03	2.7	13.2	0.25	C
	10	9	43	14.3	19-24.4	155-15.7	23.0	1.9	22	54	1.8	0.11	0.6	1.1	0.09	A
	10	11	31	52.7	19-24.1	155-17.0	9.3	1.6	17	48	0.8	0.08	0.6	0.7	0.12	B
	10	13	55	22.9	19-18.8	155-15.9	5.8	1.5	24	103	3.5	0.08	0.6	0.6	0.18	B
	10	14	36	13.8	19-21.2	155-23.9	6.2	1.6	18	59	2.1	0.08	0.7	0.8	0.19	B
	10	17	22	12.7	19-21.8	155-13.2	7.0		8	161	1.5	0.39	1.0	2.7	0.08	C
	10	17	23	54.8	19-22.2	155-13.3	4.6	1.3	16	93	1.2	0.10	0.4	1.1	0.10	B
	10	17	24	43.2	19-22.4	155-13.1	7.0		6	145	0.7	0.71	1.7	4.8	0.09	B
	10	17	26	24.0	19-22.0	155-13.3	3.1	1.3	13	93	1.4	0.13	0.6	2.0	0.12	B
	10	17	33	48.9	19-22.4	155-12.9	5.2	1.7	17	89	0.4	0.07	0.5	0.8	0.10	B



## SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
NOV	10	17	48	24.3	19-22.5	155-12.9	3.5	1.8	17	89	0.4	0.10	0.6	1.6	0.16 B
	10	17	55	28.3	19-22.4	155-12.7	2.7	1.3	16	79	0.2	0.06	0.4	1.2	0.12 B
	10	17	56	29.4	19-22.5	155-12.9	5.0	1.7	17	80	0.5	0.06	0.5	0.7	0.11 B
	10	18	9	11.0	19-22.7	155-13.9	5.5	1.3	11	112	2.2	0.24	0.7	2.0	0.10 B
	10	18	10	2.9	19-25.5	155-10.8?	8.0*		8	255	6.3	1.09	6.4		0.31 D
	10	18	13	12.8	19-22.7	155-13.9	5.8	1.3	13	112	2.2	0.20	0.6	1.6	0.08 B
	10	18	15	54.7	19-22.3	155-12.8	2.3		6	179	0.5	0.05	0.4	0.5	0.02 B
	10	18	17	49.0	19-22.7	155-12.7	1.7	1.3	11	141	0.5	0.09	0.6	0.3	0.08 B
	10	18	19	55.1	19-22.5	155-13.7	3.7		9	110	1.8	0.08	0.3	0.9	0.04 A
	10	18	31	0.2	19-21.3	155-12.8	8.4		7	217	2.2	0.37	2.0	2.8	0.08 C
	10	18	31	20.6	19-22.4	155-13.9	5.1	1.3	15	101	2.1	0.20	0.6	1.8	0.12 B
	10	18	38	37.7	19-22.3	155-13.3	2.2		6	180	1.1	0.06	0.5	0.2	0.03 B
	10	18	42	19.6	19-22.3	155-13.5	3.3		7	145	1.0	0.04	0.2	0.5	0.02 B
	10	19	2	18.4	19-22.2	155-13.2	4.1	1.8	23	53	1.0	0.06	0.5	0.7	0.16 B
	10	19	5	15.7	19-22.1	155-12.9	2.3	1.6	22	56	0.8	0.11	0.5	0.4	0.16 B
	10	19	29	26.2	19-22.4	155-12.9	2.1	1.1	15	89	0.4	0.09	0.5	0.4	0.10 B
	10	19	37	11.1	19-22.5	155-13.0	4.6	1.0	16	77	0.6	0.09	0.4	1.1	0.10 B
	10	19	44	50.1	19-22.2	155-13.5	2.2		6	147	4.3	0.01	0.1	0.1	0.01 B
	10	19	59	29.3	19-13.5	155-19.9	27.2	2.2	27	161	8.4	0.14	0.7	1.4	0.12 C
	10	20	10	13.8	19-21.9	155-13.1	3.1		6	193	1.2	0.06	0.4	0.6	0.02 B
	10	20	29	4.9	19-22.3	155-13.4	4.1		6	144	1.4	0.03	0.1	0.3	0.01 B
	10	20	32	4.2	19-22.0	155-13.3	2.3		7	142	1.3	0.06	0.4	2.7	0.04 B
	10	20	34	32.5	19-22.4	155-13.0	6.2	0.5	10	133	0.6	0.06	0.4	0.5	0.06 B
	10	20	35	9.3	19-22.3	155-13.4	2.9		9	135	1.3	0.03	0.1	0.4	0.02 B
	10	20	41	40.2	19-20.6	155-9.0	3.6	1.7	18	70	3.1	0.11	0.8	1.1	0.18 B
	10	20	49	4.6	19-22.6	155-13.3	1.3		8	133	1.2	0.04	0.2	0.2	0.04 B
	10	21	11	37.6	19-22.4	155-13.8	1.3	1.7	15	99	2.0	0.09	0.4	0.4	0.10 B
	10	21	19	3.6	19-22.6	155-14.2	1.9		9	98	2.6	0.07	0.4	0.3	0.08 A
	10	21	27	53.2	19-22.3	155-13.4	4.9	0.9	13	88	1.3	0.13	0.5	1.3	0.10 B
	10	21	30	30.4	19-22.4	155-12.9	2.9	2.4	23	79	0.5	0.06	0.5	0.8	0.14 B

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MO	Q
NOV	10	22	2	38.3	19-22.7	155-13.0	5.5	1.6	18	81	4.4	0.09	0.5	0.9	0.13	B
	10	23	38	58.0	20-20.2	155-26.7	10.7	4.1	28	208	82.6	0.41	2.0	4.1	0.24	D
	11	4	16	12.0	19-10.4	155-40.1?	0.0	2.9	18	117	9.8	6.27	1.2	11.8	0.28	C
	11	5	9	28.4	19-22.0	155-12.8	8.0*	1.4	9	157	5.2	0.16	1.6		0.20	C
	11	5	19	34.9	19-22.4	155-12.9	8.0*	1.4	11	90	5.0	0.13	1.2		0.26	B
	11	5	36	6.9	19-22.7	155-12.4	4.4	1.4	12	89	4.7	0.17	0.5	1.8	0.10	B
	11	5	38	0.1	19-22.2	155-12.9?	0.0	1.6	10	139	5.2	1.03	0.5	2.1	0.10	B
	11	5	59	19.3	19-23.0	155-12.2	0.9	1.3	12	98	4.6	0.32	1.2	1.5	0.28	B
	11	6	5	37.7	19-22.3	155-12.5	2.3*	1.4	7	140	4.7	0.13	1.0		0.13	C
	11	6	17	1.9	19-22.5	155-12.7	1.3*		6	135	5.0	0.08	0.6		0.08	C
	11	6	21	14.0	19-22.3	155-12.8	8.0*	0.7	8	93	5.2	0.16	1.6		0.25	B
	11	7	5	15.1	19-22.8	155-12.9	2.7	1.1	15	85	4.3	0.19	0.7	9.8	0.17	B
	11	7	12	27.5	19-22.1	155-13.0	8.0*	1.0	9	109	5.2	0.06	0.7		0.10	B
	11	7	22	36.7	19-22.0	155-12.7	8.0*	0.7	10	76	5.0	0.06	0.6		0.11	B
	11	8	8	34.5	19-22.6	155-13.0	8.0*	1.2	10	118	5.6	0.12	1.2		0.21	B
	11	13	25	55.6	19-22.0	155- 2.6	6.2	2.0	13	137	4.0	0.18	1.9	1.6	0.24	C
	12	20	15	10.8	19-20.2	155-10.8	5.4	1.6	17	82	3.8	0.11	0.9	1.0	0.22	B
	13	11	10	41.3	19-23.5	155-25.9	8.3	2.6	28	55	3.6	0.07	0.5	0.5	0.15	B
	13	14	0	29.6	19-20.5	155- 7.8	5.6	1.8	19	85	4.6	0.11	0.8	0.9	0.21	B
	13	21	33	0.2	19-19.4	155-14.2	6.8	1.6	20	68	4.6	0.07	0.5	0.5	0.13	B
	14	14	39	22.0	19-26.9	155- 2.7	45.3		24	104	6.5	0.31	1.3	2.6	0.13	B
	14	17	51	55.3	19-17.9	155-13.3?	8.3	0.5	12	95	1.6	0.11	0.9	0.7	0.15	B
	14	21	55	30.3	19-19.4	155-15.4	6.8	0.5	20	104	3.8	0.09	0.6	0.6	0.14	B
	14	21	57	23.9	19-20.4	155- 9.1	9.8	0.4	15	70	3.4	0.08	0.5	1.0	0.08	A
	15	0	29	27.2	19-54.6	155- 8.0	41.0	3.0	31	222	22.1	0.30	1.7	3.0	0.16	C
	15	14	40	8.6	19-58.6	155-45.9?	0.0	1.2	18	167	16.8	0.48	1.6	0.8	0.21	C
	15	16	43	30.9	19-15.0	155-13.2	8.0*		8	225	14.3	0.32	2.1		0.15	C
	16	1	59	20.6	19-22.1	155-12.3	4.0	0.8	12	81	1.7	0.10	0.5	1.3	0.11	B
	16	17	5	49.1	19-20.4	155-12.0	6.8	2.3	30	73	4.5	0.06	0.6	0.4	0.18	B
	16	21	53	57.6	19-19.7	155-12.6	4.9	1.7	17	79	5.1	0.12	0.9	1.1	0.21	C



# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
NOV	16	22	37	49.4	18-46.1	155-30.9	18.0*		14	296	43.5	1.41	8.9		0.18	D
	16	22	44	43.4	19-24.2	155-27.1	7.8	2.2	26	58	3.3	0.07	0.5	0.5	0.12	B
	17	10	24	18.1	19-20.0	156-23.2	8.0*		23	279	52.1	0.80	5.0		0.16	D
	17	10	34	9.2	19-14.9	155-24.1	32.0		20	155	9.9	0.30	1.5	3.0	0.13	C
	17	11	53	37.6	19-22.2	155-12.7	3.8	1.5	12	95	1.1	0.11	0.5	1.3	0.09	A
	17	11	55	41.4	19-22.0	155-12.8	5.2	1.5	12	110	1.2	0.26	0.9	2.3	0.13	C
	17	13	47	32.2	19-16.9	155-12.5	4.8	1.9	22	159	1.7	0.10	0.7	0.7	0.16	C
	17	14	24	22.5	19-17.5	155-12.4	2.8		16	152	2.0	0.12	0.7	1.5	0.16	C
	17	15	23	32.3	18-47.4	155-32.9?	8.0*		23	294	41.7	1.70	10.5		0.24	D
	17	16	24	40.0	19-24.6	155-23.5	8.6	2.5	26	58	6.9	0.03	0.4	0.8	0.11	B
	17	17	10	27.4	19-20.0	155-10.3	3.6	1.8	18	86	3.9	0.12	0.9	1.5	0.25	B
	17	20	50	3.1	19-21.8	155-24.3?	6.7		18	54	3.5	0.09	0.8	1.7	0.19	B
	18	0	52	41.4	19-19.7	155-11.9	5.8	1.7	27	87	5.6	0.04	0.6	0.6	0.21	B
	18	1	42	36.9	19-24.4	155-16.9	6.9	1.2	18	52	1.0	0.06	0.5	0.4	0.11	B
	18	1	44	28.2	19-24.0	155-16.8	7.5	1.4	11	90	1.2	0.07	0.7	0.5	0.06	A
	18	3	28	44.9	19-10.9	155-37.0	7.0	2.5	21	96	7.3	0.16	0.9	1.0	0.21	C
	18	4	55	14.3	19-21.0	155-13.5	6.1	1.7	26	55	3.0	0.07	0.6	0.5	0.18	B
	18	7	44	5.9	19-23.4	155-24.3	6.8		10	99	6.0	0.15	0.9	1.4	0.15	B
	18	7	45	59.7	18-45.1	155-30.8	16.8*		13	297	45.4	1.54	9.6		0.17	D
	18	14	48	26.4	19- 2.8	155-31.8	33.7		18	192	14.1	0.65	3.2	5.6	0.17	C
	18	17	36	50.0	19-19.5	155-11.3	7.8		16	96	5.3	0.04	0.7	0.5	0.13	B
	19	3	0	35.2	19-19.6	155-13.6	7.2	1.6	23	65	4.8	0.06	0.5	0.4	0.13	B
	19	4	37	7.5	19-20.2	155- 9.3	5.9	2.5	28	76	3.6	0.10	0.7	0.6	0.21	B
	19	7	7	17.1	19-31.2	155-42.6	9.0	2.4	14	130	12.0	0.07	0.8	1.1	0.13	B
	19	16	5	36.7	19-20.0	155-12.9	6.1	1.1	20	71	4.9	0.10	0.7	0.8	0.20	B
	19	20	34	5.3	19-25.9	155-51.9	9.3	1.8	15	136	8.4	0.08	0.8	1.4	0.10	B
	19	20	51	39.8	19-57.4	155-26.1	11.5	1.9	13	186	12.2	0.16	1.3	1.1	0.13	C
	20	14	36	38.9	19-19.9	155-13.7	8.0*		11	72	5.3	0.04	0.4		0.07	B
	20	22	54	37.8	18-54.7	155-32.7	37.5*	2.7	23	253	38.0	0.30	2.3		0.17	D
	21	0	38	35.2	19-17.0	155-12.2	4.8	1.7	15	186	2.2	0.15	0.9	1.0	0.18	C

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
NOV	21	2	49	9.1	19-17.2	155-12.3	5.5	1.7	15	171	2.0	0.09	0.6	0.7	0.11 C
	21	4	47	10.7	19-22.7	155- 4.8?	0.0	2.3	22	88	6.1	2.74	0.9	5.3	0.22 C
	21	5	11	5.0	19-19.8	155-10.5	6.1	2.0	20	90	4.3	0.09	0.7	0.6	0.18 B
	21	8	40	24.8	19-17.8	155-12.5	2.7		13	131	2.2	0.09	0.6	1.4	0.13 B
	21	14	18	52.4	19-23.5	155-27.2	8.2	2.3	22	57	1.9	0.09	0.9	1.4	0.21 B
	21	23	9	48.0	19-25.3	155-27.9	8.7	2.3	20	156	5.2	0.12	0.9	1.4	0.13 C
	21	23	18	46.7	19-21.9	155- 1.8?	6.0	2.1	16	159	4.2	0.21	1.8	1.3	0.30 D
	21	23	24	23.7	18-56.3	155-32.5	37.8	2.7	31	240	13.9	0.27	1.4	2.4	0.13 C
	22	3	32	1.2	19-24.1	155-27.6	8.4		25	57	3.0	0.04	0.6	1.1	0.15 B
	22	3	48	59.7	19-46.8	156- 6.4	55.8		25	245	29.8	0.55	2.4	4.5	0.12 C
	22	15	26	47.4	19-18.1	155-12.5?	6.2	1.3	10	123	2.6	0.40	3.4	1.7	0.21 C
	22	17	34	14.0	19-18.8	155-14.9	5.5	1.1	20	116	4.1	0.09	0.7	0.7	0.18 B
	22	21	40	43.9	19-20.8	155-14.6	25.8	2.3	28	64	3.8	0.10	0.7	1.1	0.12 B
	23	1	36	45.7	19- 9.9	155-41.6	3.5	2.9	25	129	12.2	0.14	1.0	1.0	0.20 C
	23	17	29	41.2	19-21.4	155-17.3	25.5	2.0	24	45	2.3	0.22	1.2	2.1	0.16 B
	24	2	33	16.1	19-23.3	155-17.4	13.5	1.5	24	56	0.8	0.05	0.5	0.7	0.12 B
	24	4	25	38.4	18-55.5	155-32.3	38.6	3.5	32	246	14.7	0.45	2.3	3.3	0.15 C
	24	13	10	41.8	19-23.8	155-25.1	8.0*	1.6	15	88	5.0	0.07	0.6		0.12 B
	24	13	45	0.8	19-56.2	155-11.1	56.2	2.8	17	219	17.3	0.85	3.1	7.5	0.13 C
	25	7	42	41.9	19-20.8	155-12.1	5.4	1.5	17	72	3.8	0.11	0.8	0.7	0.18 B
	26	8	4	56.5	19-23.1	155-24.9?	8.0	1.0	15	83	4.8	0.08	0.7	0.6	0.13 B
	26	13	32	28.8	19-21.9	155- 6.8	2.6	1.1	14	76	5.4	0.09	0.7	1.2	0.14 B
	27	5	52	15.0	19-24.1	155-23.1	7.7	2.8	29	40	5.9	0.05	0.5	0.4	0.16 B
	28	2	59	14.7	19-17.9	155-13.4	6.6	3.8	24	173	8.2	0.14	0.9	0.6	0.18 C
	28	3	59	36.6	19-20.5	155-13.6	5.5	1.3	17	190	4.0	0.14	0.9	0.7	0.19 C
	28	4	49	13.8	19-18.1	155-13.4	5.3	1.4	17	201	7.8	0.25	1.4	1.0	0.20 C
	28	5	2	36.8	19-18.8	155-13.8	6.6	2.4	20	173	6.7	0.13	0.8	0.6	0.16 C
	28	19	29	46.6	19-23.8	155-25.6?	8.0	3.2	28	40	4.2	0.06	0.4	0.4	0.13 B
	29	13	2	55.9	19-19.9	155-12.5	3.3	1.0	14	78	5.5	0.09	0.7	1.2	0.16 C
	29	13	7	13.2	19-26.0	155-22.4	7.7	3.1	27	57	4.3	0.05	0.5	0.4	0.17 B



# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MIN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
NOV	29	20	51	50.6	19-21.9	155-9.1	5.1	1.7	21	136	1.4	0.11	0.8	0.8	0.20	B
	29	23	9	27.4	18-48.0	155-32.7?	8.0*	2.7	21	293	40.6	1.79	11.1		0.25	D
	30	1	9	42.8	19-19.2	155-15.4	5.8	1.2	19	108	3.9	0.11	0.8	0.6	0.22	B
	30	4	4	43.2	19-19.9	155-10.2	3.9	1.1	17	108	4.1	0.13	0.9	1.2	0.22	B
	30	15	13	30.4	19-18.9	155-13.2?	7.8	0.9	14	79	3.6	0.09	0.7	0.6	0.15	B
	30	17	45	1.8	19-19.9	155-11.3	8.0*	0.6	15	93	4.8	0.05	0.4		0.07	B
	30	18	28	49.5	19-45.9	155-33.7	22.1	2.8	25	88	11.0	0.11	0.7	2.2	0.14	B
DEC	1	1	50	21.5	18-57.2	155-32.5	34.0	2.6	28	242	13.3	0.31	1.8	2.7	0.16	C
	1	6	6	29.4	19-19.6	155-11.8	7.7	1.7	21	90	5.6	0.08	0.6	0.4	0.15	B
	1	10	0	46.0	19-16.6	155-29.9	7.7	2.0	22	72	5.6	0.07	0.6	0.6	0.17	B
	1	12	42	18.8	19-18.9	155-13.9	6.9	0.9	13	91	3.5	0.11	0.8	0.9	0.15	B
	1	23	28	3.1	19-20.5	155-9.5?	7.7	1.7	20	166	3.0	0.12	1.0	0.6	0.14	C
	2	0	19	5.5	19-22.9	155-15.3	27.6	1.0	15	86	0.9	0.18	0.9	1.7	0.10	B
	2	21	18	19.5	19-22.2	155-23.0	4.8	1.4	12	76	3.7	0.06	0.4	0.7	0.10	B
	3	2	30	38.4	19-25.3	155-25.8	8.2	2.6	28	43	6.1	0.06	0.5	0.4	0.14	B
	3	6	20	50.1	19-20.9	155-9.3	7.7	0.4	13	197	2.4	0.17	1.2	0.7	0.13	C
	3	9	38	43.3	19-19.5	155-18.6	27.1	2.0	21	75	2.4	0.21	1.2	1.9	0.14	B
	3	13	52	37.2	19-22.9	155-22.8	8.0*	1.1	11	91	5.1	0.05	0.4		0.07	B
	3	14	34	36.4	19-19.3	155-13.4	8.0*	0.9	15	204	7.2	0.10	0.7		0.10	C
	4	0	8	14.1	19-18.8	155-13.3	5.9	1.6	13	79	3.3	0.10	0.7	0.9	0.14	B
	4	0	28	0.6	19-11.3	155-17.2	8.0*	2.0	17	223	16.3	0.33	2.0		0.27	C
	4	4	4	31.0	19-45.9	155-34.5	21.0	1.2	14	147	12.4	0.13	1.0	2.8	0.11	B
	4	5	6	18.6	19-19.6	155-13.9	8.0*	1.0	14	80	4.8	0.04	0.4		0.09	B
	4	7	15	33.5	19-24.4	155-24.1?	7.5	1.8	24	58	7.1	0.05	0.6	1.6	0.16	B
	4	9	26	59.3	19-23.2	155-26.8	8.0	1.2	12	157	1.9	0.08	0.8	0.5	0.11	C
	4	9	47	28.6	19-20.6	155-9.1	4.8	1.7	22	69	3.0	0.08	0.6	0.6	0.17	B
	4	20	18	29.2	18-54.9	155-32.9	41.3	3.0	32	252	14.4	0.40	2.1	2.8	0.14	C
	4	20	23	33.2	19-25.3	155-23.6?	0.9	1.8	24	75	7.5	0.20	1.5	2.8	0.30	C
	5	1	30	51.4	19-25.4	155-23.7	4.7	1.4	13	133	6.6	0.09	0.7	1.0	0.14	B
	5	13	20	55.8	19-22.6	155-23.8	6.8	1.3	16	101	4.5	0.09	0.7	0.8	0.16	B

## SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
DEC	5	16	0	3.3	19-21.1	155- 7.8	3.6	1.0	18	81	4.1	0.11	0.8	1.3	0.21	B
	5	18	38	3.4	19-21.1	155- 7.4?	0.6	1.2	16	128	4.7	1.80	0.9	6.7	0.19	C
	6	6	4	15.7	19-10.6	155-37.7	6.2	2.3	19	101	8.0	0.18	1.0	1.1	0.22	C
	6	12	46	45.4	19-24.9	155-16.1	11.9	1.3	19	92	1.5	0.04	0.4	0.4	0.07	B
	6	17	24	28.3	19-11.8	155-16.1	44.0	2.4	30	183	10.6	0.23	1.1	2.1	0.13	C
	7	5	4	42.9	19-22.6	155- 5.3	3.7	0.9	15	129	6.6	0.10	0.8	1.2	0.15	B
	7	7	53	7.2	19-21.8	155-12.6?	2.5	1.7	20	57	1.7	0.06	0.5	1.1	0.15	B
	7	12	45	3.4	19-18.4	155- 2.7	33.0		26	248	2.8	0.27	1.4	1.9	0.11	C
	8	1	56	50.3	18-52.0	155-33.1	8.0*		18	286	42.8	1.07	6.9		0.24	D
	8	3	40	14.3	19-22.3	155- 7.0	2.8	1.9	21	100	5.0	0.11	0.7	1.2	0.18	B
	8	5	23	35.9	19-17.1	155-22.5?	4.3	1.8	16	131	10.5	0.20	1.2	1.6	0.21	C
	8	5	55	21.0	19-20.7	155-12.4	6.1		15	68	5.2	0.08	0.5	0.7	0.11	B
	8	13	17	47.8	19-20.9	155- 6.7	8.0*	2.0	12	94	6.0	0.12	1.0		0.18	B
	8	16	38	6.0	19-20.4	155- 8.9	6.7	2.4	27	68	3.5	0.08	0.6	0.5	0.17	B
	8	17	15	19.8	19-23.3	155-21.8	5.1		18	86	3.8	0.10	0.6	1.0	0.15	B
	9	5	41	27.0	18-55.3	155-32.6	38.7		24	257	14.4	0.59	2.9	4.2	0.14	D
	9	6	30	35.5	19-24.2	155-24.3	2.0	1.6	17	125	6.6	1.51	0.7	5.6	0.15	C
	9	7	27	34.9	19- 6.4	155-38.4	51.9*		12	295	36.7	0.22	3.3		0.09	D
	9	10	59	58.4	19-20.9	155- 9.3	6.8	2.0	26	65	2.3	0.08	0.6	0.5	0.19	B
	10	3	20	4.2	19-26.7	155-51.3	8.0*		9	315	49.3	0.55	4.0		0.15	D
	10	5	3	56.6	19-19.4	155-15.6	6.8	0.6	18	102	3.4	0.09	0.6	0.7	0.13	B
	10	9	34	37.7	19-20.9	155-12.8	10.2	1.6	20	78	3.1	0.06	0.4	0.8	0.07	A
	10	13	45	31.1	19-19.8	155- 9.4	7.6	1.8	16	83	4.3	0.09	1.1	0.9	0.17	B
	10	15	52	57.1	19-18.8	155-47.1	5.5	2.5	13	183	10.5	0.11	1.2	1.0	0.08	C
	10	18	55	36.9	19-21.3	155-23.5	7.1	1.6	12	120	2.0	0.11	0.6	0.8	0.10	B
	10	19	34	50.5	19-10.8	155-19.8	45.1	2.5	21	178	13.4	0.31	1.4	2.9	0.15	C
	10	19	39	35.6	19-11.0	155-21.3	35.9	1.8	17	173	11.8	0.29	1.5	2.9	0.16	C
	11	0	32	40.5	19-20.5	155- 9.2	5.7		21	134	3.1	0.11	0.8	0.8	0.20	B
	11	0	33	8.6	19-18.5	155-13.4	6.7	1.9	16	82	2.7	0.10	0.8	0.7	0.17	B
	11	0	39	34.8	19-19.7	155-24.1	7.6	1.7	18	108	1.8	0.07	0.7	0.5	0.12	B



# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MIN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
DEC	11	3	44	10.3	19-19.8	155-11.5	5.6	1.1	18	92	5.0	0.10	0.8	0.7	0.19 B
	11	4	52	29.9	19-21.5	155-16.5	21.1	0.8	13	155	1.9	0.24	1.1	2.1	0.09 C
	11	11	2	3.4	19- 8.7	155-31.4	38.9	2.9	29	142	6.4	0.25	1.2	2.3	0.15 B
	11	12	24	47.6	20- 9.1	155-50.0?	40.1*		14	294	6.2	0.33	3.4		0.20 D
	12	0	21	35.1	19-20.6	155- 7.9?	7.7		18	83	4.4	0.07	0.7	0.5	0.14 B
	12	5	30	17.9	20-26.1	155-52.5?	39.9		17	311	35.4	0.20	1.4	2.0	0.08 C
	12	11	51	50.2	19-18.8	155-47.2	5.3		15	165	10.3	0.09	0.8	0.8	0.08 B
	12	16	7	32.2	19-24.9	155-24.4	8.0*	2.0	20	121	7.2	0.09	0.8		0.15 C
	12	18	20	36.3	19-21.2	155- 4.9	8.1	1.9	19	93	4.2	0.06	0.7	0.5	0.09 A
	12	22	41	25.9	19-44.6	156- 1.9	41.8	2.9	24	284	21.2	0.21	1.3	2.0	0.10 C
	13	2	16	16.4	19-10.9	155-18.5	6.1	1.4	12	91	2.0	0.14	0.4	1.1	0.06 A
	13	3	23	10.0	19-19.3	155-13.5	9.9		14	75	4.3	0.07	0.5	1.2	0.07 A
	13	4	25	56.0	19-21.0	155-17.6	32.1	4.6	34	33	1.7	0.13	0.8	1.3	0.15 B
	13	4	32	48.0	19-20.9	155-17.9	32.1	2.6	31	43	1.7	0.15	0.9	1.4	0.14 B
	13	4	41	39.4	19-22.1	155-17.2	28.3		22	40	2.4	0.16	0.9	1.6	0.11 B
	13	4	44	1.0	19-23.2	155-26.1	7.6	2.0	23	61	2.9	0.09	0.7	0.7	0.14 B
	13	5	16	43.6	19-21.4	155-17.4	29.1	1.6	20	42	2.3	0.17	0.9	1.7	0.12 B
	13	6	44	32.3	19-20.2	155-12.1	7.0	1.9	25	77	4.8	0.07	0.6	0.5	0.16 B
	13	7	21	19.6	19-20.6	155-17.8	29.2	1.6	22	50	1.1	0.15	0.8	1.5	0.12 B
	13	7	25	27.3	19-24.5	155-25.5	8.0*	1.6	22	67	5.3	0.06	0.6		0.13 B
	13	7	42	11.2	19-21.1	155-17.4	32.1	2.1	27	41	1.8	0.14	0.8	1.4	0.14 B
	13	7	55	14.5	19-19.6	155-12.1	8.0*		14	87	5.4	0.05	0.4		0.08 B
	13	13	20	33.8	19-21.9	155-17.8	23.5	1.9	22	31	3.1	0.10	0.6	1.0	0.10 B
	13	18	48	10.0	19-20.4	155-17.9	29.9	1.2	17	67	4.6	0.23	1.1	2.4	0.14 B
	14	4	15	28.6	19-28.6	155-54.5?	8.6	2.6	10	150	1.5	0.32	3.0	2.4	0.21 C
	14	4	36	22.5	19-28.3	155-52.4	3.6	2.6	16	111	5.1	0.17	1.5	1.7	0.25 C
	14	6	7	5.6	19-42.9	155-10.7	44.8	2.5	32	137	15.7	0.25	1.0	2.4	0.14 B
	14	11	20	15.1	19-20.9	155- 8.4	5.6	1.7	27	72	3.3	0.08	0.6	0.6	0.18 B
	14	16	46	39.8	19-18.9	155-13.7	6.9	3.5	32	68	3.6	0.06	0.5	0.3	0.15 B
	14	17	2	0.8	19-20.0	155-12.0	7.2		14	81	5.2	0.10	0.7	0.7	0.15 B

## SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MIN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
DEC	14	18	32	59.3	19-20.7	155-9.0	5.1	2.2	28	70	2.9	0.09	0.7	0.6	0.20	B
	15	14	15	58.7	19-27.1	155-21.8	8.6	1.9	17	79	2.1	0.04	0.4	0.8	0.07	A
	15	15	26	51.7	19-20.5	155-11.1	6.9	1.6	26	76	3.7	0.06	0.6	0.4	0.17	B
	15	21	7	48.8	19-22.8	155-24.6	8.0*	1.6	13	109	5.3	0.05	0.4		0.07	B
	15	23	32	44.4	19-17.5	155-18.9	28.7	2.1	24	131	0.9	0.13	0.8	1.3	0.12	B
	16	5	37	1.3	19-18.8	155-13.9	5.6	1.3	22	69	3.4	0.08	0.6	0.6	0.18	B
	16	7	33	47.1	19-20.4	155-9.4	6.0	1.7	18	73	3.1	0.11	0.8	0.9	0.23	B
	16	14	42	15.1	19-20.1	155-12.5	7.3	2.4	27	73	4.7	0.06	0.5	0.4	0.16	B
	16	22	9	22.7	19-20.7	155-8.9	4.8	1.7	20	67	3.1	0.08	0.7	0.7	0.19	B
	17	1	47	52.5	19-19.0	155-15.4	9.6		12	128	4.1	0.21	0.9	1.9	0.09	B
	17	6	0	33.9	19-19.4	155-13.6	8.4		15	77	4.4	0.05	0.4	0.3	0.10	B
	17	18	25	2.6	19-22.0	155-23.6?	8.4		12	105	3.4	0.08	0.5	0.6	0.09	B
	17	21	14	40.2	18-55.6	155-32.7	38.4	2.8	30	247	14.0	0.41	2.1	3.1	0.13	C
	17	21	46	53.7	18-60.0	155-20.3?	29.7		20	240	22.1	0.41	2.2	3.9	0.14	C
	17	22	0	41.1	19-22.0	155-12.4	3.5	1.5	11	79	1.7	0.06	0.3	1.0	0.06	A
	18	3	35	32.6	19-22.4	155-24.6	8.1	2.0	23	51	4.7	0.06	0.6	0.4	0.12	B
	18	10	41	2.7	19-18.7	155-13.4	6.4	1.6	16	78	3.1	0.10	0.7	0.7	0.16	B
	18	13	39	9.5	19-21.0	155-8.0	4.3		22	78	3.8	0.10	0.7	0.8	0.21	B
	18	18	42	41.9	19-18.2	155-13.2	8.3	0.8	14	93	2.2	0.07	0.7	0.5	0.11	B
	18	19	25	16.7	19-18.4	155-13.2	8.3	0.3	12	89	2.7	0.08	0.7	0.5	0.11	B
	18	22	1	41.8	19-20.1	155-9.8	9.1	0.8	15	81	3.6	0.07	0.5	1.1	0.08	A
	18	23	30	23.8	19-18.1	155-14.2?	7.1		14	119	2.4	0.13	0.7	1.0	0.13	B
	19	21	57	34.6	19-26.8	155-27.4	8.0*	1.8	17	105	8.0	0.08	0.6		0.13	B
	19	23	17	47.6	18-56.5	155-32.8	38.6	3.2	33	239	13.3	0.25	1.4	2.1	0.15	C
	20	2	31	27.4	19-22.2	155-11.3	7.4	1.1	16	90	2.5	0.07	0.6	0.4	0.12	B
	20	5	1	12.9	19-40.8	155-14.9	44.3	2.5	24	107	23.2	0.27	1.1	2.7	0.13	B
	20	6	32	46.8	19-19.6	155-13.1	6.0	1.6	24	73	4.7	0.08	0.6	0.6	0.19	B
	20	10	40	42.3	19-18.5	155-13.9	6.2	1.6	17	73	2.8	0.08	0.7	0.6	0.15	B
	20	10	57	39.7	19-17.8	155-15.2	6.7	0.6	16	159	3.4	0.10	0.6	0.6	0.11	C
	20	14	30	15.1	19-22.1	155-23.7?	6.8	1.5	14	75	3.5	0.10	1.0	2.0	0.19	B



## SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MIN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
DEC	20	17	18	29.9	19-19.8	155-9.3	9.4	0.6	14	82	4.2	0.09	0.5	1.2	0.09 A
	20	19	22	6.3	19-19.0	155-15.6	6.2	0.5	16	116	3.8	0.10	0.7	0.7	0.16 B
	20	21	27	7.9	19-19.3	155-14.5	6.9	0.6	17	94	4.6	0.10	0.7	0.7	0.15 B
	21	1	46	56.7	18-52.7	155-32.9	39.0		25	276	16.8	0.68	3.5	4.4	0.14 D
	21	4	15	5.0	19-19.8	155-12.1	6.2	1.9	29	83	5.5	0.07	0.6	0.5	0.19 B
	21	13	48	26.9	19-19.9	155-28.2	8.1		16	101	5.0	0.09	0.8	0.6	0.15 B
	22	3	29	11.3	19-23.1	155-24.6?	8.1	1.6	18	61	5.5	0.07	0.5	0.7	0.12 B
	22	6	43	8.0	19-19.2	155-13.6	8.4		14	116	4.1	0.11	0.8	1.8	0.10 B
	22	7	15	55.6	19-24.2	155-15.9	2.1	0.8	9	109	1.3	0.04	0.3	0.2	0.05 A
	22	17	3	40.7	19-22.1	155-23.9?	8.0	1.7	21	75	3.6	0.06	0.6	0.4	0.15 B
	22	17	13	53.8	19-22.8	155-24.8	8.0*	1.7	11	113	4.9	0.06	0.5		0.08 B
	22	18	3	36.9	19-22.9	155-24.8	8.0*		11	110	5.0	0.06	0.5		0.08 B
	22	18	18	5.0	19-24.5	155-24.8	5.5		14	135	6.2	0.09	0.6	0.7	0.13 B
	22	18	19	29.1	19-21.4	155-16.7	16.3	1.7	24	62	2.2	0.10	0.7	1.2	0.13 B
	23	2	28	5.4	19-23.5	155-23.2	8.0*		15	103	6.1	0.06	0.5		0.11 B
	23	3	44	56.6	19-22.8	155-28.8?	8.4	2.0	26	84	2.2	0.11	0.8	0.7	0.21 F
	23	3	58	29.3	19-22.3	155-23.8	8.3	2.4	32	35	4.0	0.05	0.5	0.4	0.14 B
	23	4	5	13.5	19-24.7	155-16.5	1.1	0.9	11	96	0.9	0.05	0.3	0.3	0.09 A
	23	9	59	19.6	19-19.6	155-15.8	5.7	1.5	21	100	2.9	0.08	0.6	0.6	0.17 B
	23	12	9	55.6	18-56.3	155-32.3	32.8		19	249	14.3	0.72	3.6	5.3	0.15 D
	23	17	19	30.0	19-19.4	155-13.9	6.3	2.0	29	62	4.4	0.07	0.6	0.5	0.18 B
	23	17	37	17.0	19-25.8	155-33.8	41.6	2.6	19	134	7.4	0.28	1.1	2.4	0.08 B
	23	17	50	17.0	19-21.8	155-12.5?	0.6	1.7	17	58	1.8	0.08	0.6	2.7	0.15 B
	23	20	42	0.8	19-20.3	155-12.1	6.0	1.7	26	75	4.6	0.08	0.6	0.6	0.21 B
	24	0	42	13.7	18-54.9	155-33.1	40.0		22	262	14.1	0.63	3.1	4.5	0.13 D
	24	1	10	53.5	19-19.5	155-14.0	6.3	1.7	25	65	4.6	0.08	0.6	0.5	0.17 B
	24	6	44	2.1	19-22.0	155-24.7	7.9	1.8	22	50	4.2	0.06	0.6	0.5	0.15 B
	24	8	49	53.4	19-18.9	155-13.6	4.0	1.6	16	84	3.4	0.11	0.8	1.2	0.22 B
	24	19	0	49.8	19-18.1	155-12.3?	2.3		13	124	2.9	0.13	0.9	3.2	0.21 C
	24	20	17	6.1	19-37.8	156-15.2	11.9*	2.9	28	263	38.5	0.40	2.6		0.16 D

# SUMMARY OF SEISMIC EVENTS (CONTINUED)

	1973	HR	MM	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
DEC	25	0	7	8.6	19-24.1	155-15.9	1.9	0.8	8	111	1.3	0.07	0.4	0.3	0.08	A
	25	1	46	40.1	19-23.4	155-24.0	4.9	1.5	13	96	6.0	0.09	0.7	1.0	0.14	B
	25	2	44	2.8	19-24.5	155-24.3	8.0*	1.7	17	69	6.9	0.05	0.5		0.10	B
	25	8	4	12.5	19-18.4	155-13.5	5.3	1.7	16	85	2.6	0.10	0.7	0.7	0.17	B
	25	8	38	6.9	19-18.3	155-13.4	6.1	1.8	20	84	2.4	0.10	0.8	0.6	0.19	B
	25	9	51	26.1	19-22.2	155-12.7	5.9	0.1	14	95	1.0	0.09	0.6	0.8	0.11	B
	25	14	4	47.4	19-18.0	155-13.2	7.8	2.9	27	98	2.0	0.05	0.5	0.3	0.12	B
	25	14	6	4.1	19-17.7	155-13.6	6.1	1.4	14	100	1.2	0.15	1.0	0.9	0.19	B
	25	14	6	55.2	19-18.3	155-13.5	6.6	1.9	24	79	2.3	0.08	0.6	0.5	0.16	B
	25	14	8	14.1	19-18.2	155-13.2	6.4	1.2	16	91	2.3	0.12	0.9	0.8	0.16	B
	25	14	28	27.4	19-18.4	155-13.2	6.6	1.1	14	89	2.7	0.11	0.7	0.8	0.12	B
	25	14	39	6.9	19-18.4	155-13.2	6.7	0.7	14	88	2.6	0.11	0.8	0.7	0.14	B
	25	16	47	29.2	19-17.9	155-13.1?	8.2	0.5	13	103	1.7	0.09	0.8	0.5	0.13	B
	25	22	39	39.2	19-20.7	155- 7.7	4.2	1.9	24	84	4.5	0.10	0.7	0.8	0.21	B
	25	22	41	21.0	19-21.3	155- 7.5	0.6*	0.7	14	85	7.3	0.07	0.5		0.12	C
	25	22	53	39.4	19-17.5	155-13.2	6.4	1.8	27	118	1.1	0.07	0.5	0.4	0.15	B
	25	23	24	32.8	19-22.3	155-11.3	5.6	1.0	19	92	2.7	0.06	0.5	0.6	0.11	B
	26	0	9	18.7	19-17.8	155-13.1	6.6	2.7	28	107	1.6	0.06	0.5	0.4	0.15	B
	26	0	54	25.9	19-18.5	155-13.5	6.4	1.2	19	78	2.7	0.08	0.6	0.5	0.14	B
	26	4	3	28.1	19-18.7	155-28.1?	8.3	1.9	19	53	4.8	0.10	0.8	0.7	0.21	B
	26	6	0	14.8	19-20.6	155-13.0	6.5	0.2	16	68	3.6	0.11	0.7	0.9	0.16	B
	26	6	23	54.1	19-23.4	155-24.0	8.0*	1.5	15	111	6.1	0.04	0.4		0.09	B
	26	12	58	47.8	19-22.1	155- 4.5	4.2	1.9	17	139	5.0	0.14	1.0	1.3	0.20	B
	26	14	34	8.6	19-22.4	155-11.2	4.7	0.8	13	95	2.4	0.09	0.4	1.1	0.10	B
	27	3	35	19.1	19-20.0	155-11.7	5.0	1.6	21	84	5.0	0.10	0.7	0.9	0.21	B
	27	3	46	8.0	19-23.3	155-22.9?	6.8	1.7	21	89	5.6	0.08	0.8	1.8	0.19	B
	27	6	8	21.6	19-23.1	155- 5.7?	0.0	1.8	22	77	7.5	4.49	0.7	8.5	0.19	C
	27	6	8	59.6	19-19.9	155-11.6	8.0*	1.1	17	86	5.1	0.03	0.3		0.07	B
	27	12	4	4.5	19-22.2	155-12.9	2.6	1.1	20	49	0.8	0.06	0.5	1.1	0.15	B
	27	18	6	24.2	20- 0.5	155-29.8	22.2	2.1	28	191	20.8	0.18	1.2	3.1	0.14	C



# SUMMARY OF SEISMIC EVENTS (CONTINUED)

1973	HR	MN	SEC	LAT N	LONG W	DEPTH	MAG	NO	GAP	DMIN	ERT	ERH	ERZ	MD	Q
DEC	27	19	0	4.0	19-22.0	155-26.0?	7.7	2.5	31	62	3.0	0.06	0.6	1.0	0.18 B
	27	19	1	45.8	19-22.4	155-26.1?	8.0	1.2	23	73	2.8	0.08	0.7	1.3	0.17 B
	28	0	49	51.7	19-17.3	155-27.6?	7.6	1.9	18	93	2.3	0.14	1.1	1.0	0.26 B
	28	1	54	8.2	18-56.1	155-32.8	37.2	2.7	28	243	13.6	0.46	2.3	3.5	0.15 C
	28	5	33	6.7	19-22.2	155-11.6	5.8	2.1	22	89	2.6	0.06	0.5	0.6	0.15 B
	28	11	43	31.9	19-20.1	155- 7.9?	7.7	1.8	20	89	5.0	0.09	0.9	0.8	0.17 F
	28	16	59	48.6	19-21.9	155-11.3	2.8		8	130	2.6	0.07	0.4	1.3	0.04 B
	28	19	23	24.5	19-51.7	155-49.3	47.1	2.0	15	174	19.4	0.25	1.0	2.4	0.06 C
	29	2	40	56.0	19-21.4	155-24.6	7.7	1.6	13	109	3.2	0.06	0.6	0.4	0.09 B
	29	4	46	17.8	19-21.8	155- 5.4	8.0*	1.2	16	79	5.6	0.07	0.8		0.19 B
	29	7	27	28.8	19-19.5	155-14.0	6.8	1.6	22	64	4.7	0.07	0.6	0.5	0.16 B
	29	12	24	23.6	19-27.3	155-21.9	9.3	1.8	12	105	2.1	0.12	0.6	1.2	0.06 A
	29	21	36	41.8	19-58.3	155-20.9	11.3	1.7	12	201	9.1	0.27	1.9	1.4	0.17 C
	30	1	48	49.8	19-23.1	155-24.5?	7.4	1.5	17	94	3.5	0.12	1.1	1.8	0.19 B
	30	2	12	40.7	19-19.3	155-15.1	7.3	1.8	25	86	4.2	0.04	0.4	0.3	0.10 B
	30	11	13	47.0	19-28.9	155-46.2	5.3	2.7	17	106	15.6	0.08	0.5	0.7	0.11 C
	30	11	25	56.5	19-30.5	155-46.5	5.7	1.8	13	190	15.3	0.13	1.3	1.0	0.13 C
	30	12	4	17.4	19-30.6	155-46.6	6.4	2.4	13	191	15.1	0.10	1.1	0.7	0.10 C
	30	18	41	27.7	19-22.0	155-11.4	4.3	1.5	11	132	2.8	0.41	1.4	4.9	0.15 B
	30	22	47	13.6	19-19.4	155-10.1?	8.0*		6	297	5.0	0.35	5.5		0.11 D
	30	23	55	26.6	19-12.0	155-29.3?	5.9	1.5	22	76	5.2	0.09	0.7	0.6	0.16 B
	31	7	30	15.8	19-20.9	155-13.1	8.0*	1.0	17	87	5.5	0.05	0.4		0.09 B

Table 3. Felt earthquakes

<u>Date</u>	<u>Time</u>			<u>Magnitude</u>	<u>Felt report</u>
	<u>H</u>	<u>M</u>	<u>S</u>		
Oct 1	06	43	06.6	3.9	Kamuela, Honokaa, Hilo, Puu Anahulu, Kawaihae, Kealahakua, Kohala, Honokahau
2	06	51	14.9	3.3	Honokaa
2	07	18	14.4	3.1	Honokaa
9	01	53	45.2	4.6	Island-wide Hawaii
9	02	01	02.4	4.3	Volcano, Kapapala, Honokaa, Hilo
9	02	19	43.4	2.7	Kapapala
9	02	23	47.5	2.5	Kapapala
9	02	50	36.8	2.7	Kapapala
9	03	27	28.9	2.6	Kapapala
9	04	59	49.1	2.9	Kapapala
13	06	11	11.6	4.3	Kamuela, Honokaa, Maui (Haleakala, and Kula)
18	02	31	50.0	3.6	Kapapala
22	05	19	47.6	2.9	Honokaa
23	22	34	07.1	2.5	Kapapala
26	07	53	19.5	4.3	Kapapala, Hilo, Volcano, Pahala, Kamuela, South Kona, Honokaa
Nov 3	11	12	41.7	4.0	Kapapala, Glenwood
5	22	05	57.6	2.5	Kapapala, Volcano
9	02	03	25.5	2.8	Hawaiian Volcano Observatory
10	07	20	28.6	?	Honokaa
11	23	38	58.0	4.1	Honokaa, South Kona, Hilo
28	02	59	14.7	3.8	Honokaa, Keaau, Hilo, Mt. View, Volcano, Kapapala
28	19	29	46.6	3.2	Kapapala, Volcano
13	04	25	56.0	4.6	Island-wide Hawaii
14	16	46	39.8	3.5	Hilo

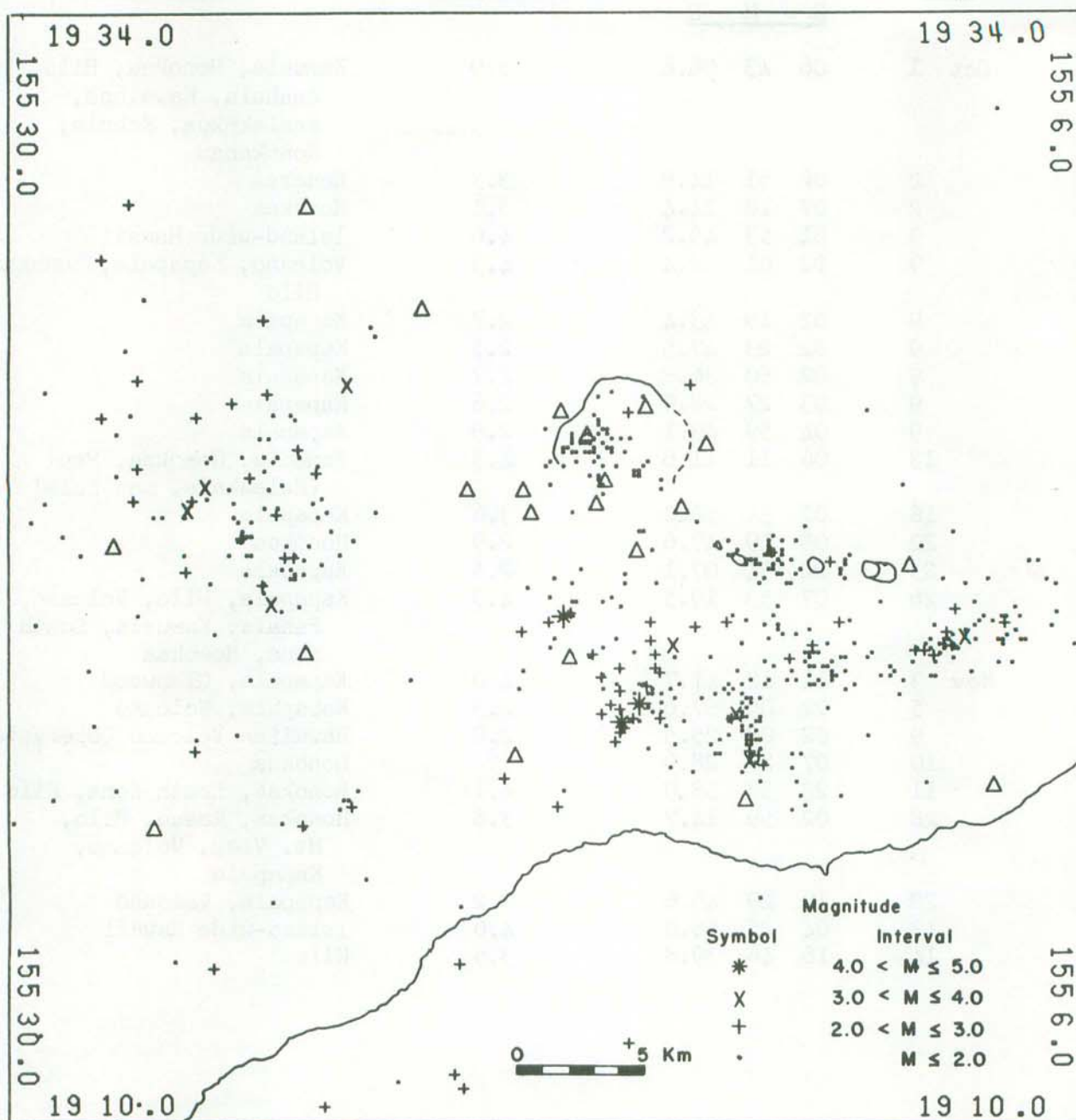


Figure 1.--Plot of epicenters in the Kilauea region. Triangles are seismometer locations. Kilauea Caldera and the major pit craters on the east rift are shown in outline. The Pacific Ocean lies in the lower right portion of the illustration.



Table 4. Seismometer stations in Hawaii operated by the U. S. Geological Survey.

STATION NAME	CODE	LAT-N	LONG-W	ELEV	TYPE	CAL	VCO	RADIO	REMARKS
AHUA	AHU	19 22.40	155 15.90	1070	3	6.0	2380		
AINAHOU	AIN	19 22.50	155 27.62	1524	1	6.0	1700	RF9	
CAPTAIN COOK	CAC	19 29.29	155 55.09	323	1	6.0	2720	RF8	
CONE PEAK	CPK	19 23.70	155 19.70	1038	3	1.34			
DESERT	DES	19 20.20	155 23.30	815	3	1.34			
ESCAPE ROAD	ESR	19 24.68	155 14.33	1177	1	6.0	1360		
HALE POHAKU	HPU	19 46.85	155 27.50	3396	1	5.6	1360	RF6	
HILINA PALI	HLP	19 17.96	155 18.63	707	3	6.0	2040		
HUALALAI	HUA	19 41.25	155 50.32	2189	1	5.2	1700	RF4	
KAAPUNA	KAA	19 15.98	155 52.28	524	1	5.5	1020	RF12	
KAENA	KAE	19 17.35	155 7.95	37	1	6.0	2380	RF6	
KAHUKU	KHU	19 14.90	155 37.10	1939	1	5.7	1700	RF3	
KAPAPALA RANCH	KPR	19 16.40	155 26.70	610	1	6.5	1700	RF1	
KEANAKOLU	KKU	19 53.39	155 20.58	1863	1	4.8	2380	RF7	
KIPUKA NENE	KPN	19 20.10	155 17.40	924	3	1.34			
KOHALA	KOH	20 7.69	155 46.77	1166	1	1.5	2380	RF2	
M12	M12	19 23.69	155 18.45	1116	1	6.0	2040		
MAU	MAU	19 22.34	155 12.52	994					Temporary
MAUNA LOA	MLO	19 29.80	155 23.30	2010	1	6.5	1360		
MAUNA LOA X	MLX	19 27.60	155 20.70	1475	3	1.34			
MAKAOPUHI	MPR	19 22.07	155 9.85	881	1	5.7	2720	RF5	
MOKUAWEOWEO	MOK	19 29.28	155 35.98	4104	1	6.5	2040	RF3	
MOUNTAIN VIEW	MTV	19 30.25	155 3.75	409	1	6.2	680	RF8	
NATIONAL GUARD	NAG	19 42.12	155 1.72	18	1	6.0	1360	RF3	
NORTH PIT	NPT	19 24.90	155 17.00	1115	3	1.34			
OUTLET	OTL	19 23.38	155 16.94	1038	3	5.0			
PAU	PAU	19 22.62	155 13.10	994					Installed 11/12/73
POLIOKEAWE PALI	POL	19 17.02	155 13.47	169	1	6.0	1360	RF12	
PUU HULUHULU	PHH	19 22.45	155 12.66	988	3				Discontinued 11/10/73
PUU HONUAULA	PHO	19 28.90	154 53.40	215	1	6.5	2720	RF1	
PUU PILI	PPL	19 9.50	155 27.87	35	1	4.4	1360	RF11	
RIM	RIM	19 23.90	155 16.60	1128	1	6.0	1020		
SOUTH POINT	SPT	18 58.91	155 39.92	244	1	7.8	2040	RF7	
WAHAULA	WHA	19 19.90	155 2.92	29	1	6.0	680	RF9	
WALDRON LEDGE	WLG	19 25.49	155 15.69	1067	3				
OPTICAL SEISMOGRAPHS									
HALEAKALA Z	HAL	20 46.00	156 15.00	2090	3	0.71			
HALEAKALA EW	HAE	20 46.00	156 15.00	2090	0	1.0			Wood-Anderson
HALEAKALA NS	HAN	20 46.00	156 15.00	2090	0	1.0			Wood-Anderson
HILO Z	HIL	19 43.20	155 5.30	20	3	1.0			
HILO EW	HIE	19 43.20	155 5.30	20	0	1.0			Wood-Anderson
HILO NS	HIN	19 43.20	155 5.30	20	0	1.0			Wood-Anderson
KIPAPA	KIP	21 25.40	158 .90	76	3	0.56			
UWEKAHUNA Z	UWE	19 25.40	155 17.60	1240	3	0.7			
UWEKAHUNA Z	USZ	19 25.40	155 17.60	1240	4	1.0			
UWEKAHUNA EW	USE	19 25.40	155 17.60	1240	4	1.0			
UWEKAHUNA PEZ		19 25.40	155 17.60	1240					15-90 Press Ewing
UWEKAHUNA PEE		19 25.40	155 17.60	1240					
UWEKAHUNA PEN		19 25.40	155 17.60	1240					

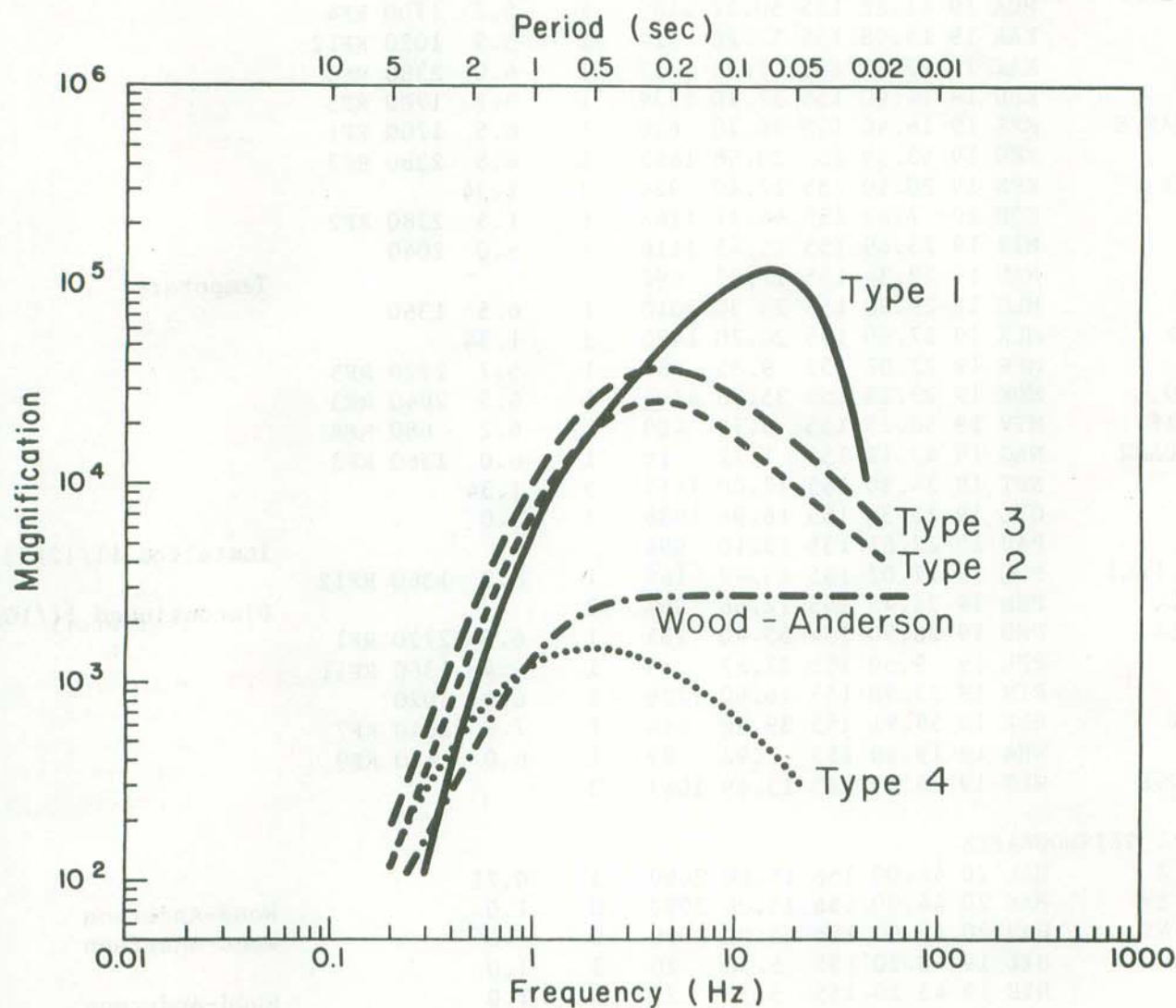


Figure 2.--System response curves for the Wood-Anderson torsion seismograph and for the four different types of seismometer-amplifier (or galvanometer) combinations in use by the Hawaiian Volcano Observatory.



Table 5.--Seismic Instrumentation Types

Type 1. Consists of:

- a) EV-17 - Electrotech EV-17 1.0 sec. period moving magnet vertical component seismometer or horizontal component adjusted for an output of 0.5 volts/cm/sec and 0.8 critically damped.
- b) Preamp/VCO - Develco Model 6202 voltage controlled oscillator or a USGS/NCER Model JE202. 3 db points for bandpass filter at 0.1 Hz and 30 Hz. Signals are transmitted on audio FM carrier over cable or FM radio link to HVO.

Type 2. Consists of:

- a) EV-17 - Electrotech EV-17 1.0 sec. period moving magnet vertical or horizontal component seismometer.
- b) 3.5 Hz galvanometer with appropriate shunt resistances for critical damping. System is poorly calibrated.

Type 3. Consists of:

- a) EV-17 Electrotech EV-17 (as described above), Hall-Sears HS-10 0.5 sec. period moving coil seismometer or Observatory-built 0.8 sec. period moving coil seismometer with HVO-built solid state seismic preamplifier (voltage gain, 200X), direct signal transmission over cable to HVO and HVO-built solid state amplifier and galvanometer driver, or Observatory-built electromagnetic seismometer with 2 Hz galvanometer. Peak magnification approximately 40,000 at 4 Hz.

Type 4. Consists of:

Sprengnether short period vertical and horizontal seismometers (E-W) with 1.5 sec. galvanometers, coupling factor = 0.25, 2X critically damped. Peak magnification approximately 1500X at 2 Hz.

Experimental type amplifier systems are not given type numbers.



# TILTING OF THE GROUND AROUND KILAUEA CALDERA

Tilting of the ground around the summit of Kilauea is monitored daily by a short-base water-tube tiltmeter in the Uwekahuna Vault, and at irregular intervals it is measured on a regional scale by means of a network of field tilt-bases and a portable water-tube tiltmeter. The attitude of the ground surface at each tilt-base is reported in terms of north-south and east-west tilt coordinates. Both coordinates at each station were arbitrarily set equal to 500 when measurements at that station were begun. Increasing tilt coordinates correspond to northward and eastward tilting of the earth's surface; that is, to a relative subsidence toward the north and east. A one-unit change in coordinate corresponds to a tilting of 1 microradian (1 mm per km) in the direction indicated.

Location of and essential data on each tiltmeter station are listed in Table 8, Summary 69.

Table 6.--Tilt Coordinates at Uwekahuna,  
October, November, and December 1973

Date	N-S	E-W	Date	N-S	E-W
Oct. 7	727	296	Dec. 2	722	285
14	728	293	9	721	283
21	728	287	16	721	283
28	728	282	23	722	283
Nov. 4	728	281	30	721	286
11	725	293			
18	723	299			
25	723	290			

Table 7.--Tilt coordinates and changes at bases around Kilauea caldera. (See fig. 3)

Tilt base	Date (1974)	Tilt N-S	Coordinates E-W	Rate ( $10^{-6}$ rad/mo) and direction of tilting since last reading		Date of last reading (1973)
Uwekahuna (U on fig. 4)	14 Jan	754.3	291.1	5.21	N63.6°W	26 Sep
Tree Molds (TM)	14 Jan	584.7	478.0	2.06	N25.9°W	25 Sep
Sand Spit (SS)	15 Jan	992.3	722.2	3.04	S30.6°W	27 Sep
Mehana (M)	14 Jan	623.2	603.3	1.16	N15.7°E	25 Sep
Keamoku (Kea).	16 Jan	762.5	237.0	2.69	S 7.7°E	25 Sep
Ahua Kamokukolau (Kam).	15 Jan	391.7	504.1	3.50	S84.6°W	27 Sep
Kipuka Nene (KN)	17 Jan	278.9	494.5	0.56	N 7.2°W	28 Sep
Hilina Pali (HP)	17 Jan	463.2	483.9	0.98	N70.8°E	28 Sep
Kapapala Ranch (Kap).	16 Jan	477.4	527.7	1.08	S75.8°E	26 Sep

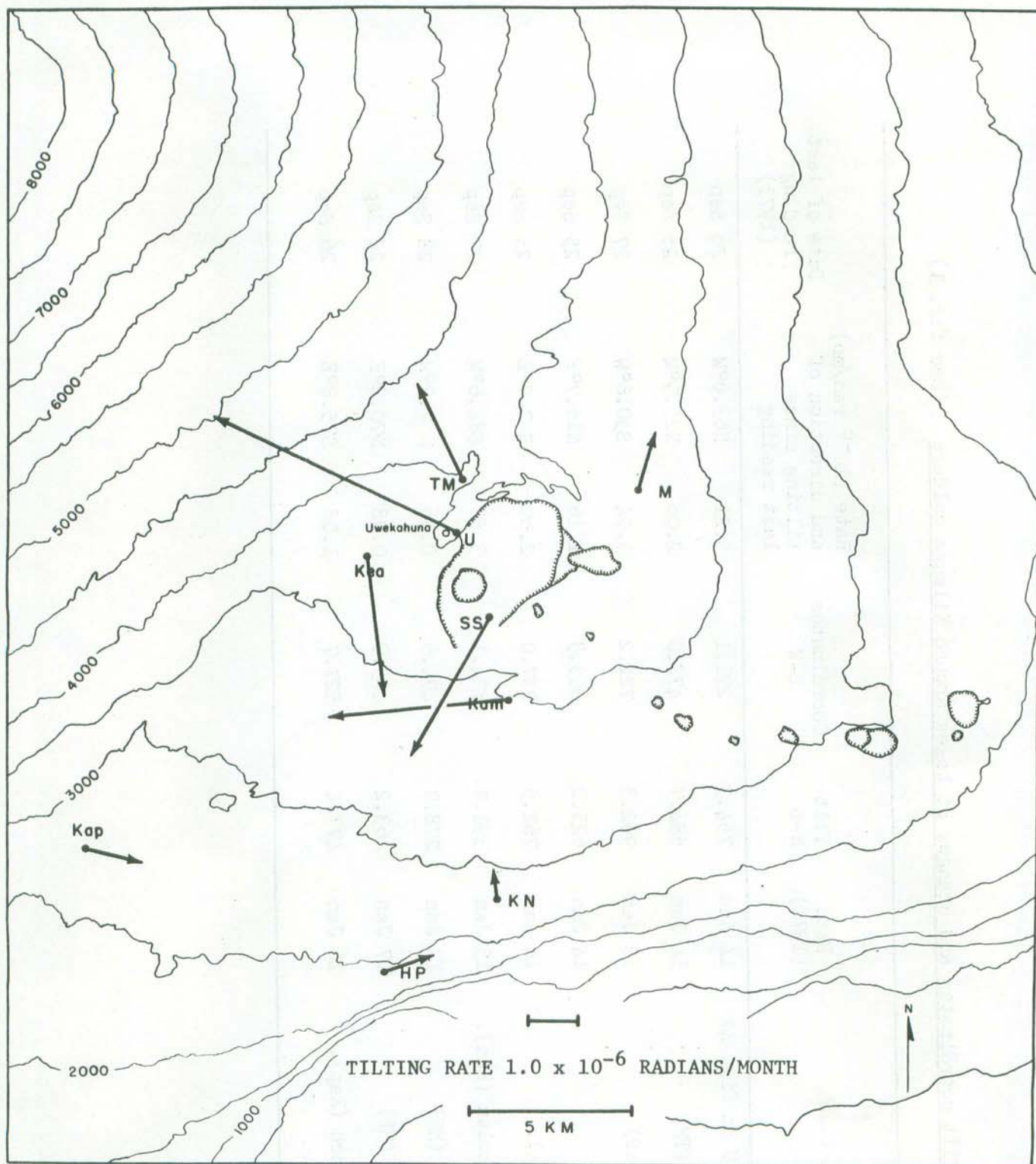


Figure 3.--Tilting of the ground around Kilauea Caldera. The vector depicting tilting at a given tilt base points in the direction of maximum relative subsidence, and its length is proportional to the rate of tilting during the measurement interval. Closed circles represent field tilt bases; open circles, short-base watertube tiltmeters. See Table 7 for explanation of abbreviations.



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