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CATALOG OF EARTHQUAKES IN SOUTHERN ALASKA

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CATALOG OF EARTHQUAKES IN SOUTHERN ALASKA
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INTRODUCTION

The Office of Earthquake Studies (formerly the National Center for Earthquake Research) of the U.S. Geological Survey (USGS) has maintained a program of telemetered seismic recording in south-central Alaska since 1971. The principal objectives of this program have been to use data recorded by this network to precisely locate earthquakes in the active seismic zones of southern Alaska, delineate seismically active faults, assess seismic risk, document potential premonitory earthquake phenomena, investigate current tectonic deformation, and study the structure and physical properties of the crust and upper mantle. A task fundamental to all of these goals is the routine cataloging of earthquake parameters for earthquakes located within and adjacent to the seismograph network.

The initial network of 10 stations, 7 around Cook Inlet and 3 near Valdez, was installed in 1971. In subsequent summers additions or modifications to the network were made. By the fall of 1973, 26 stations extended from western Cook Inlet to eastern Prince William Sound, and 4 stations were located to the east between Cordova and Yakutat. A year later 20 additional stations were installed. Thirteen of these were placed along the eastern Gulf of Alaska with support from the National Oceanic and Atmospheric Administration (NOAA) under the Outer Continental Shelf Environmental Assessment Program to investigate the seismicity of the outer continental shelf, a region of interest for oil exploration. During the subsequent years the region covered by the network has remained relatively fixed while effort has been made to improve the instrumentation and installation of the stations in order to make them more reliable.

The locations of the stations of the USGS seismograph network are plotted in Figure 1 and listed in Table 1 along with the additional stations from which readings were obtained. Each USGS station has a single, vertical-component seismometer. The stations GLB, PNL, RDT, SKN, and VLZ also have north-south- and east-west-oriented horizontal seismometers. On September 22, 1980, station CYT was moved to a new location and its station code changed to YKG.

This earthquake catalog presents origin times, focal coordinates and magnitudes for 1,289 shocks occurring in the third quarter of 1980. Readings from a total of 67 stations were used to locate the shocks, including 11 stations operated by the NOAA Alaska Tsunami Warning Center (ATWC, formerly Palmer Observatory), 2 stations operated by the Geophysical Institute of the University of Alaska (U. of A.), and 4 stations operated in southwest Yukon Territory by the Earth Physics Branch of the Department of Energy, Mines and Resources, Canada.

Earthquakes in south-central Alaska as small as magnitude 3.0 have been routinely located by the National Earthquake Information Service of the USGS and its predecessor since the great Alaska earthquake of 1964 and are published in the reports "Preliminary Determination of Epicenters" (PDE). In contrast, the shocks included in this catalog are as small as magnitude 1.0 and most are smaller than magnitude 3.0. Data for the larger historic earthquakes that occurred in south-central Alaska through 1975 have been tabulated by Meyers (1976).

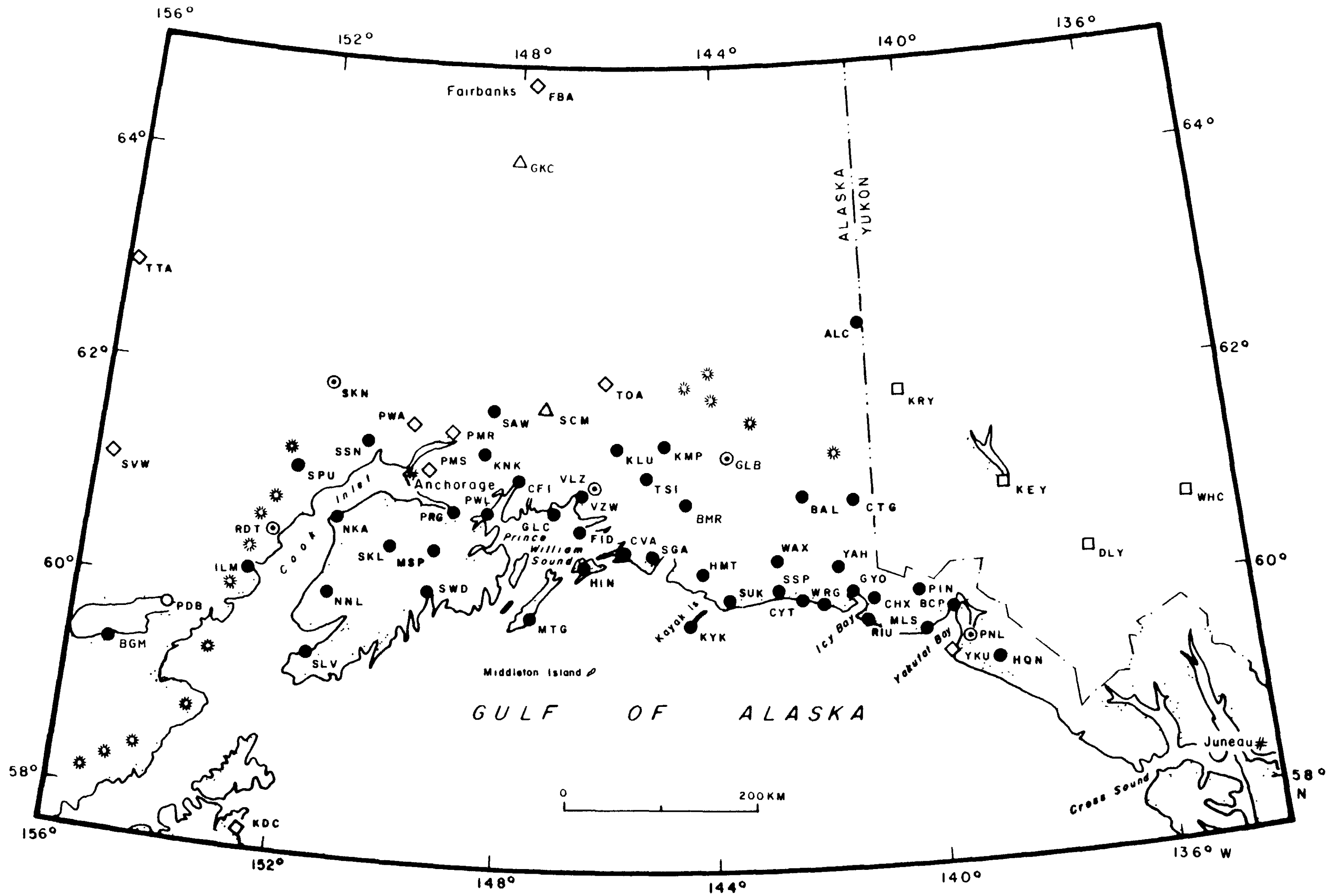

Figure 1. Map showing the locations of all USGS seismograph stations in southern Alaska and other stations used in the preparation of this catalog. The symbols are as follows: solid circles, vertical component USGS seismograph; circles with dots, three component USGS seismographs; open circles, USGS stations not reporting during this quarter; diamonds, ATWC stations; triangles, Univ. of Alaska stations; squares, Dept. Energy, Mines and Resources, Canada. Quaternary volcanoes (after King, 1969) are indicated by stars.

Table 1. Station Data

STA CODE	STATION NAME	LATITUDE N	LONGITUDE W	ELEV M	P MOD	D KM	DLY1 SEC	DLY2 SEC	DLY3 SEC	TDLY SEC	MAG AT 1 HZ	INST
ALC	ALCAN	62 37.35	141 0.50	582	3	0.01	0.00	0.00	0.00	0.00		USGS
BAL	BALDY	61 2.17	142 20.67	1300	3	0.01	0.00	0.00	-0.19	0.00	152000	USGS
BCP	BANCAS POINT	59 57.20	139 38.10	396	3	0.01	0.00	0.00	-0.80	-0.27	76000	USGS
BGM	BIG MOUNTAIN	59 23.56	155 13.76	625	1	0.01	0.00	0.00	0.00	-0.27	76000	USGS
BMR	BREMNER RIVER	60 58.09	144 36.18	823	2	0.01	0.00	0.00	1.92	-0.27	38000	USGS
CFI	COLLEGE FIORD	61 10.96	147 45.99	3	2	0.01	0.00	0.00	0.00	0.00	76000	USGS
CHX	CHAIX HILLS	60 3.75	141 7.10	1067	3	0.01	0.00	0.00	-0.05	-0.27	38000	USGS
CTG	CHITNA GLACIER	60 57.90	141 20.00	1554	3	0.01	0.00	0.00	-0.53	0.00	38000	USGS
CVA	CORDOVA	60 32.79	145 44.96	90	2	0.01	0.00	0.00	0.00	-0.27	38000	USGS
CYT	CAPE YAKATAGA	60 4.47	142 24.68	323	3	0.01	0.00	0.00	0.57	-0.27	9500	USGS
DLY	DEZADEASH LAKE	60 22.20	137 3.90	738	3	0.01	0.00	0.00	2.37	0.00		EMRC
FBA	COLLEGE OUTPOST	64 54.00	147 47.60	320	1	0.01	0.00	0.00	0.00	0.00		ATWC
FID	FIDALGO	60 43.73	146 35.79	488	2	0.01	0.00	0.00	0.00	-0.27	38000	USGS
GKC	GOLD KING CREEK	64 10.72	147 56.08	490	1	0.00	0.00	0.00	0.00	0.00		UOFA
GLB	GILAHINA BUTTE	61 26.51	143 48.63	845	3	0.01	0.00	0.00	1.60	0.00	76000	USGS
GLC	GLACIER ISLAND	60 53.44	147 4.38	3	2	0.01	0.00	0.00	0.00	-0.27	76000	USGS
GYO	GUYOT	60 8.78	141 28.29	183	3	0.01	0.00	0.00	-0.06	-0.27	38000	USGS
HIN	HINCHINBROOK ISLAND	60 23.81	146 30.10	611	2	0.01	0.00	0.00	2.09	-0.27	38000	USGS
HMT	HAMILTON	60 20.19	144 15.64	620	3	0.01	0.00	0.00	-0.55	-0.27	76000	USGS
HQN	HARLEQUIN	59 27.10	138 52.62	372	3	0.01	0.00	0.00	0.00	-0.27	76000	USGS
ILM	ILIAMNA	60 10.92	152 48.97	550	1	0.01	0.44	0.00	0.00	0.00	79700	USGS
IMA	INDIAN MOUNTAIN	66 4.11	153 40.72	1380	1	0.01	0.00	0.00	0.00	-0.27		ATWC
KDC	KODIAK	57 44.87	152 29.50	13	1	0.01	0.00	0.00	0.00	-0.27		ATWC
KEY	KLUANE LAKE	61 3.00	138 30.10	785	3	0.01	0.00	0.00	1.71	0.00		EMRC
KLU	KLUTINA	61 29.57	145 55.21	1021	2	0.01	0.00	0.00	0.00	0.00	304000	USGS
KMP	KIMBALL PASS	61 30.78	145 1.09	1143	2	0.01	0.00	0.00	0.00	-0.27	152000	USGS
KNK	KNIK GLACIER	61 24.75	148 27.34	595	2	0.01	0.00	0.00	0.00	0.00	76000	USGS
KRY	KOIDERN RIVER	61 58.20	140 24.50	686	3	0.01	0.00	0.00	3.09	0.00		EMRC
KYK	KAYAK ISLAND	59 52.10	144 31.39	375	2	0.01	0.00	0.00	1.97	-0.27	23100	USGS
MLS	MALASPINA GLACIER	59 46.00	140 9.00	30	3	0.01	0.00	0.00	0.09	-0.27	19000	USGS
MSP	MOOSE PASS	60 29.35	149 21.64	150	1	0.01	0.00	0.00	0.00	0.00	87400	USGS
MTG	MONTAGUE ISLAND	59 54.71	147 29.82	31	2	0.01	0.00	0.00	0.00	-0.27	9500	USGS
NKA	NIKISHKA	60 44.58	151 14.28	100	1	4.00	1.36	0.00	0.00	0.00	6600	USGS
NNL	NINILCHIK	60 2.53	151 17.78	366	1	4.00	0.67	0.00	0.00	0.00	34200	USGS
PDB	PEDRO BAY	59 47.27	154 11.55	305	1	0.01	0.00	0.00	0.00	-0.27	304000	USGS
PIN	PINNACLE	60 5.80	140 15.40	975	3	0.01	0.00	0.00	-0.01	-0.27	76000	USGS
PMR	PALMER OBSERVATORY	61 35.53	149 7.85	100	1	0.01	0.00	0.00	0.00	0.00		ATWC
PMS	ARCTIC VALLEY	61 14.68	149 33.63	716	1	0.01	0.00	0.00	0.00	0.00		ATWC
PNL	PENINSULA	59 40.06	139 23.82	585	3	0.01	0.00	0.00	-1.10	-0.27	76000	USGS
PRG	PORTAGE	60 51.87	149 1.21	55	1	0.01	0.00	0.00	0.00	0.00	38700	USGS
PWA	HOUSTON	61 39.05	149 52.72	137	1	0.01	0.70	0.00	0.00	0.00		ATWC
PWL	PORT WELLS	60 51.56	148 20.09	549	2	0.01	0.00	0.00	0.00	0.00	152000	USGS
RDT	REDOUBT	60 34.43	152 24.37	930	1	0.01	0.36	0.00	0.00	0.00	76000	USGS
RIU	RIOU	59 52.65	141 13.80	15	3	0.01	0.00	0.00	1.09	-0.27	5700	USGS
SAW	SAWMILL	61 48.49	148 19.98	740	2	0.01	0.00	0.00	0.00	0.00	76000	USGS
SCM	SHEEP MOUNTAIN	61 50.00	147 19.66	1020	2	0.01	0.00	0.00	0.00	0.00		UOFA
SGA	SHERMAN GLACIER	60 32.04	145 12.42	424	2	0.01	0.00	0.00	2.17	-0.27	304000	USGS
SIT	SITKA	57 3.42	135 19.47	19	3	0.01	0.00	0.00	0.00	-0.27		ATWC
SKL	SKILAK	60 30.86	150 12.96	690	1	0.01	0.10	0.00	0.00	0.00	76000	USGS
SKN	SKWENTNA	61 58.82	151 31.78	564	1	0.01	0.00	0.00	0.00	0.00	608000	USGS
SLV	SELDOVIA	59 28.28	151 34.83	91	1	0.01	0.00	0.00	0.00	0.00	73700	USGS
SPU	SPURR	61 10.90	152 3.26	800	1	0.01	0.39	0.00	0.00	0.00	193800	USGS
SSN	SUSITNA	61 27.83	150 44.60	1297	1	0.01	0.67	0.00	0.00	0.00	178500	USGS
SSP	SUNSHINE POINT	60 12.30	142 49.80	305	3	0.01	0.00	0.00	0.79	-0.27	50500	USGS
SUK	SUCKLING HILLS	60 3.32	143 47.31	299	3	0.01	0.00	0.00	2.14	-0.27	19000	USGS
SVW	SPARREVOHN	61 6.49	155 37.30	762	1	0.01	0.00	0.00	0.00	-0.27		ATWC
SWD	SEWARD	60 6.22	149 26.96	91	1	0.01	0.00	0.00	0.00	0.00	42700	USGS
TOA	TOLSONA	62 6.29	146 10.34	909	2	0.01	0.00	0.00	0.00	0.00		ATWC
TSI	TSINA	61 13.57	145 20.24	1113	2	0.01	0.00	0.00	0.00	-0.27	76000	USGS
TTA	TATALINA	62 55.80	156 1.32	914	1	0.01	0.00	0.00	0.00	-0.27		ATWC
VLZ	VALDEZ	61 7.89	146 19.92	10	2	0.01	0.00	0.10	0.00	-0.27	76000	USGS
VZW	VALDEZ WEST	61 3.54	146 33.24	796	2	0.01	0.00	0.00	0.00	-0.27	76000	USGS
WAX	WAXELL RIDGE	60 26.90	142 51.10	975	3	0.01	0.00	0.00	0.61	-0.27	45600	USGS
WHC	WHITEHORSE	60 44.20	135 5.90	732	3	0.01	0.00	0.00	2.55	0.00		EMRC
WRG	WHITE RIVER GLACIER	60 2.27	142 1.90	550	3	0.01	0.00	0.00	0.66	-0.27	38000	USGS
YAH	YAHTSE	60 21.51	141 44.70	2135	3	0.01	0.00	0.00	0.17	-0.27	152000	USGS
YKG	YAKATAGA	60 4.20	142 25.33	46	3	0.01	0.00	0.00	0.00	-0.27	7800	USGS
YKU	YAKUTAT	59 32.72	139 43.73	15	3	0.01	0.00	0.00	0.35	-0.27		ATWC

This table lists geographic coordinates and other pertinent information of all USGS seismograph stations in southern Alaska and the stations of other institutions used in the preparation of this catalog. P-MOD is the number of the P-wave velocity model assigned to the station (see text), where the numbers 1, 2, and 3 correspond to the western, central, and eastern models. D is the thickness of the low-velocity surficial sedimentary layer in kilometers assigned in the calculation of traveltimes to a given station. DLY1-3 are the station P-phase traveltime delays in seconds. TDLY is the telephone line delay in seconds. The magnification (MAG) of the vertical seismograph component is given at 1 Hz. The institutions (INST) operating the stations other than the USGS are the Alaska Tsunami Warning Center (ATWC), the Geophysical Institute of the University of Alaska (UOFA), and the Department of Energy, Mines, and Resources, Canada (EMRC). Station CYT was relocated and its station code changed to YKG.

INSTRUMENTATION

The instrumentation in the USGS seismograph network is illustrated in the block diagram in Figure 2. Data from each seismometer are telemetered to the NOAA Alaska Tsunami Warning Center in Palmer. The standard equipment at each field station includes a vertical seismometer with a natural frequency of 1.0 Hz (Mark Products, Model L-4), a package consisting of an amplifier and a voltage-controlled oscillator (VCO model NCER 202, or AlVCO) and "air-cell" storage batteries (McGraw-Edison, Model ST-2-1000). The recently developed AlVCO units (Rogers and others, 1980) have been installed at nearly all of the USGS stations in southern Alaska. These crystal-referenced units have an automatic gain-ranging capability and provide daily information on the gain setting, geophone response, battery voltage, station identification and temperature. Data are telemetered via a combination of leased telephone circuits (some of which are relayed by satellite which introduces a -0.30 sec. transmission delay) and VHF (162-174 MHz) radio links. The radio equipment consists of low-power transmitters (100 mW) and receivers adapted from HT-200 Motorola handie-talkie transceivers. Yagi antennae with 9 db directional gain (Scala, Model CAS-150) are used. At some sites where AC power is available, base-station radio receivers (G.E. Model R46AP66B) with greater sensitivity and reliability are used. The central recording facility incorporates a bank of discriminators (NCER J101 or Develco Model 6203), four 16 mm-film multi-channel oscillographs (Teledyne Geotech Develocorder, Model 4000D), a 14-channel analog tape recorder (Bell and Howell Model VR3700B), and a time-code generator (Datum, Model 9100).

The principle of operation is as follows: The seismometer translates movement of the ground into an electrical voltage that is fed into the amplifier/VCO unit where the amplified voltage causes the frequency of an audio-band oscillator to fluctuate about its center frequency. The frequency-modulated (FM) tone from the amplifier/VCO unit is carried directly by voice-grade telephone circuit to the recording site or alternately is fed through a VHF radio link onto a telephone circuit. At the recording site the FM seismic signal is demodulated by a discriminator. The demodulated signal, which is simply an amplified form of the initial signal from the seismometer, is recorded photographically on a multichannel oscillograph, together with time marks from a crystal-controlled chronometer. Twenty-four hours of data for 18 stations can be recorded on a single 43 m-long roll of 16-mm film.

Signals from more than one seismograph can be transmitted on a single telephone circuit by employing VCO units with different center frequencies. In the standard configuration there is a 340 Hz separation between center frequencies and a fixed bandwidth of 250 Hz. Up to eight seismic channels with center frequencies ranging from 680 to 3,060 Hz may be placed on a single voice-grade telephone circuit.

Figure 3 illustrates the response characteristics of the entire seismic system from seismometer to film viewer. The response level at each station is adjusted in steps of 6 decibels so that the ambient seismic noise produces a small deflection of the trace on the film. As a result, the actual response for an individual station may differ from that of the typical station by a factor of 2, 4, 8, etc. The magnification of the typical station is about 6×10^4 at 1 Hz and 10^6 at 10 Hz. The gain of a station that has an AlVCO unit is automatically reduced by a factor of 10 when the fluctuations of the FM signal exceed a preset threshold.

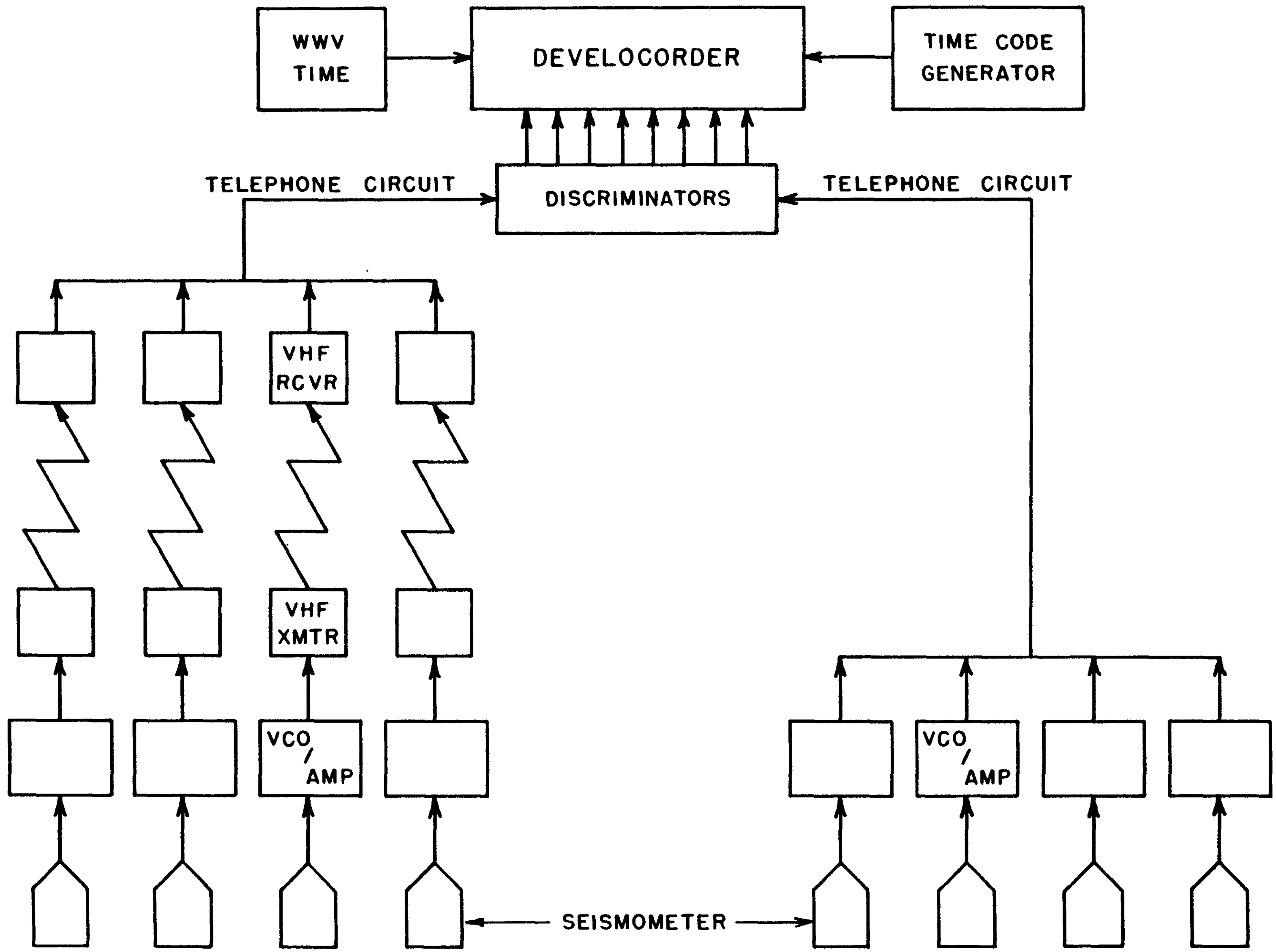

Figure 2. Block diagram of telemetered seismograph system in the USGS Alaska seismic network.

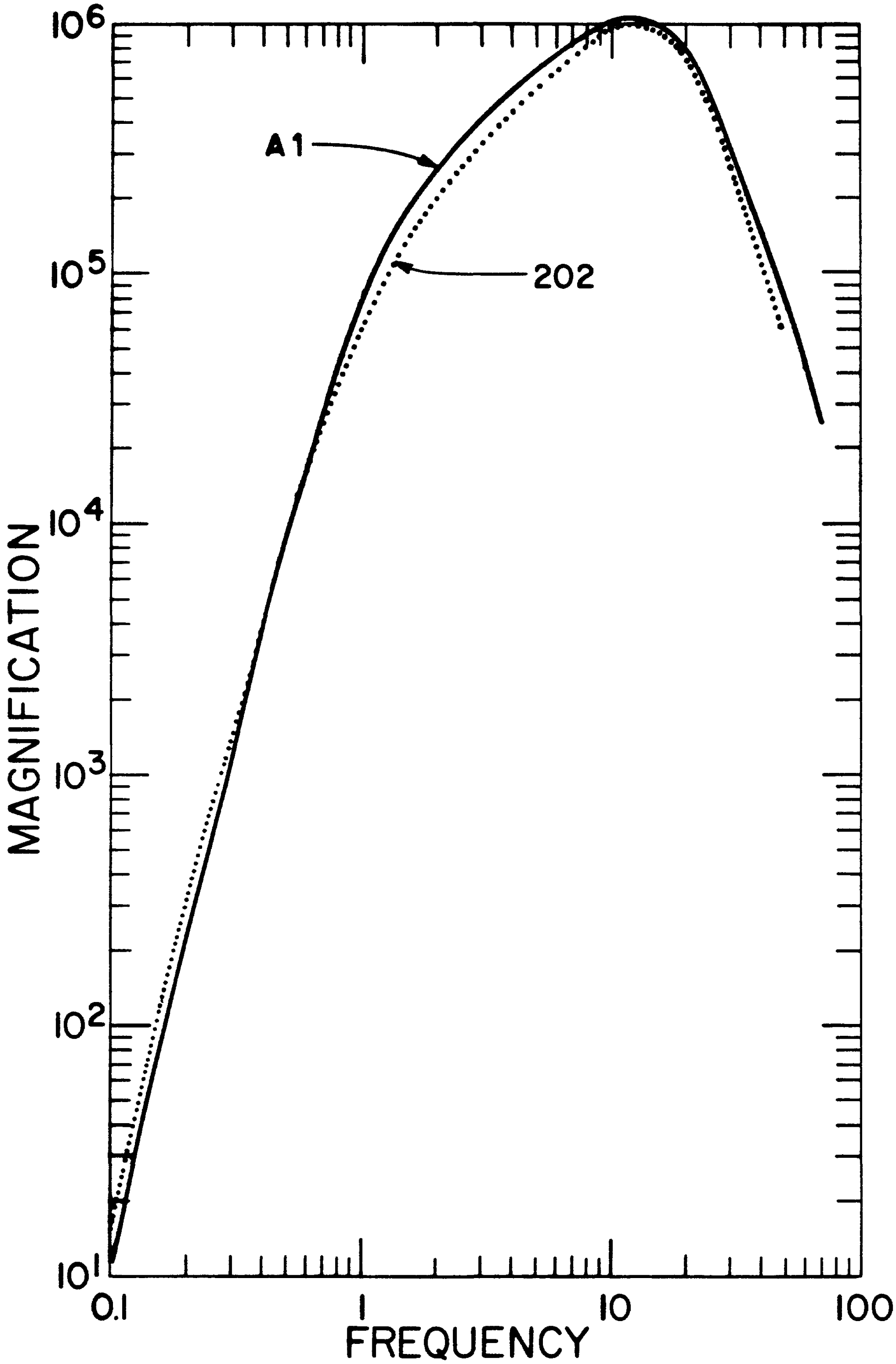

Figure 3. System response curves for typical USGS Alaska seismographs that incorporate the A1VCO unit (solid curve) and the older VCO model NCER 202 unit (dotted curve).

The installation of a typical radio-linked station is shown in Figure 4. Degradation or interruption of data transmission due to inclement weather conditions is a major problem during the winter months. Some indication of the operational reliability of the USGS stations can be inferred from the plot of station use in Figure 5.

DATA PROCESSING

The 16-mm films (four per day) are mailed weekly from Palmer to Menlo Park where the seismic data are processed by the following multi-step routine:

1. Scanning. The scan film, which has 18 stations distributed throughout the network, is scanned to identify and note times of all seismic events whether of local, regional, or teleseismic origin.

2. Timing. For the "well-recorded" local earthquakes identified in the scanning process, the following data are read from each station: P- and S-wave arrival times, direction of first motion, duration of signal in excess of a given threshold amplitude, and period and amplitude of maximum recorded signal. The criterion for choosing earthquakes to be timed is the duration of the signal, which is related to the magnitude. The network is divided into three regions--western, central and eastern--bounded approximately by longitudes 156° and 150° W., 150° and 145° W., and 145° and 138° W., respectively. In the western and central regions, only events with signal durations longer than 80 s and 20 s, respectively, are timed. In the eastern region, all earthquakes which are recorded by at least three stations and for which at least four clear arrivals can be read are timed. These criteria were established to select from the large number of earthquakes recorded by the network those shocks that are of greatest interest to current research objectives.

   Timing is done by projecting the seismic traces onto a table and digitizing the onsets of the P- and S-phases. The output from the digitizer, in the form of x-y data pairs on punched computer cards, is converted into phase data by computer using the program DIGIT3 (written by P. Ward and W. Ellsworth for use within the U.S. Geological Survey).

3. Initial computer processing. The phase data from the films are batch processed by computer using the program HYPOELLIPSE (Lahr, 1980) to obtain origin times, hypocenters, magnitudes and, if desired, first-motion plots for fault-plane solutions.

4. Analysis of initial computer results. Each hypocentral solution is checked for traveltime residuals greater than or equal to 0.75 seconds and for a poor spatial distribution of stations. Arrival times that produce large residuals are re-read. For shocks with a poor distribution of stations, readings from additional stations outside the USGS network are sought.

5. Final computer processing. The poor hypocentral solutions are rerun with corrections and the new solutions are checked for large residuals that might be due to remaining errors. Corrections are made as required before the final computer run is made.

Figure 4. Seismograph stations at Suckling Hills (SUK). Background: High gain seismograph station enclosure and antenna mast. Foreground: Kinemetrics SMA1 strong motion instrument bolted to a concrete slab poured within a large culvert.

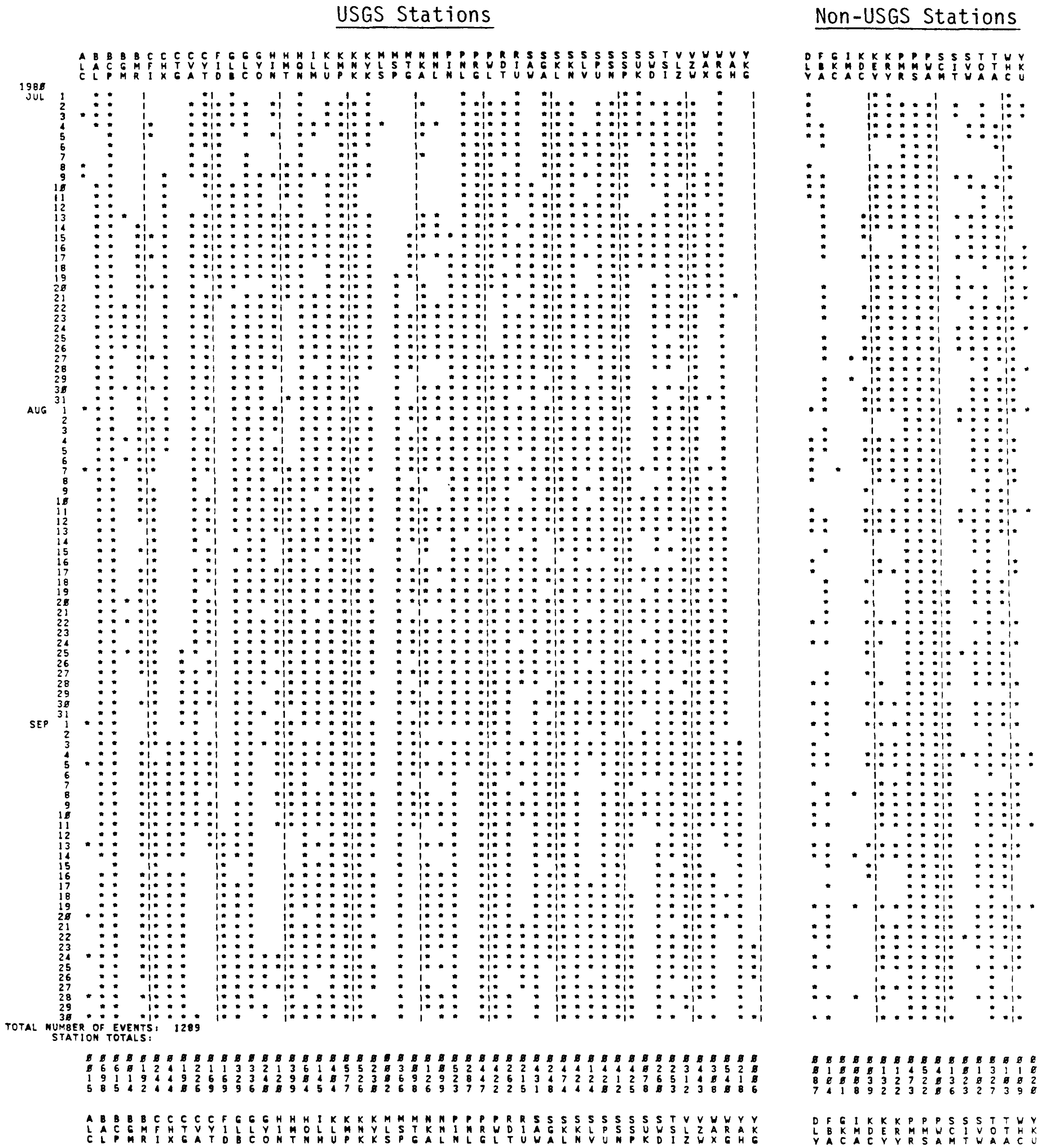

Figure 5. Record of station use during the third quarter of 1980. An asterisk indicates that one or more arrival times from a given station were used for locating earthquakes on a particular day. The totals at the bottom indicate the number of events for which arrival times at a given station were obtained. The USGS station PDB was not operational during this quarter and is not listed.

The earthquake locations are based on P and S arrivals. S arrivals are important for determining epicenters of shocks outside the network and depths of events in the Benioff zone beneath the network in Cook Inlet. Unfortunately, S cannot be read at any station for some large events because the traces on the film overlap each other or are too faint to follow.

The HYPOELLIPSE computer program determines hypocenters by minimizing differences between observed and computed traveltimes through an iterative least-squares scheme. In many respects the program is similar to HYPO71 (Lee and Lahr, 1972), which has been used in the preparation of catalogs of central California earthquakes since January 1969. An important feature available in HYPOELLIPSE is the calculation of confidence ellipsoids for each hypocenter. The ellipsoids provide valuable insight into the effect of network geometry on possible hypocentral errors.

VELOCITY MODELS

Our experience with locating earthquakes in southern Alaska suggests that significant lateral variations are present in the velocity structure across the network. Such variations might be expected from the complicated geology and tectonics of the region (e.g., Plafker, 1967). Very little information in the form of direct measurement is available for the velocity structure in southern Alaska. In previous catalogs, only two P-wave velocity models consisting of horizontal layers of constant velocity were used to locate the earthquakes (e.g., Stephens and others, 1979). These velocity models were derived by minimizing the traveltime residuals for selected sets of earthquakes in the Cook Inlet region (Model A of Matumoto and Page, 1969) and near Valdez. The models proved adequate for locating earthquakes as far east as Kayak Island, but earthquakes located farther to the east often had large traveltime residuals at nearby stations. An improved velocity model for the region east of Kayak Island was developed by minimizing the traveltime residuals for a selected set of aftershocks from the 1979 St. Elias earthquake that occurred north of Icy Bay (Stephens and others, 1980). A significant difference between this model and the earlier ones is that the new model consists of a single layer of linearly increasing velocity over a half-space of constant velocity, whereas the earlier models consist of several horizontal layers of constant velocity.

In the preparation of this catalog, the method of assigning velocity models to calculate theoretical traveltimes is different from that used in some earlier catalogs. Previously, a single velocity model was used for all stations recording a particular event, the choice of the model depending on the region in which the shock occurred. In the revised procedure, a single velocity model is assigned to each station depending on the region in which the station is located and is used in locating all events. Thus, a station in the eastern region will use the eastern velocity model to calculate traveltimes from events that occur in the western, central, and eastern parts of the network.

West of longitude 148° 45' W. the velocity model used is as follows:

Layer	Depth (km)	P velocity (km/s)
1	0 - D	2.75
2	D - 4	5.3
3	4 - 10	5.6
4	10 - 15	6.2
5	15 - 20	6.9
6	20 - 25	7.4
7	25 - 33	7.7
8	33 - 47	7.9
9	47 - 65	8.1
10	below 65	8.3

The thickness, D, of the first layer is allowed to vary between stations to account for the presence of thick sections of low-velocity sediments beneath the stations NKA and NNL, which are located in the Cook Inlet basin. For these stations D is 4 km. For all other stations D is 0.01 km. It is recognized that a model comprised of uniform horizontal layers may be a poor representation of the actual velocity structure, particularly in the vicinity of a subduction zone (Mitronovas and Isacks, 1971; Jacob, 1972), although such a model does have the advantage of simplifying the computation of traveltimes. In order to determine any bias that might result from this approximation, a set of events in the Benioff zone below Cook Inlet was relocated using a ray-tracing program of E. R. Engdahl that incorporates a more realistic, three-dimensional velocity model (Lahr, 1975). Hypocenter shifts, apparently due to the oversimplified flat-layer model, ranged from near zero at a depth of 60 km to as great as 25 km at the 160 km depth. The offsets were oriented in such a way that the dip of the Benioff zone would appear to be too great for locations based on a flat-layered model.

For earthquakes that occur between longitudes 148° 45' W. and 144° 30' W., the velocity model used to locate the events is:

Layer	Depth (km)	P velocity (km/s)
1	0.0	2.75
2	0.01	6.4
3	below 39	8.0

East of longitude 144° 30' W. the P-wave velocity of the first layer increases linearly from 5.0 km/s at the surface to 7.8 km/s at 32 km depth, while the half-space has a velocity of 8.2 km/s.

P-phase traveltime delays are applied to stations in the network that have consistent and large residuals for the locations of large groups of earthquakes. Each station has three delays (DLY1, DLY2, and DLY3 of Table 1) assigned to it that correspond to the western, central, and eastern regions convered by the network. The particular delay that is used to locate an earthquake is determined by the region in which the earthquake occurs. For example, a station near Icy Bay that is used to locate an earthquake beneath Cook Inlet will be assigned a delay DLY1, but the same station will use DLY3 to locate an earthquake that occurs beneath Icy Bay. Additional delays are applied at several stations to correct for a satellite link in the relay of the signal. S-phase delays are determined by multiplying the P-delay by 1.78, the P to S velocity ratio.

The initial trial depths for earthquakes which occur in the western, central, and eastern parts of the network are 75, 30, and 15 km, respectively, and reflect a progressive decrease in the range of depths of earthquakes from west to east.

MAGNITUDE

Magnitudes are determined from either the signal duration or the maximum trace amplitude. Eaton and others (1970) approximate the Richter local magnitude, whose definition is tied to maximum trace amplitudes recorded on standard horizontal Wood-Anderson torsion seismographs, by an amplitude magnitude based on maximum trace amplitudes recorded on high-gain, high-frequency vertical seismographs such as those operated in the Alaskan network. The amplitude magnitude XMAG used in this catalog is based on the work of Eaton and his co-workers and is given by the expression (Lee and Lahr, 1972)

$$XMAG = \log_{10} A - B_1 + B_2 \log_{10} D^2 \qquad (1)$$

where A is the equivalent maximum trace amplitude in millimeters on a standard Wood-Anderson seismograph, D is the hypocentral distance in kilometers, and B_1 and B_2 are constants. Differences in the frequency response of the two seismograph systems are accounted for in A. It is assumed, however, that there is no systematic difference between the maximum horizontal ground motion and the maximum vertical motion. The terms $-B_1 + B_2 \log_{10} D^2$ approximate Richter's $-\log_{10} A_0$ function (Richter, 1958, p. 342), which expresses the trace amplitude for an earthquake of magnitude zero as a function of epicentral distance.

For small, shallow earthquakes in central California, Lee and others (1972) express the duration magnitude FMAG at a given station by the relation

$$FMAG = -0.87 + 2.00 \log_{10} T + 0.0035\, DEL \qquad (2)$$

where T is the signal duration in seconds from the P-wave onset to the point where the peak-to-peak trace amplitude on the Geotech Model 6585 film viewer falls below 1 cm and DEL is the epicentral distance in kilometers.

Comparison of XMAG and FMAG estimates from equations (1) and (2) for 77 Alaskan shocks in the depth range 0 to 150 km and in the magnitude range 1.5 to 3.5 reveals a systematic linear decrease of FMAG relative to XMAG with increasing focal depth. To remove this discrepancy, a linear dependence on depth is added to the expression for FMAG as follows:

$$FMAG = -1.15 + 2.00 \log_{10} T + 0.007\, Z + 0.0035\, DEL \qquad (3)$$

where Z is the focal depth in kilometers.

The magnitude preferentially assigned to each earthquake in this catalog is the FMAG estimate. The XMAG value is used only where no FMAG can be determined.

ANALYSIS OF QUALITY

Two types of errors enter into the determination of hypocenters: systematic errors limiting the accuracy of hypocenters and random errors limiting the precision. Systematic errors arise from an incorrect velocity model, misidentification of phases, or systematic timing errors and can be evaluated through controlled experiments such as locating the coordinates of a known explosion. Random errors result from random timing errors and are estimated for each earthquake through the use of standard statistical techniques.

For each earthquake, HYPOELLIPSE calculates the lengths and orientations of the principal axes of the joint confidence ellipsoid. The one-standard-deviation confidence ellipsoid describes the region of space within which one is 68 percent confident that the hypocenter lies, assuming that the only source of error is random reading error. The ellipsoid is a function of the station geometry for each individual event, the velocity model assumed and the standard deviation of the random reading error. The standard deviation determined from repeated readings of the same phases by four seismologists is as small as 0.01 to 0.02 s for the most impulsive arrivals and as large as 0.10 to 0.20 s for emergent arrivals. The confidence ellipsoids are computed for a standard deviation of 0.16 s and therefore likely overestimate the 68 percent confidence regions. The standard deviation of the residuals for an individual solution is not used to calculate the confidence ellipsoid because it contains information not only about random reading errors but also about the incompatibility of the velocity model to the data. Thus, the confidence ellipsoid is a measure of the precision of the hypocentral solution. In a few extreme cases the value calculated for one of the ellipsoid axes becomes very large corresponding to a spatial direction with very great uncertainty. In these cases an upperbound length of 25 km is tabulated.

To fully evaluate the quality of a hypocenter one must consider both the confidence ellipsoid and the root mean square (RMS) residual for the solution. The RMS residual reflects both systematic and random errors, but the random errors are typically much smaller. Hence the RMS residual is primarily a measure of the incompatibility of the velocity model, misinterpretation of phases, and systematic timing errors. Interpretation of the RMS residual may depend upon the location of the earthquake. In areas where the velocity model is incompatible with the real earth, RMS residuals could be large and betray the incompatibility; alternatively, the RMS residuals could be small and not reflect the error in a bad hypocenter. Where the velocity model is compatible, however, a large RMS residual would indicate probable misreadings of phases.

Other parameters provided by HYPOELLIPSE that are useful in evaluating the quality of a hypocentral solution are: GAP, the largest azimuthal separation between stations measured from the epicenter; D3, the epicentral distance of the third closest station; NP, the number of P arrivals used in the solution; and NS, the number of S arrivals used in the solution. If GAP exceeds 180°, the earthquake lies outside the network of available stations and the solution is generally less reliable than for events occurring inside the network.

DISCUSSION OF CATALOG

Origin times, focal coordinates, magnitudes, and related parameters for 1,289 earthquakes from July-September 1980 are listed in the Appendix. Epicenters for these shocks are plotted in Figure 6. In Figure 7, only the earthquakes with magnitudes greater than 3.5 are plotted. Vertical sections showing the depth distribution of all of the shocks are presented in Figures 8 and 9.

We estimate that this catalog is reasonably complete for shocks larger than magnitude 3.5 in the western, 2.5 in the central, and 2.0 in the eastern regions of the area covered by the network. The minimum magnitude of the listed earthquakes is 0.3 for crustal events ($Z \leq 30$ km) and 3.3 for Benioff zone events deeper than or equal to 100 km.

The precision of the hypocenters or the relative accuracy of the locations of neighboring events is represented by the confidence ellipsoids. The precision of epicenters, expressed in terms of the maximum axes of the projected one-standard-deviation confidence ellipsoids (ERH), averages 5.2, 2.7, and 2.4 km, respectively, in the eastern, central, and western parts of the network. Similarly, the precision of focal depth (ERZ) averages about 5.4, 4.1, and 4.3 km, respectively. The variation in the precision of hypocenter determination across the network is strongly influenced by differences in the station coverage in the different regions.

The absolute accuracy of the earthquake locations is difficult to evaluate in the absence of known explosions. Hypocenter biases equal to and larger than the dimensions of the confidence ellipsoids are not unlikely from the over-simplified velocity model assumed in the preparation of this catalog.

The dominant feature in the distribution of epicenters is the large number of aftershocks from the 1979 St. Elias earthquake in southeastern Alaska. All of the aftershocks with better control in the solution were located at depths less than 30 km, which is consistent with the depths found for aftershocks in the early part of the sequence (Stephens and others, 1980). It is interesting to note that the aftershocks plotted here appear to form spatial clusters similar to those observed in the early part of the sequence.

Over 10 earthquakes were located in the region of the Wrangell volcanoes north of about 61° N. near the eastern part of the network (Figure 6). Similar numbers of events have been located near this region in earlier quarters of data. Because the earthquakes occurred outside of the network the hypocenters are generally poorly constrained. For this reason it is not clear whether the events are occurring within the crust or uppermost mantle, or whether the may be associated with particular volcanic centers.

Within the Yakataga seismic gap, which is located approximately between Kayak Island and the western limit of the aftershock zone of the 1979 St. Elias aftershock zone, the pattern of seismicity is similar to that observed in earlier quarters. One interesting feature is an increase in the rate of seismicity beginning in June 1980 in the offshore area between longitudes 146° 30' W. and 143° 30' W. and north of latitude 59° N. During the 4-month period from June-September 1980 the monthly average number of shocks with coda-duration magnitudes $ML \geq 2$ was eight per month, as compared to an average of about 1 1/2 per month for the previous 8-month period. Most of the activity

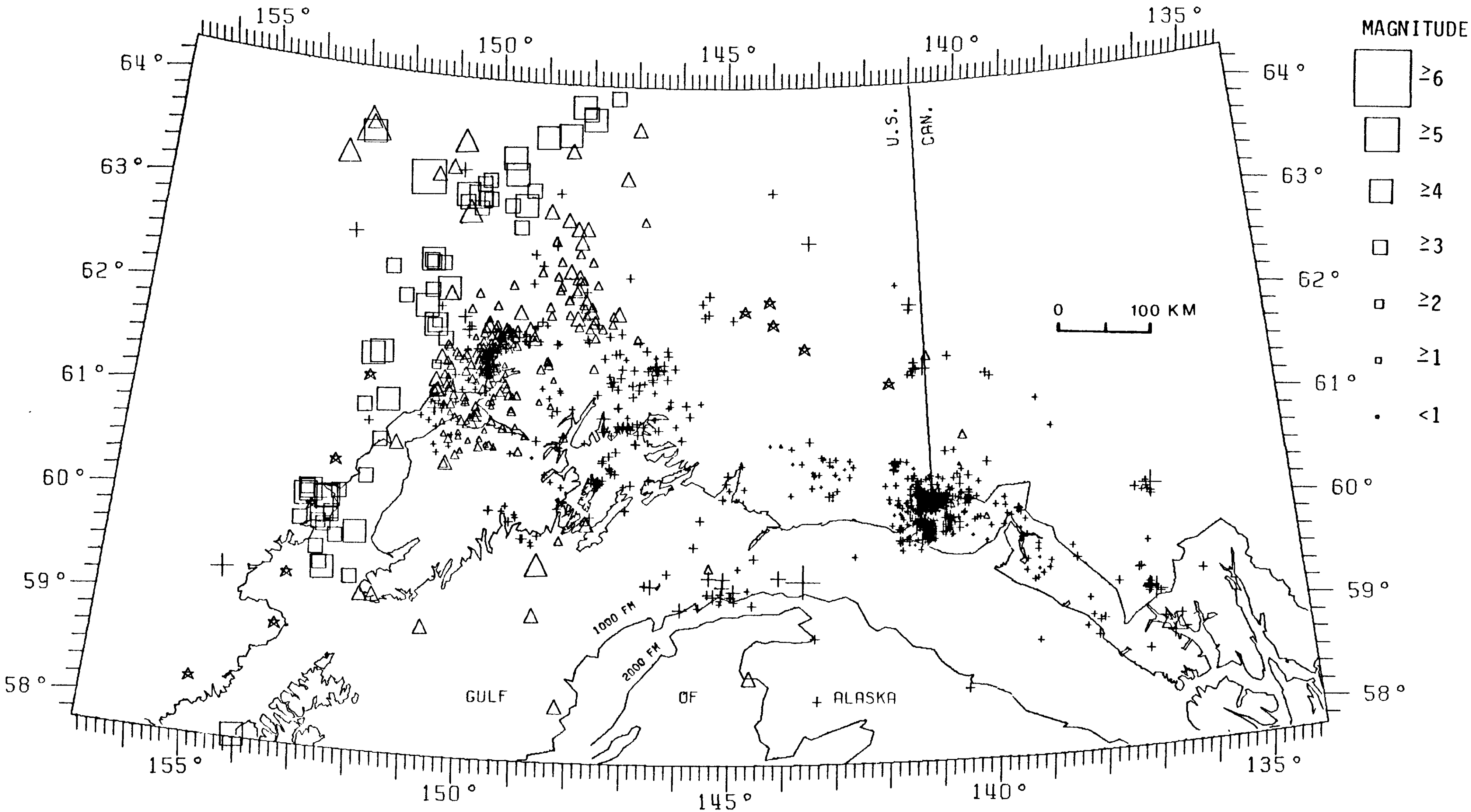

Figure 6. Map of earthquake epicenters for the period July-September 1980. Earthquakes are plotted with a symbol that represents the depth of the hypocenter as follows: "+", <30 km; "Δ", 30-69 km; "□" ≥70 km. Symbol size is proportional to magnitude. Quaternary volcanoes are indicated by stars.

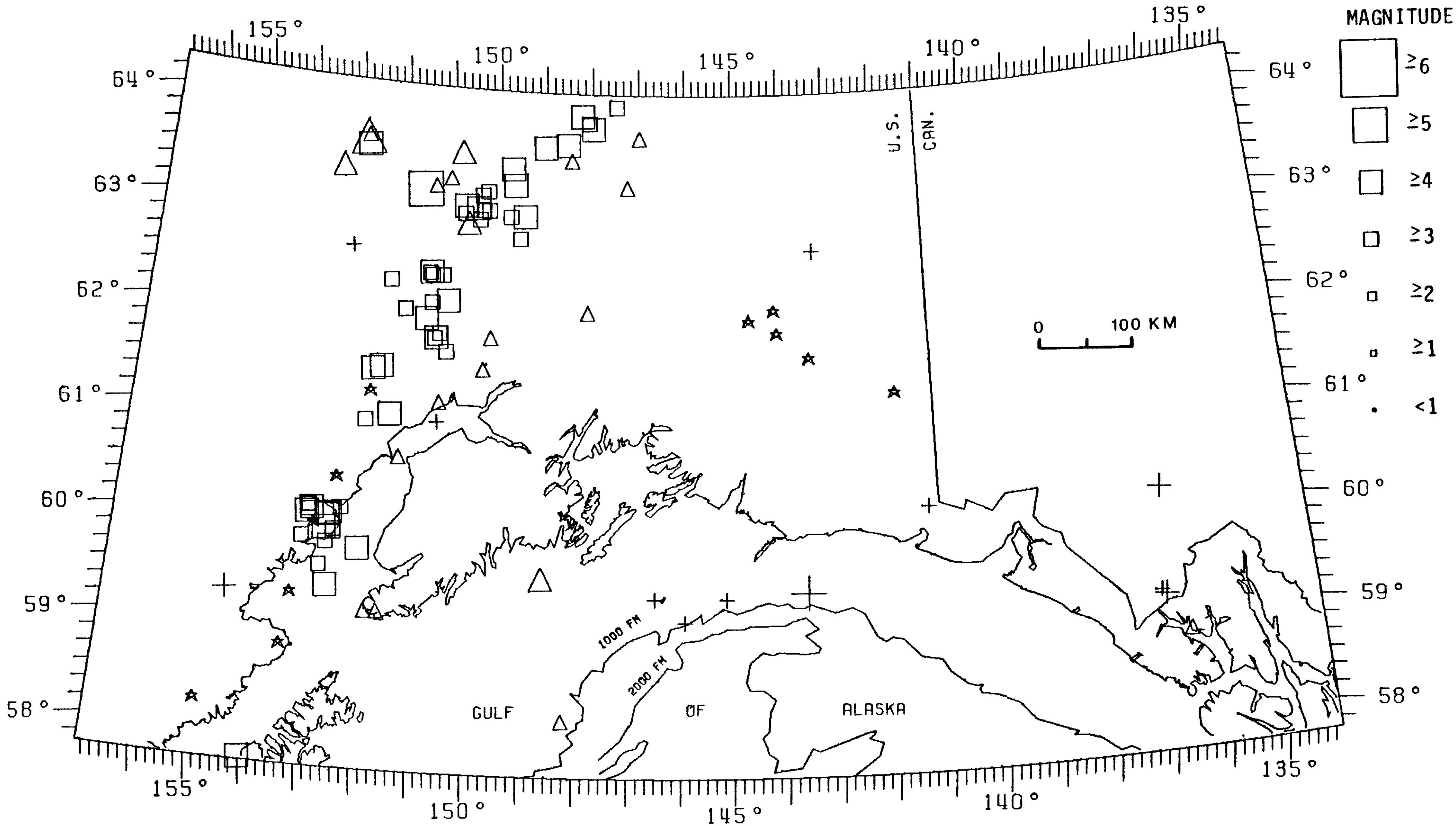

Figure 7. Map showing the epicenters of earthquakes from Figure 6 that have magnitudes of 3.5 and larger. Quaternary volcanoes are indicated by stars.

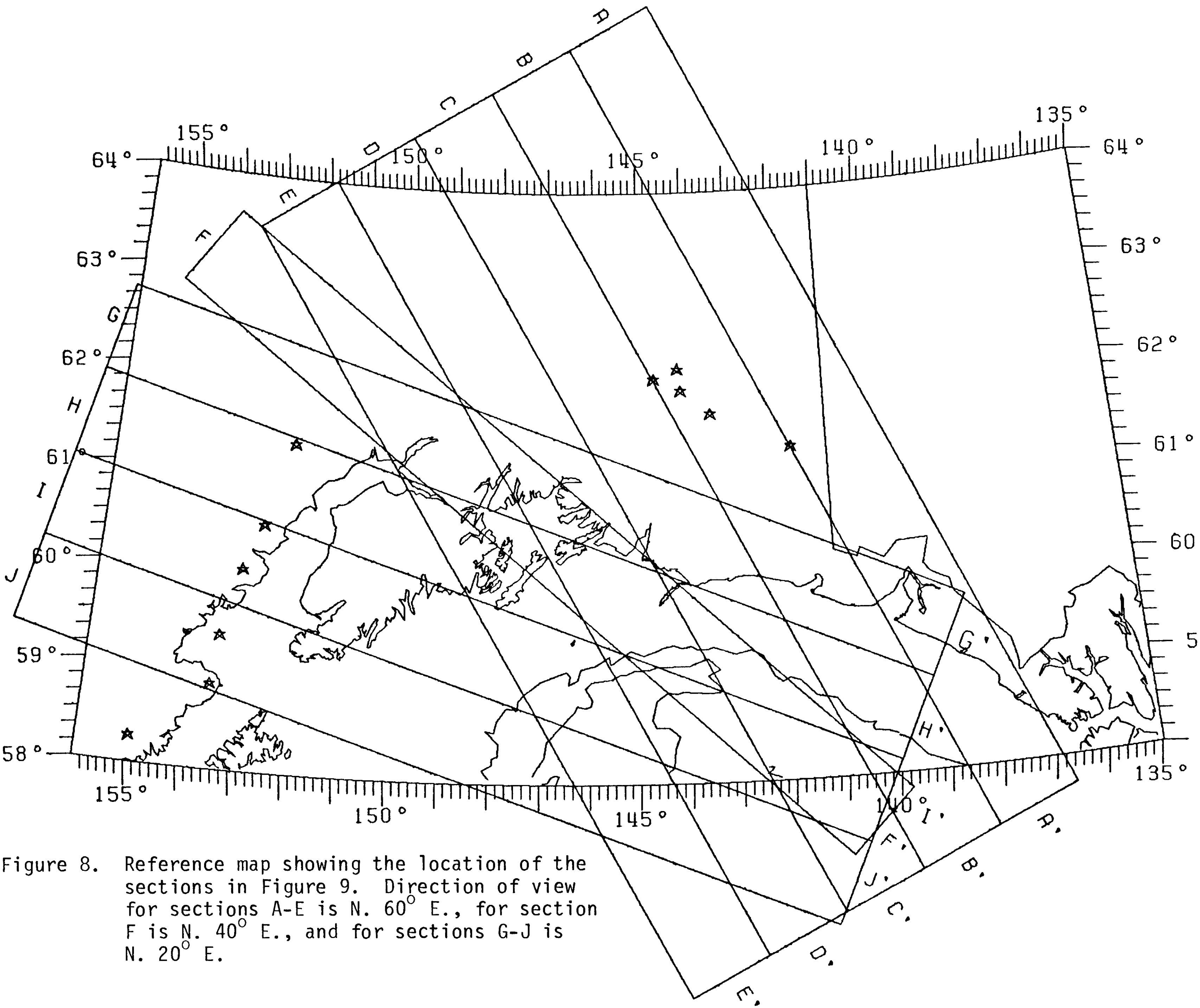

Figure 8. Reference map showing the location of the sections in Figure 9. Direction of view for sections A-E is N. 60° E., for section F is N. 40° E., and for sections G-J is N. 20° E.

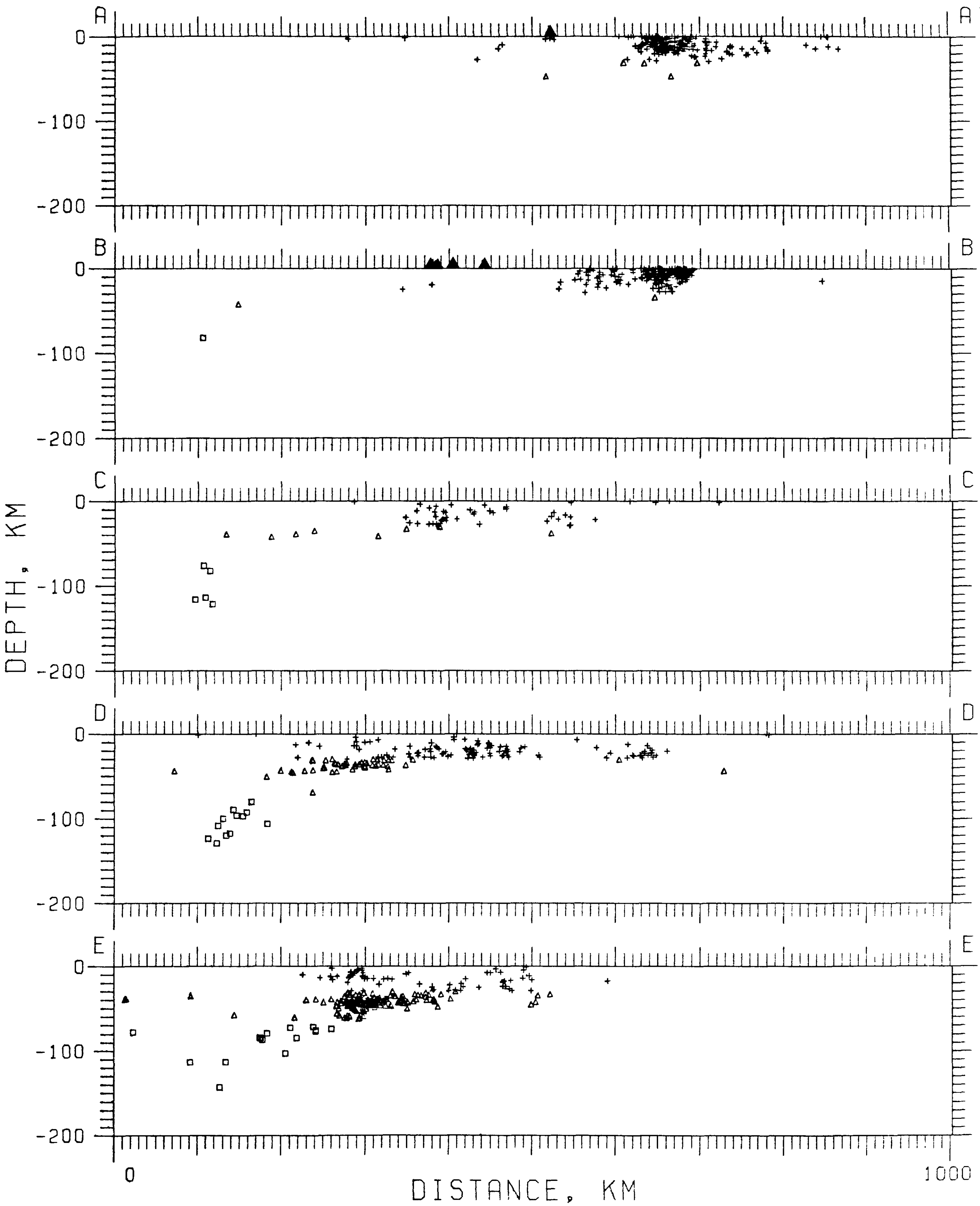

Figure 9. Vertical sections of hypocenters for the areas indicated in Figure 8. Quaternary volcanoes are plotted as solid triangles at zero depth. All distances are in kilometers. No vertical exaggeration.

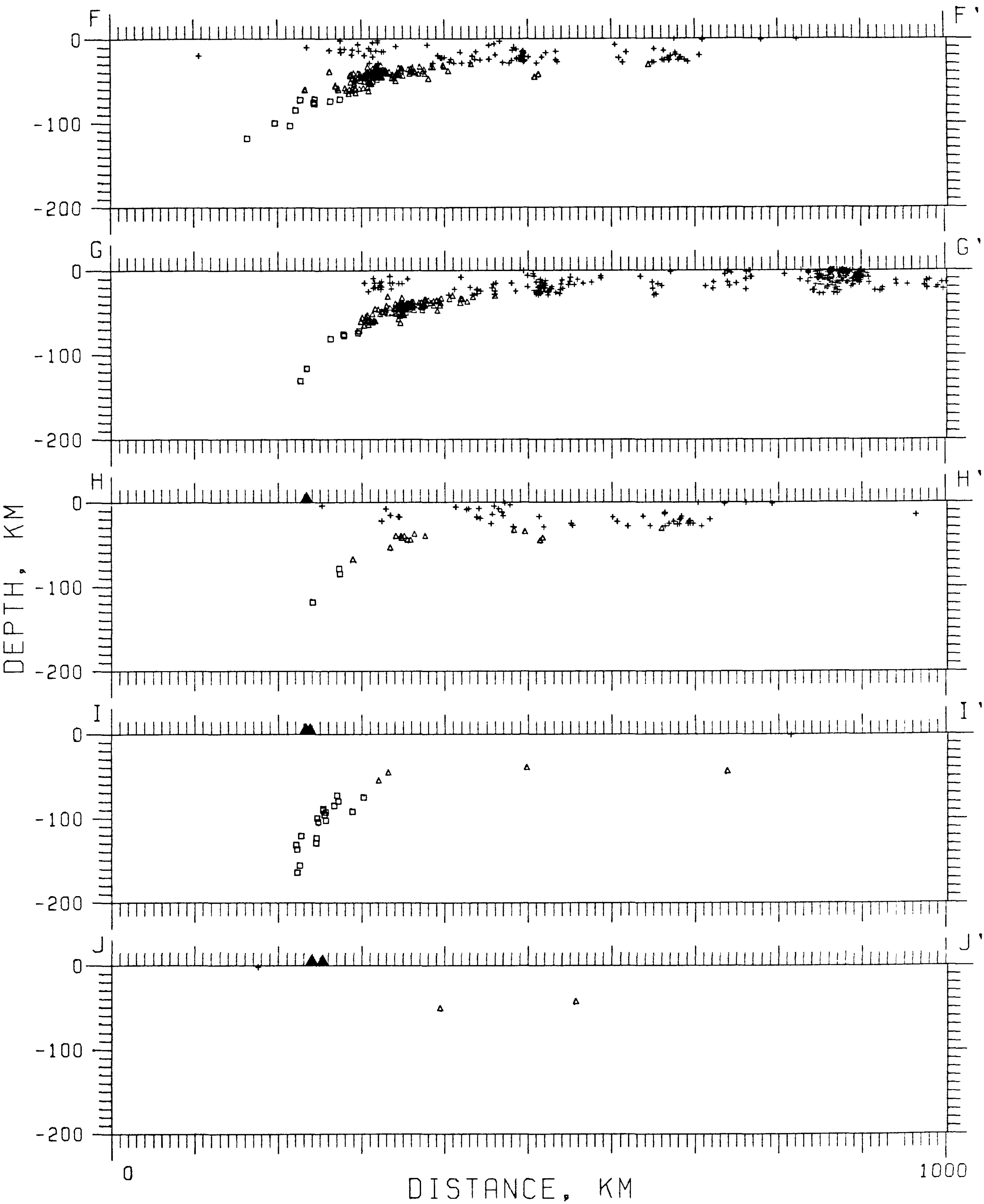

Figure 9. (continued)

was localized about 50 km southwest of Kayak Island. The largest earthquake to occur in this offshore area in almost 10 years was recorded on September 4, 1980. This earthquake (MB=5.0, MS=5.4, PDE) was located about 60 km southeast of Kayak Island and did not have any locatable aftershocks.

The seismicity throughout the remainder of the network does not vary markedly from that described for previous quarters (Stephens and others, 1980; Fogleman and others, 1978; Lahr, and others, 1974). A well-defined Benioff zone dips to the northwest beneath the Cook Inlet region (Figure 9, sections G-J). The depth to the top of this zone varies from about 50 km beneath the western Kenai Peninsula to about 115 beneath the active volcanoes west of Cook Inlet. The dip of the Benioff zone appears to increase from northeast to southwest, but the depth to the seismic zone beneath the active volcanoes--Augustine, Iliamna, Redoubt and Spurr--is nearly constant at about 115 km.

All of the seismic activity in the southern part of the network east of longitude 146° W. occurs at depths less than about 35 km. The number of larger magnitude earthquakes which occur in the east is considerably smaller than that in the western part of the network (Figure 7). Most of the seismic activity in the eastern part of the network appears to be concentrated beneath Icy Bay and northeast of Kayak Island.

The contents of the Appendix may be obtained in forms amenable to computer input (punched cards or magnetic tape) by contacting the authors.

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APPENDIX

Catalog of Earthquakes

Earthquakes from southern Alaska are listed in chronological order. The following data are given for each event:

1. Origin time in Universal Time (UT): date, hour (HR), minute (MN), and second (SEC). To convert to Alaska Standard Time (AST) subtract 10 hours.

2. Epicenter in degrees and minutes of north latitude (LAT N) and west longitude (LONG W).

3. DEPTH, depth of focus in kilometers.

   A letter code after the depth indicates as follows:

   C - Solution was constrained based on EMRC source.
   D - Depth was constrained by a geophysicist.
   P - Solution was constrained based on PDE source.
   W - Station weighting modified (for events outside of network).

4. MAG, coda duration magnitude (FMAG) of the earthquake. A letter following the magnitude indicates a magnitude other than FMAG as follows:

   A - Amplitude magnitude (XMAG), USGS.
   B - Body-wave magnitude (mb), USGS National Earthquake Information Service (NEIS).
   C - Local magnitude (ML), EMRC.
   G - Local magnitude (ML), UOFA.
   H - Helicorder magnitude, an approximate magnitude calculated using an empirical relationship between magnitudes determined from Develocorder records and corresponding coda durations or amplitudes measured on Helicorder records.
   P - Local magnitude (ML), Alaska Tsunami Warning Center.
   S - Surface-wave magnitude (MS), NEIS.

5. NP, number of P arrivals used in locating earthquake.

6. NS, number of S arrivals used in locating earthquake.

7. GAP, largest azimuthal separation in degrees between stations.

8. D3, epicentral distance in kilometers to the third closest station to the epicenter.

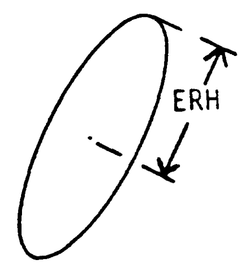
9. RMS, root-mean-square error in seconds of the traveltime residuals:

$$RMS = \left[\frac{\sum^{N} W_i [R_i]^2}{N}\right]^{1/2}$$

where Ri is the observed minus computed arrival time of the i^{th} arrival, Wi is the corresponding weight of the arrival, and the weights are normalized so that their sum equals N, the total number of arrivals used in the solution.

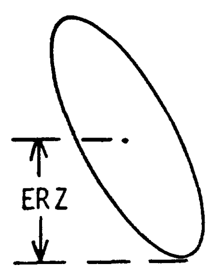
10. ERH, largest horizontal deviation in kilometers from the hypocenter within the one-standard-deviation confidence ellipsoid. This quantity is a measure of the epicentral precision for an event. Values of ERH that exceed 25 km are tabulated as 25 km.

Projection of ellipsoid onto horizontal plane:



11. ERZ, largest vertical deviation in kilometers from the hypocenter within the one-standard-deviation confidence ellipsoid. This quantity is a measure of the depth precision for an event. Values of ERZ that exceed 25 km are tabulated as 25 km.

Projection of ellipsoid onto vertical plane:



12. Q, quality of the hypocenter. This index is a measure of the precision of the hypocenter (see section Analysis of Quality) and is calculated from ERH and ERZ as follows:

Q	ERH	ERZ
A	$\leq$ 2.5	$\leq$ 2.5
B	$\leq$ 5.0	$\leq$ 5.0
C	$\leq$10.0.	$\leq$10.0
D	$\geq$10.0	$\geq$10.0

13. AZ1, DIP1, and SE1 are the azimuth in degrees (clockwise from north), dip in degrees, and standard error in kilometers of the most nearly horizontal of the three principal axes of the one-standard-deviation error ellipsoid. Values of SE1 that exceed 25 km are tabulated as 25 km.

14. AZ2, DIP2, and SE2 are defined as above, but correspond to the principal axis of intermediate dip.

15. AZ3, DIP3, and SE3 are defined as above, but correspond to the most nearly vertical principal axis.

Magnitudes and felt reports listed below an event were obtained from the Preliminary Determination of Epicenters of the USGS National Earthquake Information Service (NEIS), the Department of Energy, Mines and Resources, Canada (EMRC), or the NOAA Alaska Tsunami Warning Center (ATWC). The body-wave (mb) and surface-wave (Ms) magnitudes are those determined by the NEIS.

SOUTHERN ALASKA EARTHQUAKES, JULY - SEPTEMBER 198Ø

198Ø	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
JUL 1	1	8	56.9	59	57.6	141	4.Ø	8.7	1.3A	6	3	121	8Ø	Ø.13	4.1	3.7	B	81	22	Ø.7	33Ø	4Ø	1.2	192	42	5.4
1	2	49	1.1	59	54.8	141	2.4	8.Ø	1.2A	6	3	137	79	Ø.19	5.Ø	3.6	C	19Ø	25	5.3	86	29	Ø.9	314	5Ø	3.6
1	3	17	45.Ø	59	59.Ø	141	7.8	6.4	1.8	13	11	9Ø	72	Ø.37	1.6	1.8	A	91	2Ø	Ø.6	348	33	Ø.9	2Ø7	5Ø	2.3
								1.8 ML	EMRC																	
1	3	17	58.5	59	54.6	141	7.8	1Ø.1	1.8A	5	6	157	1Ø1	Ø.47	8.3	9.4	C	3Ø5	9	1.5	42	39	4.1	2Ø4	5Ø	11.9
1	5	9	Ø.5	6Ø	Ø.7	141	6.3	Ø.5	1.9	14	1Ø	89	73	Ø.56	1.2	1.9	A	98	7	Ø.5	5	27	Ø.8	2Ø1	62	2.1
								2.3 ML	EMRC																	
1	5	2Ø	21.Ø	59	57.6	141	3.9	7.5	1.4	9	4	121	8Ø	Ø.31	3.2	3.5	B	327	25	1.2	81	28	Ø.6	2Ø6	47	4.6
1	5	46	1.9	6Ø	Ø.8	141	48.7	4.5	1.8	13	9	149	36	Ø.55	2.7	1.9	B	1Ø8	7	Ø.5	2Ø2	3Ø	3.Ø	6	59	1.3
								2.1 ML	EMRC																	
1	6	43	19.Ø	59	56.2	141	5.8	9.6	1.1A	5	2	118	1ØØ	Ø.12	7.8	4.1	C	335	12	8.Ø	81	36	Ø.8	23Ø	5Ø	4.5
1	7	17	1.3	59	56.5	141	4.5	5.9	1.3A	6	4	119	81	Ø.37	3.8	4.2	B	327	22	2.5	81	28	Ø.7	2Ø9	48	5.3
1	8	48	34.Ø	59	57.3	141	4.5	8.3	1.7	11	9	111	8Ø	Ø.49	2.Ø	2.1	A	331	19	1.1	81	35	Ø.6	219	47	2.8
								1.8 ML	EMRC																	
1	8	56	45.1	59	52.4	14Ø	58.8	2.8	1.2A	6	3	16Ø	92	Ø.23	5.8	4.7	C	93	17	Ø.6	353	28	6.2	21Ø	56	4.4
1	9	12	36.3	59	52.5	141	4.9	6.7	1.5	8	6	161	81	Ø.18	3.5	1.9	B	2Ø1	2Ø	3.7	1Ø2	25	Ø.8	325	57	1.7
1	9	29	22.5	59	58.7	141	9.2	11.1	Ø.8A	6	3	121	1Ø4	Ø.14	11.5	4.9	D	323	1Ø	11.6	63	42	1.3	222	46	6.1
1	1Ø	27	18.9	6Ø	7.Ø	141	16.1	11.2	1.4A	7	3	131	93	Ø.68	3.6	3.9	B	9Ø	22	1.Ø	344	33	1.4	2Ø7	48	5.2
1	11	34	9.8	59	57.8	141	2.8	4.7	1.1A	6	6	122	79	Ø.57	2.1	2.7	B	82	2Ø	Ø.7	34Ø	28	1.4	2Ø2	54	3.2
1	12	42	3.3	59	59.3	141	8.5	8.3	1.9	11	1Ø	87	84	Ø.47	1.5	1.6	A	93	14	Ø.5	351	4Ø	Ø.7	198	47	2.1
								2.2 ML	EMRC																	
1	13	21	22.6	59	59.8	141	9.8	8.9	1.3A	6	3	123	85	Ø.33	4.3	4.2	B	319	18	1.Ø	81	33	Ø.7	21Ø	43	5.7
1	13	32	19.8	59	57.5	141	8.5	8.4	1.8	8	4	119	84	Ø.27	4.1	3.2	B	314	23	Ø.9	81	36	Ø.7	2Ø5	36	5.Ø
1	13	37	12.6	59	59.Ø	141	13.4	12.8	Ø.9A	4	1	175	145	Ø.11	8.7	4.3	C	169	13	8.6	81	37	1.6	275	51	5.1
1	15	14	14.7	59	54.Ø	141	3.6	4.1	Ø.8A	5	3	144	97	Ø.13	4.Ø	4.1	B	83	26	Ø.8	336	3Ø	3.4	2Ø6	48	5.Ø
1	17	21	22.8	6Ø	1.5	141	3.7	Ø.2	2.Ø	13	11	92	8Ø	Ø.68	1.3	2.6	B	81	11	Ø.6	339	18	Ø.8	198	66	2.8
								2.2 ML	EMRC																	
1	17	27	19.8	59	56.1	141	8.6	8.5	1.3A	6	2	117	84	Ø.22	4.8	3.2	B	195	31	5.5	81	34	Ø.9	316	4Ø	2.3
1	17	41	42.Ø	59	52.3	14Ø	58.4	Ø.2	1.5A	6	6	161	75	Ø.6Ø	3.8	3.1	B	97	8	Ø.8	4	18	3.8	21Ø	7Ø	3.1
1	19	57	46.9	59	5Ø.7	141	5.3	3.4	1.1A	7	7	183	82	Ø.76	3.1	1.5	B	13	Ø	3.1	1Ø3	17	Ø.5	283	73	1.5
1	2Ø	5Ø	27.3	6Ø	2.5	141	14.8	Ø.3	1.5	1Ø	7	92	9Ø	Ø.41	2.2	3.3	B	91	1Ø	Ø.6	355	3Ø	1.1	197	58	3.8
								1.8 ML	EMRC																	
1	21	21	6.8	59	5Ø.4	141	5.9	8.9	1.3A	6	2	184	133	Ø.23	4.8	3.3	B	348	27	5.2	97	33	Ø.9	227	45	3.2
1	21	36	57.8	59	59.5	141	6.4	2.7	1.8	13	8	93	82	Ø.37	1.5	2.6	B	81	16	Ø.6	341	21	Ø.8	2Ø4	62	3.Ø
								2.Ø ML	EMRC																	
1	22	32	46.Ø	6Ø	12.1	14Ø	38.8	47.7	2.3	12	8	92	92	Ø.41	1.6	4.5	B	29Ø	5	Ø.8	21	5	1.6	156	83	4.5
								2.Ø ML	EMRC																	
2	2	42	16.4	59	57.1	141	7.6	1Ø.2	2.9	27	7	82	73	Ø.46	2.2	2.Ø	A	1Ø1	9	Ø.6	199	41	2.8	1	48	1.Ø
					3.8 ML	ATWC		3.5 ML	EMRC																	
2	4	57	31.2	59	57.6	141	9.4	1Ø.2	1.6	9	6	119	85	Ø.27	4.6	2.6	B	319	24	1.1	261	39	4.Ø	82	37	Ø.8
2	4	58	37.7	59	58.7	141	9.1	7.3	1.7	12	8	121	85	Ø.51	2.3	2.3	A	32Ø	18	1.Ø	81	33	Ø.6	211	43	3.1
2	5	48	54.8	59	53.3	141	6.8	9.8	1.1A	6	5	148	83	Ø.22	4.Ø	1.9	B	178	1	4.Ø	87	41	Ø.6	269	49	2.4
2	6	49	27.8	59	5Ø.Ø	141	7.6	7.6	1.ØA	4	3	186	1ØØ	Ø.14	11.1	5.5	C	261	3Ø	6.Ø	351	33	11.3	129	47	1.Ø
2	6	51	42.1	59	58.7	141	2.2	4.Ø	1.3A	6	5	123	98	Ø.5Ø	2.7	3.5	B	81	22	Ø.9	329	24	1.2	2Ø3	52	4.2
2	8	58	56.6	59	58.5	141	5.Ø	1.6	2.Ø	14	1Ø	1Ø2	81	Ø.49	1.5	2.8	B	81	14	Ø.6	34Ø	2Ø	Ø.9	2Ø2	64	3.1
								2.3 ML	EMRC																	
2	9	43	15.2	59	52.1	14Ø	59.9	2.7	1.6	8	6	163	77	Ø.29	2.8	1.9	B	98	14	Ø.5	194	26	3.Ø	342	6Ø	1.6
2	11	8	5.4	59	56.8	141	5.5	7.8	1.1A	8	6	119	82	Ø.41	3.8	3.1	B	318	28	1.4	81	34	Ø.8	2Ø3	38	4.8
2	11	8	17.4	59	57.5	141	8.3	1Ø.3	1.3A	8	6	119	98	Ø.18	4.8	3.7	B	3Ø6	28	2.9	193	36	5.8	64	41	Ø.9
2	11	32	35.5	59	53.Ø	141	5.1	1Ø.2	1.ØA	6	4	154	81	Ø.57	4.4	2.Ø	B	194	18	4.6	93	3Ø	Ø.8	311	54	1.7
2	14	7	2Ø.5	61	26.Ø	149	54.2	39.3	2.3	19	13	64	45	Ø.45	1.3	2.3	A	91	4	Ø.7	182	11	1.2	341	78	2.4
2	15	47	12.4	59	56.3	141	Ø.3	4.8	1.1A	6	6	128	77	Ø.51	2.4	2.5	B	99	6	Ø.7	3	42	1.1	196	47	3.3
2	15	48	3Ø.5	6Ø	16.4	141	9.3	13.3	1.ØA	4	2	15Ø	1Ø7	Ø.Ø2	5.4	1Ø.Ø	D	117	2	1.3	26	25	3.Ø	211	65	11.Ø
2	16	43	35.8	61	28.2	147	26.3	18.7	1.8	16	12	125	67	Ø.35	1.7	2.4	A	278	11	Ø.6	11	15	1.6	153	71	2.5
2	18	5	23.3	6Ø	59.9	146	3.3	14.3	1.8	25	12	63	42	Ø.75	Ø.7	1.Ø	A	315	3	Ø.6	45	5	Ø.7	194	84	1.Ø
2	19	13	13.7	59	56.8	141	6.7	11.8	1.ØA	5	4	119	137	Ø.13	7.9	4.3	C	331	14	8.1	81	4Ø	1.Ø	227	44	4.9

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1980	ORIGIN HR	TIME MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
JUL 2	19	32	43.3	61	2.8	150	6.1	43.2	2.0	14	12	61	60	0.60	1.0	2.1	A	281	2	0.7	190	5	0.9	33	85	2.1
2	20	34	42.2	61	17.4	147	39.2	15.0	2.2	21	14	108	60	0.63	1.0	1.7	A	8	3	1.0	277	13	0.5	111	77	1.8
2	21	19	16.6	59	57.3	141	5.5	10.6	1.0A	3	4	228	137	0.15	5.0	3.8	B	312	24	3.7	81	39	0.8	204	33	5.6
2	21	55	57.3	59	57.8	141	6.3	11.1	1.1A	4	4	172	138	0.13	7.1	4.9	C	319	15	7.2	81	40	0.8	216	39	5.7
3	0	7	1.1	59	23.1	145	9.1	20.6	2.2	8	5	271	134	0.20	19.5	10.2	D	283	13	3.3	17	16	20.1	156	69	9.1
3	0	49	29.6	60	4.9	141	9.5	23.5	1.4	7	3	131	86	0.23	6.8	5.5	C	81	28	1.5	195	38	8.3	325	39	3.2
3	1	8	42.8	60	14.4	136	43.9	1.9	4.1	18	3	176	133	1.43	4.9	4.6	B	261	20	1.8	122	23	2.5	10	35	5.0
4.5 MB 4.3 ML ATWC 4.1 ML EMRC FELT AT WHITEHORSE																										
3	2	18	2.6	59	56.6	141	6.8	7.8	1.5	9	5	118	83	0.40	4.0	3.4	B	81	32	1.0	324	32	1.9	203	40	5.0
3	3	6	5.6	60	13.0	137	2.4	4.4	2.0	5	4	235	134	0.33	11.8	5.9	D	91	25	13.0	198	32	1.2	331	47	2.9
1.9 ML EMRC																										
3	4	24	40.5	61	8.7	148	9.5	16.4	1.6	8	6	100	56	0.24	0.9	1.9	A	158	1	0.8	261	12	0.8	64	72	1.9
3	6	56	15.9	59	49.6	139	59.0	12.6	0.8	3	3	290	100	0.56	5.7	10.3	D	161	12	1.4	261	20	3.8	43	65	11.2
3	8	47	31.9	61	46.3	148	28.8	7.3	1.9	16	10	155	75	1.07	1.4	1.4	A	272	16	0.6	9	23	1.4	150	61	1.5
3	8	51	15.7	60	23.7	141	55.2	18.7	1.6	4	2	207	100	0.39	10.2	24.2	D	264	8	9.4	356	12	1.0	141	75	25.0
3	8	53	22.5	59	50.6	141	5.5	4.9	1.6A	6	3	183	132	0.23	9.3	4.1	C	15	8	9.4	109	31	1.0	272	58	4.6
3	9	40	42.1	59	53.0	141	3.7	8.3	1.9	8	4	155	80	0.31	3.8	2.7	B	106	14	0.9	203	27	4.1	351	59	2.2
3	9	59	1.6	61	27.5	141	16.1	3.9	1.9	9	5	127	136	1.51	3.2	3.4	B	81	6	1.0	148	40	2.2	344	45	3.8
1.9 ML EMRC																										
3	11	9	29.1	59	56.8	141	6.2	10.4	1.3A	5	2	119	137	0.06	14.6	8.6	D	321	22	5.8	261	40	12.8	80	38	2.3
3	12	57	57.3	60	33.2	141	20.6	28.0	0.8A	4	2	171	116	0.05	11.3	23.8	D	313	1	2.5	43	19	8.2	220	71	25.0
3	13	36	40.1	59	57.7	141	6.6	8.7	1.9	12	9	102	82	0.34	3.6	3.5	B	313	20	1.0	60	39	1.1	202	44	4.9
1.9 ML EMRC																										
3	16	22	5.9	59	55.1	141	11.4	8.8	1.2	6	5	114	104	0.31	4.1	2.5	B	316	23	2.3	212	28	4.6	79	52	1.0
3	18	49	28.9	60	27.7	140	15.9	15.9	2.7	21	7	68	108	0.76	1.8	4.3	B	302	6	0.9	34	16	1.3	192	73	4.5
3.1 ML EMRC																										
3	20	40	45.3	61	12.8	150	42.5	20.2	1.8	11	10	71	66	0.57	1.0	4.2	B	165	5	0.8	261	6	0.5	38	80	4.2
3	20	44	4.1	59	52.4	141	5.6	10.2	2.1	17	8	162	82	0.41	2.4	1.1	A	193	13	2.4	93	36	0.6	300	51	1.1
2.5 ML EMRC																										
4	1	1	4.9	59	55.8	141	3.8	8.4	2.3	15	6	125	77	0.37	2.0	1.9	A	333	30	1.3	84	33	0.7	211	43	2.5
2.4 ML EMRC																										
4	2	16	29.0	60	34.7	140	26.3	32.2	0.7A	5	1	209	107	0.81	16.6	25.0	D	291	0	6.3	21	0	16.6	0	90	25.0
4	2	37	12.6	60	39.0	142	60.0	28.8	2.2	10	4	102	72	0.35	1.6	2.3	A	339	3	0.9	81	16	1.4	239	70	2.4
4	3	32	47.8	59	52.4	141	3.1	6.0	1.3	6	2	162	96	0.23	5.1	2.9	C	203	9	5.1	106	35	1.2	305	53	3.4
4	3	44	22.1	60	13.5	139	35.5	23.6	1.5	4	3	214	95	0.10	15.5	3.3	D	261	17	14.1	332	27	3.3	136	54	2.5
4	3	46	4.2	60	15.8	136	48.9	5.9	1.8A	6	6	171	127	0.64	2.7	2.3	B	261	18	1.9	3	39	3.1	151	46	1.6
1.7 ML EMRC																										
4	3	49	38.9	59	57.0	141	7.8	9.9	1.5	9	4	119	83	0.28	5.7	4.1	C	311	27	2.4	200	35	6.9	69	43	1.0
4	5	45	15.6	61	52.6	151	1.5	77.6	4.4	29	1	91	65	0.57	2.0	2.9	B	83	4	1.1	174	17	1.9	340	73	3.0
4.3 MB 3.8 ML ATWC FELT HOUSTON TO ANCHORAGE																										
4	6	29	40.1	60	13.9	140	16.0	17.5	2.0	5	2	183	101	0.27	12.3	6.0	D	311	17	1.4	48	20	13.0	184	63	4.5
4	6	52	25.3	60	10.1	141	3.3	3.7	1.1A	6	5	143	67	0.51	4.7	11.2	D	95	8	2.2	3	14	3.7	214	74	11.6
4	8	1	30.1	61	52.4	151	3.0	75.9	3.5	21	2	91	67	0.51	2.0	3.1	B	83	4	1.1	174	13	1.9	336	76	3.2
4	8	17	54.2	59	57.9	141	6.8	9.1	2.0	11	5	99	83	0.37	3.4	3.1	B	87	20	1.0	339	41	1.4	196	42	4.4
1.8 ML EMRC																										
4	8	40	1.8	60	2.8	141	15.1	0.2	1.5	9	3	125	65	0.44	2.7	4.1	B	281	2	0.7	12	29	1.7	187	61	4.6
4	9	39	17.3	61	26.0	149	54.2	40.0	2.4	16	5	121	45	0.35	1.6	3.0	B	189	2	1.6	98	3	0.9	312	86	3.0
4	11	46	17.3	59	41.6	136	53.8	15.0	1.4A	3	2	336	156	0.81	16.4	20.4	D	343	11	14.9	261	38	4.5	87	50	25.0
4	12	48	21.2	59	55.8	141	0.2	10.7	1.2A	6	3	131	95	0.38	8.5	8.9	C	101	15	1.5	203	39	5.0	354	47	11.4
4	14	48	23.3	59	53.0	141	8.5	13.1	1.1A	5	4	152	136	0.27	6.0	2.9	C	200	19	6.3	304	35	3.3	87	49	1.0
4	15	11	36.1	61	20.7	149	51.4	41.8	2.0	10	5	69	47	0.35	1.8	2.8	B	117	7	1.0	209	17	1.6	5	72	2.9
4	16	42	24.8	60	8.6	140	46.3	19.5	2.0	6	1	149	93	0.19	5.4	6.7	C	290	2	1.3	21	10	5.3	189	80	6.7
4	17	26	22.3	60	18.9	143	1.3	2.1	2.0	12	6	96	51	0.73	1.1	1.9	A	298	0	0.6	28	18	0.9	208	72	2.0
4	20	11	28.9	59	52.2	141	9.6	6.1	1.1	6	2	172	137	0.37	7.6	2.4	C	189	8	7.7	93	39	1.0	289	50	2.8
4	21	59	50.8	61	56.2	147	41.5	27.7	2.5	13	4	197	115	0.37	4.4	2.9	B	84	18	1.0	183	26	4.7	323	58	2.4

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1980	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
JUL 4	22	5	13.7	59	51.8	141	14.6	13.4	3.1	16	4	161	91	0.40	2.7	3.4	B	101	9	0.8	6	28	2.3	207	60	3.7
								3.6 ML	EMRC																	
4	22	54	42.3	60	59.2	147	8.1	21.6	2.7	17	3	119	46	0.51	1.4	2.4	A	1	2	1.4	270	16	0.6	98	74	2.5
4	23	8	31.3	59	56.4	141	5.8	10.5	1.8	7	2	162	82	0.10	5.0	3.0	B	88	27	1.0	193	27	5.5	321	50	2.0
4	23	9	3.4	59	57.3	141	7.1	12.2	2.6	15	6	102	73	0.61	2.7	2.0	B	98	2	0.6	189	35	3.2	5	55	0.9
								3.0 ML	EMRC																	
4	23	15	31.8	59	51.1	140	59.5	1.1	1.3A	4	3	172	127	0.21	7.2	2.6	C	197	2	7.2	106	24	0.8	291	66	2.8
5	0	7	9.0	60	7.4	139	19.5	15.0	1.4	3	1	299	79	0.04	14.8	20.3	D	27	10	5.5	124	34	1.5	283	54	25.0
5	1	4	23.0	61	27.5	146	14.6	5.0	2.7	25	7	82	55	0.59	0.9	1.2	A	28	4	0.9	297	21	0.8	128	69	1.3
5	1	13	33.5	60	14.4	141	0.8	2.1	1.5	8	3	205	80	0.43	5.1	3.5	C	282	4	0.9	190	27	5.5	20	63	2.7
5	3	33	14.0	59	55.5	141	5.2	10.1	1.3A	4	2	165	81	0.06	5.6	3.5	C	193	28	6.2	81	37	0.9	310	41	2.9
5	4	36	38.8	59	56.8	141	4.6	10.5	2.5	13	5	114	76	0.54	2.5	1.9	A	95	6	0.6	189	35	2.9	357	54	1.1
								2.7 ML	EMRC																	
5	5	1	50.4	60	0.2	141	8.5	7.5	2.1	13	7	84	71	0.57	2.0	2.3	A	93	21	0.6	349	33	1.0	210	49	2.9
								2.0 ML	EMRC																	
5	6	54	10.5	63	2.7	148	47.3	50.6	3.2	11	5	143	183	0.40	3.1	25.0	D	30	1	1.6	300	1	3.1	165	89	25.0
5	9	10	4.9	59	54.0	141	3.7	6.8	1.5	6	2	157	80	0.17	4.5	3.1	B	186	9	4.5	91	31	0.9	290	58	3.5
5	11	35	43.0	60	0.2	140	49.5	17.5	1.4A	4	3	182	67	0.28	13.0	8.4	D	3	6	13.1	94	10	2.6	242	78	8.5
5	15	50	25.5	61	36.0	150	2.0	41.0	3.5	19	1	117	47	0.25	2.0	2.5	B	281	1	1.0	190	29	1.7	13	61	2.7
					3.7 ML	ATWC						FELT AT PALMER														
5	15	58	47.5	59	51.9	139	19.2	17.8	0.4	3	3	213	100	0.32	18.4	19.1	D	152	5	1.3	81	43	4.0	247	44	25.0
5	16	11	11.4	59	51.9	139	19.0	18.5	0.3	3	3	213	100	0.28	18.6	18.7	D	153	5	1.4	81	44	4.0	248	43	25.0
5	16	26	49.4	62	3.2	149	17.7	35.9	3.2	18	3	107	91	0.37	3.2	3.3	B	341	28	2.1	90	31	1.1	218	46	4.3
5	16	30	47.9	59	52.2	141	1.5	2.5	1.1	6	4	163	78	0.33	8.1	4.9	C	185	11	8.2	91	21	0.9	301	66	5.0
5	18	31	56.5	62	30.0	151	12.4	84.7	4.0	20	2	111	149	0.55	2.8	10.1	D	23	3	2.8	293	6	1.9	140	83	10.2
					3.3 ML	ATWC																				
5	20	13	48.2	59	55.5	141	4.2	6.2	1.1A	5	4	165	80	0.12	8.1	5.4	C	196	31	9.2	83	33	1.3	318	41	3.8
5	20	19	22.3	59	54.2	141	11.2	9.7	1.4	6	2	156	104	0.18	7.5	3.4	C	206	19	7.8	306	26	4.6	84	57	0.9
5	23	22	38.6	61	25.5	149	53.2	38.7	1.9	10	4	67	44	0.43	2.2	2.3	A	289	1	1.2	197	41	2.0	20	49	2.5
6	0	35	0.0	59	54.5	141	10.6	11.2	1.6	5	2	157	86	0.09	6.8	2.6	C	198	16	7.1	301	38	2.4	90	48	1.3
6	1	57	29.0	60	21.8	147	39.2	16.8	2.4	19	4	164	93	0.51	1.7	2.5	A	172	8	1.7	265	15	0.7	55	73	2.6
6	2	1	25.6	59	37.6	139	13.6	21.4	1.7	3	2	167	43	0.14	24.9	14.4	D	137	3	1.4	261	24	25.0	42	49	2.5
6	5	20	37.6	60	31.7	140	24.1	27.5	1.4A	5	6	211	139	0.28	15.6	20.5	D	126	8	3.1	221	35	6.5	25	54	25.0
6	7	7	55.3	60	10.0	141	13.3	2.3	0.8A	3	2	213	100	0.05	23.3	17.5	D	87	9	3.9	353	27	25.0	194	61	15.2
6	9	54	13.8	60	27.3	141	21.7	11.7	1.3A	6	5	179	111	0.36	4.7	7.2	C	172	12	4.5	81	18	1.5	295	68	7.6
6	12	45	15.1	59	55.6	141	5.5	9.7	1.8	6	3	160	82	0.19	4.1	2.3	B	194	22	4.4	94	24	0.9	322	57	1.8
6	15	29	10.4	62	23.2	148	2.6	44.7	2.5	12	6	119	126	0.53	5.8	21.4	D	91	6	2.4	0	11	3.6	209	77	21.9
6	17	10	42.5	59	21.0	144	56.4	22.4	2.5	8	2	264	152	0.16	11.4	3.5	D	1	6	11.5	266	40	4.0	98	49	2.7
6	19	0	58.2	61	26.8	150	1.1	32.4	1.9	7	4	71	50	0.26	2.1	4.2	B	178	7	1.7	271	22	1.1	71	67	4.6
7	1	31	55.0	61	9.6	150	17.6	45.0	2.1	12	9	64	59	0.56	1.1	3.0	B	208	3	1.1	118	5	0.9	329	84	3.0
7	2	18	49.5	59	50.4	141	10.9	7.0	1.4	6	3	186	88	0.50	8.5	1.8	C	10	6	8.5	103	25	1.0	267	64	1.7
7	5	8	58.4	60	59.8	147	14.4	29.0	2.5	19	7	121	46	0.53	1.5	1.5	A	273	14	0.6	16	41	1.2	168	46	1.8
7	8	20	28.7	59	55.0	141	6.2	9.8	1.9	5	4	162	82	0.29	4.8	2.4	B	100	13	0.7	196	23	5.2	343	63	1.5
7	9	50	0.4	61	34.3	149	59.7	45.1	1.6	10	6	96	43	0.36	2.0	2.2	A	274	10	0.9	177	35	1.7	18	53	2.4
7	15	54	50.1	61	34.6	146	30.5	6.6	2.3	15	5	175	74	0.34	1.7	2.0	A	286	23	0.8	27	25	1.3	159	55	2.4
7	22	41	20.5	61	32.5	150	43.4	58.5	2.7	17	4	116	65	0.32	1.5	3.6	B	82	2	1.0	172	12	1.4	343	78	3.6
8	1	15	33.1	61	39.6	146	29.8	7.7	1.9	17	8	184	79	0.30	1.9	2.3	A	288	21	0.9	29	27	1.6	165	55	2.6
8	3	59	40.5	60	31.4	145	0.3	14.1	2.2	23	5	107	46	0.36	1.4	1.7	A	23	13	1.4	117	17	0.7	257	68	1.8
8	7	28	7.7	59	54.3	140	38.0	0.2	1.7A	6	5	164	79	0.82	9.8	6.7	C	279	7	1.9	11	17	10.1	167	72	6.4
8	9	27	43.5	60	23.2	140	27.1	2.7	2.4	17	9	74	96	0.86	1.6	3.2	B	272	2	0.9	2	14	1.5	174	76	3.3
								2.8 ML	EMRC																	
8	11	56	20.3	61	24.5	139	42.6	0.5	2.7	15	6	148	162	1.21	3.5	4.0	B	106	6	1.5	197	6	3.5	332	81	4.0
								2.3 ML	EMRC																	

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1980	ORIGIN TIME HR MN SEC	LAT N DEG MIN	LONG W DEG MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
JUL 8	12 17 12.2	60 32.1	147 21.0	25.7	2.0	18	8	150	86	0.61	1.7	2.2	A	270	5	0.7	179	18	1.6	15	71	2.3
8	12 43 15.7	60 31.6	147 16.1	21.4	2.0	20	11	151	69	0.62	1.4	1.6	A	268	7	0.7	173	37	1.2	7	52	1.8
8	15 59 4.2	61 43.6	146 41.2	4.4	2.0	16	8	189	91	0.40	2.1	2.9	B	24	17	1.7	286	25	0.9	145	59	3.3
8	16 20 37.8	61 49.1	147 54.3	25.9	2.3	13	9	187	106	0.42	3.4	5.1	C	86	13	1.2	349	28	1.8	198	59	5.8
8	20 1 12.4	61 34.1	149 58.8	45.0	2.0	8	8	101	42	0.34	2.0	2.4	A	288	1	1.0	198	10	2.0	24	80	2.4
8	20 16 55.2	59 42.6	139 0.1	22.4	1.0	3	3	219	100	0.33	18.8	18.6	D	324	7	1.0	81	40	5.0	227	43	25.0
9	0 33 36.4	60 3.6	140 38.9	15.2	1.3	7	5	172	58	0.46	14.0	4.9	D	188	5	14.0	97	10	1.2	304	79	4.9
9	8 27 46.7	62 52.2	149 25.6	106.6	3.8	23	4	108	147	0.62	2.5	10.9	D	115	2	2.5	24	6	2.0	223	84	11.0
9	8 35 59.5	59 11.6	136 46.4	10.1	2.6	7	6	255	158	1.55	10.6	8.5	C	81	17	1.9	304	33	3.7	184	33	11.6
				2.4 ML	EMRC																	
9	11 9 25.5	61 27.1	150 19.7	50.7	2.1	11	10	94	66	0.29	1.8	2.4	A	107	3	0.9	198	15	1.7	6	75	2.5
9	11 10 39.3	61 21.0	147 14.5	17.6	2.6	22	4	154	65	0.42	1.5	2.4	A	14	8	1.5	282	15	0.6	131	73	2.5
9	11 39 29.6	60 3.9	141 7.1	6.6	1.3	7	5	164	84	0.36	5.4	1.4	C	18	0	5.4	108	35	0.9	288	55	1.6
9	13 24 27.1	60 36.7	141 40.3	1.5	1.7	13	10	184	67	0.60	1.5	2.5	A	23	2	1.5	113	12	0.9	284	78	2.5
9	13 35 32.4	60 3.6	139 57.7	31.5	1.6	4	2	213	91	0.25	12.1	4.0	D	34	14	12.5	298	21	4.2	155	64	2.3
9	14 43 12.4	60 55.3	146 49.4	27.7	2.0	16	6	101	35	0.56	1.5	2.3	A	171	2	1.5	261	12	0.8	72	78	2.4
9	15 41 37.0	61 25.4	147 20.5	11.3	2.0	16	9	160	63	0.52	2.0	2.5	A	290	14	0.7	25	21	1.9	169	64	2.7
9	16 22 6.3	61 32.5	147 45.0	31.0	2.4	18	10	167	84	0.52	2.1	2.2	A	283	0	0.7	13	44	1.2	193	46	2.8
9	16 40 10.9	59 17.8	136 56.5	9.9	2.3	7	6	126	145	1.26	8.8	7.7	C	81	14	1.8	310	36	4.2	183	36	10.1
				2.1 ML	EMRC																	
9	16 59 35.8	59 26.5	145 7.0	26.6	3.7	25	1	181	122	0.32	3.8	1.7	B	114	7	1.1	22	12	3.9	234	76	1.5
			4.1 ML ATWC																			
9	17 14 8.9	60 13.2	140 59.4	8.1	1.8	12	6	168	40	0.50	2.4	2.6	B	99	4	0.9	5	41	1.4	194	49	3.2
9	20 33 1.3	61 40.7	150 41.8	58.0	2.6	11	7	146	55	0.24	1.8	3.5	B	95	5	1.0	186	17	1.4	349	72	3.7
9	21 27 2.1	62 24.9	148 34.7	40.6	2.9	22	13	115	112	0.43	2.9	12.6	D	352	4	2.7	82	7	1.5	232	82	12.7
9	22 56 4.2	61 37.7	140 32.4	1.9	2.3A	15	9	110	127	1.57	2.2	3.1	B	81	4	2.2	171	12	1.4	333	77	3.1
				2.2 ML	EMRC																	
10	2 35 4.4	61 36.2	149 53.0	53.2	2.3	11	5	71	43	0.34	2.2	2.6	B	193	1	2.2	102	8	0.9	290	82	2.6
10	2 56 47.5	61 23.7	149 35.7	46.9	1.9	9	4	86	33	0.44	2.2	3.4	B	187	7	2.2	279	12	1.1	67	76	3.4
10	4 46 1.9	62 19.5	148 29.6	30.0	2.2	12	5	111	104	0.43	2.8	2.1	B	81	8	1.4	331	12	2.7	198	66	1.9
10	6 38 56.0	60 59.2	149 45.4	39.1	2.1	14	4	62	58	0.44	1.4	3.5	B	321	0	1.1	261	1	0.9	51	60	3.0
10	10 54 26.7	63 13.7	149 11.9	97.3	3.1	10	5	116	184	0.74	3.1	12.7	D	282	0	3.1	12	1	2.0	192	89	12.8
10	10 54 42.0	62 3.6	150 56.7	10.3	2.1	7	5	235	72	1.21	12.2	12.7	D	109	20	1.2	215	37	2.3	357	46	17.5
10	12 43 19.6	61 53.3	147 13.1	17.7	2.3	14	5	154	82	0.53	1.6	1.9	A	270	5	0.6	177	25	1.5	11	64	2.0
10	15 42 43.4	60 0.2	141 4.1	7.0	1.5	8	2	117	27	0.19	1.8	1.9	A	22	18	1.1	126	37	0.9	271	47	2.4
10	17 14 41.9	59 54.2	140 46.8	0.2	1.4	7	1	148	47	0.18	6.9	5.9	C	117	14	2.7	215	29	7.3	4	57	5.6
10	21 42 28.5	60 2.0	141 16.1	6.8	2.1	17	8	98	18	0.66	1.1	0.9	A	281	0	0.5	191	3	1.1	11	87	0.9
				2.2 ML	EMRC																	
10	22 7 51.2	60 2.5	141 15.9	2.2	1.4	7	2	102	18	0.37	1.9	1.7	A	95	6	0.6	0	41	2.2	192	48	1.4
10	22 17 10.1	60 21.2	141 14.2	0.3	1.6	9	3	155	56	0.65	3.3	5.2	C	81	13	2.0	328	20	1.3	196	57	5.6
11	0 58 29.0	59 59.5	141 6.9	4.6	1.2	7	3	94	26	0.19	1.6	2.6	A	81	11	1.2	143	14	1.1	304	57	2.4
11	1 22 24.1	60 12.7	140 50.7	3.5	1.1	6	3	155	69	0.25	4.3	5.9	C	321	14	3.0	81	18	1.6	205	53	6.1
11	4 12 35.7	60 8.6	141 5.2	14.0	1.1	6	2	139	84	0.07	16.7	6.2	D	204	19	17.6	305	29	4.2	85	54	1.5
11	4 31 51.1	60 11.3	141 29.5	10.5	0.9	3	2	243	34	0.09	8.1	3.4	C	97	3	1.5	7	11	8.2	202	79	3.0
11	4 32 28.5	60 13.9	141 29.6	9.3	1.4	4	2	246	37	0.01	4.6	3.8	B	95	1	1.2	4	26	4.8	187	64	3.5
11	5 35 33.4	61 50.8	149 10.6	4.6	1.7	12	4	163	45	0.45	1.2	2.1	A	4	10	1.2	271	17	0.8	123	70	2.2
11	5 37 13.4	60 11.4	140 22.5	21.0	1.3A	4	2	171	118	0.11	9.5	7.0	C	105	6	2.3	196	11	9.6	347	77	6.9
11	10 9 37.0	62 21.1	147 44.8	36.9	2.7	20	6	109	111	0.57	2.3	2.5	A	177	18	2.3	81	31	0.9	294	54	2.9
11	10 20 48.4	61 55.1	149 45.5	49.8	2.3	15	4	208	73	0.32	2.6	2.6	B	81	7	1.3	342	43	2.2	178	46	3.0
11	11 3 21.9	61 21.3	149 31.7	34.7	2.3	13	5	69	38	0.38	1.1	1.6	A	197	2	0.9	107	13	1.1	296	77	1.6

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1980	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
JUL 11	13	25	45.3	59	57.8	140	57.6	0.9	1.5	8	5	123	35	0.78	1.2	1.5	A	104	10	0.5	12	14	1.2	229	73	1.6
11	14	20	18.2	60	26.5	140	46.4	0.5	1.3A	5	2	183	108	0.16	4.6	13.8	D	261	0	2.3	316	0	3.5	0	55	11.3
11	17	0	56.3	60	17.9	140	16.8	11.2	2.5	17	6	88	68	0.79	1.9	2.9	B	91	1	0.9	0	28	1.3	183	62	3.2
								2.6 ML	EMRC																	
11	20	20	58.9	60	37.0	141	42.7	9.3	2.1	16	8	61	65	0.85	0.8	2.0	A	223	1	0.8	133	3	0.6	331	87	2.0
								2.2 ML	EMRC																	
11	22	34	42.2	60	13.9	141	50.5	0.1	0.7	6	4	132	44	0.17	1.9	5.8	C	2	1	1.9	272	2	1.0	119	88	5.8
12	0	46	28.8	59	55.5	141	1.5	2.6	1.3	6	2	169	132	0.15	6.2	4.5	C	126	9	1.2	30	32	7.0	230	56	3.0
12	2	56	12.9	61	34.0	146	36.0	13.4	1.8	14	5	168	57	0.56	1.5	1.7	A	192	16	1.5	287	18	0.6	63	66	1.8
12	6	47	5.2	61	35.0	146	28.3	18.5	2.1	14	4	91	59	0.65	1.0	2.0	A	215	5	0.9	306	7	0.9	90	81	2.0
12	7	39	54.0	59	49.0	141	29.1	1.2	0.9	4	2	235	100	0.31	5.0	7.3	C	200	4	2.0	108	26	4.0	298	64	7.9
12	12	9	3.2	61	31.0	150	14.7	43.5	2.1	12	6	105	47	0.19	2.2	3.4	B	81	2	0.9	169	19	2.0	345	71	3.5
12	13	4	42.8	60	9.9	136	44.8	4.2	2.2	5	5	181	144	0.46	5.6	6.0	C	81	3	1.4	327	17	5.1	179	61	5.6
								2.2 ML	EMRC																	
12	15	26	21.6	61	41.0	146	13.8	27.2	2.0	16	5	98	62	0.65	1.2	1.3	A	272	24	0.9	167	31	0.8	33	49	1.5
12	20	33	49.6	61	27.1	146	33.5	14.0	2.0	14	5	149	44	0.42	1.3	2.0	A	16	11	1.2	281	24	0.7	129	63	2.2
12	22	20	6.5	63	23.4	147	12.0	42.6	3.8	22	3	146	186	0.56	4.6	14.6	D	174	3	1.6	265	14	2.8	72	76	15.1
					3.1 ML	ATWC																				
13	1	46	36.2	60	15.4	141	14.5	14.1	1.2	4	3	197	100	0.11	5.4	6.4	C	107	2	1.8	15	37	3.7	200	53	7.5
13	1	53	30.5	60	26.8	140	26.4	1.4	1.3	6	2	199	71	0.06	11.6	18.9	D	91	5	1.6	184	30	4.0	352	59	21.8
13	2	6	37.2	60	17.9	145	6.3	29.3	2.2	20	4	132	47	0.50	1.4	1.3	A	110	19	0.7	214	35	1.6	357	49	1.2
13	3	49	24.1	60	46.9	143	44.2	23.6	1.6	8	4	76	74	0.60	1.9	5.9	C	356	2	1.0	87	11	1.5	256	79	6.1
13	4	54	49.5	60	10.7	141	5.8	13.9	1.2	7	3	143	85	0.10	9.6	6.9	C	94	25	1.0	204	35	11.7	337	44	2.1
13	5	26	21.5	59	59.1	152	43.2	95.3	3.7	24	2	68	86	0.59	2.0	2.4	A	81	2	2.0	162	13	1.4	342	74	2.5
					3.3 ML	ATWC																				
13	8	4	1.7	61	33.0	146	24.3	30.8	2.0	18	4	85	55	0.62	1.0	1.6	A	350	6	0.9	261	21	0.9	95	68	1.7
13	11	15	44.7	62	27.1	148	54.8	31.6	2.4	12	4	123	102	0.49	2.3	3.1	B	346	17	2.0	84	25	1.5	225	59	3.5
13	11	48	16.0	58	33.8	144	36.0	43.6	3.0	11	4	259	209	0.48	5.8	24.9	D	275	3	3.1	184	4	5.5	41	85	25.0
13	17	24	32.1	60	4.3	141	21.2	21.1	1.1	5	2	170	38	0.15	6.9	8.9	C	269	13	1.5	171	31	4.6	19	56	10.4
13	18	16	17.9	59	12.6	136	58.8	0.0	2.7	8	3	126	171	1.54	5.6	6.6	C	318	19	3.1	81	24	2.0	203	46	7.5
								2.6 ML	EMRC																	
13	19	14	38.4	61	51.4	150	20.2	2.8	3.3	20	2	88	64	0.62	1.5	1.6	A	267	20	0.7	162	36	1.3	20	47	1.9
					3.0 ML	ATWC																				
13	21	2	5.8	60	24.0	141	16.8	0.2	2.3	17	5	54	58	1.09	1.1	1.5	A	272	5	0.8	4	24	0.9	171	65	1.6
								2.9 ML	EMRC																	
14	3	48	29.8	63	18.3	150	8.8	129.3	3.6	8	4	305	289	0.29	15.7	17.1	D	95	6	4.8	0	39	11.9	192	50	20.0
14	5	21	4.0	62	12.7	150	10.2	40.2	2.7	18	3	216	88	0.31	3.2	9.3	C	9	5	3.0	100	9	1.0	250	80	9.5
14	5	45	44.2	61	33.4	148	41.1	31.7	2.3	17	8	106	34	0.49	1.4	1.0	A	17	1	1.4	108	19	0.6	284	71	1.0
14	10	13	50.2	59	51.6	152	50.6	88.8	3.6	28	5	137	83	0.58	1.9	1.8	A	160	26	1.2	51	34	1.6	279	45	2.1
14	11	18	31.9	59	43.4	142	33.2	4.6	1.6A	7	3	197	112	0.84	4.3	4.4	B	91	26	2.0	342	33	2.4	211	45	5.7
14	11	37	38.4	60	0.9	139	12.8	7.2	1.1	3	1	269	100	0.14	9.7	23.2	D	222	7	5.6	130	21	1.1	330	68	25.0
14	12	50	36.3	59	28.6	138	56.6	13.8	1.1	3	3	183	66	0.09	21.9	5.8	D	221	4	21.9	314	38	1.8	126	52	7.0
14	14	58	31.5	60	19.2	140	16.7	15.7	1.8	15	7	92	69	0.69	1.9	3.1	B	93	2	0.8	2	25	1.3	187	65	3.3
								1.8 ML	EMRC																	
14	18	4	55.6	60	13.8	140	21.0	20.3	1.2	6	3	178	120	0.16	9.3	6.7	C	94	5	1.3	185	9	9.4	335	80	6.6
14	19	42	36.1	62	2.3	148	40.0	42.1	2.5	17	9	179	71	0.40	1.8	2.3	A	277	6	1.4	10	24	1.6	174	65	2.5
14	23	33	22.0	60	1.9	141	18.8	4.2	1.9	19	6	100	18	0.60	1.1	1.0	A	288	4	0.5	196	33	1.2	24	57	0.9
15	0	51	4.5	60	9.3	139	35.3	16.7	1.6	7	2	210	86	0.52	5.0	2.5	B	301	9	1.4	209	12	5.1	67	75	2.4
15	1	12	18.5	60	31.9	143	12.7	3.1	1.3	12	4	99	67	0.40	2.4	3.4	B	278	2	2.4	8	16	0.9	181	74	3.5
15	2	22	49.9	58	59.7	137	51.7	12.8	2.2	3	2	354	147	0.02	24.9	15.2	D	214	6	25.0	308	28	25.0	113	61	10.5
15	3	5	50.3	59	13.3	145	55.8	28.4	3.5	21	5	253	135	0.70	5.4	2.4	C	184	21	5.7	81	37	1.8	298	47	1.6
15	3	17	29.4	61	56.5	148	44.6	18.6	1.9	10	8	197	61	0.44	3.8	5.5	C	199	13	1.8	297	31	0.8	89	56	6.7
15	3	29	37.0	63	40.0	150	43.8	43.7	4.3	31	4	153	229	0.69	3.0	11.1	D	302	5	2.8	211	6	2.0	71	82	11.2
					3.4 ML	ATWC																				
15	4	22	10.6	61	19.0	150	41.8	45.7	2.1	14	7	71	75	0.39	1.9	2.3	A	89	13	0.9	188	33	1.2	341	54	2.7

SOUTHERN ALASKA EARTHQUAKES, JULY - SEPTEMBER 198Ø

198Ø	ORIGIN TIME HR MN SEC	LAT N DEG MIN	LONG W DEG MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
JUL 15	7 49 37.8	6Ø 49.4	146 51.8	16.2	2.2	32	15	5Ø	45	Ø.57	Ø.7	1.2	A	168	2	Ø.7	261	16	Ø.5	71	74	1.3
15	9 22 57.5	63 59.8	148 3.5	76.3	3.9	17	5	149	274	Ø.79	9.9	24.4	D	28Ø	2	9.9	19Ø	12	2.1	19	78	25.Ø
15	1Ø 23 32.2	6Ø 38.6	15Ø 25.Ø	44.3	2.Ø	12	6	123	1Ø7	Ø.19	2.6	8.6	C	261	4	Ø.9	156	4	2.4	29	74	8.4
15	1Ø 48 49.6	6Ø 11.3	141 3.9	11.5	1.3	11	6	139	46	Ø.14	4.3	3.3	B	278	8	1.Ø	183	35	5.2	19	54	1.7
15	11 26 31.3	6Ø 6.9	141 6.6	2Ø.8	1.2	7	4	126	47	Ø.93	6.7	3.2	C	189	13	6.8	94	22	1.3	3Ø7	64	3.1
15	11 58 Ø.9	6Ø 36.8	141 46.3	3.3	1.6	17	12	155	62	Ø.56	1.6	3.5	B	152	2	Ø.8	261	8	1.4	5Ø	69	3.4
15	12 16 29.5	61 55.6	148 56.7	4.3	2.Ø	17	7	17Ø	58	Ø.4Ø	1.9	2.7	B	32	13	1.5	295	28	Ø.7	144	59	3.1
15	13 3 51.9	6Ø 31.Ø	143 18.6	1.9	1.1A	7	5	82	56	1.3Ø	2.8	5.9	C	279	3	Ø.9	188	21	1.9	17	69	6.3
15	13 7 42.3	6Ø 18.7	14Ø 58.9	5.4	1.4	13	9	161	47	Ø.45	1.8	2.8	B	28Ø	3	Ø.9	12	25	1.3	184	65	3.Ø
15	13 13 22.7	6Ø 13.3	141 31.1	2.9	1.1	6	4	132	35	Ø.36	2.2	4.Ø	B	3Ø3	17	Ø.9	39	18	1.4	173	65	4.4
15	13 27 23.6	6Ø 58.4	147 1.9	25.1	3.1	45	8	57	36	Ø.75	Ø.7	1.1	A	12	1	Ø.7	282	3	Ø.5	12Ø	87	1.1
		2.8 ML	ATWC																			
15	13 33 39.9	6Ø 33.Ø	143 2Ø.5	4.9	Ø.9	9	5	85	56	Ø.9Ø	1.8	4.2	B	279	3	Ø.7	188	16	1.4	19	74	4.3
15	14 5 46.7	61 58.5	15Ø 26.5	13.9	3.Ø	25	7	111	59	Ø.44	2.5	2.8	B	273	12	1.Ø	175	35	2.Ø	19	53	3.3
15	19 14 37.6	64 3.9	148 12.3	116.5	4.6	32	11	126	252	Ø.43	6.8	24.1	D	275	2	5.1	184	15	1.9	12	75	25.Ø
15	19 46 35.6	63 15.9	15Ø 15.6	1Ø8.8	3.5	8	6	287	19Ø	Ø.62	15.1	23.1	D	81	14	7.3	332	2Ø	1Ø.1	199	6Ø	25.Ø
15	2Ø 4 4Ø.Ø	62 1.4	148 8.Ø	38.2	3.3	39	12	82	71	Ø.61	1.6	1.4	A	2Ø1	2Ø	1.5	94	39	Ø.8	312	44	1.8
15	2Ø 12 9.5	62 33.9	147 51.4	31.7	2.8	17	8	12Ø	132	Ø.74	2.2	2.1	A	82	29	1.4	33Ø	34	2.Ø	2Ø2	42	2.4
15	2Ø 3Ø 12.7	6Ø 58.9	147 2.3	29.6	2.3	34	12	57	37	Ø.56	Ø.9	1.1	A	13	6	Ø.9	282	9	Ø.6	136	79	1.1
15	2Ø 45 4Ø.6	62 28.Ø	148 18.9	39.8	3.Ø	25	9	113	118	Ø.5Ø	2.1	24.4	D	355	Ø	2.1	85	3	1.3	265	87	24.4
15	21 33 4Ø.2	6Ø 9.8	14Ø 51.2	15.Ø	1.6	9	8	149	67	Ø.67	6.6	3.8	C	94	2Ø	1.Ø	195	26	7.3	331	56	2.4
16	1 21 23.3	61 41.3	149 38.1	42.5	2.2	14	13	151	5Ø	Ø.4Ø	1.6	1.6	A	1Ø4	2	Ø.9	195	33	1.7	11	57	1.6
16	7 13 33.6	6Ø 14.2	14Ø 43.Ø	1Ø.5	1.8	11	1Ø	163	76	Ø.75	2.2	2.5	A	1Ø4	5	Ø.9	1Ø	39	1.3	2ØØ	51	3.1
16	8 17 38.5	6Ø 49.1	144 9.8	24.2	Ø.8A	4	4	17Ø	72	1.56	6.7	7.1	C	176	5	1.6	81	43	1.3	271	47	9.7
16	9 48 24.8	6Ø 16.8	141 6.1	Ø.3	2.5	23	9	153	76	Ø.93	1.3	1.5	A	113	2	Ø.7	22	33	1.1	2Ø6	57	1.7
16	1Ø 4 4.5	61 2Ø.9	149 52.Ø	41.1	2.1	14	11	56	49	Ø.37	1.4	2.1	A	1Ø6	5	Ø.8	15	8	1.4	228	81	2.1
16	1Ø 55 11.5	62 3.3	148 17.6	36.2	2.4	23	2Ø	18Ø	72	Ø.63	1.9	1.2	A	351	Ø	1.9	81	44	Ø.7	261	46	1.6
16	11 1Ø 2.1	6Ø 15.2	141 4Ø.2	2.Ø	1.1	11	7	129	69	Ø.75	1.3	3.2	B	299	7	Ø.7	31	13	1.1	181	75	3.3
16	11 11 37.6	63 47.Ø	148 29.2	121.4	4.4	31	9	119	221	1.Ø1	3.2	14.Ø	D	99	2	3.1	19Ø	9	1.8	357	81	14.2
16	14 28 2.2	6Ø 2.4	141 4.1	7.8	1.6A	8	4	152	81	Ø.85	4.Ø	1.2	B	15	4	4.1	1Ø6	1Ø	Ø.8	264	79	1.2
16	14 28 18.9	6Ø Ø.6	141 3.5	8.4	2.1	13	11	156	76	Ø.91	2.9	1.5	B	1Ø4	9	Ø.8	11	18	3.Ø	219	7Ø	1.2
16	2Ø 32 47.6	59 59.3	141 3.6	2.6	1.6	15	11	114	29	Ø.88	Ø.9	1.3	A	18	11	Ø.9	111	14	Ø.6	251	72	1.4
16	23 38 3.8	6Ø 19.7	141 16.8	9.7	1.7	15	12	151	5Ø	Ø.77	1.3	2.Ø	A	316	15	Ø.7	52	22	1.Ø	194	63	2.2
17	6 2 36.2	59 13.2	136 5Ø.8	16.3	4.4	24	4	13Ø	168	1.43	3.Ø	12.9	D	345	5	2.4	81	7	1.9	222	8Ø	13.Ø
	4.4 MB		4.6 ML ATWC	4.7 ML	EMRC																	
17	6 15 58.1	61 6.3	145 46.2	11.7	2.5	25	12	73	44	Ø.84	Ø.8	1.2	A	224	9	Ø.8	132	1Ø	Ø.7	355	76	1.2
17	7 8 33.3	58 51.6	136 28.Ø	3Ø.8	3.5	15	6	264	217	1.22	13.2	25.9	D	81	6	2.8	321	17	7.2	185	55	25.Ø
				3.3 ML	EMRC																	
17	8 49 2Ø.4	59 16.2	136 58.8	Ø.1	2.6	9	7	126	168	1.78	2.4	3.2	B	343	16	2.1	81	18	1.9	215	65	3.5
				2.6 ML	EMRC																	
17	8 53 11.Ø	62 3Ø.7	148 53.8	1Ø.2	2.5	14	1Ø	221	1Ø9	Ø.92	2.1	2.8	B	181	2	1.8	273	36	1.Ø	88	54	3.3
17	13 17 5Ø.8	58 56.6	143 21.2	2.Ø	2.7	29	12	2ØØ	143	Ø.81	3.8	2.1	B	2Ø6	23	4.1	314	37	2.1	91	44	1.Ø
17	13 34 13.2	6Ø 1Ø.6	141 13.2	1.9	1.7	15	9	138	48	Ø.79	1.6	1.8	A	112	1	Ø.6	22	38	1.1	2Ø3	52	2.2
17	13 37 31.2	6Ø 9.7	141 11.7	2.3	2.1	26	14	7Ø	32	Ø.84	1.1	1.2	A	1Ø8	11	Ø.5	8	39	Ø.8	211	49	1.5
				2.6 ML	EMRC																	
17	13 41 27.7	6Ø 9.6	141 12.7	6.3	1.8	17	14	72	48	1.Ø5	1.5	1.6	A	283	Ø	Ø.6	12	41	Ø.9	193	49	2.Ø
				1.8 ML	EMRC																	
17	14 45 54.1	63 9.2	15Ø 35.4	143.1	4.6	38	3	13Ø	188	Ø.59	2.3	7.5	C	348	Ø	2.3	81	3	1.9	258	86	7.5
		3.4 ML	ATWC																			
17	15 18 34.3	59 56.8	141 1.9	2.7	1.7	12	7	121	57	Ø.69	1.1	1.6	A	2	14	1.Ø	96	18	Ø.6	236	67	1.7
17	16 32 28.3	6Ø 31.2	142 53.6	22.5	1.2A	4	3	137	78	Ø.29	12.7	9.9	D	81	5	1.1	138	35	13.9	345	43	1.4
17	16 46 33.2	61 49.7	149 4Ø.5	47.1	2.Ø	1Ø	9	161	65	Ø.27	1.9	2.6	B	98	2	Ø.9	7	22	1.8	193	68	2.8

SOUTHERN ALASKA EARTHQUAKES, JULY - SEPTEMBER 1980

1980	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
JUL 17	18	12	22.9	60	41.0	143	6.3	3.7	0.8A	4	4	168	74	0.44	3.8	6.0	C	2	11	2.1	95	14	3.5	235	72	6.3
17	23	24	32.4	60	15.2	141	14.8	3.9	1.7	17	13	145	42	0.83	1.1	1.6	A	300	7	0.6	33	27	0.9	197	62	1.7
18	1	3	24.6	59	56.9	141	3.0	0.3	1.4	8	2	118	32	0.45	1.5	3.4	B	338	4	1.0	81	4	1.4	210	76	3.3
18	1	25	18.4	60	22.7	148	18.1	3.5	1.9	8	3	155	107	0.34	3.0	5.5	C	320	12	2.3	225	22	1.3	77	65	6.0
18	1	29	15.9	61	13.5	145	32.9	5.0	1.5	14	7	64	43	1.11	0.9	1.2	A	178	7	0.9	87	11	0.5	300	77	1.3
18	5	20	58.8	58	58.6	137	56.4	0.9	2.0	4	2	354	145	0.48	24.9	6.8	D	224	4	25.0	130	40	7.1	319	50	6.1
18	6	50	22.1	60	14.9	141	13.7	4.3	1.9	13	7	79	68	0.87	1.4	2.2	A	88	1	0.7	358	26	1.0	180	64	2.5
								2.0 ML	EMRC																	
18	6	55	24.7	60	3.1	141	0.5	9.2	1.6	8	2	150	77	0.30	12.8	5.9	D	349	22	13.8	89	24	0.9	221	57	3.3
18	9	5	19.7	60	9.6	141	14.1	0.2	0.9	4	3	245	100	0.20	7.7	12.2	D	288	2	0.8	197	23	6.3	23	67	13.0
18	11	51	14.0	60	23.6	144	40.5	1.9	1.6	12	3	98	59	0.72	2.5	5.6	C	22	4	2.5	112	8	1.1	266	81	5.7
18	12	5	34.7	60	15.8	140	50.5	10.1	1.2	4	3	228	75	0.76	3.9	6.0	C	338	15	3.0	81	23	1.2	220	60	6.8
18	15	41	17.5	60	19.8	142	56.7	0.6	1.3	7	3	110	41	0.58	1.0	2.6	B	203	5	0.9	294	13	0.7	92	76	2.7
18	17	8	21.7	59	54.6	140	58.6	10.9	1.1	4	2	197	75	0.43	8.9	10.6	D	233	23	4.6	129	30	2.5	354	51	13.4
18	20	12	4.4	60	16.5	141	12.1	1.2	3.5	23	4	71	56	0.63	1.3	1.8	A	108	6	0.6	15	27	1.0	210	62	2.0
			4.7 MB				4.3 ML ATWC	4.2 ML	EMRC																	
18	22	18	12.6	59	22.5	145	23.8	25.9	2.6	19	8	228	129	0.40	2.8	1.6	B	12	15	2.9	108	21	1.5	249	64	1.5
18	22	56	44.3	61	30.6	148	49.5	30.4	2.2	19	6	99	42	0.70	1.1	0.9	A	9	3	1.1	100	17	0.6	269	73	1.0
19	0	13	47.3	60	11.6	140	47.5	3.1	1.1	5	2	198	100	0.33	6.2	8.7	C	81	7	2.3	324	13	5.2	192	60	8.3
19	0	59	26.6	59	55.2	141	2.2	1.7	1.4	5	4	170	78	0.27	7.1	7.6	C	261	23	2.7	142	27	1.6	18	46	9.8
19	1	0	37.6	59	59.2	141	4.0	5.2	1.3	6	4	112	54	0.19	2.5	3.5	B	33	3	1.4	125	32	1.5	298	58	4.1
19	1	16	34.3	58	20.0	143	20.7	1.3	2.7	18	4	242	210	1.43	6.5	3.3	C	220	19	6.8	320	25	4.0	97	58	2.1
19	1	36	48.9	61	14.7	149	17.1	38.7	2.0	15	6	47	45	0.38	1.0	1.0	A	22	12	0.8	123	42	0.8	279	46	1.1
19	2	24	28.0	60	16.0	141	9.6	2.1	1.5	10	6	149	92	1.29	1.9	2.3	A	308	17	0.9	48	30	1.4	192	55	2.7
19	5	3	13.6	61	44.3	149	25.3	43.9	1.3A	11	7	159	58	0.29	1.9	2.0	A	81	10	1.2	333	39	1.6	182	47	2.2
19	6	47	17.0	58	53.5	136	40.4	32.0	3.0	7	5	273	206	0.70	7.9	27.8	D	261	0	2.8	325	0	7.0	0	64	25.0
								2.5 ML	EMRC																	
19	7	58	23.1	59	1.8	138	4.3	0.3	1.7	3	3	354	136	0.39	24.9	4.5	D	220	4	25.0	128	27	7.3	318	63	2.8
19	10	7	28.4	59	59.3	141	7.7	2.0	1.3	8	4	89	26	0.40	1.1	2:0	A	39	0	1.1	129	17	0.9	309	73	2.1
19	10	29	7.3	59	59.8	141	5.2	7.8	1.5	10	4	107	27	0.34	1.4	1.4	A	213	23	1.3	109	29	0.6	335	51	1.6
19	11	26	49.3	60	10.6	141	9.8	3.3	1.8	10	4	154	51	1.00	2.4	2.4	A	322	27	1.0	81	28	1.6	202	43	3.0
19	11	28	5.2	61	19.6	148	46.0	8.4	1.8	13	4	56	43	0.61	1.3	2.6	B	311	2	0.8	220	25	0.6	45	65	2.9
19	14	34	38.0	60	19.5	141	11.2	4.1	1.1	6	5	155	57	0.11	3.1	4.2	B	269	4	1.6	1	21	2.8	169	69	4.4
19	15	34	55.3	60	4.5	140	44.1	12.9	1.5	9	2	155	42	0.24	4.4	2.5	B	87	7	0.9	179	13	4.4	329	75	2.4
19	16	28	13.9	60	15.1	141	1.3	1.9	2.5	16	4	68	80	0.71	1.4	1.9	A	89	2	0.7	358	30	1.0	182	60	2.2
								2.6 ML	EMRC																	
19	17	0	55.2	60	27.6	140	51.8	2.6	1.5	9	6	181	80	0.70	1.3	2.7	B	39	4	1.3	309	10	0.8	151	79	2.7
19	18	52	17.9	60	1.3	140	58.9	4.2	1.4	5	3	154	59	0.45	5.6	3.1	C	7	19	5.8	113	39	1.9	257	45	3.0
19	20	9	59.6	59	57.0	141	6.6	5.0	1.1	6	4	116	30	0.32	2.7	3.5	B	14	9	0.7	278	30	2.0	119	58	4.0
19	20	53	55.7	60	11.3	141	4.3	11.7	1.4	9	2	160	36	0.29	4.3	4.3	B	81	13	3.9	335	39	1.3	185	47	5.6
19	22	27	32.3	60	59.7	146	42.9	12.1	2.0	14	4	81	30	0.59	1.0	1.8	A	275	5	0.9	185	8	1.0	37	81	1.8
20	4	18	31.0	60	5.9	141	10.2	19.1	1.2	5	2	132	148	0.19	12.3	2.8	D	297	11	4.1	205	11	12.6	71	74	1.4
20	4	53	51.8	60	16.6	141	16.3	1.5	1.2	7	3	146	89	0.30	2.4	6.2	C	81	3	1.6	319	11	0.9	182	56	5.5
20	5	17	22.8	60	3.1	140	8.9	23.9	1.6	7	2	159	60	0.69	B.8	3.4	C	28	16	9.2	283	40	3.3	135	45	1.1
20	8	7	52.5	61	54.0	149	5.2	38.2	3.1	31	4	97	50	0.36	1.7	1.2	A	185	16	1.8	87	27	0.8	302	58	1.3
20	9	6	59.2	60	23.5	141	1.0	5.0	1.4	5	3	173	100	0.43	5.7	9.0	C	345	16	1.1	261	26	3.9	107	59	9.9
20	9	7	42.9	60	9.1	140	54.5	2.5	1.1	4	1	201	100	0.09	8.2	9.1	C	81	8	1.0	337	30	7.4	184	56	9.7
20	16	4	7.6	59	14.5	136	58.0	1.0	3.3	15	6	126	161	1.54	4.3	5.7	C	324	15	2.9	81	21	1.9	209	53	6.2
								3.2 ML	EMRC																	
20	16	9	58.5	59	14.9	136	56.2	1.6	3.4	14	5	127	162	1.26	4.3	5.8	C	324	14	2.9	81	21	1.9	210	54	6.3
								3.2 ML	EMRC																	

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1980	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
JUL 20	19	43	32.7	61	22.2	150	16.8	15.1	1.9	13	4	78	66	0.66	1.3	4.0	B	0	2	1.3	270	12	0.5	99	78	4.1
20	20	27	47.0	60	37.3	144	43.3	19.0	1.1A	7	4	132	41	0.42	1.8	4.2	B	116	12	0.8	24	13	1.4	248	72	4.4
20	22	10	41.7	60	17.8	141	21.2	1.3	1.3	6	3	157	84	0.89	2.2	5.6	B	261	4	1.6	323	16	1.1	157	58	5.1
21	6	54	36.4	60	14.2	140	58.0	5.9	1.0	6	2	200	81	0.11	4.8	9.5	C	342	6	3.0	81	24	1.2	239	64	10.5
21	8	48	38.7	59	15.5	136	55.6	1.0	3.7	18	4	127	162	1.15	5.0	8.3	C	330	11	3.9	81	17	2.0	214	61	8.6
								3.5 ML	EMRC																	
21	10	7	10.5	60	43.9	149	58.0	39.8	2.0	16	8	55	54	0.62	1.1	3.1	B	271	7	0.7	2	9	0.9	144	79	3.2
21	10	43	41.3	60	17.6	140	59.9	12.4	1.5	7	4	158	47	0.19	2.9	4.9	B	81	17	1.1	330	17	1.4	206	59	5.4
21	14	8	56.2	60	1.9	141	9.9	7.6	1.2	6	3	90	21	0.12	1.2	1.8	A	157	1	0.7	81	10	1.1	253	73	1.8
21	14	57	4.1	61	7.2	148	27.8	24.5	2.3	24	5	79	61	0.50	1.0	1.6	A	278	5	0.8	187	11	1.0	32	78	1.6
21	19	34	13.8	59	25.0	144	38.1	27.6	1.9A	6	2	267	221	0.29	10.0	3.1	C	21	8	10.1	289	11	4.7	146	76	2.6
21	22	6	25.7	61	46.8	149	5.5	10.5	3.1	24	4	91	44	0.79	1.3	1.8	A	1	6	1.3	269	19	0.6	108	70	1.9
21	22	36	50.1	61	44.4	149	7.0	15.0	1.3	8	4	158	51	0.43	1.5	1.7	A	359	11	1.3	261	37	0.8	103	51	2.1
22	1	19	55.0	61	32.5	146	19.1	21.4	2.2	22	12	86	55	0.75	0.9	2.0	A	199	1	0.9	289	7	0.6	101	83	2.0
22	4	33	2.4	59	25.8	139	3.2	17.6	1.1	3	2	247	67	0.06	7.1	3.6	C	218	7	7.1	312	30	1.1	116	59	4.0
22	4	44	41.8	60	20.0	141	19.0	15.0	1.3	6	3	150	52	0.14	3.6	4.1	B	298	9	1.6	36	39	1.9	197	49	5.1
22	4	44	56.4	60	22.5	141	18.7	4.2	1.2	6	4	154	55	0.38	3.9	5.7	C	326	10	1.8	81	19	2.8	215	58	5.9
22	4	53	7.4	63	38.0	148	23.8	39.3	3.5	12	9	151	205	0.69	3.2	23.6	D	274	0	3.3	184	3	1.5	4	87	23.6
22	5	47	34.3	59	57.8	141	8.3	6.5	1.7	8	5	165	84	0.31	3.6	3.0	B	102	6	0.9	7	39	4.5	199	50	1.4
22	12	14	38.6	61	10.0	138	48.2	2.4	1.4A	8	7	147	143	1.44	2.1	2.7	B	208	8	2.0	301	23	1.0	100	66	2.9
								2.0 ML	EMRC																	
22	14	18	58.4	61	24.5	150	45.6	61.6	2.7	23	7	52	67	0.48	1.3	2.9	B	81	1	0.8	161	11	1.1	346	75	2.9
22	14	52	54.2	61	30.0	150	38.2	51.2	2.0	12	9	109	64	0.28	1.7	3.0	B	86	1	0.9	176	15	1.5	352	75	3.0
22	17	24	37.7	60	15.1	141	8.9	29.1	1.5	5	3	146	55	0.30	5.5	6.2	C	291	19	1.5	35	35	1.9	178	49	8.1
22	19	6	16.0	60	12.7	141	2.4	12.1	2.1	12	6	144	58	0.16	2.3	2.7	B	283	10	0.8	21	38	1.2	181	50	3.3
22	20	58	9.0	62	3.0	147	56.9	34.3	2.2	21	14	179	81	0.58	2.0	1.2	A	343	12	2.0	81	26	0.7	231	61	1.2
22	22	20	10.6	60	9.4	141	14.8	1.9	1.7	7	4	136	88	0.23	3.2	4.7	B	316	21	1.1	55	22	2.2	187	59	5.3
22	22	45	43.6	59	46.0	152	35.4	72.9	3.2	28	3	76	79	0.43	1.4	3.3	B	314	1	1.4	224	3	1.4	62	87	3.3
					3.4 ML		ATWC																			
22	23	29	16.8	61	24.8	150	32.0	15.0	2.0	13	8	93	55	0.65	1.0	1.9	A	97	1	0.8	187	12	0.9	2	78	2.0
23	0	16	38.5	60	12.0	141	4.3	2.8	1.3	7	4	141	85	0.45	3.5	4.7	B	81	12	1.0	338	30	2.2	189	56	5.4
23	0	19	20.0	61	26.0	146	32.9	20.5	2.8	33	5	81	42	0.62	0.9	1.6	A	8	8	0.8	276	9	0.6	139	78	1.6
23	2	11	42.3	61	30.3	149	43.4	36.9	2.2	19	12	92	54	0.44	1.4	1.6	A	266	5	0.8	172	33	1.1	4	56	1.8
23	2	51	46.1	60	13.3	141	6.2	0.3	1.3	6	3	143	100	0.23	3.1	5.2	C	81	10	1.0	346	24	2.0	192	64	5.7
23	3	4	54.1	60	13.3	141	5.9	0.2	1.2	6	5	144	56	0.23	2.9	4.9	B	81	11	1.0	342	21	2.1	196	65	5.3
23	3	10	2.2	63	22.7	149	34.5	100.5	4.3	27	3	126	191	0.55	2.6	14.2	D	290	1	2.5	200	2	1.8	47	88	14.3
					3.3 ML		ATWC																			
23	3	17	20.8	61	25.0	148	34.0	36.7	1.8	12	8	76	45	0.19	1.7	1.8	A	145	15	1.5	261	19	1.0	27	55	1.8
23	3	27	48.6	60	19.4	141	15.9	0.1	1.1	7	5	151	61	0.19	1.5	3.5	B	96	3	0.9	6	11	1.4	201	79	3.5
23	3	47	40.2	60	16.4	141	0.9	11.7	1.8	13	9	155	62	0.36	1.6	2.0	A	277	4	0.6	10	36	0.9	182	54	2.4
23	4	13	54.2	60	17.8	141	0.6	5.8	1.1	4	4	160	100	0.21	4.2	8.1	C	81	7	1.4	329	20	2.0	187	60	8.5
23	6	7	27.6	63	44.9	148	58.3	113.6	4.0	22	7	170	232	0.28	7.1	15.4	D	193	5	1.8	102	13	6.3	304	76	15.8
23	6	58	51.1	60	43.9	150	50.8	7.8	1.9	16	8	64	82	0.64	1.0	1.4	A	4	15	1.0	99	18	0.5	237	66	1.5
23	8	7	40.2	61	11.8	148	49.7	34.2	1.1A	11	8	86	40	0.35	1.9	2.2	A	130	12	1.2	261	19	0.9	22	44	2.1
23	8	38	46.5	60	25.0	147	35.2	27.6	2.3	27	14	76	60	0.47	1.0	1.6	A	270	8	0.6	3	18	0.9	157	70	1.6
23	9	51	23.0	62	33.8	148	30.8	30.8	2.7	25	10	120	124	0.65	2.0	2.1	A	326	5	1.6	81	37	1.2	230	46	2.4
23	10	26	21.6	62	0.8	147	46.8	30.0	2.2	21	11	193	85	0.66	2.6	2.0	B	81	7	0.9	345	26	2.7	185	63	1.8
23	11	48	34.9	62	11.7	148	19.2	34.9	2.8	27	11	90	88	0.51	1.7	1.8	A	347	7	1.7	83	38	0.9	248	51	2.2
23	12	51	29.8	62	8.2	147	50.4	34.1	2.5	24	13	96	87	0.50	2.4	1.4	A	344	13	2.4	81	20	0.8	224	65	1.3

SOUTHERN ALASKA EARTHQUAKES, JULY - SEPTEMBER 198Ø

198Ø	ORIGIN TIME HR MN SEC	LAT N DEG MIN	LONG W DEG MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
JUL 23	15 37 25.5	6Ø 12.9	14Ø 51.9	19.8	2.6	21	8	81	36	Ø.54	1.7	1.8	A	284	8	Ø.8	21	41	1.1	185	48	2.3
				2.8 ML	EMRC																	
23	17 1Ø 47.9	6Ø 8.6	14Ø 43.8	17.3	1.6	9	6	143	41	Ø.16	4.2	2.Ø	B	3	Ø	4.2	93	2	1.Ø	273	88	2.Ø
23	17 45 38.6	6Ø 11.8	14Ø 58.4	1Ø.Ø	1.2	5	4	2Ø7	41	Ø.11	7.9	8.8	C	81	14	1.3	335	36	4.2	188	49	11.1
23	19 23 35.7	6Ø 15.2	141 4.6	9.7	1.4	8	6	15Ø	49	Ø.2Ø	2.8	3.9	B	85	13	1.Ø	348	3Ø	1.7	196	57	4.5
23	19 25 37.5	59 31.7	145 6.3	26.6	3.2	35	14	2Ø3	119	Ø.53	3.1	1.4	B	9	4	3.1	99	8	1.1	253	81	1.4
23	21 27 Ø.3	6Ø 15.5	141 12.1	4.Ø	1.3	7	5	145	52	Ø.27	2.3	4.6	B	1ØØ	3	1.1	8	23	1.3	197	67	4.9
23	22 3 39.5	6Ø 16.8	141 2.5	8.1	1.1	6	5	155	86	Ø.26	3.5	5.6	C	319	15	1.7	81	16	1.Ø	2Ø1	52	5.8
23	22 11 44.7	6Ø 2Ø.Ø	141 9.Ø	1Ø.Ø	1.4	6	4	157	59	Ø.31	3.6	5.6	C	81	13	2.2	329	2Ø	1.8	196	58	6.Ø
23	23 7 19.6	59 14.1	151 59.6	54.2	3.5	29	3	1Ø9	115	Ø.42	2.3	3.8	B	261	3	1.6	338	11	2.1	155	73	3.8
24	Ø 45 1Ø.Ø	6Ø 5.4	139 17.4	7.1	2.1	13	7	14Ø	54	Ø.94	1.6	2.3	A	91	21	1.1	351	23	Ø.9	219	58	2.6
				2.1 ML	EMRC																	
24	1 16 32.5	6Ø 14.2	14Ø 54.1	15.3	1.2	6	4	155	77	Ø.19	5.1	5.2	C	82	13	1.4	341	41	3.9	186	46	6.3
24	2 8 17.5	6Ø 6.8	139 2Ø.5	3.4	2.1	13	6	137	51	Ø.95	1.4	1.9	A	27Ø	6	1.1	4	32	Ø.9	171	57	2.2
				2.2 ML	EMRC																	
24	2 44 36.6	59 8.2	148 43.9	39.Ø	3.Ø	2Ø	4	236	155	Ø.35	7.5	6.5	C	188	2	7.5	96	41	1.6	28Ø	49	8.5
24	5 34 36.3	61 18.7	149 3Ø.Ø	35.6	2.2	15	5	6Ø	43	Ø.48	1.1	1.4	A	132	4	1.Ø	223	6	1.1	9	83	1.4
24	6 59 41.6	6Ø 8.4	136 44.7	23.8	2.7	1Ø	6	184	142	1.22	3.9	9.4	C	81	3	1.4	332	14	2.8	182	66	9.3
				2.7 ML	EMRC																	
24	9 19 51.Ø	59 58.2	139 38.5	17.1	1.Ø	4	3	211	37	Ø.32	9.1	5.1	C	317	1	1.3	81	21	8.5	225	51	2.6
24	9 21 57.3	6Ø 7.3	139 2Ø.Ø	8.Ø	2.2	12	6	87	51	Ø.87	2.1	3.5	B	121	4	1.3	28	28	1.Ø	218	62	4.Ø
				2.4 ML	EMRC																	
24	9 5Ø 39.8	61 5Ø.8	149 31.7	34.Ø	2.3	17	6	163	63	Ø.37	1.8	1.5	A	89	2	Ø.8	18Ø	22	1.9	354	68	1.4
24	1Ø 1Ø 47.3	59 19.7	137 31.7	1.9	2.6	12	5	127	127	Ø.9Ø	4.9	6.7	C	335	17	4.1	81	2Ø	1.8	212	6Ø	7.3
				2.6 ML	EMRC																	
24	1Ø 23 57.Ø	59 12.Ø	138 5.8	1Ø.1	1.9	4	2	348	121	Ø.55	24.2	7.6	D	2Ø9	15	25.Ø	114	2Ø	7.Ø	334	65	3.8
24	1Ø 55 56.6	6Ø 26.1	147 4Ø.1	23.7	2.Ø	23	7	79	64	Ø.41	1.6	1.9	A	27Ø	13	Ø.7	7	28	1.3	158	59	2.1
24	15 39 15.7	6Ø 11.6	14Ø 58.9	13.9	2.3	15	6	83	61	Ø.23	1.9	2.1	A	85	1	Ø.7	354	41	1.1	176	49	2.6
				2.4 ML	EMRC																	
24	19 1 57.1	61 34.4	152 4.6	116.3	4.Ø	25	2	86	72	Ø.44	1.9	3.8	8	81	3	1.3	162	4	1.9	311	8Ø	3.7
		3.3 ML	ATWC																			
24	19 48 38.2	6Ø 59.7	151 9.4	14.9	1.8	12	8	58	57	Ø.5Ø	Ø.8	2.Ø	A	315	Ø	Ø.8	45	2	Ø.7	225	88	2.Ø
25	Ø 33 36.Ø	59 57.4	141 11.3	7.2	2.2	15	7	86	26	Ø.51	1.1	1.Ø	A	199	2	1.1	1Ø9	14	Ø.6	297	76	1.Ø
				2.5 ML	EMRC																	
25	Ø 35 43.2	59 58.Ø	141 9.8	4.1	1.4	9	3	87	26	Ø.34	1.5	2.7	A	143	8	1.1	81	13	1.Ø	27Ø	58	2.4
25	1 22 17.3	6Ø 2Ø.Ø	141 17.4	6.9	2.3	9	5	72	63	Ø.23	1.4	1.8	A	82	3	Ø.7	35Ø	29	1.1	177	61	2.Ø
				2.4 ML	EMRC																	
25	2 47 5Ø.4	61 32.6	149 48.3	43.4	1.2A	1Ø	6	131	51	Ø.44	1.9	3.Ø	B	288	3	Ø.8	2Ø	24	1.5	191	66	3.2
25	3 21 8.1	58 48.2	136 34.6	29.9	3.1	6	3	273	254	Ø.87	17.5	24.2	D	81	6	3.2	325	24	12.5	182	55	25.Ø
				2.6 ML	EMRC																	
25	3 35 54.2	59 57.3	141 12.2	5.6	3.2	21	4	77	26	Ø.53	1.Ø	1.1	A	1Ø3	8	Ø.6	9	24	1.Ø	21Ø	64	1.2
		3.7 ML	ATWC	3.7 ML	EMRC																	
25	3 42 Ø.2	59 57.6	141 7.8	4.6	Ø.9	5	2	138	28	Ø.13	2.7	6.2	C	357	5	1.6	266	16	2.Ø	1Ø4	73	6.5
25	7 19 47.2	6Ø 2Ø.Ø	141 16.9	6.3	2.1	17	7	53	51	Ø.39	1.Ø	1.8	A	27Ø	4	Ø.6	2	21	Ø.8	17Ø	69	1.9
				2.3 ML	EMRC																	
25	7 2Ø 41.Ø	6Ø 21.6	141 15.3	8.4	1.4	6	1	248	63	Ø.Ø6	7.5	7.6	C	81	14	1.6	331	38	5.2	186	46	9.4
25	11 48 36.6	6Ø 25.4	141 12.7	13.3	1.5	7	4	163	63	Ø.11	3.3	6.2	C	81	12	1.6	346	12	3.Ø	214	72	6.4
25	13 23 58.4	6Ø 15.2	141 13.7	34.7	1.3	6	4	143	57	Ø.17	4.9	5.8	C	46	19	3.6	3Ø4	32	1.7	162	52	7.1
25	14 1Ø 51.4	6Ø 44.3	147 15.6	12.2	2.1	19	6	66	85	Ø.49	1.4	2.2	A	163	11	1.Ø	261	27	Ø.6	53	6Ø	2.5
25	16 32 51.3	59 43.5	144 3Ø.6	Ø.Ø	2.5	12	3	198	1Ø8	Ø.9Ø	9.5	11.3	D	2Ø5	22	3.7	1Ø1	31	1.9	324	5Ø	14.5
25	16 48 35.3	6Ø 14.8	141 Ø.1	12.8	2.Ø	6	2	169	62	Ø.Ø9	7.8	6.8	C	274	15	1.1	171	41	1Ø.2	2Ø	45	2.2
25	17 9 35.3	6Ø 3.6	14Ø 4.9	11.1	1.9	8	2	164	58	Ø.85	4.4	2.2	B	116	13	Ø.8	22	2Ø	4.6	237	66	1.7
25	17 26 38.6	59 58.6	141 7.3	6.2	1.3	8	3	94	27	Ø.36	1.7	2.1	A	2Ø7	7	1.7	115	12	Ø.8	327	76	2.1
25	17 34 27.9	61 34.8	149 44.5	39.4	2.3	17	5	114	39	Ø.63	1.4	2.4	A	1Ø4	3	Ø.8	14	5	1.4	225	84	2.4
25	19 16 59.4	59 29.5	152 49.8	84.8	3.2	3Ø	3	91	1Ø6	Ø.53	1.5	3.3	B	2Ø8	3	1.3	117	7	1.5	321	82	3.3
25	19 34 2.3	6Ø 57.3	15Ø 59.Ø	2Ø.6	1.7	11	2	71	65	Ø.39	2.2	8.6	C	261	Ø	Ø.8	159	2	2.2	351	78	8.4
25	23 8 1.7	6Ø 2.8	14Ø 4Ø.3	9.3	2.2	1Ø	5	141	59	Ø.4Ø	3.Ø	1.8	B	274	9	Ø.7	7	18	3.1	159	7Ø	1.6
26	Ø 39 58.4	6Ø 17.Ø	141 Ø.3	6.7	Ø.9	6	3	158	46	Ø.13	3.8	5.8	C	87	9	1.3	352	27	2.6	194	61	6.4

SOUTHERN ALASKA EARTHQUAKES, JULY - SEPTEMBER 198Ø

198Ø	ORIGIN TIME HR MN SEC	LAT N DEG MIN	LONG W DEG MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
JUL 26	2 22 45.2	6Ø 15.3	14Ø 52.4	16.6	1.2	7	3	2Ø9	38	Ø.18	3.1	2.9	B	86	9	Ø.9	185	43	4.Ø	347	46	1.5
26	3 51 8.2	6Ø 14.9	14Ø 5Ø.1	15.4	1.7	13	6	16Ø	37	Ø.32	2.1	2.1	A	276	6	Ø.7	12	43	1.3	18Ø	46	2.7
26	5 22 Ø.1	6Ø 38.1	143 32.7	14.4	1.5	7	2	125	1Ø7	Ø.5Ø	2.8	5.8	C	163	5	1.6	81	2Ø	1.9	267	68	6.Ø
26	6 56 9.Ø	61 58.3	147 42.7	28.Ø	2.1	19	7	169	82	Ø.73	1.5	1.8	A	81	8	Ø.8	343	27	1.4	186	61	1.9
26	7 18 15.8	6Ø 17.3	141 9.5	8.9	Ø.9	7	2	2Ø9	54	Ø.2Ø	3.2	4.2	B	86	11	Ø.9	349	33	1.6	192	55	5.Ø
26	9 15 18.Ø	6Ø 16.4	14Ø 47.8	13.Ø	1.6	11	5	164	4Ø	Ø.27	2.5	2.4	B	91	7	Ø.6	188	42	3.Ø	353	47	1.8
26	11 52 23.3	6Ø 1Ø.8	141 13.3	4.9	Ø.7	5	4	2Ø5	48	Ø.17	2.6	3.Ø	B	96	4	Ø.8	3	38	1.7	191	52	3.6
26	12 2 11.6	63 5.1	149 2Ø.5	8Ø.6	4.4	36	2	113	167	Ø.69	2.1	9.9	C	261	1	1.6	335	2	1.9	142	74	9.5
		3.8 ML	ATWC																			
26	12 24 23.1	61 38.1	149 52.2	38.2	1.6	7	5	111	46	Ø.39	1.8	1.2	A	2Ø6	23	1.9	1Ø3	27	Ø.7	33Ø	53	1.2
26	13 15 52.6	61 4.Ø	147 31.5	Ø.5	3.Ø	4Ø	4	38	63	Ø.77	Ø.9	1.Ø	A	175	14	Ø.8	272	27	Ø.5	6Ø	59	1.1
		3.4 ML	ATWC																			
26	15 14 45.5	6Ø 15.3	14Ø 49.3	14.1	1.3	9	6	161	38	Ø.29	3.Ø	3.4	B	293	1Ø	Ø.9	31	39	1.4	191	49	4.3
26	15 45 41.9	58 57.1	136 43.2	25.4	2.8	6	4	27Ø	199	Ø.75	15.6	21.6	D	81	6	2.6	33Ø	31	6.2	18Ø	53	25.Ø
				2.Ø ML	EMRC																	
26	17 2Ø 18.9	6Ø 13.3	141 2.Ø	13.9	1.5	5	4	199	59	Ø.14	3.7	2.4	B	91	7	1.1	184	25	4.Ø	346	64	1.9
26	2Ø 19 15.5	59 57.4	141 7.7	2.9	1.1	8	4	99	29	Ø.15	1.1	2.7	B	96	7	1.1	4	9	Ø.6	223	78	2.7
26	2Ø 22 51.9	61 46.5	149 5.4	12.2	1.Ø	9	6	164	53	Ø.5Ø	1.5	2.1	A	35Ø	21	1.2	261	25	Ø.8	12Ø	58	2.4
26	2Ø 33 12.6	61 48.2	149 4Ø.Ø	34.1	2.3	16	6	158	62	Ø.37	1.4	1.8	A	95	1	1.Ø	5	17	1.4	188	73	1.9
26	23 1Ø 17.Ø	59 57.6	141 9.3	1.Ø	Ø.9	5	3	131	27	Ø.29	3.1	8.7	C	17	1	Ø.9	287	14	2.3	111	76	9.Ø
27	2 8 39.8	62 9.1	148 1.8	9.6	2.6	29	3	98	85	Ø.89	2.2	1.9	A	268	3Ø	Ø.8	25	38	1.5	152	37	2.6
27	3 47 34.9	6Ø 25.5	147 39.Ø	24.1	1.9	23	7	79	63	Ø.38	1.1	1.7	A	261	15	Ø.6	341	19	1.Ø	129	64	1.7
27	6 43 22.3	6Ø 6.5	141 37.2	24.1	Ø.9	3	3	172	28	Ø.15	5.2	5.4	C	9Ø	4	1.4	184	39	4.7	355	51	5.8
27	6 45 26.5	6Ø 5.1	141 36.6	17.2	Ø.7	3	3	162	1ØØ	Ø.19	8.3	5.8	C	261	25	2.1	1	38	9.8	143	45	1.9
27	9 5 37.Ø	63 43.9	152 48.8	38.2	5.1	26	Ø	11Ø	264	Ø.64	2.6	6.7	C	156	1Ø	1.9	81	13	2.1	289	68	6.6
	4.7 MB	3.7 MS	5.Ø ML ATWC																			
27	9 13 15.7	63 45.1	152 46.9	39.1	3.9	16	2	11Ø	262	Ø.55	5.Ø	2Ø.3	D	152	1	4.6	81	6	2.4	251	7Ø	19.3
		3.4 ML	ATWC																			
27	9 24 1.4	63 39.4	152 45.9	78.4	4.1	14	1	1Ø7	278	Ø.69	7.2	24.9	D	1Ø4	3	2.6	14	3	7.1	239	86	25.Ø
		3.5 ML	ATWC																			
27	13 29 12.Ø	6Ø 1Ø.3	141 14.1	9.5	1.1	1Ø	3	131	47	Ø.18	3.8	3.3	B	274	3	1.Ø	181	4Ø	4.8	8	5Ø	1.7
27	14 18 32.8	6Ø 15.2	14Ø 55.Ø	15.1	1.6	12	6	157	41	Ø.17	1.9	2.2	A	279	2	Ø.8	11	39	1.2	187	51	2.6
27	19 45 49.1	59 59.5	141 7.8	6.5	2.1	17	4	88	26	Ø.28	1.1	1.1	A	93	6	Ø.7	1	18	1.1	2Ø1	71	1.1
				2.4 ML	EMRC																	
27	19 46 59.Ø	59 59.1	141 7.8	6.3	2.1	18	5	9Ø	26	Ø.4Ø	1.1	1.1	A	92	7	Ø.7	358	31	1.Ø	193	58	1.1
				2.6 ML	EMRC																	
27	19 49 15.2	59 59.6	141 7.7	7.2	Ø.9	4	2	127	26	Ø.Ø6	2.4	4.5	B	358	6	1.2	266	2Ø	1.9	1Ø4	69	4.8
27	2Ø 51 39.9	59 59.8	141 8.6	7.9	1.2	8	3	85	25	Ø.27	1.3	1.8	A	23	3	1.3	114	3Ø	1.Ø	288	6Ø	2.Ø
27	2Ø 59 19.8	6Ø 58.3	147 3Ø.Ø	6.8	1.9	23	5	88	52	Ø.64	Ø.9	1.2	A	266	13	Ø.6	173	13	Ø.9	4Ø	71	1.3
27	21 52 5.1	59 45.8	138 59.9	15.Ø	1.Ø	4	3	228	8Ø	Ø.23	1Ø.3	7.7	C	317	11	1.2	261	35	1Ø.Ø	62	42	3.8
28	1 15 3.5	59 57.5	141 7.Ø	2.4	1.7	6	4	166	138	Ø.35	3.1	3.3	B	134	26	1.1	241	31	2.3	12	47	4.1
28	1 15 34.4	59 59.6	141 7.7	7.9	3.Ø	2Ø	4	15Ø	51	Ø.4Ø	1.8	1.3	A	27Ø	3	Ø.8	Ø	15	1.9	169	75	1.2
		3.Ø ML	ATWC	3.2 ML	EMRC																	
28	2 9 58.1	59 59.1	141 8.2	5.3	1.8	12	3	151	51	Ø.27	2.2	2.Ø	A	1Ø8	1Ø	Ø.8	9	41	2.7	2Ø9	47	1.3
28	2 15 3Ø.Ø	59 58.9	141 8.Ø	5.1	1.9	13	6	151	51	Ø.41	1.8	1.4	A	112	17	Ø.8	14	27	1.9	231	58	1.4
				2.1 ML	EMRC																	
28	2 26 47.4	59 56.8	141 9.2	2.6	1.5	5	4	168	85	Ø.37	5.4	8.Ø	C	221	11	2.4	124	31	1.Ø	328	57	9.5
28	2 29 25.1	6Ø 12.Ø	14Ø 52.3	19.Ø	3.1	25	3	83	67	Ø.62	1.8	1.9	A	289	8	Ø.8	27	43	1.3	191	46	2.3
		3.1 ML	ATWC	3.3 ML	EMRC																	
28	4 Ø 42.Ø	61 26.4	149 52.3	46.1	2.1	15	6	119	47	Ø.39	1.1	2.2	A	28Ø	2	Ø.7	19Ø	1Ø	1.Ø	21	8Ø	2.3
28	4 19 48.Ø	59 59.4	141 8.Ø	6.7	1.7	13	3	88	26	Ø.3Ø	1.2	1.3	A	194	2	1.1	1Ø4	24	Ø.6	288	66	1.4
28	7 7 56.8	61 17.7	149 57.4	39.Ø	2.Ø	15	5	1Ø1	55	Ø.42	1.1	2.7	B	31	5	1.Ø	121	6	Ø.8	261	82	2.7
28	1Ø 32 57.8	6Ø 13.7	14Ø 51.3	2Ø.1	1.6	8	4	156	74	Ø.24	3.2	3.Ø	B	1Ø8	1Ø	1.Ø	2Ø8	43	4.1	8	45	1.6
28	13 37 57.9	59 58.8	141 6.1	2.2	1.2	5	3	162	82	Ø.3Ø	3.2	3.5	B	24Ø	26	2.1	134	3Ø	1.Ø	3	48	4.4
28	14 2Ø 8.Ø	6Ø 14.6	14Ø 42.8	18.Ø	1.8	8	3	164	77	Ø.24	2.8	3.1	B	1Ø5	13	1.Ø	5	38	1.3	21Ø	49	4.Ø
28	16 34 35.8	6Ø 19.Ø	14Ø 57.8	11.8	1.Ø	5	2	236	84	Ø.16	6.3	7.4	C	151	7	5.9	81	24	1.6	257	58	7.5

SOUTHERN ALASKA EARTHQUAKES, JULY - SEPTEMBER 198Ø

198Ø	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
JUL 28	18	53	38.3	61	34.9	15Ø	Ø.1	43.1	2.1	17	8	1Ø1	44	Ø.39	1.2	2.Ø	A	1Ø3	1	Ø.7	193	15	1.2	9	75	2.1
28	23	26	23.7	6Ø	12.6	14Ø	43.7	17.1	2.3	15	5	159	67	Ø.55	2.Ø	1.8	A	29Ø	7	Ø.8	194	38	2.3	29	51	1.5
29	2	26	22.3	63	26.8	153	15.6	51.7	4.1	18	1	1Ø9	256	Ø.4Ø	7.3	25.Ø	D	1Ø9	2	2.2	199	2	7.3	334	87	25.Ø
					3.6 ML ATWC																					
29	3	56	41.1	6Ø	53.1	138	33.1	3.2	1.8A	8	6	91	144	Ø.93	5.6	5.Ø	C	2ØØ	26	Ø.9	312	37	2.3	84	42	7.3
								1.8 ML EMRC																		
29	5	42	59.9	6Ø	9.Ø	141	29.9	7.1	1.3	9	3	129	51	Ø.3Ø	3.9	4.1	B	27Ø	5	Ø.7	5	42	2.Ø	175	48	5.3
29	6	8	58.3	6Ø	3.7	139	28.9	11.Ø	1.5	5	2	2Ø9	44	Ø.78	1Ø.5	6.1	D	13Ø	6	1.2	223	29	12.Ø	29	6Ø	2.1
29	8	49	11.Ø	6Ø	11.Ø	14Ø	46.5	14.5	2.2	14	5	1Ø7	68	Ø.29	1.8	1.9	A	3ØØ	16	Ø.7	43	37	1.2	191	48	2.4
								2.4 ML EMRC																		
29	12	51	55.6	59	6Ø.Ø	141	3.8	2.9	1.7	9	5	158	54	Ø.54	2.1	1.7	A	111	16	Ø.6	1Ø	34	2.3	222	51	1.3
29	12	52	23.3	59	59.7	141	7.4	3.6	1.3	6	4	165	51	Ø.3Ø	4.7	3.4	B	13	31	5.3	127	34	1.2	252	4Ø	2.9
29	14	28	16.4	61	48.Ø	149	36.9	29.6	2.1	18	7	158	62	Ø.56	1.2	1.2	A	1Ø2	11	Ø.6	2	42	1.Ø	2Ø4	46	1.4
29	14	42	3.7	61	43.5	149	41.Ø	42.6	2.1	17	5	193	54	Ø.44	1.7	1.8	A	81	11	Ø.8	34Ø	35	1.5	186	52	1.9
29	19	6	31.9	6Ø	17.Ø	14Ø	58.Ø	1Ø.1	1.1	7	6	158	45	Ø.14	2.1	2.6	B	86	13	Ø.8	347	35	1.3	193	52	3.1
29	22	4	57.6	6Ø	11.2	14Ø	54.Ø	2.Ø	1.8	13	5	146	37	Ø.47	2.1	2.1	A	96	3	Ø.7	3	45	1.5	189	45	2.5
3Ø	1	42	27.3	6Ø	21.1	141	18.3	8.Ø	1.9	11	5	152	69	Ø.24	1.1	2.6	B	1ØØ	1	Ø.6	1Ø	13	Ø.9	194	77	2.6
3Ø	2	1Ø	59.2	6Ø	13.9	14Ø	49.Ø	11.2	1.9	11	6	158	71	Ø.36	1.4	1.5	A	294	4	Ø.6	28	43	1.Ø	2ØØ	47	1.8
3Ø	4	12	33.2	61	15.9	15Ø	52.3	64.3	3.8	31	1	41	64	Ø.57	1.3	2.5	A	81	1	Ø.8	156	9	1.2	345	73	2.5
		3.7 MB				3.7 ML ATWC																				
3Ø	4	46	2.Ø	61	33.3	146	19.3	23.4	1.9	23	3	87	57	Ø.8Ø	1.Ø	1.6	A	273	6	Ø.6	3	6	1.Ø	138	82	1.6
3Ø	5	59	12.7	61	15.2	15Ø	53.Ø	6Ø.1	3.1	29	2	41	63	Ø.48	1.1	2.8	B	81	4	Ø.7	156	9	1.Ø	325	72	2.7
3Ø	6	4	3.6	61	23.5	15Ø	41.Ø	58.7	1.8	13	5	78	62	Ø.38	1.4	2.9	B	1Ø2	4	Ø.9	193	14	1.2	356	75	3.Ø
3Ø	12	23	2Ø.9	6Ø	55.7	149	3Ø.8	36.4	2.1	24	7	65	5Ø	Ø.57	Ø.8	1.2	A	353	2	Ø.8	83	5	Ø.6	241	85	1.2
3Ø	12	49	24.6	6Ø	4.2	14Ø	36.7	7.6	1.9	13	6	113	41	Ø.52	1.4	1.4	A	277	Ø	Ø.7	7	44	1.1	187	46	1.6
								2.4 ML EMRC																		
3Ø	21	48	57.Ø	6Ø	16.6	14Ø	4Ø.9	17.3	1.6	9	5	169	46	Ø.64	2.1	2.3	A	282	8	Ø.7	18	4Ø	1.1	183	49	2.9
31	3	37	57.5	6Ø	3.7	14Ø	38.7	1Ø.4	1.2	7	3	157	82	Ø.39	4.2	3.Ø	B	287	Ø	1.Ø	17	32	4.9	197	58	1.8
31	5	13	42.7	6Ø	21.7	14Ø	4Ø.4	Ø.6	1.7	13	7	75	5Ø	Ø.63	1.2	1.5	A	112	1	Ø.6	21	3Ø	1.1	2Ø4	6Ø	1.6
								1.8 ML EMRC																		
31	5	43	37.6	6Ø	15.5	141	9.Ø	9.7	1.Ø	6	4	147	53	Ø.18	2.5	3.8	B	277	Ø	1.Ø	7	29	1.5	187	61	4.3
31	7	54	35.7	61	32.8	149	5Ø.6	41.2	2.2	22	7	79	38	Ø.51	1.1	2.3	A	11Ø	4	Ø.7	2ØØ	5	1.1	341	84	2.3
31	8	16	33.7	6Ø	2Ø.Ø	14Ø	39.3	2.7	1.7	12	6	176	71	Ø.96	1.5	1.5	A	292	7	Ø.7	29	42	1.1	194	47	1.8
31	9	53	39.8	61	53.4	149	47.4	4Ø.5	2.1	17	8	18Ø	69	Ø.45	1.7	2.1	A	291	Ø	Ø.8	22	2Ø	1.6	2Ø1	7Ø	2.2
31	11	59	23.4	59	23.3	152	13.9	75.Ø	3.2	28	6	131	94	Ø.56	1.9	2.9	B	347	Ø	1.4	81	1Ø	1.8	257	79	2.9
		3.7 MB				3.Ø ML ATWC																				
31	17	39	9.1	6Ø	33.3	141	44.7	9.9	1.7	13	7	151	63	Ø.55	Ø.9	2.6	B	19Ø	1	Ø.9	1ØØ	6	Ø.7	289	84	2.7
31	19	8	36.1	58	56.Ø	138	11.8	Ø.3	1.5	3	3	354	14Ø	Ø.47	25.6	4.5	D	81	7	24.2	154	3Ø	7.2	339	55	2.7
AUG 1	1	6	5.8	6Ø	14.Ø	14Ø	55.8	13.7	Ø.9	6	2	152	1ØØ	Ø.3Ø	8.1	13.3	D	81	16	1.Ø	331	2Ø	4.1	2Ø1	58	14.8
1	3	9	44.2	62	53.Ø	148	12.6	44.7	3.4	17	3	124	152	Ø.47	7.2	18.Ø	D	261	1	3.1	346	11	6.4	166	78	18.2
1	4	5	41.6	59	57.7	152	42.8	92.6	3.5	16	3	133	8Ø	Ø.15	3.4	3.7	B	156	18	1.8	81	26	3.Ø	284	56	3.8
					3.2 ML ATWC																					
1	5	45	12.1	62	37.2	149	4.8	12.8	2.5	14	6	132	116	Ø.56	3.1	4.2	B	16	18	2.3	277	27	1.3	136	57	4.8
1	7	1Ø	7.Ø	6Ø	4.7	141	24.7	21.3	1.2	5	3	166	64	Ø.29	9.Ø	5.2	C	271	14	1.3	174	28	1Ø.1	25	58	2.7
1	8	54	29.6	59	52.3	149	2.Ø	15.Ø	2.3	13	3	167	86	Ø.44	3.1	4.5	B	28Ø	14	1.6	13	15	2.9	148	69	4.7
1	9	3	3.8	61	53.2	149	31.4	4Ø.2	2.3	12	7	164	63	Ø.32	2.Ø	2.8	B	9Ø	16	1.1	353	24	1.5	211	61	3.1
1	11	29	7.Ø	59	26.7	137	7.2	Ø.5	2.7	11	4	12Ø	131	1.1Ø	2.2	5.2	C	344	5	1.3	81	15	1.6	237	73	5.3
								2.8 ML EMRC																		
1	11	58	28.Ø	59	59.3	141	11.6	Ø.4	Ø.9	5	1	113	23	Ø.28	3.2	7.9	C	1Ø2	9	2.Ø	194	11	2.8	334	76	8.1
1	12	22	53.4	59	59.5	141	14.9	1.9	1.4	8	2	1Ø2	21	Ø.61	1.8	3.Ø	B	181	1Ø	1.7	88	17	1.1	3ØØ	7Ø	3.2
1	14	39	15.6	6Ø	12.1	153	13.1	131.7	3.9	14	4	178	123	Ø.14	3.2	4.Ø	B	297	24	2.9	81	37	3.8	194	25	2.6
					3.4 ML ATWC																					
1	17	48	49.2	61	4Ø.7	149	48.1	42.8	2.4	17	4	143	5Ø	Ø.52	1.4	2.4	A	1Ø9	3	1.1	199	3	1.4	334	86	2.4
1	23	7	16.5	59	37.5	148	41.7	33.4	4.8	23	Ø	184	1Ø3	1.Ø5	3.7	2.4	B	92	2	1.4	182	18	3.8	356	72	2.3
		5.4 MB		5.1 MS		5.7 ML ATWC				FELT (IV) IN THE SEWARD AREA, (III) IN PARTS OF ANCHORAGE AND NORTH TO MATANUSKA VALLEY																
2	Ø	48	39.8	6Ø	52.2	148	18.1	3Ø.1	2.2	18	5	6Ø	61	Ø.29	1.1	1.6	A	261	6	Ø.9	165	7	1.1	29	79	1.6

SOUTHERN ALASKA EARTHQUAKES, JULY - SEPTEMBER 1980

1980 AUG	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM	Remarks
2	2	13	32.4	60	4.2	139	33.8	23.8	1.5	5	2	204	46	0.46	7.5	3.0	C	216	4	7.5	124	16	1.1	320	73	3.0	
2	4	12	49.3	60	15.2	141	7.2	5.2	1.3	8	4	147	51	0.13	2.5	3.5	B	85	6	0.8	352	29	1.8	186	60	4.0	
2	7	36	9.9	58	39.8	137	3.8	5.2	2.5	4	3	355	205	0.44	25.0	19.2	D	227	4	25.0	133	42	25.0	321	48	12.4	2.1 ML EMRC
2	15	40	31.0	60	1.6	149	16.7	17.6	2.9	24	3	149	75	0.60	1.5	1.8	A	358	5	1.5	267	18	0.9	103	71	1.8	3.1 ML ATWC
2	16	6	2.6	61	43.9	146	14.7	28.1	2.6	22	4	98	67	0.83	1.2	1.7	A	282	10	0.8	190	13	1.2	49	74	1.7	
2	16	41	13.0	60	12.9	140	58.4	10.4	1.1	5	2	214	80	0.49	7.6	9.5	C	81	20	1.1	324	24	3.2	199	50	11.4	
2	20	32	8.7	60	16.4	140	50.7	4.7	0.9	6	3	161	38	0.22	5.3	8.3	C	354	16	4.8	89	17	1.3	223	66	8.9	
2	20	50	21.5	60	9.8	140	57.9	12.1	1.8	10	4	138	35	0.16	2.1	2.2	A	90	2	0.9	358	43	1.5	182	47	2.6	
3	3	22	40.2	59	51.2	141	29.2	7.9	1.8	10	5	192	33	0.30	2.5	1.8	B	281	15	0.7	18	24	2.6	162	61	1.6	
3	6	15	41.2	61	19.0	148	25.4	23.4	1.4	10	5	76	49	0.32	1.2	2.9	B	173	7	1.2	264	8	0.8	42	79	3.0	
3	7	59	54.0	62	10.9	147	57.6	35.9	3.8	27	2	97	90	0.46	1.7	2.3	A	163	11	1.4	81	35	0.9	269	53	2.6	3.2 ML ATWC
3	9	22	31.1	59	58.3	141	9.3	5.6	1.4	8	3	89	26	0.13	1.5	2.8	A	141	17	0.9	81	25	0.7	271	49	2.6	
3	14	30	53.1	61	4.2	150	2.6	40.9	2.0	13	5	77	60	0.54	1.7	3.9	B	128	8	0.9	37	9	1.6	259	78	4.0	
3	14	32	37.6	61	48.6	149	22.9	34.3	2.3	15	6	157	55	0.33	2.0	1.8	A	96	2	1.0	187	26	2.0	2	64	1.7	
3	17	34	17.7	60	29.6	142	37.1	22.9	1.8	7	4	112	60	0.41	2.9	4.0	B	352	8	0.9	86	32	1.8	250	57	4.6	
4	0	32	30.0	61	31.9	149	57.0	43.9	2.3	16	6	74	43	0.23	2.2	2.6	B	85	6	1.1	179	35	1.7	347	54	3.0	
4	0	56	35.3	60	17.4	140	42.6	8.4	1.3	7	2	168	122	0.15	3.5	7.7	C	282	7	1.1	15	19	2.1	173	70	8.2	
4	1	19	23.2	62	8.5	141	16.0	15.0	3.0	10	4	221	155	0.69	12.3	14.8	D	265	24	1.8	162	27	8.3	30	52	18.0	3.0 ML EMRC
4	2	9	39.1	60	6.8	140	22.9	11.4	1.4	5	4	151	45	0.33	9.3	2.4	C	282	2	2.0	12	12	9.5	183	78	1.4	
4	2	31	17.9	60	17.5	140	46.7	14.3	1.6	9	7	165	42	0.21	2.1	3.0	B	95	1	0.7	5	32	1.1	187	58	3.5	
4	3	33	29.3	61	42.3	149	46.9	44.2	2.1	13	9	152	53	0.33	1.9	2.3	A	349	6	1.8	82	19	1.4	242	70	2.4	
4	5	0	40.1	62	5.4	141	17.2	10.5	2.3	6	4	212	152	0.78	7.9	7.3	C	267	19	1.1	159	42	4.7	15	42	9.8	2.2 ML EMRC
4	6	35	8.9	61	1.1	149	46.2	41.6	0.9A	5	5	180	63	0.11	4.8	5.1	C	185	25	2.1	81	32	3.6	307	48	6.3	
4	8	0	53.0	61	16.2	149	36.8	35.2	2.0	19	12	54	45	0.43	1.1	1.8	A	155	7	0.9	261	15	0.8	44	67	1.8	
4	8	6	1.2	59	58.3	141	9.6	0.9	1.1	4	2	205	52	0.12	4.3	5.0	B	104	7	1.1	198	33	3.6	3	56	5.5	
4	8	40	29.8	60	6.7	141	45.8	14.4	0.6	3	3	195	100	0.04	10.3	5.6	D	261	8	1.4	343	15	10.4	142	71	5.2	
4	8	44	28.9	60	21.3	141	14.1	8.2	1.2A	5	2	156	100	0.06	3.4	15.9	D	340	1	2.8	81	9	1.8	244	76	15.9	
4	10	10	18.5	60	9.1	140	58.0	9.8	1.3	10	5	135	34	0.30	3.5	2.5	B	89	5	0.8	182	24	3.7	348	65	2.2	
4	10	20	14.1	60	53.4	149	19.5	29.3	1.9	23	11	83	45	0.39	1.0	1.9	A	33	0	0.8	302	7	0.9	123	83	1.9	
4	11	29	58.8	61	38.4	140	58.1	47.8	2.3	9	5	136	147	1.13	10.6	16.4	D	261	15	1.7	132	15	3.0	17	46	16.4	1.8 ML EMRC
4	11	56	49.8	62	2.1	144	54.1	19.3	2.2	11	5	211	81	0.42	3.9	8.8	C	82	6	2.5	350	17	2.8	191	72	9.2	
4	12	3	3.1	60	13.7	141	1.6	7.1	1.0	6	3	147	45	0.16	3.1	5.8	C	82	7	1.1	349	23	1.8	188	66	6.3	
4	14	54	48.8	60	6.1	140	24.1	15.2	1.3	7	1	138	91	0.23	16.5	4.7	D	288	8	3.7	20	15	17.1	171	73	1.7	
4	17	31	3.3	61	7.1	151	50.0	81.0	4.1	20	1	69	68	0.32	2.1	4.3	B	201	2	1.2	111	18	1.7	297	72	4.5	3.8 MB; 4.1 ML ATWC; FELT (III) IN EAGLE RIVER/CHUGIAK
4	18	9	2.4	61	15.3	149	52.6	46.5	1.3A	10	9	99	63	0.27	1.9	2.1	A	140	17	1.3	261	17	1.4	21	52	2.0	
4	20	18	55.0	60	16.8	140	57.9	7.9	1.1	6	4	157	65	0.20	3.6	5.9	C	81	12	1.2	336	23	2.2	194	60	6.5	
4	21	41	37.8	60	14.7	141	0.7	13.4	1.8	9	7	150	61	0.22	2.7	3.1	B	81	15	0.9	327	32	0.8	189	48	4.0	
4	21	53	55.4	60	3.5	140	41.4	4.7	2.1	14	8	143	60	0.54	2.1	1.6	A	277	2	0.7	187	6	2.1	25	84	1.6	2.3 ML EMRC
4	22	10	34.9	60	1.1	140	42.2	8.4	2.3	15	7	146	60	0.34	2.0	2.0	A	269	9	0.6	7	43	2.4	170	46	1.5	2.5 ML EMRC
4	22	13	50.6	59	57.3	140	40.7	0.5	1.4	7	5	159	58	0.24	3.4	4.6	B	83	1	0.7	173	3	3.4	335	87	4.6	
4	22	24	21.2	60	1.2	140	41.6	1.1	1.5	8	7	151	60	0.41	2.5	2.9	B	90	2	0.6	182	36	2.0	357	54	3.3	
4	22	47	5.3	60	12.3	140	42.3	6.6	1.3	6	5	158	66	0.39	3.7	3.4	B	83	6	0.7	175	23	3.8	339	66	3.3	
4	23	39	39.2	60	16.5	141	9.0	9.4	1.0	5	3	149	100	0.05	3.2	8.1	C	305	4	1.5	36	14	2.6	199	75	8.3	
5	1	18	12.8	61	21.7	150	6.4	42.6	1.0A	11	9	108	58	0.43	1.8	2.9	B	123	4	1.0	213	10	1.7	11	79	3.0	
5	2	5	36.3	60	10.6	140	56.5	3.5	2.1	18	9	82	37	0.54	1.3	1.8	A	89	1	0.7	359	29	1.0	181	61	1.9	2.4 ML EMRC

SOUTHERN ALASKA EARTHQUAKES, JULY - SEPTEMBER 198Ø

198Ø	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
AUG 5	3	59	42.4	59	48.6	139	17.6	21.9	Ø.8	4	2	199	46	Ø.14	13.Ø	13.1	D	138	11	2.Ø	261	38	17.Ø	38	4Ø	4.4
5	4	42	21.4	61	48.9	149	28.9	37.Ø	1.8	13	9	17Ø	61	Ø.27	1.5	1.5	A	95	11	1.Ø	358`	33	1.5	2Ø1	55	1.6
5	6	25	41.Ø	59	32.1	145	22.7	28.2	3.2	13	1	2ØØ	115	Ø.39	5.5	2.6	C	12	14	5.7	278	19	1.6	137	66	2.4
5	6	27	51.2	59	57.5	141	9.1	Ø.8	1.2	8	3	93	28	Ø.19	1.1	3.7	B	3Ø1	Ø	1.1	31	5	1.Ø	211	85	3.7
5	6	44	48.3	6Ø	1Ø.4	147	2.4	28.Ø	2.6	27	6	119	8Ø	Ø.64	1.4	1.4	A	81	1	Ø.7	324	44	1.Ø	172	4Ø	1.6
5	7	18	31.8	61	41.5	15Ø	1.4	44.3	2.1	14	9	148	49	Ø.27	1.6	1.5	A	195	3	1.6	1Ø5	4	Ø.9	322	85	1.5
5	9	5	54.9	59	59.4	141	8.3	4.3	1.2	7	5	88	25	Ø.43	1.Ø	2.1	A	18	5	1.Ø	1Ø9	1Ø	Ø.7	262	79	2.1
5	9	11	35.2	6Ø	1Ø.9	147	3.6	25.4	2.Ø	22	9	117	79	Ø.57	1.6	1.7	A	81	6	Ø.7	322	35	1.1	178	45	1.9
5	1Ø	43	3.6	6Ø	11.7	141	1.5	1Ø.1	1.3	7	5	141	44	Ø.14	3.3	4.1	B	88	11	Ø.7	35Ø	36	1.5	192	52	5.1
5	11	2	6.8	61	2.Ø	15Ø	53.8	14.7	1.7	9	7	92	69	Ø.69	1.6	5.Ø	B	317	1	Ø.9	81	3	1.1	214	56	4.2
5	12	18	24.1	6Ø	1.Ø	14Ø	39.1	3.6	1.7	8	7	151	57	Ø.33	6.Ø	3.2	B	95	5	Ø.7	261	45	2.3	4	1Ø	4.8
5	12	59	24.8	63	13.3	148	36.6	Ø.2	2.9	18	7	143	183	Ø.49	3.3	3.4	B	224	18	1.9	329	38	1.5	114	46	4.4
5	13	1	46.3	59	59.3	14Ø	4Ø.2	5.4	1.5	7	5	155	58	Ø.33	4.6	3.7	B	92	2	Ø.9	1	33	5.2	185	57	2.8
5	14	17	53.1	6Ø	59.9	147	7.1	17.6	2.3	25	13	57	45	Ø.45	1.Ø	1.5	A	Ø	2	Ø.9	269	17	Ø.5	97	73	1.5
5	17	3	54.5	6Ø	16.6	142	57.4	Ø.2	Ø.8	4	4	242	91	Ø.55	18.2	17.6	D	339	14	1.2	81	43	3.8	235	44	25.Ø
5	18	26	1.6	62	28.6	151	11.6	87.1	3.7	16	3	1Ø7	115	Ø.31	2.1	4.2	B	84	7	1.8	352	19	1.5	193	7Ø	4.4
5	18	39	6.4	58	57.9	15Ø	47.2	5Ø.3	3.4	11	2	158	148	Ø.21	5.3	1Ø.8	D	43	5	2.5	135	23	2.7	3Ø1	66	11.7
5	18	53	37.6	6Ø	14.4	141	8.8	4.4	1.1	7	4	144	54	Ø.17	3.2	6.1	C	81	9	1.2	34Ø	21	1.8	192	65	6.6
5	22	39	23.2	61	51.6	149	19.3	11.Ø	1.3	8	8	178	68	Ø.62	2.3	4.3	B	177	1	1.7	267	26	1.Ø	85	64	4.7
6	2	53	51.6	6Ø	11.5	141	8.Ø	2.2	1.Ø	6	2	137	53	Ø.32	4.2	5.5	C	93	1Ø	Ø.8	358	29	3.3	2ØØ	59	6.2
6	4	14	18.5	6Ø	4.2	14Ø	42.8	9.7	1.9	1Ø	7	145	62	Ø.55	2.6	2.3	B	1Ø2	3	Ø.9	11	26	2.7	198	64	2.2
								1.8 ML	EMRC																	
6	4	4Ø	28.6	61	48.7	149	18.7	4.5	2.2	16	6	157	52	Ø.66	1.4	1.4	A	282	22	Ø.8	177	33	1.1	39	49	1.6
6	5	35	56.8	59	34.4	146	11.6	28.8	2.6	14	4	228	111	Ø.19	7.7	2.8	C	339	2	7.6	261	4Ø	2.4	71	48	2.9
6	5	57	23.5	59	57.5	14Ø	41.6	1.1	1.6	7	5	159	75	Ø.61	4.7	4.4	B	133	26	1.7	261	26	1.8	17	4Ø	5.8
6	5	57	3Ø.Ø	61	12.7	15Ø	18.9	39.Ø	2.Ø	13	5	93	8Ø	Ø.45	1.9	2.3	A	111	21	1.Ø	11	24	1.7	237	57	2.5
6	9	16	21.9	6Ø	11.8	152	37.Ø	9Ø.Ø	3.6	18	2	96	75	Ø.19	2.8	4.6	B	349	2	2.Ø	81	2Ø	2.4	254	7Ø	4.8
					3.5 ML	ATWC																				
6	18	32	24.2	6Ø	16.1	14Ø	56.2	11.9	1.5	6	2	158	1ØØ	Ø.13	6.8	7.1	C	84	6	1.Ø	349	41	5.5	181	48	8.2
6	19	15	39.Ø	6Ø	Ø.5	14Ø	43.9	3.5	1.4	5	2	153	121	Ø.34	11.4	1Ø.1	D	276	11	4.9	16	41	14.8	174	47	3.5
6	19	36	23.8	6Ø	17.1	141	12.6	8.1	1.9	1Ø	4	147	71	Ø.15	2.4	4.7	B	262	Ø	Ø.8	352	8	2.3	172	82	4.8
7	Ø	15	5Ø.5	61	55.5	147	52.7	36.1	2.8	21	5	163	76	Ø.49	2.5	2.1	B	197	24	1.8	3Ø8	38	3.1	83	42	Ø.8
7	Ø	49	3Ø.6	59	56.3	14Ø	46.1	3.7	1.5	9	3	139	46	Ø.48	4.5	4.8	B	282	2	1.5	19Ø	38	4.Ø	15	52	5.2
7	1	3	54.4	59	14.8	145	34.8	13.9	2.2A	6	3	298	142	Ø.Ø9	12.4	8.2	D	261	19	12.7	3	34	1Ø.7	147	5Ø	5.3
7	1	52	2Ø.4	59	48.1	139	19.2	12.3	Ø.7	4	1	193	46	Ø.Ø2	6.7	7.4	C	139	3	1.6	261	43	8.8	46	38	2.9
7	2	Ø	3.8	61	14.6	149	26.5	36.2	2.3	16	5	61	48	Ø.41	1.4	2.Ø	A	328	Ø	Ø.9	261	12	1.1	58	64	1.9
7	3	5	38.Ø	61	49.Ø	149	36.4	11.9	1.8	13	5	169	64	Ø.43	1.5	2.1	A	166	17	1.3	263	21	Ø.9	4Ø	62	2.3
7	3	35	51.7	6Ø	25.5	146	57.5	17.3	2.3	24	6	94	64	Ø.33	1.Ø	2.1	A	223	3	Ø.6	314	14	Ø.8	121	76	2.1
7	7	5	22.Ø	6Ø	46.1	148	25.9	2Ø.8	2.1	1Ø	4	141	6Ø	Ø.31	1.6	3.1	B	172	8	1.4	265	18	1.1	59	7Ø	3.3
7	7	59	2.5	6Ø	4.1	141	35.Ø	1Ø.Ø	1.9	11	5	126	29	Ø.45	1.9	1.6	A	358	1	1.9	88	4	Ø.7	254	86	1.6
7	8	1	2Ø.5	6Ø	1.Ø	141	3Ø.9	12.4	1.1	8	2	163	71	Ø.62	6.3	5.Ø	C	94	19	1.4	349	37	7.7	2Ø6	47	2.6
7	9	9	59.7	6Ø	7.1	141	6.Ø	1.4	1.3	6	2	173	53	Ø.1Ø	21.8	13.4	D	95	7	1.Ø	1	3Ø	25.Ø	197	59	5.6
7	9	59	2.Ø	59	59.2	141	39.Ø	5.9	Ø.9	8	2	175	79	Ø.21	5.6	7.3	C	94	14	1.5	193	33	2.3	344	53	9.Ø
7	19	16	11.3	63	16.8	151	29.3	113.Ø	5.6	1Ø	Ø	156	2Ø2	Ø.51	5.6	24.5	D	3Ø3	Ø	5.6	33	3	3.8	213	87	24.5
		5.2 M8				5.4 ML ATWC				FELT ANCHORAGE TO FAIRBANKS. NO INTENSIES ABOVE (III)																
7	22	37	18.9	61	26.7	139	47.7	14.4	2.2	8	6	147	146	1.2Ø	4.2	7.5	C	285	7	1.5	192	2Ø	3.4	33	69	7.9
								1.9 ML	EMRC																	
8	3	16	38.6	61	43.8	149	31.6	33.9	1.9	11	5	156	54	Ø.29	1.8	4.1	B	168	5	1.7	261	12	1.5	56	77	4.2
8	8	18	5Ø.6	61	36.5	149	55.7	43.7	2.3	12	5	92	45	Ø.4Ø	1.6	2.3	A	284	1	Ø.8	15	22	1.4	192	68	2.4

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1980	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
AUG 8	9	44	34.5	60	10.0	140	39.2	14.3	1.6	6	2	152	78	0.53	12.1	3.9	D	18	14	12.5	280	28	2.7	132	58	2.4
8	10	11	53.6	61	40.5	150	7.9	7.2	2.4	17	3	140	54	0.43	1.6	1.6	A	272	10	0.9	172	43	1.4	12	45	1.7
8	10	37	5.5	60	11.7	140	58.7	9.7	2.0	13	8	78	42	0.33	1.8	2.2	A	273	3	0.8	5	36	1.0	179	54	2.7
								2.2 ML EMRC																		
8	10	45	56.7	61	51.4	147	26.7	28.1	2.4	18	6	151	73	0.66	2.0	3.2	B	261	6	0.7	159	17	1.7	8	68	3.3
8	13	57	0.0	60	7.8	140	52.0	11.1	1.3	6	3	138	97	0.13	11.2	4.1	D	119	6	3.0	28	9	11.3	242	79	3.8
8	23	27	21.5	61	35.4	148	41.8	42.0	2.1	11	4	111	31	0.16	1.6	2.0	A	86	16	1.2	181	17	1.5	315	66	2.1
9	4	34	34.7	60	16.7	140	57.6	16.9	1.7	8	3	157	65	0.27	4.2	3.8	B	86	8	0.9	183	42	5.4	347	47	1.6
9	6	4	47.3	60	23.5	147	36.3	26.6	2.2	21	7	80	63	0.48	1.0	1.8	A	221	1	0.8	311	15	0.9	127	75	1.9
9	13	15	13.5	60	14.1	141	3.5	10.8	1.6	9	2	147	58	0.18	3.9	4.8	B	270	2	1.1	2	35	2.7	177	55	5.5
9	13	48	24.3	60	15.1	141	3.4	9.2	1.2	8	3	149	59	0.37	4.5	4.4	B	97	12	1.2	355	43	1.8	199	44	6.0
9	19	28	25.6	59	21.3	144	58.1	23.3	2.7	13	6	231	132	0.59	7.6	5.0	C	205	7	7.6	109	38	2.9	304	51	5.9
9	20	46	14.5	61	50.6	149	11.8	6.6	1.6	8	5	160	46	0.44	1.1	1.4	A	181	5	1.1	272	12	0.7	69	77	1.4
9	22	31	24.9	60	53.9	149	52.0	34.5	1.7	10	3	119	53	0.21	2.5	7.4	C	11	4	1.3	281	5	2.5	140	84	7.4
9	23	24	36.8	57	45.2	154	1.5	101.5	4.4	10	0	257	279	0.17	23.1	22.5	D	81	13	22.8	338	26	3.9	194	59	25.0
			4.2 MB			3.2 ML ATWC																				
10	4	48	4.1	61	41.3	147	19.0	14.3	2.6	24	7	128	76	0.55	1.2	1.6	A	281	9	0.6	187	22	1.1	32	66	1.6
10	6	29	7.9	60	1.0	140	35.0	9.0	1.2	4	2	198	100	0.24	14.2	9.7	D	133	33	2.6	261	35	4.6	18	33	16.6
10	16	18	54.8	59	24.3	144	54.6	25.8	3.2	18	3	227	110	0.35	5.4	2.6	C	359	25	5.7	261	31	1.9	124	50	1.6
						3.0 ML ATWC																				
10	17	46	31.1	61	39.7	149	44.2	42.0	2.4	18	12	142	47	0.36	1.9	2.4	A	277	0	1.1	187	2	1.9	7	88	2.4
10	20	40	20.3	63	7.5	150	13.7	117.7	3.8	12	5	208	176	0.39	11.4	23.4	D	94	5	4.2	1	21	7.3	197	68	25.0
10	20	57	16.7	60	37.0	141	44.3	2.7	1.8	16	10	156	64	0.80	1.3	3.1	8	328	0	0.7	261	10	1.1	58	65	2.9
11	2	6	10.9	61	24.6	146	43.3	21.5	1.9	18	12	139	44	0.50	1.1	2.5	A	287	6	0.7	18	11	1.0	169	77	2.5
11	3	34	15.0	61	52.0	149	32.2	31.9	2.5	20	13	162	64	0.49	1.9	1.8	A	287	1	1.0	196	36	2.0	18	54	1.6
11	5	14	55.1	60	11.6	141	13.0	0.2	1.5	9	7	134	54	0.64	3.3	2.9	B	87	3	0.8	179	37	3.8	353	53	2.2
11	9	9	10.8	60	41.0	150	19.5	44.3	1.5	9	7	102	75	0.20	2.2	3.4	B	269	3	1.3	1	27	1.5	173	63	3.8
11	11	36	33.9	60	36.0	141	41.5	0.5	1.0A	4	4	233	66	0.63	7.1	10.5	D	343	4	2.3	261	29	4.8	80	60	11.6
11	12	16	21.3	60	37.8	141	35.8	16.5	1.2A	7	5	165	95	0.51	2.6	6.9	C	328	0	0.9	81	6	2.3	238	66	6.4
11	13	21	33.3	61	10.3	147	14.1	7.5	2.3	27	7	67	39	0.83	1.0	1.7	A	178	1	1.0	269	26	0.7	86	64	1.9
11	13	52	25.2	61	32.6	150	3.6	51.4	3.3	21	6	96	43	0.45	1.5	2.1	A	88	9	0.8	180	17	1.4	331	71	2.2
11	19	12	45.1	60	24.0	143	21.0	18.6	1.0A	8	7	86	46	0.81	3.0	4.8	8	267	9	1.2	0	21	2.5	155	67	5.2
11	20	25	47.5	59	38.5	152	55.8	102.1	3.9	12	2	146	102	0.16	7.2	8.1	C	328	6	2.8	81	28	6.1	228	54	8.4
						3.5 ML ATWC																				
11	21	11	15.0	60	4.1	140	40.8	10.6	3.4	20	5	99	45	0.41	1.6	1.8	A	272	2	0.6	4	33	1.4	179	57	2.0
								3.8 ML EMRC																		
12	2	43	37.4	60	53.9	152	10.6	4.0	2.6	20	3	93	54	0.70	1.6	1.2	A	190	10	0.7	286	31	1.8	84	57	0.9
12	3	43	27.2	61	14.3	149	22.3	35.5	1.7	15	5	71	46	0.33	1.4	1.4	A	172	9	0.9	81	42	1.2	272	47	1.5
12	12	5	48.4	60	21.6	141	25.1	12.9	1.9	16	5	147	55	0.55	1.3	3.0	8	275	0	0.9	5	17	1.0	185	73	3.1
12	13	45	10.4	63	4.2	149	38.3	92.2	3.6	9	3	210	159	0.16	10.7	22.9	D	297	6	2.9	30	23	3.8	193	66	25.0
12	14	44	31.1	59	59.9	152	53.6	99.5	4.5	15	1	183	89	0.14	4.5	6.3	C	333	0	2.4	81	26	3.4	243	59	6.5
			5.0 MB			4.6 ML ATWC																				
12	17	29	39.3	61	35.4	146	19.5	29.0	2.0	21	6	88	58	0.69	1.1	1.6	A	104	2	0.7	194	6	1.1	356	84	1.6
12	18	15	51.8	59	59.2	141	9.1	5.6	1.8	18	9	86	49	0.36	1.4	1.7	A	102	8	0.7	6	34	1.1	203	55	1.9
								2.1 ML EMRC																		
12	18	31	47.4	61	0.2	150	10.9	9.6	1.9	16	5	45	60	0.34	1.4	2.4	A	190	15	1.2	286	19	0.6	64	65	2.6
12	22	38	46.3	58	16.1	148	12.7	42.6	3.8	12	1	211	236	0.20	16.0	26.6	D	328	0	14.5	261	10	5.4	58	65	25.0
						3.3 ML ATWC																				
13	0	8	49.5	62	45.5	148	7.1	44.2	3.2	10	4	121	185	0.26	12.2	25.0	D	261	2	3.5	343	10	11.4	160	77	25.0
13	2	37	13.7	60	13.9	141	18.4	0.9	1.1	8	3	177	60	0.52	5.4	6.3	C	87	11	1.0	348	38	2.3	190	50	8.0
13	3	22	8.5	60	15.0	140	54.4	12.8	2.0	15	7	76	67	0.30	2.2	2.4	A	270	1	0.7	1	39	1.6	179	51	2.8
								2.1 ML EMRC																		
13	3	52	57.4	59	14.5	151	46.4	45.2	3.8	11	1	142	120	0.17	3.7	3.9	B	12	4	2.4	281	14	3.7	118	75	4.0
			4.0 MB			4.0 ML ATWC				FELT (III) AT HOMER																
13	6	3	15.8	61	39.7	150	5.1	49.5	3.3	19	3	143	51	0.22	1.8	2.9	B	268	0	1.0	178	17	1.6	358	73	3.0

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1980	ORIGIN HR	TIME MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
AUG 13	9	0	42.1	60	12.6	141	11.5	0.1	0.9	8	2	137	53	0.52	6.4	5.9	C	85	8	1.4	182	41	7.9	346	48	3.7
13	11	49	58.1	61	38.6	147	32.0	24.0	2.3	19	6	120	55	0.56	1.3	2.3	A	335	2	1.2	261	8	0.6	79	72	2.2
13	13	35	0.4	61	50.9	150	20.2	16.3	1.9	10	4	168	70	0.54	1.9	2.9	B	105	1	0.9	195	26	1.5	13	64	3.1
13	13	53	32.1	60	40.2	143	8.2	13.1	1.2	10	5	78	59	1.36	1.4	3.7	B	263	6	1.4	354	11	0.9	145	77	3.8
13	14	11	20.3	60	23.5	140	53.6	12.4	1.0A	5	4	210	108	0.24	24.9	5.3	D	207	4	25.0	116	13	3.1	314	76	5.1
13	19	35	35.5	59	50.4	141	39.5	17.7	1.2	5	2	212	36	0.19	4.3	9.3	C	81	2	2.1	164	14	3.7	343	74	9.5
13	22	23	22.7	59	51.2	141	37.2	0.1	2.1	17	7	167	34	0.85	2.3	1.8	A	288	2	0.6	19	30	2.6	195	60	1.4
								2.5 ML	EMRC																	
13	22	48	45.0	59	51.8	141	39.3	1.4	2.4	15	4	176	33	0.91	2.5	2.1	B	286	10	0.6	23	35	2.9	182	53	1.5
								2.5 ML	EMRC																	
13	23	9	23.7	60	25.5	147	34.8	21.1	2.2	19	4	83	64	0.33	1.4	3.3	B	172	6	1.3	264	16	0.7	62	73	3.4
14	1	16	51.8	60	15.2	140	46.6	11.0	1.3	6	4	161	74	0.41	7.9	5.4	C	207	13	8.0	303	22	1.8	89	64	5.7
14	3	50	16.6	60	28.9	140	29.7	4.8	1.2	5	2	198	100	0.10	17.7	14.1	D	327	16	2.1	81	21	18.0	209	55	12.7
14	5	27	19.0	61	37.9	150	32.5	61.1	2.2	12	6	132	65	0.28	1.7	1.8	A	86	4	0.9	352	39	1.6	181	51	1.9
14	5	57	16.3	60	49.9	150	31.0	16.9	1.9	15	4	86	72	0.38	1.1	2.9	B	282	3	0.9	192	5	1.1	43	84	2.9
14	8	53	5.2	60	43.7	151	54.7	79.2	3.4	18	2	68	51	0.29	2.3	5.0	B	145	8	1.9	81	15	1.4	266	59	4.6
14	9	21	10.2	60	11.9	140	38.4	0.0	1.2	7	1	160	62	0.11	12.8	8.2	D	283	4	1.6	192	15	13.1	28	74	7.7
14	11	23	58.8	60	13.8	141	1.2	8.0	1.3	8	2	147	60	0.07	5.2	5.5	C	277	3	1.1	10	43	1.8	184	47	7.4
14	11	58	5.3	61	13.1	150	32.0	46.1	2.0	14	6	68	59	0.46	1.1	3.9	B	265	0	0.8	175	10	0.9	355	80	4.0
14	16	38	4.2	61	27.2	149	54.7	44.3	1.9	14	4	93	44	0.23	1.6	2.7	B	261	2	0.9	154	19	1.3	356	65	2.8
14	19	48	50.2	60	11.4	141	25.5	8.0	0.9	6	2	126	84	0.08	13.1	10.6	D	48	3	4.7	140	39	16.7	314	51	2.1
15	0	29	56.8	60	10.4	140	58.2	9.0	1.4	9	2	139	41	0.28	5.8	4.5	C	94	2	1.5	4	13	5.9	193	77	4.4
15	1	47	21.9	60	8.1	141	2.3	8.7	1.7	12	4	130	44	0.40	1.8	2.7	B	96	4	0.9	4	20	1.6	197	70	2.8
15	5	38	21.9	61	58.4	148	51.5	14.2	2.4	18	4	171	65	0.52	2.4	3.8	B	2	10	2.1	267	27	0.9	111	61	4.3
15	6	2	23.9	60	16.4	140	57.0	11.0	1.5	9	4	157	66	0.36	3.4	3.6	B	88	1	1.0	357	43	2.5	179	47	4.2
15	9	36	3.0	60	0.5	141	29.8	1.0	0.9	6	2	195	70	0.37	5.0	8.0	C	261	5	1.3	166	29	2.7	0	60	9.1
15	12	34	16.5	61	30.3	149	47.3	43.1	2.1	11	6	82	36	0.33	1.8	2.0	A	301	6	1.0	34	26	1.7	199	63	2.0
15	13	13	39.2	62	25.2	148	7.9	44.9	3.4	20	4	107	108	0.34	2.9	9.7	C	81	5	1.4	334	9	1.9	195	70	9.5
15	21	45	46.5	61	44.9	150	47.6	74.0	3.5	19	1	135	50	0.23	2.6	4.9	B	81	2	1.3	165	21	2.0	346	68	5.1
16	1	8	20.2	62	16.8	147	58.5	30.0	2.4	16	9	200	98	0.69	3.6	2.2	B	331	2	3.4	81	8	1.2	229	68	2.1
16	2	36	54.8	59	31.1	138	48.5	8.8	1.2	4	1	251	67	0.21	12.5	9.7	D	101	32	5.9	343	37	1.3	219	37	15.3
16	4	9	11.1	60	16.2	140	45.1	13.3	1.7	9	4	164	71	0.36	2.9	3.4	B	284	3	1.0	16	36	2.2	190	54	4.0
16	8	1	28.4	60	8.7	141	23.1	8.8	1.8	12	3	122	38	0.35	2.1	1.4	A	89	10	0.7	180	10	2.1	315	76	1.4
16	8	52	41.0	60	27.6	141	23.1	12.9	1.5	7	3	158	74	0.23	1.8	4.2	B	117	2	0.9	27	17	1.4	214	73	4.4
16	8	59	41.3	60	29.1	141	20.0	1.2	1.3	7	3	163	74	0.58	2.2	3.8	B	298	1	1.0	28	20	1.8	205	70	4.0
16	10	54	42.7	60	2.1	140	39.7	1.8	1.3	7	1	159	58	0.32	9.6	11.0	D	274	6	2.8	180	40	4.1	11	49	14.0
16	11	43	1.9	60	12.2	141	41.6	3.7	1.5	9	4	119	42	0.42	2.6	3.1	B	288	12	1.0	26	33	2.0	181	54	3.6
16	23	19	21.0	59	13.2	136	49.4	5.0	2.4	7	4	254	154	0.72	14.5	14.3	D	39	21	2.7	292	38	5.4	151	45	19.8
								2.3 ML	EMRC																	
17	7	15	56.1	61	50.2	147	44.6	31.0	2.7	23	12	153	78	0.47	1.7	2.0	A	87	3	0.8	178	8	1.7	337	81	2.0
17	7	59	59.6	60	45.4	149	45.9	41.3	2.0	15	8	60	42	0.25	1.4	3.1	B	274	7	1.3	6	12	1.0	154	76	3.2
17	12	19	28.8	62	6.1	149	46.3	43.0	2.6	18	8	186	82	0.31	3.1	6.6	C	101	5	1.3	9	17	2.4	207	72	6.8
17	13	32	55.4	62	17.4	148	10.3	38.6	2.5	20	8	200	99	0.55	6.0	2.1	C	338	6	5.8	261	37	2.7	76	51	1.5
17	14	48	50.2	60	9.9	141	9.6	7.1	1.4	9	5	133	51	0.16	9.2	4.3	C	93	16	1.1	358	16	9.5	226	67	3.7
17	15	56	31.8	59	31.8	145	22.9	12.5	2.4	14	8	229	110	0.64	5.1	2.1	C	355	11	5.2	95	41	1.3	253	47	2.3
17	16	18	54.5	62	3.3	150	18.9	39.4	2.9	20	7	184	70	0.57	3.3	5.1	C	12	6	3.2	103	7	0.9	242	81	5.1
17	18	51	20.4	60	14.4	141	0.6	7.2	2.4	20	7	72	45	0.55	2.1	3.1	B	277	7	0.9	11	29	1.3	175	60	3.5
								2.7 ML	EMRC																	
17	19	29	1.9	60	11.8	141	24.9	6.6	2.1	21	9	46	39	0.62	1.6	1.6	A	91	2	0.8	359	45	1.0	183	45	2.0
								2.4 ML	EMRC																	

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1980	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
AUG 17	21	27	41.9	60	10.5	148	21.5	29.6	2.2	24	11	127	66	0.41	1.2	1.6	A	278	5	0.8	10	21	1.1	175	68	1.7
17	21	56	47.1	61	49.9	150	0.6	40.8	2.3	17	11	157	57	0.35	3.0	2.8	B	288	1	1.0	197	39	3.4	19	51	2.3
18	1	41	26.7	62	58.0	148	24.3	43.4	3.1	14	8	131	158	0.86	4.9	25.3	D	341	3	4.4	81	4	3.0	218	79	25.0
18	2	30	31.3	60	22.4	141	15.1	1.5	1.3	8	3	155	95	0.40	2.7	5.7	C	87	6	1.3	354	20	1.7	193	69	6.1
18	3	7	14.3	60	20.6	140	36.5	0.0	1.5	6	4	217	69	0.24	7.6	4.9	C	8	5	7.6	278	7	1.2	133	81	4.9
18	7	28	50.0	60	10.6	141	9.6	6.9	1.5	11	7	133	51	0.46	2.6	2.3	B	92	9	0.8	188	35	2.8	350	54	2.1
18	11	8	41.2	61	18.0	148	24.9	22.2	1.4	11	5	75	49	0.31	1.5	3.1	B	214	10	1.4	306	12	1.1	85	74	3.2
18	11	15	59.2	60	18.7	140	57.3	7.0	1.8	14	7	161	67	0.54	2.1	2.7	B	280	8	0.7	15	31	1.6	177	58	3.0
18	15	10	29.8	61	51.3	149	27.3	42.3	2.4	21	11	161	59	0.44	2.2	2.8	B	93	5	1.0	0	27	2.0	193	62	3.0
18	15	45	39.9	59	37.3	144	48.5	25.5	1.2A	5	2	284	100	0.10	9.6	2.2	C	28	2	4.5	118	7	9.7	282	83	1.8
18	22	43	9.8	60	26.1	147	33.5	25.9	2.2	24	13	83	58	0.48	1.0	1.5	A	270	7	0.7	1	10	1.0	145	78	1.6
18	22	50	25.2	62	59.8	150	30.7	57.8	4.4	11	1	120	171	0.36	2.6	17.2	D	293	3	2.0	23	6	1.5	176	83	17.3
	4.5 MB					4.0 ML ATWC						FELT (III) AT CURRY AND GOLD CREEK														
19	2	45	51.2	60	28.7	142	48.9	8.0	0.6	5	4	116	81	0.28	3.9	2.1	B	138	25	4.2	25	39	0.9	251	40	1.5
19	3	32	14.0	63	7.0	150	6.1	89.4	3.9	12	4	120	172	0.32	9.6	23.1	D	305	8	2.1	38	19	4.6	193	69	24.6
19	8	19	34.4	59	46.3	141	15.4	2.1	1.6	11	5	188	52	0.36	6.2	4.9	C	121	14	1.2	20	37	7.6	228	50	2.2
19	9	25	48.0	61	46.6	148	52.4	9.5	1.5	15	7	162	46	0.54	1.4	1.9	A	180	3	1.4	272	29	0.8	85	61	2.1
19	12	30	10.3	60	8.1	141	9.1	9.7	1.4	7	4	138	87	0.20	7.4	6.1	C	270	0	1.4	0	12	7.4	180	78	6.1
19	16	4	4.5	61	34.2	150	5.7	45.5	2.2	14	11	110	46	0.21	2.1	2.8	B	88	13	1.3	183	22	1.8	330	64	3.0
19	20	37	41.3	60	59.0	150	10.3	43.0	3.0	26	5	44	62	0.38	1.1	3.6	B	341	1	1.0	81	2	0.8	227	80	3.5
19	23	53	36.0	61	49.7	149	44.2	58.2	2.4	15	12	168	66	0.33	1.9	2.2	A	285	2	0.9	16	34	1.7	192	56	2.4
20	3	11	52.3	62	18.6	149	28.9	69.0	2.8	18	10	204	82	0.40	3.3	7.2	C	93	2	1.1	2	13	2.9	192	77	7.3
20	3	16	1.7	59	58.3	140	40.0	7.0	1.6	8	5	157	58	0.49	4.8	4.1	B	280	1	0.9	11	39	6.0	189	51	1.9
20	3	20	44.0	60	3.3	140	37.3	10.6	1.6	7	5	146	79	0.40	7.0	5.0	C	266	31	1.9	19	33	8.1	144	41	3.0
20	3	29	50.5	61	14.9	150	55.2	53.0	2.4	22	8	75	61	0.34	1.5	4.2	B	81	3	1.0	154	7	1.3	326	71	4.1
20	5	21	39.6	61	15.5	150	56.1	54.1	2.1	15	10	76	71	0.39	1.6	3.1	B	81	4	1.0	167	16	1.4	337	73	3.1
20	6	46	10.9	59	53.8	141	11.0	5.2	1.3	7	5	177	87	0.54	5.9	6.9	C	269	1	1.6	0	30	5.4	177	60	7.3
20	7	14	46.9	62	17.6	148	8.2	37.4	3.4	25	5	103	94	0.33	2.2	1.6	A	160	5	2.1	81	43	1.2	255	46	1.8
20	9	20	19.9	60	43.2	140	31.1	0.5	1.1A	7	1	216	105	0.22	6.7	9.0	C	142	7	2.5	261	23	4.8	39	53	9.1
20	9	20	32.9	60	51.4	140	19.1	31.8	2.5	10	4	222	131	0.28	6.8	24.9	D	298	2	2.3	208	5	6.5	50	85	25.0
20	10	14	50.8	60	43.1	151	35.5	67.5	3.9	22	0	51	57	0.28	1.7	3.8	B	31	9	1.3	123	12	1.4	265	75	3.9
	3.7 MB					3.7 ML ATWC																				
20	11	37	0.4	60	27.4	141	1.9	11.5	1.4	10	5	173	72	0.48	2.3	6.0	C	298	11	1.1	30	11	1.9	164	74	6.2
20	14	3	8.4	61	16.7	146	56.3	25.6	2.7	29	8	42	44	0.49	0.8	1.8	A	180	2	0.8	270	7	0.6	74	83	1.8
20	15	36	59.8	59	52.2	148	17.5	34.5	2.6	27	3	170	91	0.50	4.3	2.4	B	91	20	1.2	191	25	4.7	327	57	1.5
20	17	49	53.9	60	0.7	141	11.5	7.4	1.7	14	7	108	47	0.54	1.5	1.7	A	105	4	0.7	12	36	1.2	200	54	1.9
20	22	4	21.6	61	24.5	149	50.3	40.3	2.1	17	9	65	43	0.37	1.5	2.3	A	107	5	0.9	199	18	1.4	2	71	2.4
21	1	34	59.5	61	24.2	149	50.1	37.0	2.1	14	12	67	43	0.52	1.6	1.4	A	112	9	0.7	18	24	1.7	221	64	1.4
21	2	6	53.3	63	56.7	147	57.7	82.6	4.0	13	7	145	283	0.13	18.4	23.6	D	178	5	2.4	270	25	16.6	77	64	25.0
21	4	57	3.1	60	13.0	141	1.4	8.0	2.0	14	7	145	59	0.51	1.9	3.5	B	280	9	0.8	14	22	1.4	169	66	3.8
21	6	0	51.7	61	49.5	149	23.5	8.9	0.9A	10	8	172	56	0.39	1.2	1.6	A	357	16	1.1	261	20	0.7	123	64	1.7
21	12	39	0.4	59	37.4	138	59.8	15.0	0.6	4	3	205	88	0.34	19.4	6.3	D	318	20	1.2	261	24	15.9	99	46	3.3
21	12	45	37.2	61	4.4	148	33.7	27.7	1.8	26	17	52	38	0.39	1.1	1.6	A	44	2	0.8	134	5	1.1	292	85	1.6
21	14	27	47.8	60	14.2	140	51.5	9.3	1.2	7	3	156	75	0.22	6.1	6.6	C	280	13	1.5	20	37	4.6	174	50	7.9
21	14	42	57.6	60	23.4	141	23.1	0.6	0.3A	5	4	151	89	0.35	3.6	9.9	C	294	0	2.5	24	13	2.8	204	77	10.1
21	15	16	45.8	61	45.6	148	31.1	28.3	2.0	8	7	181	39	0.51	1.9	2.0	A	81	11	1.1	323	25	1.6	188	52	1.9
21	15	24	41.0	60	15.4	141	2.5	3.6	1.9	11	7	151	85	0.47	3.5	4.4	B	18	3	3.5	287	8	0.9	128	81	4.5

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1980	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
AUG 21	18	20	17.9	61	54.0	149	34.4	36.0	2.5	22	10	165	66	0.43	1.9	1.6	A	93	10	0.9	188	22	2.0	340	65	1.5
21	20	19	36.6	59	35.4	138	46.3	6.0	1.8	4	3	251	63	0.09	4.9	6.0	C	353	21	0.8	93	23	4.2	225	58	6.8
22	0	43	50.3	61	32.5	152	14.6	130.5	4.7	21	2	87	80	0.26	1.9	2.6	B	182	13	1.5	276	18	1.7	58	68	2.8
			4.3 MB			4.0 ML ATWC																				
22	4	38	46.0	61	27.6	147	12.3	27.9	2.3	18	5	49	57	0.34	1.1	2.2	A	23	0	1.1	113	8	0.9	293	82	2.2
22	6	57	0.7	60	39.1	150	48.2	15.9	1.6	12	9	73	73	0.48	1.8	3.3	B	292	3	0.9	22	4	1.8	165	85	3.3
22	9	53	46.0	61	17.1	150	39.1	46.0	2.1	16	13	67	59	0.46	1.3	3.1	B	135	7	1.0	226	10	1.1	10	78	3.1
22	10	8	1.6	60	38.3	147	31.6	14.4	2.0	22	10	146	62	0.29	2.1	2.7	B	159	20	1.1	261	28	0.7	39	54	3.3
22	11	29	23.3	60	6.4	140	57.9	10.8	1.1	7	4	142	60	0.23	6.3	4.1	C	188	6	6.3	97	8	1.4	314	80	4.1
22	11	29	37.8	61	9.6	148	36.1	31.7	1.8	20	12	47	40	0.35	1.0	1.7	A	222	8	0.7	313	10	0.9	94	77	1.7
22	12	25	54.3	59	55.7	139	19.0	27.1	0.7	4	4	225	56	0.23	11.1	7.7	D	141	9	2.6	261	12	10.1	26	57	6.5
22	16	23	55.6	59	59.8	141	7.2	8.6	1.4	9	7	106	49	0.29	1.8	2.4	A	103	18	0.9	4	27	1.3	223	57	2.8
22	16	41	56.0	61	55.8	147	36.4	37.0	2.2	21	13	162	73	0.62	2.3	1.4	A	81	14	0.9	343	21	2.4	202	64	1.1
22	16	42	47.1	61	10.0	147	14.6	4.2	1.3	10	7	110	39	0.19	1.6	8.3	C	268	0	0.9	358	2	1.6	178	88	8.3
22	18	7	7.8	60	8.3	140	53.3	12.9	1.9	13	7	135	35	0.37	2.8	2.2	B	98	3	0.8	8	8	2.8	208	81	2.1
22	22	0	40.4	60	13.2	140	59.1	18.5	2.8	18	7	75	43	0.83	2.4	2.0	A	94	5	0.8	187	35	2.8	357	55	1.4
								2.9 ML EMRC																		
23	0	55	35.3	60	25.9	148	30.9	8.2	1.8	19	12	100	56	0.71	1.4	2.5	B	180	1	0.8	271	27	0.7	88	63	2.8
23	2	38	14.8	60	18.6	140	55.7	16.5	1.4	8	4	161	68	0.27	6.5	7.7	C	93	4	1.1	0	39	2.8	188	51	9.7
23	3	50	59.5	60	7.6	149	40.8	5.6	2.5	24	6	135	52	0.62	1.3	2.1	A	343	4	1.2	261	27	0.8	81	62	2.3
						3.0 ML ATWC																				
23	9	53	33.5	60	2.2	140	56.9	8.6	1.3	9	6	114	39	0.38	3.0	4.5	B	99	8	1.1	190	12	2.9	336	76	4.6
23	10	4	44.7	59	58.1	140	43.3	15.8	1.4	7	5	158	74	0.41	12.0	12.4	D	279	1	2.3	188	44	2.7	10	46	17.1
23	12	24	16.1	59	31.3	139	0.6	0.6	0.7	4	1	171	95	0.44	24.1	10.1	D	313	10	1.1	220	16	25.0	74	71	7.8
23	13	5	5.3	59	58.8	140	46.5	12.2	1.4	9	2	158	70	0.31	9.8	8.8	C	104	2	1.5	11	41	12.5	196	49	4.2
23	13	9	13.1	60	8.2	140	57.3	7.9	1.4	10	5	133	39	0.35	2.3	3.4	B	91	3	0.9	0	20	2.0	189	70	3.5
23	14	54	9.9	60	18.8	141	19.5	2.7	1.6	9	7	146	64	0.58	1.7	2.8	B	94	6	0.9	1	24	1.2	197	65	3.1
23	17	6	3.7	61	47.4	149	40.4	42.1	2.4	21	11	155	61	0.35	2.0	3.3	B	2	5	2.0	93	8	1.0	240	81	3.4
23	17	12	32.1	61	6.1	150	44.8	14.9	1.3	12	9	83	71	0.69	1.1	4.3	B	314	0	0.9	44	1	1.1	224	89	4.3
23	17	31	48.9	60	42.5	149	11.6	38.2	2.6	31	13	59	50	0.32	1.4	1.4	A	153	15	1.2	81	38	0.8	263	46	1.5
23	19	47	33.1	60	30.4	142	54.0	10.5	0.5	3	3	131	77	0.10	18.2	17.5	D	261	23	1.8	138	39	25.0	10	37	1.2
23	19	47	42.4	61	14.1	148	37.0	20.1	1.1	4	4	112	46	0.14	2.2	3.7	B	143	1	1.0	261	25	1.0	51	53	3.8
23	20	8	53.8	60	17.6	140	58.5	0.1	1.1	6	3	160	65	0.30	7.0	9.7	C	95	1	1.5	186	22	6.3	3	68	10.1
23	22	37	5.8	60	20.1	141	17.1	6.4	1.7	11	6	150	63	0.61	2.3	3.7	B	81	4	1.4	339	25	1.6	179	62	4.0
24	2	39	11.5	60	19.6	141	9.4	6.7	1.2A	7	2	154	94	0.21	4.2	11.4	D	265	6	1.3	357	14	3.0	152	75	11.8
24	4	6	7.3	59	43.1	138	20.3	27.1	1.1A	4	4	294	77	0.60	7.8	14.7	D	272	4	4.6	5	27	1.9	174	63	16.5
24	5	10	13.2	60	8.7	140	53.1	13.8	1.3	9	2	137	73	0.16	9.3	4.0	C	94	4	0.9	185	12	9.5	346	77	3.6
24	6	31	36.7	60	9.6	153	13.2	136.9	3.5	15	4	181	108	0.12	5.0	7.4	C	322	0	2.8	81	14	3.8	232	58	6.7
						3.1 ML ATWC																				
24	7	7	58.6	60	12.8	136	49.0	4.0	1.8A	6	5	177	131	0.61	2.6	2.9	B	208	23	2.3	107	24	1.4	336	56	3.3
								1.7 ML EMRC																		
24	10	15	56.9	60	23.9	141	14.8	10.1	1.5	11	4	158	64	0.55	4.0	5.4	C	270	0	1.3	0	34	2.3	180	56	6.3
24	10	57	18.3	60	13.2	141	0.2	12.2	1.5	6	5	146	61	0.27	5.9	4.4	C	87	10	0.9	182	29	6.4	340	59	3.6
24	11	0	38.5	60	33.1	147	19.9	26.3	2.6	31	1	73	65	0.41	1.0	1.6	A	355	3	1.0	265	5	0.7	116	84	1.6
						3.4 ML ATWC																				
24	11	38	30.8	60	25.6	147	35.3	18.4	2.1	22	6	82	60	0.35	1.2	2.6	B	355	5	0.9	264	17	0.9	101	72	2.7
24	14	17	46.6	60	56.8	149	16.9	33.8	1.4	8	5	64	52	0.25	1.5	5.4	C	300	3	1.3	210	11	0.9	45	79	5.5
24	16	24	5.4	60	18.1	145	3.7	28.3	0.3A	5	3	232	135	0.13	7.6	3.0	C	33	8	7.6	131	43	1.7	295	46	3.5
24	16	24	10.1	60	16.5	141	19.3	8.9	0.8	6	5	141	87	0.13	5.7	6.2	C	81	25	1.1	324	26	2.0	202	47	8.1
24	18	20	47.6	62	11.8	150	45.9	60.7	3.2	16	2	211	82	0.42	5.5	5.2	C	95	27	1.4	203	31	5.0	332	47	6.2
24	20	53	18.6	61	16.6	150	22.1	21.5	1.8	12	4	90	49	0.45	1.2	4.9	B	338	0	1.0	261	8	0.9	68	75	4.8

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1980	ORIGIN HR	TIME MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
AUG 25	3	22	15.1	60	11.4	140	57.9	8.1	1.5	10	3	143	41	0.32	2.1	3.7	B	81	13	1.4	335	13	1.5	208	66	3.8
25	4	42	51.1	60	42.7	140	41.2	0.9	2.2	7	5	206	102	0.93	13.5	11.3	D	130	10	3.4	223.	20	13.8	15	68	11.1
25	9	11	28.6	60	22.0	152	7.4	85.1	3.4	19	1	77	58	0.21	2.2	2.8	B	18	10	1.6	114	32	1.4	273	56	3.2
25	9	37	10.7	60	5.5	140	46.8	14.1	1.5	9	2	127	39	0.23	6.5	4.4	C	275	8	1.1	182	23	6.8	23	66	3.9
25	12	53	16.5	60	9.0	141	12.1	1.1	0.8	7	4	135	53	0.49	5.1	5.6	C	96	8	0.9	0	38	3.9	196	51	6.5
25	13	23	54.5	61	43.7	149	20.4	31.9	2.3	20	6	150	54	0.49	1.7	2.0	A	274	12	0.8	9	22	1.7	157	65	2.1
25	13	38	25.2	59	52.9	152	56.1	103.7	3.3	16	2	74	89	0.12	2.2	4.1	B	285	0	2.1	195	19	1.9	15	71	4.3
		4.8 MB				3.1 ML ATWC																				
25	14	1	44.2	59	56.6	141	10.0	9.4	1.3	10	1	98	54	0.18	2.6	2.7	B	323	23	1.9	81	26	0.9	204	47	3.3
25	14	34	23.9	60	14.9	141	14.4	9.4	0.8A	5	2	141	57	0.09	12.4	13.4	D	81	25	1.9	325	27	2.9	201	47	17.8
25	15	43	54.2	61	4.1	146	28.9	9.0	1.9	22	7	82	38	0.57	1.0	1.2	A	261	2	0.6	148	16	0.8	357	62	1.2
25	15	49	47.5	61	48.5	146	50.3	26.2	2.5	20	4	130	60	0.66	1.4	2.4	A	96	7	0.8	188	15	1.3	342	73	2.5
25	16	16	29.6	60	1.8	141	3.5	0.1	1.0	7	2	112	45	0.34	4.9	5.9	C	120	4	1.4	29	14	4.8	226	75	6.0
25	17	24	2.5	60	38.5	143	43.5	18.9	0.4A	8	5	87	69	0.59	2.5	8.5	C	356	4	1.7	87	14	1.2	250	75	8.8
25	18	10	43.8	57	6.9	135	58.1	12.7	4.4	8	4	216	415	0.29	25.0	23.0	D	300	23	1.8	51	40	25.0	188	41	25.0
								3.7 ML	EMRC																	
25	18	20	55.9	60	34.5	142	42.1	11.4	0.7	7	4	127	55	0.61	1.9	2.4	A	15	6	0.9	281	34	1.2	114	55	2.8
26	1	35	3.7	62	41.4	152	53.3	20.1	3.8	9	2	199	174	0.31	9.7	24.9	D	120	1	2.2	210	5	9.4	19	85	25.0
						3.9 ML ATWC																				
26	1	48	7.3	59	49.0	141	22.9	4.8	0.7A	5	3	199	99	0.30	10.2	8.0	D	108	6	1.4	16	23	10.6	212	66	7.4
26	3	47	23.7	59	51.7	141	19.0	15.8	1.1A	6	4	182	95	0.72	6.6	8.9	C	13	5	6.6	104	11	1.7	259	78	9.1
26	8	59	13.0	60	14.0	141	5.8	2.3	1.8	16	7	117	49	0.75	0.8	1.5	A	290	4	0.5	21	16	0.7	186	73	1.6
26	14	12	53.3	60	16.1	140	43.4	16.8	2.0	10	3	143	85	0.19	4.3	3.2	B	324	9	0.8	81	19	4.2	215	56	2.7
26	17	23	3.8	61	53.3	149	34.4	43.2	2.1	9	4	181	78	0.31	4.2	8.8	C	309	4	1.4	41	22	2.4	209	68	9.4
26	17	25	15.6	60	19.8	143	46.1	21.9	1.0A	8	6	77	52	0.35	1.8	3.7	B	344	11	1.5	81	16	0.8	222	69	3.9
26	18	29	19.3	61	36.0	150	29.7	60.0	2.6	18	3	126	69	0.27	2.0	5.4	C	87	2	1.1	178	8	1.9	343	82	5.4
26	19	33	55.7	60	36.7	142	59.7	8.4	1.5	12	4	78	59	1.35	1.3	2.6	A	261	6	1.2	335	18	0.7	152	65	2.5
26	20	30	13.0	61	48.2	149	29.4	38.3	1.4A	10	5	168	62	0.18	2.6	2.3	B	347	29	1.7	101	36	1.2	229	40	3.2
26	20	53	25.0	61	3.3	150	45.0	22.8	1.7	10	6	76	67	0.64	1.1	5.4	C	189	3	1.0	279	4	0.7	62	85	5.4
27	0	35	1.4	60	4.6	139	20.5	29.7	0.9	4	3	246	51	0.39	6.4	4.2	C	239	29	7.1	129	33	1.6	1	44	3.2
27	0	46	17.8	62	58.5	146	46.8	35.1	2.8	8	4	149	195	0.30	11.6	19.0	D	264	9	4.9	169	29	2.9	10	59	22.0
27	0	52	54.7	60	19.2	141	4.9	10.0	1.0A	4	3	159	100	0.05	7.0	8.7	C	81	9	1.2	347	13	6.8	204	74	8.9
27	5	15	53.3	60	41.5	143	9.6	7.0	1.1	7	5	90	72	0.94	1.7	5.0	B	28	8	0.9	297	10	1.5	156	77	5.1
27	6	34	21.4	61	46.9	149	9.9	12.2	2.2	22	11	155	44	0.55	1.5	1.7	A	155	14	1.4	261	20	0.9	36	61	1.8
27	7	36	44.6	59	59.6	141	6.3	6.3	2.2	15	10	153	73	0.61	2.2	2.4	A	279	2	0.6	188	16	2.2	16	74	2.4
27	10	20	55.8	60	14.6	140	26.7	15.9	1.8	9	7	174	87	0.61	5.8	2.1	C	203	4	5.8	294	15	1.7	98	74	2.1
27	14	29	30.7	61	22.7	147	22.3	28.2	2.1	20	13	59	57	0.35	1.0	2.6	B	278	1	0.8	8	2	1.0	161	88	2.6
27	14	36	28.3	59	54.1	153	18.1	120.7	3.6	12	2	149	108	0.06	4.8	5.7	C	152	7	2.8	261	19	4.4	45	63	5.7
27	14	46	55.8	60	4.4	141	27.2	27.5	0.9	6	2	113	33	0.24	5.7	5.8	C	115	2	3.4	207	44	2.9	23	46	7.6
27	15	9	28.9	60	15.0	140	50.6	13.2	1.9	16	10	134	47	0.31	1.1	2.3	A	27	6	1.1	296	10	0.8	148	78	2.4
27	17	18	10.8	61	41.9	147	14.5	27.9	2.0	24	14	67	64	0.59	1.2	2.6	B	92	1	0.6	182	13	1.0	358	77	2.7
27	20	30	2.3	60	49.1	143	57.0	38.5	0.7A	5	4	124	70	0.54	3.4	4.1	B	281	1	3.3	11	6	1.3	182	84	4.1
27	22	10	15.7	60	57.3	150	43.0	48.9	1.9	12	9	95	70	0.35	1.8	4.4	B	280	0	1.0	10	1	1.8	190	89	4.4
27	22	15	31.9	60	1.9	140	12.3	24.9	1.3	4	3	206	99	0.43	14.5	6.3	D	22	23	15.7	275	35	2.6	138	46	1.1
28	1	48	41.5	60	13.6	141	4.2	7.9	1.6	13	10	117	47	0.39	1.4	2.5	A	82	9	0.8	349	19	1.1	196	69	2.6
28	3	39	37.3	60	15.8	141	0.5	8.2	1.2	6	3	126	80	0.24	4.4	8.0	C	313	5	1.1	44	8	4.3	191	81	8.1
28	5	36	2.1	60	10.9	136	48.4	10.8	1.5A	5	5	180	156	0.46	12.5	6.8	D	81	4	1.6	326	10	11.6	188	63	5.8
								1.8 ML	EMRC																	
28	5	52	27.0	61	26.9	149	32.7	42.8	1.0A	15	11	92	29	0.33	2.0	2.4	A	96	16	1.5	191	18	1.9	327	66	2.6

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198Ø	ORIGIN TIME HR MN SEC	LAT N DEG MIN	LONG W DEG MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
AUG 28	7 43 54.5	62 29.6	151 14.Ø	85.1	3.6	17	5	194	118	Ø.3Ø	4.2	7.5	C	114	15	3.6	2Ø	16	1.7	245	68	8.1
28	16 22 5Ø.3	6Ø 43.Ø	15Ø 33.Ø	18.3	1.4	9	6	1Ø5	8Ø	Ø.34	3.5	5.9	C	45	16	2.8	31Ø	19	1.1	173	65	6.4
29	3 44 1Ø.Ø	6Ø 11.3	141 13.3	Ø.4	1.ØA	6	2	133	113	Ø.3Ø	5.8	7.9	C	95	2	1.4	4	32	3.8	188	58	9.1
29	3 59 3Ø.Ø	6Ø 13.2	14Ø 46.7	14.9	1.7	1Ø	5	134	73	Ø.36	3.7	4.4	B	2Ø5	5	3.7	297	18	1.3	1ØØ	71	4.6
29	4 2Ø 26.9	6Ø 51.8	15Ø 22.5	5Ø.7	1.7	12	9	52	69	Ø.25	2.2	4.7	B	28	6	2.1	297	1Ø	1.2	149	78	4.7
29	8 27 15.8	6Ø 49.2	15Ø 22.6	4Ø.1	1.6	12	1Ø	78	74	Ø.35	2.Ø	4.7	B	3Ø4	7	1.Ø	36	15	1.6	19Ø	73	4.9
29	9 23 12.8	6Ø 18.Ø	14Ø 25.2	13.7	1.9	9	4	165	89	Ø.38	6.3	3.2	C	32Ø	16	1.3	261	19	5.3	1Ø1	51	2.6
29	9 41 38.3	6Ø 13.1	141 1.5	13.3	1.8	11	6	126	83	Ø.21	1.5	4.2	B	13	8	1.4	282	9	1.Ø	144	78	4.3
29	1Ø 33 13.1	58 5Ø.3	137 59.3	15.Ø	2.1	4	3	355	1ØØ	Ø.Ø8	26.7	8.Ø	D	81	1Ø	25.Ø	155	37	11.4	337	49	4.8
29	11 16 25.3	6Ø 24.9	143 11.Ø	15.5	Ø.6A	4	3	184	1ØØ	Ø.Ø6	12.5	1Ø.8	D	261	21	1.1	151	4Ø	16.1	11	42	3.9
29	11 39 36.2	6Ø 18.6	141 12.1	7.2	1.6	1Ø	6	119	73	Ø.52	1.5	5.7	C	267	7	1.1	358	8	Ø.9	136	79	5.8
29	12 14 2.8	59 59.8	141 6.7	7.2	1.6	11	4	161	83	Ø.46	4.2	4.5	B	274	1	1.Ø	183	38	3.7	5	52	4.9
29	13 19 55.9	59 17.3	145 1Ø.5	19.4	1.7A	9	5	278	128	Ø.2Ø	1Ø.Ø	4.3	C	1Ø1	4	5.9	1Ø	9	1Ø.1	215	8Ø	4.Ø
29	14 33 47.Ø	6Ø 13.3	14Ø 56.4	11.8	1.4	7	3	126	86	Ø.25	1Ø.Ø	5.9	D	43	9	1Ø.1	312	1Ø	1.8	174	77	5.8
29	16 11 2Ø.5	6Ø 4.3	149 9.9	19.5	1.8	18	7	145	76	Ø.58	1.7	2.3	A	273	1Ø	1.1	7	23	1.5	161	65	2.5
29	17 45 35.1	6Ø 12.7	14Ø 46.8	13.8	1.6	8	4	133	72	Ø.31	3.1	3.2	B	211	13	3.1	3Ø4	15	1.1	82	7Ø	3.3
29	22 2 12.2	6Ø 1Ø.6	149 21.8	8.2	1.7	16	7	1Ø5	6Ø	Ø.33	1.5	1.9	A	261	8	1.Ø	335	36	Ø.9	16Ø	5Ø	2.2
29	22 51 24.2	6Ø 18.3	14Ø 57.9	8.Ø	1.7	11	4	16Ø	84	Ø.56	2.5	4.1	B	283	6	Ø.8	14	8	2.4	157	8Ø	4.1
3Ø	Ø 18 22.4	59 26.8	152 46.Ø	79.6	4.6	11	Ø	146	1Ø6	Ø.18	4.7	8.Ø	C	81	3	4.4	334	5	2.6	197	72	7.7
	4.5 MB		4.7 ML ATWC																			
3Ø	Ø 24 37.Ø	61 3Ø.6	149 45.Ø	43.7	1.4A	13	4	89	34	Ø.28	1.9	2.1	A	263	17	1.3	2	28	1.8	145	57	2.3
3Ø	Ø 28 22.2	6Ø 12.8	141 5.Ø	14.3	1.2	6	5	142	86	Ø.34	3.7	3.8	B	297	9	1.2	34	4Ø	3.3	197	49	4.2
3Ø	Ø 35 46.6	6Ø 14.7	141 3.5	9.6	Ø.3A	6	5	148	86	Ø.35	6.2	4.3	C	95	2	1.3	5	11	6.2	195	79	4.3
3Ø	2 34 57.6	61 7.1	15Ø 43.Ø	51.1	2.2	19	8	6Ø	64	Ø.39	1.5	2.8	B	261	2	Ø.8	153	19	1.1	356	64	2.8
3Ø	2 47 28.9	6Ø 17.Ø	141 2.3	6.7	1.4	11	4	155	86	Ø.43	2.7	6.3	C	277	8	1.1	9	11	2.5	152	76	6.5
3Ø	7 21 6.9	6Ø 27.2	145 2.5	21.5	2.1	12	3	11Ø	45	Ø.56	1.6	3.5	B	198	1	1.6	1Ø8	12	Ø.7	293	78	3.6
3Ø	9 56 55.1	59 5Ø.7	139 16.6	21.Ø	1.4	4	1	211	49	Ø.17	8.8	7.4	C	317	Ø	1.6	261	33	9.4	47	44	3.7
3Ø	12 25 3.2	6Ø 13.7	14Ø 46.4	14.6	1.8	1Ø	3	136	73	Ø.32	2.2	3.2	B	219	11	2.2	311	12	Ø.9	87	74	3.3
3Ø	14 26 33.Ø	61 32.Ø	146 38.7	28.Ø	2.3	22	8	7Ø	49	Ø.61	1.2	2.1	A	288	2	Ø.6	198	1Ø	1.2	29	8Ø	2.1
3Ø	16 6 54.8	6Ø 27.7	147 3Ø.5	15.1	2.1	29	8	71	61	Ø.5Ø	1.Ø	1.9	A	282	9	Ø.5	19Ø	11	Ø.9	5Ø	76	2.Ø
3Ø	17 21 58.5	6Ø Ø.3	141 24.8	19.6	1.1A	7	4	164	94	Ø.71	5.7	5.1	C	94	23	1.3	2Ø4	39	6.7	341	42	4.2
3Ø	17 32 55.4	61 48.5	148 59.9	38.5	3.Ø	26	7	9Ø	5Ø	Ø.4Ø	1.2	Ø.8	A	35Ø	6	1.3	83	21	Ø.7	245	68	Ø.9
3Ø	2Ø 44 26.1	6Ø 15.1	14Ø 49.8	13.8	2.Ø	1Ø	4	135	74	Ø.34	3.4	5.2	B	261	1Ø	2.7	316	12	1.Ø	119	52	4.3
3Ø	22 25 36.Ø	6Ø 13.7	14Ø 47.5	3.6	2.Ø	14	7	125	87	Ø.6Ø	1.4	2.6	B	269	6	Ø.8	Ø	12	1.3	153	77	2.7
				2.3 ML	EMRC																	
3Ø	22 57 18.Ø	6Ø 14.7	141 4.4	21.7	1.3A	7	4	122	86	Ø.39	2.7	6.2	C	128	2	1.3	219	4	2.7	12	85	6.2
31	11 37 1Ø.4	6Ø 19.Ø	141 16.1	13.1	1.5	9	3	116	61	Ø.22	1.7	4.Ø	B	91	8	1.3	358	17	1.Ø	2Ø5	71	4.2
31	15 52 47.7	62 4.6	147 17.2	41.2	3.Ø	22	6	91	63	Ø.53	1.8	3.6	B	83	1	1.Ø	353	3	1.8	191	87	3.6
31	16 48 47.4	62 28.6	15Ø 58.Ø	79.9	3.9	17	2	1Ø5	114	Ø.34	2.5	7.1	C	82	1	1.9	352	16	1.6	175	74	7.4
			3.1 ML ATWC																			
31	16 55 38.5	61 36.1	149 59.5	57.8	2.3	14	4	158	46	Ø.67	2.7	3.8	B	267	5	1.1	174	27	2.Ø	7	62	4.2
31	18 21 6.2	6Ø 17.2	14Ø 44.6	17.7	2.Ø	9	5	144	82	Ø.18	2.8	2.Ø	B	135	3	1.Ø	45	9	2.8	243	81	2.Ø
SEP 1	6 56 15.1	6Ø 23.9	14Ø 4.3	4.3	1.8A	7	2	2Ø8	143	Ø.89	12.Ø	6.7	D	34Ø	27	1.9	261	35	12.Ø	11Ø	46	4.2
1	11 56 29.5	6Ø 16.7	141 Ø.8	2.7	1.8	9	5	128	78	Ø.71	1.3	3.1	B	17	Ø	1.3	287	3	Ø.7	1Ø7	87	3.1
1	13 3 26.2	6Ø 13.7	14Ø 58.7	13.5	1.7	6	4	148	1Ø7	Ø.32	4.1	5.2	C	3Ø7	2Ø	1.1	2Ø8	26	3.1	7Ø	57	6.Ø
1	14 27 Ø.1	6Ø 52.4	148 18.6	28.9	2.4	27	6	59	45	Ø.38	Ø.9	1.2	A	173	2	Ø.9	83	8	Ø.7	277	82	1.2
1	17 Ø 57.3	6Ø 12.Ø	14Ø 59.Ø	7.5	1.ØA	7	2	145	8Ø	Ø.12	9.7	7.3	C	193	2	9.7	283	9	2.3	91	81	7.3
1	17 48 Ø.8	6Ø 12.2	14Ø 59.3	8.9	2.Ø	12	7	127	87	Ø.78	1.5	3.4	B	81	6	1.Ø	337	8	1.3	2Ø3	73	3.4
				2.1 ML	EMRC																	

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198Ø	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
SEP 1	19	41	18.5	61	45.2	149	52.3	44.3	1.1A	9	4	239	56	Ø.14	3.7	4.8	B	346	3	3.6	81	5	1.9	226	82	4.8
1	19	46	39.9	59	2Ø.1	154	38.3	2.1	4.Ø	23	1	2ØØ	186	Ø.57	3.4	1.8	B	339	4	2.Ø	261	12	3.4	88	73	1.6
4.3 MB 3.6 ML ATWC																										
1	2Ø	14	3.5	6Ø	35.Ø	139	53.1	5.8	2.Ø	8	4	218	9Ø	Ø.42	5.Ø	4.9	B	323	1Ø	1.2	81	39	3.6	223	43	5.8
1	21	13	54.3	63	15.6	144	3.2	3.2	2.9	12	9	16Ø	2Ø1	Ø.8Ø	3.7	3.3	B	178	18	3.6	81	38	1.5	289	48	4.Ø
1	21	48	24.3	6Ø	13.8	141	9.5	Ø.4	1.1A	7	1	14Ø	83	Ø.Ø8	5.4	2Ø.Ø	D	267	3	1.5	357	5	5.1	146	84	2Ø.1
2	3	1Ø	35.3	61	32.7	146	26.1	27.1	1.9	23	6	8Ø	54	Ø.49	Ø.8	1.4	A	113	6	Ø.7	22	8	Ø.8	239	8Ø	1.4
2	3	25	5Ø.Ø	6Ø	56.3	147	31.5	19.6	2.1	23	9	49	45	Ø.53	Ø.9	1.1	A	261	11	Ø.5	167	19	Ø.9	19	68	1.1
2	4	54	2.3	61	31.6	146	31.6	3Ø.Ø	1.7	17	4	75	52	Ø.58	1.1	1.5	A	273	9	Ø.6	18Ø	22	1.Ø	24	66	1.6
2	9	48	52.4	62	38.8	148	8.5	43.4	2.9	22	7	117	118	Ø.54	3.9	2Ø.4	D	81	3	1.5	348	3	3.7	215	85	2Ø.4
3	Ø	5	48.Ø	6Ø	1.9	141	21.1	11.7	1.8	11	3	156	59	Ø.5Ø	5.1	5.Ø	C	87	11	2.3	345	44	4.2	188	44	5.9
3	4	35	52.6	6Ø	39.9	142	52.1	19.1	1.9	19	9	65	51	Ø.95	Ø.9	1.6	A	84	1	Ø.9	354	1Ø	Ø.7	18Ø	8Ø	1.7
3	5	21	43.5	61	48.6	148	59.3	34.2	Ø.7A	1Ø	6	2Ø1	5Ø	Ø.3Ø	3.2	3.3	B	268	16	2.1	6	24	3.1	148	6Ø	3.5
3	6	1	45.9	61	45.3	15Ø	1.2	47.1	2.4	22	14	152	5Ø	Ø.37	1.7	3.7	B	93	2	1.Ø	3	3	1.7	217	86	3.7
3	7	21	48.3	61	4.Ø	146	29.8	13.2	1.7	25	17	58	37	Ø.57	1.2	1.8	A	81	1	Ø.8	158	1Ø	1.1	345	74	1.7
3	7	31	7.3	59	51.7	139	12.Ø	12.1	1.6	6	2	2Ø2	49	Ø.5Ø	5.7	6.Ø	C	141	2	1.3	261	43	7.1	49	39	3.1
3	8	41	3Ø.1	61	41.1	149	34.1	4.7	1.6	16	1Ø	148	49	Ø.71	1.Ø	2.4	A	345	4	1.Ø	261	7	Ø.8	1Ø6	8Ø	2.4
3	1Ø	37	4Ø.8	59	21.4	145	18.Ø	23.3	3.4	36	6	2Ø8	124	Ø.46	4.5	1.9	B	14	14	4.6	1Ø9	19	1.4	25Ø	66	1.6
3	11	59	3.7	6Ø	23.5	144	58.Ø	16.2	1.1	8	5	135	46	Ø.41	5.2	3.9	C	113	17	1.1	211	24	5.5	351	6Ø	3.7
3	12	6	58.6	59	36.Ø	138	16.4	19.2	2.Ø	4	3	3Ø7	124	Ø.52	8.8	11.5	D	267	Ø	6.8	357	37	2.4	177	53	14.3
3	13	8	35.1	61	11.2	15Ø	53.6	58.9	2.7	25	9	7Ø	62	Ø.48	1.5	4.3	B	184	4	1.5	93	9	1.1	298	8Ø	4.4
3	14	Ø	5.4	62	23.3	148	6.5	35.3	2.4	17	9	212	1Ø4	Ø.36	3.4	1.6	B	162	8	3.4	261	16	1.9	48	7Ø	1.4
3	15	19	58.3	61	1.1	146	5Ø.6	26.Ø	2.2	25	14	44	3Ø	Ø.41	Ø.9	1.3	A	351	4	Ø.9	261	1Ø	Ø.7	1Ø3	79	1.3
3	16	45	47.6	6Ø	15.3	141	8.9	8.7	1.8	12	6	119	8Ø	Ø.27	1.7	4.3	B	91	3	1.Ø	Ø	8	1.6	2Ø1	81	4.4
3	19	41	17.3	59	59.9	141	8.9	3.7	2.Ø	12	5	83	49	Ø.53	3.4	2.5	B	261	3Ø	1.5	129	33	1.1	14	33	3.8
3	19	44	8.4	6Ø	12.9	141	4Ø.9	2.9	1.9	18	15	1Ø6	44	Ø.59	1.1	1.7	A	14Ø	1	Ø.9	81	9	Ø.5	236	58	1.5
1.9 ML EMRC																										
3	2Ø	18	46.2	59	56.Ø	14Ø	5Ø.3	4.4	2.Ø	8	4	164	68	Ø.48	4.5	4.Ø	8	1Ø7	9	1.1	1Ø	4Ø	5.6	2Ø7	49	2.3
3	2Ø	38	33.7	6Ø	12.4	141	39.1	1Ø.2	1.4	4	3	135	34	Ø.22	3.3	9.Ø	C	115	2	2.Ø	2Ø6	12	2.7	16	78	9.2
3	22	33	19.7	61	37.1	149	53.8	52.4	2.Ø	12	11	79	45	Ø.26	1.6	1.7	A	271	5	Ø.9	177	37	1.5	8	53	1.7
3	22	35	46.5	59	48.5	148	49.7	16.3	1.9	7	6	175	81	Ø.3Ø	3.1	3.5	B	297	16	1.1	38	32	2.3	185	53	4.1
3	22	36	42.4	59	5Ø.4	148	5Ø.Ø	11.4	1.8	7	6	195	78	Ø.39	2.7	2.6	B	289	14	Ø.9	187	41	3.1	34	46	2.3
4	2	7	5Ø.5	59	58.6	141	7.3	3.1	1.6	12	8	163	51	Ø.42	1.9	2.2	A	118	11	Ø.8	216	37	1.2	14	51	2.7
4	2	54	44.2	61	4Ø.3	149	34.5	29.3	2.2	16	11	146	48	Ø.52	1.4	1.4	A	272	7	Ø.7	9	44	1.3	175	45	1.5
4	5	44	42.5	61	45.8	149	46.8	41.2	2.4	18	12	154	59	Ø.32	1.4	2.3	A	85	6	Ø.9	353	19	1.3	192	7Ø	2.4
4	8	9	21.9	58	5Ø.Ø	139	6.Ø	15.Ø	1.6	4	3	325	128	Ø.85	18.8	14.8	D	22Ø	15	3.9	118	38	23.7	327	48	3.6
4	1Ø	53	57.5	59	29.6	143	34.3	Ø.1	5.Ø	33	Ø	179	9Ø	Ø.8Ø	2.5	2.3	A	1Ø2	29	Ø.8	353	29	2.3	228	46	2.7
5.Ø MB 5.4 MS 5.Ø ML ATWC																										
4	11	56	16.4	6Ø	57.9	146	28.Ø	17.3	1.7	18	9	7Ø	34	Ø.48	1.8	1.6	A	261	1	Ø.9	338	4Ø	2.Ø	17Ø	48	1.3
4	15	25	5Ø.5	6Ø	44.3	149	4Ø.9	47.8	1.9	12	7	79	39	Ø.24	1.5	2.8	B	2Ø	7	Ø.9	288	18	1.1	13Ø	71	3.Ø
4	18	24	44.7	6Ø	1Ø.5	141	7.3	3.5	2.Ø	2Ø	12	74	49	Ø.75	1.5	1.7	A	283	1	Ø.6	14	33	1.3	191	57	1.8
4	2Ø	7	19.2	6Ø	34.Ø	147	23.1	15.7	1.9	28	19	74	71	Ø.52	1.1	2.2	A	166	9	1.Ø	261	18	Ø.6	51	69	2.4
4	2Ø	37	Ø.8	6Ø	18.3	141	7.3	6.Ø	1.2	9	6	124	53	Ø.41	2.4	6.1	C	3Ø1	Ø	Ø.9	31	17	1.5	211	73	6.4
4	23	4Ø	58.4	6Ø	59.9	147	Ø.3	22.8	1.9	18	13	85	39	Ø.47	1.1	1.5	A	173	3	1.1	264	12	Ø.6	69	78	1.5
4	23	41	25.9	59	26.9	137	4.7	Ø.8	2.3	7	6	233	133	1.34	4.8	4.Ø	B	81	11	1.4	148	37	4.9	336	46	2.9
2.3 ML EMRC																										
4	23	48	22.1	6Ø	6Ø.Ø	146	56.8	19.6	2.2	27	22	57	36	Ø.57	Ø.8	1.1	A	278	14	Ø.5	185	15	Ø.7	5Ø	69	1.2
5	Ø	23	21.5	6Ø	58.4	15Ø	14.1	5Ø.2	1.ØA	5	4	127	1Ø1	Ø.16	4.1	7.2	C	31	Ø	2.Ø	3Ø1	18	3.5	121	72	7.5
5	2	26	53.5	6Ø	15.9	14Ø	57.9	3.5	Ø.8	5	2	156	82	Ø.32	4.3	8.Ø	C	325	6	3.7	81	9	1.5	21Ø	62	7.4

SOUTHERN ALASKA EARTHQUAKES, JULY - SEPTEMBER 198Ø

198Ø	ORIGIN TIME HR MN SEC	LAT N DEG MIN	LONG W DEG MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
SEP 5	3 23 24.1	61 23.1	15Ø 11.2	44.Ø	2.Ø	12	8	76	37	Ø.27	1.8	2.9	B	193	11	1.7	1ØØ	17	Ø.9	315	7Ø	3.Ø
5	5 43 7.8	61 56.5	148 5.2	37.2	2.1	25	14	168	62	Ø.52	2.2	1.1	A	165	4	2.2	261	44	1.3	71	46	Ø.7
5	5 46 14.8	6Ø 1Ø.5	153 9.8	155.5	4.3	27	4	162	1Ø5	Ø.58	3.1	3.3	B	17	16	2.3	119	36	2.5	267	5Ø	3.8
	4.Ø MB	3.2 ML ATWC																				
5	6 4 18.7	6Ø 9.5	14Ø 57.6	1Ø.4	1.6	15	8	113	49	Ø.43	1.6	2.Ø	A	277	Ø	Ø.8	8	33	1.2	187	57	2.2
5	6 8 5Ø.3	6Ø 14.9	141 25.4	5.4	2.1	24	14	94	41	Ø.67	Ø.9	1.3	A	299	Ø	Ø.5	29	24	Ø.8	2Ø9	66	1.4
				2.2 ML	EMRC																	
5	6 14 6.8	6Ø 1Ø.6	14Ø 55.7	7.6	1.3	8	5	142	5Ø	Ø.24	3.1	3.8	B	81	17	Ø.9	33Ø	27	2.2	196	53	4.4
5	6 48 14.9	6Ø 39.3	147 3Ø.8	26.5	2.Ø	2Ø	15	62	69	Ø.38	1.3	2.2	A	261	4	Ø.7	336	9	1.2	145	72	2.1
5	8 28 36.5	61 7.Ø	15Ø 43.5	17.8	2.2	19	11	6Ø	72	Ø.7Ø	1.4	3.Ø	B	261	5	Ø.7	141	11	Ø.9	9	58	2.7
5	8 43 28.7	61 2.9	152 17.3	118.3	3.7	29	7	75	66	Ø.63	1.6	2.1	A	39	13	1.1	135	22	1.4	281	64	2.3
		3.1 ML ATWC																				
5	9 4B 1Ø.5	6Ø 18.3	14Ø 26.5	1Ø.2	1.4	7	4	165	6Ø	Ø.31	2.3	4.5	B	292	1Ø	1.3	25	14	2.Ø	168	73	4.7
5	1Ø 4Ø 35.8	61 31.Ø	141 11.7	Ø.1	2.4	21	13	8Ø	82	1.77	1.7	2.3	A	261	2	1.Ø	135	4	1.1	8	54	1.9
				2.4 ML	EMRC																	
5	12 7 7.6	61 31.3	141 3.Ø	Ø.2	3.Ø	2B	5	77	88	1.67	1.5	2.3	A	26	Ø	1.1	116	22	1.3	296	68	2.4
				3.Ø ML	EMRC																	
5	12 15 51.2	6Ø 1Ø.8	141 13.3	1.5	1.6	15	6	1Ø4	48	Ø.42	1.7	3.6	B	3ØØ	1Ø	Ø.8	33	16	1.3	179	71	3.7
5	12 24 51.Ø	6Ø 18.3	141 26.Ø	11.1	1.Ø	7	5	1Ø5	45	Ø.23	3.4	5.2	C	134	4	1.Ø	42	27	2.5	232	63	5.7
5	13 37 15.7	6Ø 3.1	141 26.6	1Ø.Ø	Ø.6A	4	2	181	38	Ø.21	3.7	1Ø.6	D	23	2	3.7	292	13	2.Ø	122	77	1Ø.9
5	14 22 54.9	6Ø 11.3	14Ø 3Ø.6	6.4	1.3	7	3	146	55	Ø.22	4.3	5.1	C	271	6	Ø.8	5	35	3.3	173	54	5.8
5	15 5 22.9	6Ø 11.7	141 15.4	13.5	1.4	1Ø	6	1Ø4	47	Ø.29	3.Ø	2.9	B	318	16	1.Ø	81	35	1.9	212	41	3.5
5	15 6 53.8	61 31.5	149 58.6	5Ø.9	2.1	16	9	79	41	Ø.32	1.6	2.4	A	182	2	1.5	272	4	Ø.9	65	86	2.4
5	16 5Ø 41.5	62 5.3	145 24.8	11.8	2.2	21	1Ø	213	72	1.Ø7	2.4	2.4	A	115	18	Ø.9	1Ø	38	1.5	225	46	3.1
5	19 8 55.Ø	6Ø 1.Ø	14Ø 29.9	4.2	2.Ø	15	8	144	49	Ø.44	2.5	2.1	A	275	1Ø	Ø.7	1Ø	27	2.6	166	61	2.Ø
5	2Ø 44 35.8	59 55.8	141 1.3	Ø.7	1.1	5	2	215	62	Ø.25	3.9	7.Ø	C	115	4	1.2	2Ø7	23	2.8	16	67	7.5
5	21 5 46.8	59 6Ø.Ø	141 5.7	5.4	2.8	26	7	86	48	Ø.63	Ø.9	1.1	A	1Ø7	4	Ø.7	16	14	Ø.9	213	75	1.1
				2.9 ML	EMRC																	
5	21 36 54.4	59 57.9	141 36.3	15.1	1.2	4	4	21Ø	45	Ø.Ø8	4.6	5.5	C	95	5	1.2	3	28	4.1	194	62	5.8
6	Ø 47 2Ø.Ø	59 46.Ø	141 37.3	11.1	1.3	9	4	191	66	Ø.41	2.6	5.5	C	92	2	1.Ø	182	5	2.6	34Ø	85	5.5
6	2 1 54.8	6Ø 2.6	141 19.4	9.8	1.Ø	4	3	242	1ØØ	Ø.11	6.9	3.6	C	25	12	7.Ø	289	27	1.Ø	137	6Ø	3.8
6	2 19 26.1	59 37.9	145 22.7	3Ø.8	2.2	18	4	2Ø8	1Ø1	Ø.53	5.8	3.5	C	179	6	5.8	88	11	2.2	297	77	3.5
6	2 34 44.3	61 23.2	146 57.5	24.2	2.Ø	28	17	5Ø	49	Ø.44	Ø.6	1.4	A	214	2	Ø.6	3Ø4	7	Ø.5	1Ø8	83	1.5
6	3 26 6.Ø	6Ø 16.6	14Ø 55.8	9.5	Ø.9	5	5	134	46	Ø.14	3.4	7.9	C	87	5	1.2	355	21	1.5	19Ø	68	8.5
6	4 32 23.6	6Ø 14.2	14Ø 48.8	9.2	Ø.8A	5	5	16Ø	53	Ø.39	4.7	7.8	C	266	Ø	1.4	356	29	2.2	176	61	8.8
6	8 35 45.3	59 54.7	141 7.4	3.5	1.1	6	2	174	53	Ø.17	4.2	6.6	C	288	13	3.1	192	25	2.5	43	61	7.4
6	8 38 16.9	61 47.4	15Ø 11.1	43.7	1.2A	14	1Ø	154	6Ø	Ø.28	2.4	2.2	A	287	5	Ø.9	193	4Ø	2.6	23	5Ø	2.Ø
6	1Ø 12 42.5	61 12.4	145 51.2	27.7	2.4	39	17	59	32	Ø.78	Ø.9	Ø.8	A	271	3	Ø.5	3	34	Ø.9	177	56	Ø.8
6	13 3Ø 24.Ø	61 46.4	149 11.4	7.7	1.5	19	11	156	45	Ø.62	1.2	1.4	A	1	16	1.2	264	24	Ø.7	122	61	1.6
6	14 19 24.1	6Ø 1Ø.1	141 23.5	7.9	1.4	11	7	12Ø	38	Ø.25	1.3	2.2	A	3Ø5	4	Ø.8	36	17	1.1	2Ø2	73	2.3
6	16 19 41.6	61 42.7	149 4Ø.6	4.6	1.8	2Ø	9	15Ø	52	Ø.68	Ø.9	1.4	A	2	4	Ø.9	27Ø	19	Ø.6	1Ø3	7Ø	1.5
6	16 54 32.6	6Ø 7.2	141 9.5	12.6	1.2	6	2	148	5Ø	Ø.22	14.2	11.2	D	1Ø5	8	1.8	2Ø1	38	17.8	5	51	2.7
6	17 2Ø 47.2	61 36.1	149 58.Ø	4Ø.Ø	1.7	16	1Ø	1Ø3	44	Ø.53	1.3	1.3	A	276	2	Ø.7	185	39	1.2	8	51	1.4
6	2Ø 38 45.3	61 53.8	149 21.5	43.3	1.8	13	1Ø	179	55	Ø.26	2.8	3.7	B	81	6	1.5	349	19	2.6	188	7Ø	3.9
6	22 11 55.7	6Ø 1Ø.Ø	14Ø 5Ø.8	5.7	1.4	1Ø	5	12Ø	54	Ø.19	2.4	4.1	B	91	2	Ø.9	Ø	27	1.3	185	63	4.5
6	22 46 46.1	6Ø 1Ø.7	141 1Ø.9	13.1	1.1	8	5	1Ø5	5Ø	Ø.23	6.4	4.7	C	3Ø9	19	2.2	81	39	1.4	2Ø5	33	7.4
7	2 39 14.2	59 55.5	14Ø 46.5	6.2	2.1	18	8	142	35	Ø.62	1.9	1.7	A	284	Ø	Ø.7	14	29	2.Ø	194	61	1.6
				2.1 ML	EMRC																	
7	12 19 24.9	6Ø 35.1	141 38.4	13.4	Ø.7	8	4	1Ø1	65	Ø.25	3.1	3.3	B	18	1Ø	Ø.8	117	41	2.2	277	47	4.Ø
7	12 2Ø 1.5	6Ø 2Ø.7	14Ø 51.9	21.2	1.5	8	3	15Ø	74	Ø.21	2.6	6.7	C	89	1	2.6	359	17	Ø.7	182	73	7.Ø
7	12 36 47.Ø	61 24.5	146 49.1	23.5	1.8	2Ø	7	1Ø9	49	Ø.43	1.3	3.5	B	139	1	Ø.7	261	3	1.Ø	36	58	3.Ø
7	13 45 25.8	62 3.3	147 23.7	3Ø.2	2.3	17	5	219	91	Ø.64	2.2	1.5	A	174	18	2.2	81	42	1.4	283	45	1.6

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1980	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
SEP 8	3	7	24.6	63	19.8	151	15.6	35.6	3.6	29	4	80	210	0.49	6.5	5.2	C	24	5	2.1	290	36	7.8	121	54	3.1
					3.3 ML ATWC																					
8	3	11	26.1	61	3.0	150	35.2	31.0	1.7	7	4	119	63	0.39	2.6	14.2	D	328	1	1.4	261.	2	2.3	88	67	13.0
8	10	19	9.4	61	39.1	150	20.0	13.4	2.2	14	6	141	61	0.65	2.0	1.7	A	81	3	0.8	345	35	2.3	175	54	1.3
8	13	13	18.1	60	9.9	139	45.7	15.3	1.5	8	7	113	94	1.03	2.0	2.6	B	342	22	1.0	84	28	0.8	219	53	3.2
								1.9 ML EMRC																		
8	14	18	59.2	60	47.4	150	10.1	37.9	1.9	10	6	108	63	0.24	2.1	2.3	A	104	19	0.8	0	36	1.1	216	48	3.0
8	15	33	52.8	62	12.5	151	9.6	103.5	3.8	25	1	101	92	0.45	2.8	3.9	B	92	6	1.3	1	9	2.8	215	79	4.0
8	21	33	30.5	60	17.1	140	59.2	6.5	1.1	8	3	130	46	0.21	1.8	5.2	C	306	4	0.8	37	16	1.1	202	73	5.4
8	22	9	40.0	61	36.8	150	20.1	49.0	2.3	17	6	136	58	0.34	1.4	4.2	B	117	3	0.9	207	4	1.4	350	85	4.3
8	22	50	7.6	60	28.4	146	36.0	15.6	2.2	28	3	71	53	0.50	0.9	1.3	A	181	7	0.9	272	11	0.6	59	77	1.3
9	0	28	3.0	61	39.9	150	19.9	19.5	1.8	9	5	142	62	0.61	2.0	1.6	A	265	8	0.6	357	14	2.0	146	74	1.6
9	1	37	32.2	60	7.2	141	38.5	0.5	0.9	5	2	176	100	0.18	9.6	22.5	D	128	4	0.9	37	20	5.1	229	70	23.9
9	2	12	49.4	59	59.8	141	14.3	2.0	0.9A	3	2	247	100	0.01	7.6	7.8	C	261	14	2.3	131	29	4.0	6	41	8.9
9	4	43	12.8	60	24.6	147	5.5	21.9	1.8	20	8	163	75	0.49	1.2	1.8	A	271	16	0.7	176	16	1.1	44	67	2.0
9	5	31	44.6	61	50.2	146	52.7	33.0	2.2	18	6	142	64	0.60	1.1	2.0	A	281	2	0.9	190	16	1.0	18	74	2.1
9	6	57	26.4	60	10.B	141	7.1	13.2	1.6	11	5	109	40	0.16	1.7	2.1	A	81	9	1.1	342	37	0.8	182	51	2.6
9	8	1	22.8	60	11.8	140	59.0	12.3	1.5	9	3	118	46	0.13	3.1	4.1	B	100	11	1.1	3	33	1.6	206	55	4.9
9	8	25	9.4	61	4.8	150	53.7	9.3	3.5	30	2	41	73	0.41	1.0	2.1	A	156	2	0.9	261	13	0.7	58	70	2.1
	3.6 MB				3.7 ML ATWC					FELT (III) AT ANCHORAGE																
9	8	52	30.9	60	12.6	141	0.1	11.1	2.3	19	7	74	43	0.47	1.2	1.8	A	88	1	0.7	358	29	0.9	180	61	2.0
								2.5 ML EMRC																		
9	8	55	35.4	60	4.1	141	8.5	27.5	0.9A	4	3	195	100	0.11	10.7	3.9	D	293	11	3.7	200	14	11.0	60	72	3.0
9	10	8	29.3	63	31.8	149	39.3	123.5	4.4	29	4	132	203	0.60	2.8	9.5	C	105	1	2.8	195	10	1.3	9	80	9.7
					3.5 ML ATWC																					
9	12	31	20.8	61	19.4	146	30.3	21.3	1.8	18	4	49	36	0.38	1.0	1.8	A	261	0	0.6	333	9	0.9	171	70	1.7
9	16	36	27.9	60	15.6	141	25.2	10.8	0.7A	4	3	164	100	0.08	4.2	7.8	C	221	2	4.2	131	6	0.9	329	84	7.8
9	18	9	57.0	58	57.9	136	25.5	0.9	2.0	5	4	304	211	1.14	17.2	8.5	D	81	28	2.6	290	38	6.1	183	20	17.4
								2.1 ML EMRC																		
9	19	5	11.3	61	0.0	150	28.3	50.3	2.5	22	4	49	56	0.40	1.1	3.7	B	261	0	0.7	157	1	1.1	351	76	3.6
9	21	9	33.0	59	60.0	141	14.9	21.9	0.9	3	2	246	100	0.01	12.5	3.7	D	281	4	4.7	12	13	12.8	174	76	2.4
9	21	36	30.3	59	59.1	141	8.4	17.1	0.6A	3	2	245	100	0.03	22.1	12.2	D	345	28	25.0	98	36	1.3	227	41	4.7
9	21	40	49.0	61	36.4	149	56.1	43.5	1.6A	10	8	95	45	0.31	1.9	1.9	A	119	6	1.2	214	43	1.6	23	46	2.1
9	23	41	40.1	59	16.2	144	32.8	20.5	2.7	17	5	253	120	0.62	3.3	1.8	B	112	7	1.4	20	16	3.5	225	72	1.6
10	0	20	11.2	60	16.6	140	45.7	19.1	1.2	8	6	142	55	0.55	2.9	4.4	B	296	11	1.0	32	27	1.7	186	60	5.0
10	3	17	24.4	61	35.7	148	43.0	38.6	1.3	16	9	114	31	0.27	1.5	1.1	A	81	2	0.9	331	30	1.7	174	54	0.7
10	3	21	24.2	61	38.6	149	54.5	61.9	1.3A	13	7	130	48	0.27	2.7	3.3	B	105	6	1.6	13	17	2.6	214	72	3.4
10	4	30	21.3	60	33.0	150	37.4	40.3	2.9	29	6	86	68	0.51	1.2	3.0	B	263	0	0.8	353	8	1.2	173	82	3.1
10	5	56	34.7	59	30.9	139	15.2	19.1	1.2	3	3	211	86	0.26	19.0	19.1	D	312	20	1.6	206	38	11.1	64	45	25.0
10	6	49	56.3	61	1.1	150	3.7	41.3	2.5	27	13	44	59	0.56	0.9	3.1	B	0	2	0.9	90	4	0.6	243	86	3.1
10	8	20	40.6	60	16.5	140	56.8	8.0	1.1	6	4	132	45	0.05	4.1	13.0	D	101	1	1.0	10	16	1.7	194	74	13.5
10	8	33	48.4	60	15.1	141	10.9	13.5	1.7	16	9	114	42	0.30	1.2	1.9	A	116	3	0.7	25	23	1.0	213	67	2.0
10	8	42	16.1	60	50.2	150	40.2	53.7	1.9	14	9	56	81	0.42	1.4	3.0	B	34	4	1.4	304	7	0.9	154	82	3.0
10	8	43	24.5	59	56.3	141	6.2	0.4	1.1	8	3	138	50	0.17	1.8	5.2	C	43	6	0.7	134	10	1.6	282	78	5.3
10	9	55	33.2	60	12.8	140	57.8	10.0	1.2	6	3	122	46	0.32	5.0	9.0	C	81	17	1.4	333	17	2.3	207	60	9.9
10	11	11	59.0	60	15.2	141	10.5	19.5	1.2A	8	4	115	54	0.38	3.2	4.5	B	92	15	1.4	353	30	1.1	205	56	5.4
10	11	12	12.0	60	14.9	141	9.1	16.4	1.4	8	7	116	52	0.32	3.4	4.4	B	328	18	1.1	81	25	1.9	211	53	5.2
10	12	29	28.2	61	14.5	146	10.1	10.4	1.7	20	8	70	31	0.60	1.3	2.6	A	81	1	0.6	324	10	1.0	176	61	2.4
10	12	50	51.3	60	10.8	141	36.2	24.3	1.2	12	4	120	30	0.49	2.3	2.8	B	296	21	1.2	38	29	1.5	175	53	3.3
10	13	36	0.6	59	56.7	140	41.4	12.8	1.9	13	5	138	31	0.36	2.9	2.8	B	100	8	0.9	3	44	3.5	198	45	2.1
10	14	46	55.3	60	14.2	140	19.0	14.0	2.4	26	14	64	49	0.65	1.4	1.7	A	297	13	0.7	35	33	0.9	188	54	2.0
								2.5 ML EMRC																		

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198Ø SEP	ORIGIN TIME HR MN SEC	LAT N DEG MIN	LONG W DEG MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
1Ø	15 55 55.6	6Ø 15.Ø	14Ø 19.2	12.8	1.8	15	12	83	5Ø	Ø.55	1.8	2.2	A	278	5	Ø.7	12	36	1.Ø	181	54	2.7
				1.8 ML	EMRC																	
1Ø	17 43 43.Ø	6Ø 6.6	141 27.6	17.8	1.2	7	2	15Ø	95	Ø.26	4.8	3.2	B	218	3	4.8	3Ø9	18	1.Ø	119	72	3.4
1Ø	19 15 9.4	61 8.3	15Ø 17.7	15.5	1.ØA	1Ø	6	96	61	Ø.66	1.5	5.5	C	3Ø3	6	1.1	213	7	1.3	74	81	5.5
1Ø	19 16 53.6	61 41.4	149 42.2	35.7	1.7	16	1Ø	147	5Ø	Ø.49	1.6	1.9	A	286	3	1.Ø	18	28	1.5	19Ø	62	2.Ø
1Ø	19 44 35.3	6Ø 16.Ø	14Ø 33.1	12.1	1.2	8	4	153	62	Ø.32	2.1	3.9	B	269	1	1.Ø	359	22	1.5	177	68	4.2
1Ø	22 33 31.Ø	6Ø 5.3	141 13.8	13.9	1.1	6	3	148	45	Ø.42	4.6	3.8	B	46	3Ø	3.5	289	38	1.4	162	37	5.4
11	Ø 59 17.5	61 47.8	147 52.5	28.Ø	2.2	3Ø	17	153	53	Ø.72	1.2	1.4	A	261	1	Ø.7	167	3Ø	1.1	353	6Ø	1.5
11	3 7 52.3	62 53.5	148 Ø.7	39.3	3.1	32	15	122	129	Ø.72	1.7	17.6	D	192	1	1.5	1Ø2	1	1.6	327	89	17.6
11	3 2Ø 2Ø.5	6Ø 31.9	143 18.1	13.7	1.7	19	13	78	57	Ø.82	1.2	1.9	A	121	1	Ø.8	31	11	1.1	216	79	1.9
11	3 36 6.2	6Ø 26.7	14Ø 33.8	1.5	1.3	9	4	173	66	Ø.42	1.8	5.7	C	261	4	1.7	333	9	1.Ø	145	7Ø	5.5
11	3 53 58.7	6Ø 17.7	141 23.2	11.Ø	Ø.8A	6	3	1Ø7	46	Ø.16	2.5	4.7	B	133	2	1.Ø	43	16	2.2	23Ø	74	4.9
11	4 15 35.4	61 41.5	149 55.2	43.5	1.1A	13	9	15Ø	51	Ø.33	2.9	2.9	B	3Ø1	3	1.4	2Ø8	42	2.8	34	48	3.1
11	6 13 38.2	6Ø 11.7	14Ø 17.9	17.4	2.4	23	12	84	48	Ø.57	1.5	1.4	A	287	12	Ø.7	188	38	1.7	31	5Ø	1.2
				2.5 ML	EMRC																	
11	7 41 41.4	59 51.8	141 7.8	Ø.3	1.3	7	3	218	1ØØ	Ø.25	3.6	4.8	B	148	8	1.3	261	11	3.2	31	63	4.6
11	8 24 31.4	61 9.6	149 49.7	41.8	1.4A	15	11	75	55	Ø.34	1.6	2.8	B	2Ø3	8	1.2	111	8	1.6	337	79	2.8
11	1Ø 11 47.7	6Ø 8.1	141 17.6	11.1	1.1	7	2	126	58	Ø.14	12.2	7.3	D	212	3Ø	14.Ø	328	37	1.7	95	38	2.4
11	1Ø 14 18.7	6Ø 15.2	14Ø 49.7	12.2	1.8	18	11	88	52	Ø.34	1.2	1.9	A	284	2	Ø.7	15	26	Ø.8	19Ø	64	2.Ø
				1.7 ML	EMRC																	
11	11 15 11.1	59 5Ø.3	139 16.3	13.5	2.2	17	1Ø	86	49	Ø.7Ø	1.9	1.8	A	3Ø6	1	1.Ø	215	41	2.2	37	49	1.4
				2.Ø ML	EMRC																	
11	11 34 12.7	6Ø 18.7	14Ø 57.4	Ø.3	Ø.9A	5	3	162	84	Ø.17	3.7	9.4	C	15Ø	3	3.4	81	5	1.4	275	68	8.8
11	13 14 2Ø.4	6Ø 16.6	14Ø 59.9	1Ø.7	1.6	13	7	129	46	Ø.31	1.5	3.2	B	81	13	1.1	347	15	Ø.9	21Ø	7Ø	3.4
11	13 55 19.6	6Ø 45.4	149 48.7	38.5	1.4	1Ø	7	83	45	Ø.21	1.9	2.1	A	125	9	1.9	29	35	1.1	227	54	2.5
11	14 1Ø 35.5	59 57.5	141 16.Ø	1.5	1.3	9	3	169	58	Ø.22	5.3	5.4	C	277	12	2.Ø	176	42	3.1	2Ø	46	7.Ø
11	15 34 57.2	61 42.5	149 35.1	34.1	1.7	17	15	154	52	Ø.47	2.Ø	1.6	A	194	9	2.1	1Ø1	17	1.1	311	71	1.6
11	2Ø 3 2.3	6Ø 52.1	145 56.Ø	7.5	2.Ø	39	19	55	4Ø	Ø.51	Ø.7	1.Ø	A	1Ø6	6	Ø.5	198	22	Ø.6	2	67	1.1
11	21 25 3.4	6Ø 52.Ø	145 56.4	9.7	2.9	42	1Ø	55	4Ø	Ø.46	Ø.7	1.Ø	A	2Ø8	5	Ø.7	117	13	Ø.5	319	76	1.Ø
			3.2 ML ATWC	3.Ø ML	EMRC																	
12	6 51 16.8	6Ø 23.9	141 41.9	2.2	1.7	16	8	95	49	Ø.55	1.2	2.Ø	A	353	14	Ø.7	88	2Ø	Ø.9	23Ø	65	2.2
12	14 1 56.Ø	6Ø 15.6	14Ø 28.8	8.1	1.4	9	5	157	58	Ø.34	3.7	4.6	B	277	6	1.1	11	34	2.6	178	55	5.3
12	14 38 1Ø.3	61 7.8	15Ø 58.8	24.5	1.ØA	9	5	83	77	Ø.65	2.7	4.6	B	84	1	1.1	174	17	2.4	351	73	4.7
12	19 35 59.2	62 17.3	148 31.3	34.5	2.4	22	16	2Ø2	84	Ø.64	2.2	1.4	A	183	16	2.3	283	33	1.5	71	53	1.1
12	2Ø 3 45.7	6Ø 11.Ø	141 9.5	1Ø.2	1.5	8	5	1Ø7	51	Ø.29	2.9	4.1	B	314	12	Ø.9	52	32	1.1	2Ø6	55	4.9
12	21 44 42.3	6Ø 11.9	141 8.5	6.4	1.5	5	5	11Ø	51	Ø.14	3.6	6.6	C	84	12	1.3	348	24	1.6	198	63	7.4
13	3 15 47.1	62 5.7	147 51.2	4Ø.1	3.1	32	12	94	82	Ø.58	1.6	3.8	B	35Ø	3	1.6	81	6	1.Ø	234	83	3.8
13	5 49 12.3	6Ø 16.2	14Ø 43.7	17.3	1.4	9	7	143	57	Ø.25	1.9	3.3	B	3Ø8	17	Ø.9	44	2Ø	1.2	18Ø	63	3.7
13	6 14 15.4	6Ø 6.5	141 15.Ø	18.9	1.3	8	3	134	55	Ø.22	7.6	4.1	C	112	7	1.8	2Ø6	27	8.5	9	62	1.6
13	6 19 3Ø.7	6Ø 17.9	14Ø 57.3	4.5	1.3	9	6	133	45	Ø.23	2.1	6.4	C	84	7	1.1	352	12	1.5	2Ø4	76	6.6
13	7 24 14.1	59 49.2	152 12.7	91.8	4.5	3Ø	Ø	123	85	Ø.55	2.Ø	3.5	B	3	5	1.9	94	12	1.5	251	77	3.6
	4.3 MB		4.4 ML ATWC					FELT AT ANCHOR POINT AND HOMER														
13	9 15 1.3	62 46.1	143 18.5	2.Ø	3.5	41	8	141	166	Ø.97	2.6	2.7	B	345	11	2.4	84	39	1.Ø	242	49	3.4
			3.4 ML ATWC	3.9 ML	EMRC																	
13	13 42 47.Ø	61 32.9	147 1Ø.7	28.Ø	2.Ø	26	13	54	64	Ø.51	Ø.9	1.5	A	98	2	Ø.6	189	8	Ø.9	354	82	1.5
13	19 31 54.8	64 9.3	147 28.Ø	81.8	3.9	17	1Ø	168	259	Ø.46	8.7	16.7	D	267	9	8.3	175	13	1.8	31	74	17.3
13	19 39 18.6	61 5.9	149 21.7	33.1	2.1	23	14	37	56	Ø.54	1.Ø	1.7	A	1	4	1.Ø	271	6	Ø.9	125	83	1.7
13	2Ø 29 5Ø.9	59 25.Ø	139 6.7	16.6	1.6	6	3	232	99	Ø.36	18.2	17.5	D	192	26	5.4	3Ø2	35	1.3	74	44	25.Ø
13	21 19 21.1	59 31.9	144 2.1	2.1	3.2	21	1Ø	19Ø	158	Ø.91	4.3	2.7	B	225	25	4.6	115	36	Ø.9	341	44	2.5
			3.3 ML ATWC	3.6 ML	EMRC																	
14	2 35 4Ø.9	6Ø 28.5	14Ø 6Ø.Ø	18.6	1.9	8	4	146	58	Ø.52	1.8	2.9	B	32Ø	3	Ø.7	81	18	1.3	223	54	2.7
14	2 47 58.8	6Ø 14.3	14Ø 14.9	8.2	1.1	4	2	245	52	Ø.17	4.4	5.1	C	283	12	1.3	23	38	1.6	179	49	6.5
14	5 4 57.4	63 23.2	15Ø 43.7	1.3	3.1	16	7	175	214	Ø.78	3.8	2.9	B	2Ø7	17	1.6	1Ø7	31	4.2	322	54	2.3
			3.Ø ML ATWC																			

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1980	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
SEP 14	5	54	56.8	60	51.0	143	22.2	16.5	2.1	14	9	129	70	1.00	1.9	3.6	B	6	4	1.9	97	16	0.9	262	73	3.8
14	6	27	5.7	60	20.7	140	58.6	11.0	1.3	7	2	136	49	0.17	2.5	7.3	C	95	1	1.5	4	17	1.2	188	73	7.6
14	7	1	21.3	60	20.6	141	1.4	10.6	1.5	7	3	133	51	0.29	1.8	4.0	B	313	7	0.7	45	20	0.9	205	69	4.3
14	7	24	40.9	60	32.7	141	44.4	18.1	2.9	15	7	63	64	0.42	1.7	2.0	A	150	1	0.7	81	34	1.2	241	51	2.1
					3.4 ML	ATWC		2.9 ML	EMRC																	
14	7	43	42.6	60	48.5	149	57.0	40.2	1.8	12	4	86	51	0.21	1.7	4.7	B	46	11	1.1	313	12	0.9	177	74	4.8
14	8	19	24.9	60	33.1	141	41.6	13.7	1.6	7	3	113	63	0.29	2.1	3.1	B	339	1	0.7	81	23	1.8	247	64	3.2
14	10	50	20.2	61	33.0	149	59.5	43.9	2.0	12	8	87	41	0.37	1.8	2.5	B	278	1	0.7	188	20	1.7	11	70	2.6
14	13	4	50.2	61	33.3	149	58.8	53.5	1.8	11	5	87	45	0.45	2.7	3.2	B	275	8	1.0	180	32	2.3	17	57	3.5
14	14	34	9.8	60	13.5	140	54.2	15.4	1.8	7	4	128	49	0.24	2.4	3.3	B	296	3	0.8	28	33	1.4	201	57	3.9
14	15	43	39.3	59	53.2	140	15.1	21.1	0.9	3	2	237	91	0.23	18.9	17.0	D	141	28	1.1	261	30	3.1	22	41	25.0
14	20	14	34.5	59	26.8	146	30.6	23.6	3.5	22	3	225	143	0.67	2.4	2.4	A	151	20	2.3	261	31	1.3	36	49	2.7
					3.3 ML	ATWC																				
14	20	44	31.9	60	3.2	141	20.6	7.3	0.9	4	3	211	61	0.05	6.5	2.7	C	31	7	6.5	300	12	1.1	151	76	2.6
14	23	4	37.9	60	5.8	145	33.4	7.4	2.3	12	3	185	91	0.80	2.4	2.9	B	111	11	1.7	15	28	2.2	220	60	3.1
14	23	11	52.6	60	18.3	140	51.7	4.9	1.0	5	2	165	100	0.21	2.8	9.8	C	352	2	2.7	82	5	1.2	240	85	9.8
15	5	19	38.5	60	15.5	140	8.2	17.3	1.2A	4	2	223	114	0.21	6.4	5.4	C	323	23	2.7	81	39	1.4	213	39	8.1
15	12	34	31.1	61	54.5	149	55.0	46.6	3.7	27	4	88	66	0.30	1.6	2.2	A	95	6	0.7	186	14	1.6	342	75	2.3
					2.6 ML	ATWC																				
15	17	7	48.0	60	7.5	152	50.3	128.9	4.2	27	2	130	112	0.66	2.3	3.7	B	356	5	2.3	87	15	1.8	248	74	3.8
					3.3 ML	ATWC																				
15	20	23	13.3	61	6.5	149	22.7	41.8	1.8	13	4	59	55	0.14	1.5	2.6	A	319	6	1.0	81	8	1.0	205	57	2.3
15	22	49	57.8	61	41.6	149	48.4	40.9	2.1	21	5	147	52	0.43	1.6	2.4	A	177	2	1.6	87	4	0.8	294	86	2.4
16	1	33	3.7	60	7.6	139	19.2	6.4	1.8	3	1	255	100	0.19	9.5	14.1	D	337	18	2.7	81	23	5.6	215	58	16.2
16	5	33	11.4	60	7.9	153	14.4	164.4	4.1	27	3	139	109	0.52	2.2	4.5	B	7	0	1.9	97	9	2.1	277	81	4.6
16	5	40	38.3	60	13.2	141	9.2	15.6	1.0	5	3	122	52	0.22	13.7	18.1	D	321	15	1.1	61	33	1.4	210	53	22.6
16	7	8	24.5	59	52.4	141	32.0	8.4	1.3	6	4	234	107	0.07	3.4	4.6	B	305	6	1.8	211	30	2.5	45	59	5.1
16	7	57	53.7	61	29.7	146	27.6	12.3	2.0	20	6	76	49	0.62	0.8	1.5	A	294	11	0.6	201	16	0.7	57	70	1.5
16	8	21	30.0	61	29.7	150	56.5	72.0	2.7	21	5	103	62	0.44	1.8	3.4	B	261	3	0.8	153	12	1.5	3	68	3.3
16	9	37	55.2	60	17.4	140	49.7	14.7	1.2	6	2	164	51	0.18	4.7	5.7	C	285	2	1.3	16	36	3.3	192	54	6.6
16	9	40	6.4	60	13.3	140	45.8	10.4	1.8	8	3	136	56	0.38	2.0	3.0	B	293	0	0.8	23	28	1.4	203	62	3.3
16	10	53	54.0	59	58.7	140	21.3	23.9	0.9	3	2	257	102	0.42	21.1	13.7	D	17	33	25.0	261	35	3.8	138	38	1.6
16	12	25	24.7	60	1.9	140	38.9	0.1	1.2	4	2	154	71	0.18	10.3	7.5	D	269	3	1.3	177	35	12.5	3	55	2.5
16	12	41	29.7	60	9.4	140	59.0	11.1	1.3	6	1	137	78	0.07	9.5	7.3	C	81	24	1.5	319	40	3.2	190	36	11.6
16	13	36	54.9	60	10.3	140	59.3	10.8	1.7	5	2	139	47	0.09	2.8	2.7	B	114	3	0.8	206	43	3.6	21	47	1.6
16	16	52	17.1	61	24.8	147	23.9	20.8	2.1	23	9	54	56	0.45	0.9	1.6	A	268	9	0.4	177	9	0.8	43	77	1.6
16	18	8	22.4	60	14.1	140	22.1	2.6	1.2	5	2	178	52	0.13	3.1	7.0	C	284	14	0.9	18	15	2.0	153	69	7.5
16	21	40	24.3	60	15.4	140	44.3	10.0	1.3	6	3	164	137	0.32	3.3	6.1	C	318	8	1.3	52	25	1.5	212	64	6.8
16	22	13	23.4	60	3.3	141	12.9	26.9	1.1	6	3	179	54	0.20	6.7	2.9	C	297	13	1.7	203	18	7.0	61	68	2.1
17	0	19	28.1	62	15.9	145	23.3	24.8	2.2	6	5	252	90	0.20	3.8	4.5	B	89	25	1.3	345	26	2.7	216	52	5.5
17	0	39	20.4	59	58.2	139	53.1	17.4	1.2	4	4	153	81	0.25	22.5	11.2	D	297	4	1.8	29	26	25.0	199	64	2.4
17	1	5	44.2	61	10.4	149	45.4	38.0	1.9	25	18	43	54	0.47	0.8	1.0	A	196	6	0.8	103	24	0.6	299	65	1.1
17	1	36	42.5	61	38.6	149	47.4	40.0	2.6	26	12	143	46	0.42	1.4	2.0	A	89	4	0.7	179	5	1.4	320	84	2.0
17	2	51	27.5	61	40.9	149	29.5	31.8	1.6	13	8	150	49	0.42	2.0	1.9	A	289	16	0.9	192	22	2.0	52	62	1.9
17	3	13	48.6	61	41.5	149	47.7	53.2	1.0A	15	11	151	51	0.30	1.6	2.0	A	102	3	0.9	11	27	1.5	198	63	2.1
17	3	21	32.9	60	49.7	146	52.2	22.9	2.5	35	10	111	31	0.57	1.0	1.0	A	261	14	0.5	158	40	0.8	6	46	1.2
17	4	5	11.6	60	17.5	140	44.2	5.0	0.9A	6	3	145	56	0.36	3.3	8.1	C	261	0	1.3	351	14	2.7	171	76	8.3
17	5	43	26.4	61	33.7	146	4.9	23.8	2.8	40	11	100	55	0.88	1.0	1.1	A	282	2	0.6	13	34	0.9	189	56	1.2
					2.9 ML	ATWC																				
17	8	2	27.1	59	27.0	146	37.2	17.7	2.8	19	9	232	144	0.61	2.5	2.0	A	9	28	2.6	123	37	2.0	252	40	1.5

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198Ø	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
SEP 17	1Ø	21	7.6	6Ø	7.9	141	29.6	28.Ø	1.Ø	5	2	221	69	Ø.13	16.9	6.6	D	42	6	16.9	311	11	3.6	16Ø	77	6.5
17	1Ø	54	13.7	6Ø	15.8	141	3.4	1Ø.Ø	1.2	7	4	124	48	Ø.17	3.3	5.4	C	324	13	Ø.9	81	2Ø	1.2	21Ø	55	5.8
17	11	22	55.Ø	61	21.6	15Ø	54.6	65.Ø	3.2	3Ø	B	47	64	Ø.51	1.2	2.3	A	81	4	Ø.8	166	12	1.1	332	76	2.3
17	13	6	25.4	59	5Ø.1	145	4Ø.3	16.2	2.9	36	16	178	96	Ø.72	1.5	1.3	A	96	1	Ø.8	6	35	1.6	187	55	1.1
17	16	3	58.9	6Ø	14.7	14Ø	56.5	11.7	1.9	1Ø	6	128	46	Ø.23	1.6	2.3	A	299	Ø	Ø.6	28	31	1.1	2Ø9	59	2.6
17	18	28	42.7	58	24.6	14Ø	28.B	15.Ø	2.2	5	4	3Ø3	18B	Ø.51	17.3	18.8	D	81	25	3.6	327	28	4.4	2Ø2	47	25.Ø
17	21	41	54.5	61	54.4	148	59.7	13.9	1.2	18	11	168	55	Ø.47	1.9	2.5	A	261	19	Ø.8	35Ø	31	1.3	141	54	2.9
17	21	48	47.9	61	48.Ø	149	41.4	46.Ø	1.8	13	3	168	62	Ø.23	3.1	3.Ø	B	1Ø6	1	1.4	196	23	3.1	14	67	2.9
17	23	54	Ø.9	6Ø	49.4	148	5Ø.6	29.7	2.5	23	3	1ØB	47	Ø.4Ø	1.1	1.3	A	261	1	Ø.7	338	2Ø	1.Ø	168	66	1.3
18	Ø	12	29.1	6Ø	4Ø.9	149	2Ø.4	22.7	1.3	4	4	218	95	Ø.Ø7	5.3	16.5	D	211	1	1.6	3Ø1	5	5.1	11Ø	85	16.6
18	1	35	34.Ø	59	54.4	148	43.3	1.Ø	2.1	3Ø	17	183	1Ø7	Ø.81	2.3	1.3	A	352	4	2.3	261	37	Ø.7	87	53	1.5
18	5	2	25.5	61	25.2	15Ø	Ø.8	48.Ø	1.4	13	11	116	39	Ø.22	1.3	1.8	A	111	4	1.1	2Ø1	12	1.3	3	77	1.9
18	5	7	33.Ø	6Ø	49.3	147	52.9	25.1	1.9	27	1Ø	122	45	Ø.4Ø	1.3	1.7	A	261	5	Ø.6	165	16	1.3	7	72	1.8
18	5	39	12.1	6Ø	1Ø.2	141	7.2	7.5	1.2	9	4	134	49	Ø.7Ø	2.6	2.2	A	32Ø	23	Ø.8	81	38	1.7	21Ø	38	3.Ø
18	6	6	59.2	6Ø	2Ø.1	141	15.1	1Ø.2	1.3	8	4	119	61	Ø.63	2.4	3.3	8	311	1Ø	1.1	45	22	2.2	198	66	3.5
18	6	16	34.4	6Ø	9.8	141	7.5	8.3	1.5	9	9	133	49	Ø.54	3.1	2.9	B	81	19	1.1	332	4Ø	1.2	19Ø	43	4.1
18	6	56	56.5	6Ø	16.7	14Ø	57.4	1.5	1.2	5	4	194	44	Ø.Ø8	2.7	9.7	C	81	4	1.3	339	5	2.4	2Ø5	76	9.6
18	8	19	4Ø.Ø	6Ø	9.4	141	8.3	9.9	1.9	11	8	1Ø5	49	Ø.57	2.5	2.Ø	B	3Ø1	1Ø	Ø.9	2Ø3	37	3.Ø	44	51	1.1
18	9	6	34.4	6Ø	17.5	141	11.8	9.7	1.8	15	7	118	56	Ø.82	1.5	2.1	A	32Ø	11	Ø.7	81	15	1.1	2Ø6	54	2.Ø
18	9	9	6.9	6Ø	15.7	141	1Ø.2	18.Ø	1.7	1Ø	7	116	54	Ø.87	2.4	2.2	A	296	4	Ø.9	2Ø3	42	2.8	3Ø	48	1.5
18	9	4Ø	12.3	62	25.7	147	4.Ø	1.3	2.4	31	22	224	96	Ø.84	2.6	1.6	B	264	14	Ø.8	169	21	2.7	25	64	1.4
18	1Ø	Ø	49.1	61	17.Ø	15Ø	7.3	15.6	1.9	21	13	61	43	Ø.63	1.4	3.Ø	B	281	8	Ø.7	188	17	1.1	35	71	3.1
18	1Ø	11	28.8	61	18.4	149	52.4	39.6	1.9	23	14	52	5Ø	Ø.3Ø	1.2	2.6	B	95	9	1.Ø	186	9	1.1	321	77	2.7
18	12	24	51.Ø	6Ø	35.6	141	42.1	15.7	1.4	11	4	96	61	Ø.32	1.1	2.3	A	81	3	1.Ø	346	6	1.Ø	196	82	2.3
18	13	48	35.7	6Ø	12.6	14Ø	53.7	18.5	Ø.9	4	2	217	66	Ø.15	12.Ø	1Ø.2	D	85	4	1.1	178	4Ø	15.4	35Ø	5Ø	3.Ø
18	15	56	37.3	6Ø	57.8	146	58.6	22.4	2.5	35	11	71	33	Ø.67	Ø.9	1.Ø	A	267	1Ø	Ø.5	172	27	Ø.8	16	61	1.Ø
18	16	26	9.3	6Ø	17.6	141	12.8	9.Ø	1.3	9	4	117	57	Ø.15	4.Ø	8.1	C	117	5	1.2	25	24	1.7	218	65	8.9
18	17	35	15.9	6Ø	21.5	141	16.8	2.9	1.3	8	4	119	68	Ø.46	2.8	5.7	B	319	3	1.Ø	81	13	1.8	219	56	5.1
18	18	7	22.5	6Ø	17.4	14Ø	58.Ø	Ø.1	1.1	1Ø	4	132	45	Ø.48	1.3	4.7	B	3Ø	5	1.Ø	3ØØ	5	1.2	165	83	4.8
18	18	25	12.3	6Ø	58.4	15Ø	2Ø.3	45.8	2.2	19	15	73	73	Ø.33	1.4	3.3	B	84	2	1.Ø	354	9	1.3	186	81	3.3
18	18	47	52.6	6Ø	18.3	141	9.6	1.6	1.3	11	8	122	55	Ø.52	1.3	3.1	B	324	5	Ø.6	81	1Ø	Ø.9	214	61	2.9
18	2Ø	11	53.8	61	28.4	149	44.6	41.Ø	2.2	17	11	83	35	Ø.32	1.3	1.8	A	13Ø	12	1.Ø	222	12	1.3	356	73	1.9
19	2	21	38.5	6Ø	Ø.3	141	19.4	4.5	3.1	25	7	145	6Ø	Ø.73	1.4	1.4	A	28Ø	1	Ø.7	11	37	1.3	189	53	1.4
								3.1 ML	EMRC																	
19	2	26	55.Ø	6Ø	1.3	141	18.5	3.Ø	2.1	15	1Ø	187	59	Ø.73	1.5	1.4	A	281	1Ø	Ø.6	186	26	1.5	3Ø	62	1.4
								1.8 ML	EMRC																	
19	2	4Ø	34.4	6Ø	26.4	141	6.7	Ø.9	1.1A	4	2	141	61	Ø.12	2.5	9.3	C	25	1	2.5	115	11	1.1	29Ø	79	9.4
19	2	43	17.8	59	57.9	141	19.8	3.4	1.4	9	4	176	62	Ø.27	3.2	4.3	B	261	2Ø	1.2	156	24	2.1	24	56	4.9
19	3	45	32.9	61	41.8	15Ø	44.1	56.2	2.8	26	8	132	53	Ø.39	2.5	4.9	B	261	Ø	1.2	151	13	2.Ø	351	66	4.7
19	4	33	16.6	59	59.1	141	19.6	5.2	1.7	1Ø	6	174	61	Ø.22	2.3	2.2	A	266	21	Ø.8	157	39	1.4	17	43	2.9
19	4	39	34.1	61	32.4	146	55.9	18.Ø	2.Ø	25	13	65	6Ø	Ø.5Ø	Ø.7	1.4	A	184	1	Ø.7	274	6	Ø.6	85	84	1.5
19	5	43	55.5	63	8.3	15Ø	2Ø.6	12Ø.3	4.Ø	29	7	127	181	Ø.45	4.1	7.8	C	337	4	3.7	81	13	2.6	232	71	7.8
19	5	58	55.2	59	55.9	141	2Ø.3	2.4	1.3	7	1	217	63	Ø.1Ø	3.7	8.5	C	186	3	3.1	277	21	1.6	88	69	9.1
19	6	52	4Ø.7	6Ø	7.3	141	15.5	13.1	1.3	7	3	145	56	Ø.33	4.4	2.7	B	3Ø4	9	1.Ø	21Ø	23	4.7	54	65	2.2
19	7	6	3.3	59	58.9	141	2Ø.Ø	5.5	1.6	9	4	195	61	Ø.29	2.6	3.Ø	B	277	8	Ø.9	181	36	1.7	18	53	3.6
19	B	32	32.6	6Ø	27.2	147	36.Ø	2Ø.5	2.Ø	17	11	186	63	Ø.33	2.3	3.3	B	261	13	Ø.7	159	24	1.7	16	61	3.7
19	11	31	49.9	6Ø	4.3	147	49.3	44.9	2.3	2Ø	13	2Ø2	97	Ø.81	2.1	1Ø.2	D	164	2	2.Ø	81	7	1.Ø	27Ø	8Ø	1Ø.2

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1980	ORIGIN HR	TIME MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
SEP 19	12	2	33.5	61	43.2	149	32.8	33.9	1.8	12	8	190	53	0.28	2.1	2.2	A	261	1	1.2	336	42	2.0	170	46	2.2
19	13	20	27.0	60	13.4	141	7.6	0.5	1.1	5	2	115	50	0.19	3.4	10.8	C	323	7	1.0	81	7	2.0	202	60	9.9
19	14	19	48.3	60	10.3	141	11.6	9.7	1.0	6	3	143	53	0.20	16.2	19.2	D	316	13	0.8	56	37	2.5	210	50	25.0
19	23	12	47.8	60	6.0	140	44.0	1.3	1.4	6	3	154	63	0.24	3.6	5.5	C	86	1	0.7	356	23	3.0	178	67	5.8
19	23	12	52.4	63	51.6	146	57.8	41.9	3.9	30	10	162	227	0.68	8.5	24.0	D	168	4	1.5	261	16	4.9	64	73	25.0
					3.1 ML ATWC																					
19	23	13	17.6	60	8.5	140	45.1	0.3	1.0	5	4	141	100	0.27	4.1	6.0	C	83	1	0.6	353	5	4.1	184	85	6.1
20	2	40	2.3	60	16.5	140	58.4	10.7	1.9	13	10	130	44	0.78	1.2	1.9	A	304	11	0.6	38	22	0.9	189	65	2.1
20	3	15	31.3	62	7.8	151	42.1	100.4	3.6	29	8	100	107	0.67	1.7	2.4	A	85	6	1.2	175	7	1.7	314	81	2.4
20	5	6	0.4	60	44.2	148	22.1	15.7	2.0	33	18	119	59	0.85	1.0	1.1	A	261	14	0.5	157	28	0.9	13	56	1.2
20	6	34	21.6	62	23.9	152	1.8	118.2	3.7	29	12	170	136	0.62	2.2	2.9	B	182	1	2.2	92	5	1.2	283	85	2.9
					3.1 ML ATWC																					
20	7	51	26.2	60	37.3	141	28.8	0.2	1.4	11	10	114	65	0.81	0.9	2.0	A	279	2	0.9	189	5	0.6	31	85	2.0
20	11	43	53.0	60	36.1	142	56.2	0.6	0.5A	6	5	82	71	0.35	1.5	4.4	B	29	7	0.9	297	10	1.3	153	78	4.5
20	12	16	4.8	60	45.8	148	22.3	24.4	1.9	20	15	127	57	0.60	1.3	1.2	A	261	15	0.6	358	36	1.4	152	51	1.1
20	17	2	30.5	62	11.4	145	31.2	19.6	2.5	15	12	233	81	1.08	2.0	1.9	A	100	27	0.8	350	34	1.5	219	44	2.4
20	20	8	25.6	60	5.9	149	10.7	7.6	1.7	21	13	179	74	0.93	1.5	1.3	A	261	21	0.7	150	32	1.7	16	48	1.1
20	21	39	39.5	60	56.6	147	14.4	19.1	1.9	28	19	108	39	0.60	0.9	1.0	A	271	12	0.4	175	25	0.8	24	62	1.1
20	23	39	12.4	62	7.1	148	42.1	35.4	2.3	26	20	187	79	0.77	1.5	1.0	A	180	10	1.5	84	28	0.7	288	60	1.0
21	0	57	12.7	60	0.6	141	11.9	5.4	0.9	7	2	97	49	0.17	3.0	3.7	B	200	11	1.1	298	34	1.9	95	54	4.4
21	3	19	36.7	59	55.7	141	7.9	7.9	2.1	17	5	112	52	0.54	1.1	1.0	A	110	26	0.8	219	33	1.2	350	45	0.9
								2.2 ML EMRC																		
21	4	55	52.3	61	7.6	150	34.6	41.6	2.1	20	8	65	69	0.50	1.0	3.2	B	87	4	0.6	178	7	0.9	328	82	3.3
21	5	50	22.3	59	21.7	135	55.2	13.3	2.4	7	3	257	168	1.11	14.6	10.3	D	261	0	2.3	145	29	15.4	351	52	5.9
								2.2 ML EMRC																		
21	6	44	38.2	60	11.6	141	4.0	8.5	1.2	11	4	113	42	0.53	2.4	2.9	B	300	16	1.1	41	33	1.4	188	52	3.5
21	7	32	9.2	60	15.2	140	57.2	7.0	1.0	10	3	129	45	0.36	3.0	5.6	C	81	9	1.0	332	21	1.5	190	61	6.0
21	9	41	53.2	62	42.7	148	37.8	27.7	2.8	15	6	128	135	0.63	2.8	2.5	B	18	5	1.5	284	37	3.2	115	53	2.1
21	9	56	22.9	61	28.5	150	2.9	45.3	2.1	15	6	92	37	0.37	1.4	2.6	B	100	2	0.6	191	19	1.2	4	71	2.7
21	12	9	23.9	60	1.9	140	45.5	8.2	1.9	14	7	115	31	0.54	1.4	1.2	A	109	7	0.6	202	25	1.5	4	64	1.2
								2.0 ML EMRC																		
21	12	17	7.5	60	4.6	140	42.8	5.7	1.9	15	7	108	36	0.76	1.7	1.6	A	278	4	0.7	185	39	2.0	13	51	1.2
								2.0 ML EMRC																		
21	12	19	4.9	60	3.8	140	30.8	8.7	1.2	8	2	143	50	0.23	11.3	7.2	D	267	10	1.5	2	28	12.5	159	60	4.8
21	12	45	23.3	61	7.1	150	50.0	20.1	1.7	10	5	91	70	0.38	2.6	10.1	D	265	0	0.9	175	12	1.5	355	78	10.4
21	12	56	11.7	59	59.7	141	38.1	8.8	1.0A	10	3	169	41	0.23	1.8	1.4	A	289	0	0.6	19	10	1.8	199	80	1.4
21	12	56	14.5	59	58.3	141	39.8	9.3	2.1	17	9	172	43	0.62	1.2	1.1	A	292	2	0.7	201	32	1.3	25	58	1.0
								2.2 ML EMRC																		
21	12	58	4.4	59	58.4	141	38.4	1.8	1.3A	10	4	175	78	0.80	1.5	4.6	B	289	9	0.9	197	9	1.3	63	77	4.7
21	12	59	59.0	59	57.7	141	40.0	9.7	1.2	10	4	176	80	0.36	2.4	3.6	B	278	12	0.9	183	25	1.8	32	62	4.0
21	13	2	25.6	60	11.4	141	27.5	11.0	0.5A	7	2	152	82	0.97	13.2	12.4	D	118	12	1.3	16	43	18.0	220	44	2.2
21	14	13	36.9	60	11.9	141	2.8	7.7	2.2	18	8	74	43	0.70	1.2	1.8	A	299	4	0.6	32	29	0.9	202	61	2.0
								2.0 ML EMRC																		
21	15	32	7.3	59	58.8	141	39.1	10.0	0.9	10	4	175	43	0.32	1.6	3.9	B	196	4	1.5	287	13	0.8	89	76	4.0
21	15	45	58.5	59	54.2	140	39.9	2.3	1.3	6	3	180	79	0.64	3.0	6.6	C	187	10	2.5	280	17	1.2	68	70	6.9
21	17	15	29.6	60	19.6	140	16.9	14.6	1.5	8	4	178	81	0.53	4.2	4.3	B	306	20	1.2	52	37	2.3	194	46	5.6
21	19	22	12.1	60	21.8	142	52.0	8.0	1.2	6	4	94	77	0.23	1.2	1.9	A	261	21	0.9	340	22	0.7	122	58	2.1
21	21	0	19.4	60	8.4	152	48.7	122.8	4.3	29	2	168	85	0.68	2.4	3.9	B	331	2	1.6	81	20	1.7	236	62	3.9
		4.2 MB			4.0 ML ATWC																					
21	23	47	16.9	62	3.2	151	15.0	85.2	4.1	28	4	97	85	0.50	1.9	2.4	A	81	6	1.1	168	24	1.8	338	65	2.5
		4.4 MB			3.7 ML ATWC																					
22	5	10	30.4	60	24.0	141	18.1	10.7	1.1A	7	3	122	63	0.52	2.3	5.2	C	339	4	0.8	81	17	1.6	237	69	5.3
22	5	34	54.5	56	46.7	139	23.3	32.7	3.9	11	3	242	354	0.90	10.8	25.0	D	7	0	6.5	277	0	10.8	0	90	25.0
22	6	18	12.8	60	15.9	141	50.6	11.0	1.0A	6	4	144	55	0.36	3.3	3.2	B	163	4	3.2	261	34	1.1	67	55	3.8
22	10	38	10.4	60	15.2	140	56.0	12.4	1.1	7	3	156	46	0.22	3.8	6.4	C	291	5	1.1	24	28	1.7	192	61	7.2

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ORIGIN 1980	HR	MN	TIME SEC	LAT N DEG MIN	LONG W DEG MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
SEP 22	13	41	9.4	60 11.8	141 16.3	10.9	2.5	21	7	82	36	0.84	1.2	1.6	A	306	19	0.6	44	23	1.0	180	60	1.7
						2.5 ML	EMRC																	
22	14	7	45.8	60 14.3	141 3.5	8.5	1.0	5	2	148	151	0.19	4.5	6.3	C	311	3	4.5	42	26	1.4	215	64	6.9
22	14	43	9.1	61 30.9	149 54.8	46.4	2.7	25	6	66	42	0.43	1.3	2.1	A	87	2	0.8	178	14	1.3	349	76	2.1
22	15	44	54.6	60 18.3	141 10.2	1.9	0.3A	4	3	194	56	0.22	2.7	7.6	C	45	5	2.6	314	10	1.9	161	79	7.7
22	16	32	30.3	61 4.7	147 2.3	17.9	1.9	19	7	93	41	0.41	1.3	1.5	A	279	11	0.6	182	33	1.1	25	55	1.7
22	19	44	12.2	62 14.3	150 49.7	72.9	4.0	28	3	101	86	0.57	2.2	2.8	B	354	4	2.2	84	9	1.2	240	80	2.8
					3.5 ML ATWC																			
22	21	38	36.6	59 52.2	148 59.7	5.2	2.2	17	3	199	99	0.60	2.9	2.4	B	261	19	1.3	340	32	2.9	140	52	2.2
22	22	45	36.8	62 3.6	145 29.2	26.7	2.4	13	5	206	67	0.45	2.6	2.2	B	93	34	1.2	335	35	1.7	213	37	3.0
22	23	8	58.5	60 19.0	140 55.7	3.3	0.9	4	2	167	100	0.13	3.5	15.2	D	81	4	1.1	155	9	2.5	325	71	14.8
23	1	35	3.5	61 21.0	146 49.7	27.1	2.6	27	8	49	51	0.61	0.8	1.5	A	282	11	0.5	14	12	0.7	150	74	1.6
23	4	2	49.1	60 32.2	141 40.1	7.1	0.9A	8	4	99	61	0.43	1.8	2.7	B	344	3	0.8	81	21	1.5	246	68	2.8
23	5	22	25.0	60 8.1	141 9.7	11.2	2.6	22	8	73	41	0.70	1.0	1.2	A	307	11	0.6	44	35	0.8	202	53	1.3
						2.8 ML	EMRC																	
23	6	9	45.7	60 54.2	150 50.0	22.1	1.3A	9	8	109	73	0.80	1.5	5.3	C	205	5	1.4	295	7	0.9	80	81	5.4
23	6	14	3.0	61 55.4	150 57.3	71.8	3.9	30	2	92	64	0.49	1.9	2.5	B	83	9	1.0	177	26	1.6	335	62	2.7
					3.6 ML ATWC																			
23	7	0	9.0	60 6.3	147 43.3	29.1	2.2	12	9	172	96	0.50	1.9	2.6	B	334	1	1.8	261	9	0.9	70	71	2.5
23	11	5	24.2	59 19.2	145 8.6	17.2	2.9	6	4	250	175	0.40	4.8	3.4	B	21	18	4.9	126	39	2.2	272	46	3.8
23	13	54	9.1	60 2.1	147 46.8	42.3	3.1	8	4	219	166	0.32	4.3	25.0	D	284	0	1.4	194	1	4.3	14	89	25.0
23	14	28	56.1	60 10.8	136 54.6	5.0C	1.7C																	
23	23	41	6.6	60 14.0	141 14.1	12.6	1.1	7	5	110	56	0.30	2.9	3.1	B	314	9	0.8	52	41	1.7	214	48	3.9
24	0	13	33.0	60 47.5	150 34.4	40.3	2.2	22	14	53	74	0.54	1.0	2.9	B	91	5	0.7	1	5	1.0	226	83	2.9
24	0	17	38.1	61 33.1	146 28.5	29.8	2.0	19	13	88	55	0.52	0.9	2.3	A	225	3	0.7	315	9	0.9	117	81	2.3
24	2	55	10.6	60 14.5	141 5.8	11.4	2.6	22	8	58	38	0.53	1.5	1.7	A	320	22	0.7	81	23	0.8	201	47	2.0
						2.7 ML	EMRC																	
24	4	0	22.0	61 46.5	149 38.9	43.0	2.4	19	12	156	59	0.28	1.7	2.3	A	88	4	0.8	356	21	1.5	188	69	2.4
24	4	41	34.1	60 5.9	141 15.7	5.8	0.9	4	3	178	39	0.08	13.9	11.8	D	300	7	1.0	204	40	18.0	38	49	2.9
24	5	23	0.9	60 9.3	141 9.6	11.0	1.1	8	1	103	40	0.15	7.8	7.5	C	318	24	1.8	67	37	3.4	203	44	10.3
24	5	26	28.1	59 59.3	140 58.4	16.3	1.1	7	3	185	42	0.09	10.2	3.4	D	195	5	10.2	103	24	1.4	296	65	3.6
24	6	34	14.0	60 9.6	141 23.9	10.2	1.6	13	8	94	29	0.23	1.5	1.6	A	309	3	0.7	42	40	1.3	215	50	1.8
24	7	44	10.1	60 21.1	141 13.5	15.4	1.0	9	4	122	33	0.24	2.2	3.2	B	118	5	0.8	26	30	1.3	217	60	3.6
24	9	12	12.1	61 27.9	149 58.5	41.7	1.1A	14	12	69	41	0.46	1.4	2.0	A	283	0	0.8	193	19	1.3	13	71	2.1
24	11	58	32.5	60 17.1	140 59.5	4.2	1.1	5	3	131	46	0.18	2.3	8.9	C	291	0	0.9	21	12	1.3	201	78	9.1
24	14	44	2.0	60 7.8	141 0.9	11.4	1.3	11	5	106	31	0.24	3.8	3.3	B	89	15	1.1	191	40	4.6	343	46	2.0
24	14	58	44.3	60 17.9	141 8.0	10.1	1.5	10	7	123	34	0.22	2.2	4.0	B	304	7	0.9	38	23	1.5	198	66	4.3
24	15	27	0.6	60 11.2	140 59.8	5.0	1.5	14	6	116	37	0.46	1.5	2.3	A	324	13	0.8	81	15	1.0	205	57	2.3
24	15	27	50.9	60 9.1	141 0.3	9.6	1.5	8	2	110	47	0.17	5.5	5.8	C	81	25	1.4	327	28	2.9	202	47	7.5
24	17	12	2.5	61 8.0	149 45.9	43.8	1.8	16	12	78	64	0.29	1.1	2.3	A	200	1	1.1	110	4	1.0	304	86	2.3
24	17	54	22.2	61 32.2	149 34.4	38.1	1.6	14	9	130	61	0.26	1.5	1.3	A	186	2	1.5	276	8	1.0	82	82	1.3
24	18	13	41.2	61 34.3	150 23.1	48.6	2.4	21	11	125	57	0.24	1.5	2.5	A	273	1	0.7	183	21	1.3	6	69	2.6
24	19	38	8.5	62 19.9	141 32.0	28.0	1.2A	3	3	170	155	0.20	17.1	23.3	D	120	4	17.0	212	21	1.9	20	69	25.0
24	21	23	15.4	61 11.1	146 12.2	13.6	1.1A	11	4	114	37	0.64	2.1	2.2	A	81	14	0.7	309	37	2.2	182	35	1.7
24	21	23	20.6	61 12.0	146 10.2	15.6	1.7	12	8	114	35	0.63	2.9	2.7	B	81	22	1.0	315	32	2.7	192	40	2.8
25	4	34	58.3	60 39.4	148 54.5	29.3	0.9A	11	7	119	39	0.28	2.3	2.9	B	324	3	2.0	261	5	0.9	90	62	2.6
25	4	46	15.3	61 29.5	149 59.4	42.6	1.4A	14	8	75	40	0.33	1.4	2.4	A	102	3	0.9	193	11	1.4	357	79	2.4
25	4	55	40.1	61 58.3	147 48.4	37.7	2.3	23	14	170	71	0.64	2.0	1.1	A	345	7	2.0	81	40	0.7	247	49	1.4
25	6	32	49.4	60 8.8	141 19.0	22.5	1.0	4	2	140	100	0.04	14.1	8.0	D	302	8	2.1	210	19	14.7	54	69	6.9
25	7	48	53.4	60 12.0	141 15.5	13.7	1.3	9	3	104	32	0.28	2.6	2.7	B	312	15	0.8	55	40	1.3	206	46	3.5

SOUTHERN ALASKA EARTHQUAKES, JULY - SEPTEMBER 198Ø

198Ø	ORIGIN HR	TIME MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
SEP 25	7	59	48.8	6Ø	11.9	141	14.5	16.8	1.Ø	8	2	115	56	Ø.14	9.8	6.7	C	319	17	1.1	261	36	9.Ø	74	41	3.6
25	8	7	46.5	61	28.9	149	53.8	39.4	3.2	32	8	6Ø	43	Ø.38	1.1	2.1	A	88	4	Ø.7	179	8	1.1	332	81	2.1
								2.5 ML ATWC																		
25	12	3	21.5	61	48.Ø	15Ø	19.7	12.5	1.3	11	8	162	66	Ø.42	1.5	1.9	A	28Ø	7	Ø.7	12	19	1.4	171	7Ø	1.9
25	12	38	41.6	6Ø	54.3	147	21.2	28.6	1.9	22	12	92	46	Ø.47	1.Ø	1.3	A	267	7	Ø.6	358	7	1.Ø	133	8Ø	1.4
25	13	27	39.3	6Ø	4.1	14Ø	46.1	9.5	2.6	24	1Ø	1Ø8	33	Ø.49	1.4	1.6	A	276	4	Ø.7	1Ø	39	1.1	181	51	1.8
								2.9 ML EMRC																		
25	14	3Ø	28.3	6Ø	3.7	14Ø	46.9	1Ø.4	2.3	2Ø	9	1Ø8	32	Ø.45	1.6	1.5	A	89	16	Ø.7	193	42	1.8	343	44	1.3
								2.3 ML EMRC																		
25	15	38	11.5	61	58.6	147	24.3	31.3	2.3	27	17	167	66	Ø.67	1.4	1.1	A	268	4	Ø.6	Ø	21	1.4	168	69	1.1
25	15	49	3.5	6Ø	8.3	14Ø	53.6	7.6	1.Ø	6	3	136	36	Ø.38	3.3	5.2	C	88	6	1.Ø	355	28	1.9	189	61	5.9
25	16	13	9.Ø	6Ø	26.2	141	16.6	14.7	1.2	6	6	127	43	Ø.27	4.2	9.2	C	343	8	1.6	81	2Ø	1.8	233	67	9.9
25	16	17	29.2	61	34.6	15Ø	5Ø.3	6Ø.7	3.1	31	9	62	78	Ø.46	1.4	2.7	B	81	5	Ø.9	171	16	1.2	334	73	2.8
25	16	51	58.Ø	6Ø	15.7	141	15.1	13.7	1.7	13	8	112	29	Ø.2Ø	1.5	1.9	A	31Ø	11	Ø.7	47	33	1.1	2Ø4	55	2.2
25	19	14	17.5	61	48.6	149	51.7	41.5	2.Ø	21	12	158	61	Ø.54	1.6	2.6	B	6	2	1.6	96	6	Ø.9	258	84	2.6
25	22	17	47.1	61	53.Ø	149	59.5	42.3	2.8	27	8	88	61	Ø.51	1.8	3.Ø	B	6	6	1.8	97	7	Ø.7	236	81	3.Ø
25	22	26	Ø.2	6Ø	4.3	141	8.9	11.2	1.7	1Ø	6	93	46	Ø.46	3.2	1.2	B	193	9	3.3	285	11	Ø.9	65	76	1.1
26	Ø	21	8.7	6Ø	5.6	141	17.1	6.2	Ø.8	5	3	146	1ØØ	Ø.27	5.3	4.Ø	C	3Ø4	17	1.Ø	2Ø5	24	5.6	65	6Ø	3.8
26	Ø	22	3.9	6Ø	38.8	142	35.9	2.7	1.9	16	6	54	51	1.14	Ø.9	2.1	A	33	1	Ø.7	123	1	Ø.9	258	89	2.1
26	Ø	27	56.2	6Ø	35.5	142	32.2	4.7	1.4	7	2	8Ø	51	Ø.21	2.8	9.8	C	37	1Ø	1.1	129	1Ø	1.4	263	76	1Ø.1
26	2	51	12.3	61	37.7	149	55.Ø	4Ø.9	1.7	15	9	1Ø4	47	Ø.36	2.9	2.Ø	A	99	19	1.1	261	41	1.7	4	13	2.6
26	3	7	26.4	6Ø	7.5	14Ø	58.2	11.9	1.5	12	6	1Ø7	31	Ø.31	3.4	2.9	B	83	33	1.6	327	34	1.9	2Ø4	39	4.1
26	5	42	8.3	6Ø	3.6	141	17.6	5.3	Ø.6	6	2	153	42	Ø.38	5.1	3.9	C	183	3	5.1	274	28	2.5	87	62	4.2
26	6	4	8.3	6Ø	42.Ø	147	23.7	11.Ø	2.2	24	9	154	54	Ø.48	1.7	2.1	A	261	21	Ø.6	153	23	1.2	25	55	2.4
26	7	23	8.2	6Ø	12.6	141	4.Ø	16.7	Ø.7	5	4	172	1ØØ	Ø.15	14.9	2Ø.3	D	292	2	1.7	24	36	2.7	199	54	25.Ø
26	8	17	27.7	6Ø	9.Ø	141	21.3	9.9	1.4	11	9	1Ø7	32	Ø.27	2.2	1.9	A	3Ø2	5	Ø.8	21Ø	29	2.3	41	61	1.9
26	9	27	54.1	6Ø	18.7	14Ø	56.3	Ø.3	Ø.8	6	3	162	45	Ø.13	2.4	9.4	C	261	1	1.8	344	6	2.2	161	81	9.3
26	14	3	4.9	6Ø	6.6	141	2.9	25.Ø	1.2	5	4	146	44	Ø.22	14.3	11.5	D	1Ø6	2	2.8	198	38	17.9	13	52	4.3
26	15	24	27.5	6Ø	26.5	147	43.Ø	24.3	2.Ø	2Ø	12	178	69	Ø.53	1.8	2.2	A	261	16	Ø.7	147	26	1.3	14	52	2.5
26	15	53	39.9	6Ø	1.5	141	13.4	3.3	Ø.7	5	2	133	19	Ø.1Ø	7.4	16.8	D	355	3	3.2	264	23	1.9	92	67	18.2
26	16	34	7.1	61	46.7	149	11.Ø	11.4	Ø.7A	5	4	197	45	Ø.28	1.9	2.9	B	261	12	Ø.9	162	18	1.7	21	67	3.1
26	16	4Ø	39.4	6Ø	3Ø.Ø	148	38.3	25.8	1.8	16	11	148	46	Ø.3Ø	1.5	2.5	A	261	2	Ø.8	151	13	1.3	359	66	2.4
26	18	59	43.Ø	61	39.6	15Ø	Ø.6	44.8	1.7	14	1Ø	145	47	Ø.25	1.9	2.9	B	1Ø8	1	1.4	198	2Ø	1.7	15	7Ø	3.Ø
26	2Ø	16	42.6	61	37.2	149	58.Ø	42.1	1.9	13	9	118	45	Ø.34	3.4	2.5	B	1Ø4	19	1.4	2	29	3.7	222	54	2.Ø
26	21	36	58.6	61	38.5	147	5.9	26.1	1.9	19	11	73	65	Ø.68	1.Ø	2.1	A	265	1	Ø.8	175	11	Ø.9	Ø	79	2.2
27	3	52	12.3	6Ø	1Ø.3	141	1.Ø	1.7	2.1	12	6	81	81	Ø.66	2.Ø	2.7	B	29Ø	13	1.2	28	3Ø	1.Ø	179	57	3.2
								2.Ø ML EMRC																		
27	4	46	32.5	6Ø	2Ø.7	14Ø	58.7	7.5	1.3	8	3	136	49	Ø.44	1.7	5.5	C	81	4	1.2	339	13	Ø.8	187	72	5.6
27	6	54	41.3	6Ø	5.1	141	12.7	11.5	1.5	7	2	198	53	Ø.37	7.Ø	3.7	C	299	6	1.1	2Ø6	26	7.7	41	63	1.7
27	7	3Ø	37.5	59	18.5	144	53.4	25.3	2.5	9	3	274	151	Ø.56	6.Ø	3.5	C	195	6	6.Ø	287	25	1.5	92	64	3.7
27	9	14	9.Ø	59	57.7	14Ø	3Ø.4	8.4	2.1	13	6	16Ø	49	Ø.39	1.9	2.2	A	1Ø8	15	Ø.8	12	21	1.8	231	64	2.4
								1.9 ML EMRC																		
27	13	35	15.5	61	38.Ø	149	4Ø.8	37.8	2.1	18	5	143	44	Ø.63	1.Ø	1.1	A	213	6	1.Ø	12Ø	25	Ø.6	316	64	1.1
27	14	24	14.4	61	13.1	149	44.Ø	43.3	1.9	16	5	98	53	Ø.25	1.4	3.1	B	22	Ø	1.Ø	112	9	1.3	292	81	3.1
27	17	6	34.5	6Ø	1.4	141	11.4	8.1	1.Ø	8	2	94	48	Ø.45	1.4	1.7	A	213	3	1.4	3Ø4	26	1.Ø	117	64	1.9
27	17	19	39.8	61	41.6	149	34.Ø	3.Ø	2.Ø	16	4	148	5Ø	Ø.58	1.Ø	1.5	A	8	Ø	1.Ø	278	23	Ø.6	98	67	1.6
27	17	32	13.8	6Ø	Ø.7	141	12.2	6.Ø	1.2	7	2	112	54	Ø.37	1.4	2.Ø	A	261	18	1.2	35Ø	2Ø	1.3	129	63	2.1
27	18	58	56.7	6Ø	27.7	141	28.Ø	5.Ø	1.1A	8	4	114	57	Ø.56	1.1	2.7	B	339	1	Ø.7	81	6	1.Ø	24Ø	77	2.7
27	19	28	42.8	6Ø	51.2	149	5.3	33.4	1.7	13	6	98	43	Ø.36	1.Ø	1.4	A	213	1	Ø.7	3Ø4	12	1.Ø	118	78	1.5
27	22	35	11.8	6Ø	14.6	141	1.9	1.1	1.Ø	8	3	122	46	Ø.25	1.5	6.5	C	3Ø4	5	1.3	34	8	1.Ø	182	81	6.6

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1980	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D3 KM	RMS SEC	ERH KM	ERZ KM	Q	AZ1 DEG	DIP1 DEG	SE1 KM	AZ2 DEG	DIP2 DEG	SE2 KM	AZ3 DEG	DIP3 DEG	SE3 KM
SEP 27	22	50	2.9	60	10.9	141	16.5	3.2	1.8	12	5	103	57	0.45	1.3	1.8	A	295	0	0.5	25	32	0.8	205	58	2.0
28	0	43	4.0	62	7.5	147	59.1	36.2	2.7	22	5	186	83	0.56	2.0	1.3	A	341	12	2.1	81	34	0.7	235	53	1.5
28	2	21	26.0	61	39.9	149	53.5	39.3	2.4	21	4	144	50	0.47	1.5	2.2	A	176	5	1.5	86	6	0.7	306	82	2.3
28	3	15	21.9	61	58.3	149	56.2	39.2	1.8	13	7	191	71	0.37	2.0	2.4	A	285	1	0.7	16	34	1.6	194	56	2.6
28	7	16	43.5	61	53.1	150	17.6	12.4	2.2	12	4	164	66	0.72	2.0	1.8	A	275	15	0.6	17	38	2.3	168	48	1.6
28	9	10	28.1	60	33.8	150	36.0	42.3	3.3	26	2	75	69	0.42	1.2	3.0	B	81	3	0.9	335	5	1.1	197	73	3.0
					3.3 ML ATWC																					
28	11	41	45.5	61	33.8	149	43.3	39.7	2.1	18	4	110	36	0.54	1.7	1.7	A	92	2	0.7	183	37	1.6	359	53	1.7
28	11	45	48.9	61	31.2	141	14.6	2.8	2.3	14	11	104	123	1.34	1.3	1.4	A	115	10	1.0	213	37	1.3	12	51	1.4
								2.4 ML EMRC																		
28	11	46	40.7	61	27.9	141	22.1	0.2	1.5	7	5	150	125	0.55	2.1	2.0	A	317	18	1.0	81	33	2.2	209	41	1.8
28	15	42	26.3	60	58.0	146	23.9	11.0	2.0	18	4	114	29	0.53	1.6	1.6	A	220	11	0.7	316	25	1.5	108	62	1.6
28	17	54	10.6	63	24.7	150	56.5	35.0	3.5	25	6	78	217	0.78	5.6	4.3	C	26	9	1.8	290	35	6.6	128	54	2.6
					3.2 ML ATWC																					
28	18	23	6.4	62	45.4	148	39.4	45.8	2.5	12	7	130	139	0.72	3.3	7.0	C	261	4	1.9	340	9	3.0	146	75	7.0
28	20	37	59.3	60	16.2	140	36.4	11.0	1.7	9	3	150	64	0.17	2.2	3.8	B	285	9	0.7	19	25	1.1	177	63	4.2
28	23	7	24.9	61	29.6	141	17.8	0.2	1.6	6	2	175	127	0.91	4.8	6.1	C	335	8	4.4	261	16	2.7	94	66	6.1
29	0	55	49.6	61	8.7	150	29.3	15.0	1.4	8	7	105	72	0.52	1.3	4.6	B	207	6	1.0	298	10	0.8	86	78	4.7
29	3	6	20.5	60	19.7	141	12.2	3.5	1.7	11	10	121	30	0.81	1.1	2.2	A	309	2	0.7	39	18	0.9	213	72	2.3
29	3	15	11.0	60	18.7	141	12.9	2.6	1.6	10	9	119	58	0.51	1.0	2.1	A	106	4	0.7	15	12	1.0	214	77	2.1
29	5	31	37.1	61	36.0	149	53.5	40.7	1.2A	13	11	85	43	0.39	1.8	2.2	A	26	0	1.8	116	6	0.9	296	84	2.2
29	9	25	36.5	60	16.0	140	51.3	6.5	1.0	5	5	162	76	0.20	2.8	5.0	C	298	6	0.8	31	20	2.2	192	69	5.3
29	22	15	51.8	61	7.2	150	4.9	42.5	2.3	25	14	49	60	0.61	0.9	2.8	B	167	2	0.9	81	3	0.7	292	85	2.8
30	3	49	35.6	60	34.8	147	22.7	21.1	2.0	13	6	176	70	0.38	2.1	3.7	B	156	12	1.6	261	17	0.8	36	65	4.0
30	5	47	3.5	60	7.7	149	25.8	9.1	1.3	12	4	165	61	0.67	2.4	1.8	A	51	2	1.1	142	35	2.9	318	55	0.8
30	14	51	18.0	60	1.9	141	22.4	9.0	1.3	5	3	235	63	0.24	6.3	2.2	C	26	2	6.3	116	9	1.0	284	81	2.2
30	18	48	50.1	63	2.0	150	17.0	96.3	3.6	19	5	182	170	0.70	2.7	6.2	C	135	4	2.7	44	15	1.6	240	74	6.4
30	20	30	28.6	62	20.3	149	3.1	15.0	2.2	15	5	120	88	0.72	1.7	2.3	A	9	3	1.5	277	34	0.9	103	56	2.7
30	20	34	36.8	63	4.7	150	35.6	113.5	3.9	27	4	127	184	0.59	2.8	6.6	C	330	2	2.2	81	10	1.8	230	67	6.3
30	20	50	0.2	61	34.7	141	13.9	3.2	2.7	24	6	98	85	1.59	1.7	2.1	A	81	2	1.2	147	17	1.4	345	61	2.0
								3.0 ML EMRC																		
30	22	17	49.6	60	12.8	140	59.9	9.1	1.1	6	5	146	43	0.19	2.1	2.7	B	105	4	0.7	12	35	1.0	201	55	3.2
30	23	10	40.0	60	8.5	141	10.2	12.4	1.4	8	3	110	40	0.18	1.9	1.9	A	315	16	0.7	60	41	0.9	209	44	2.5