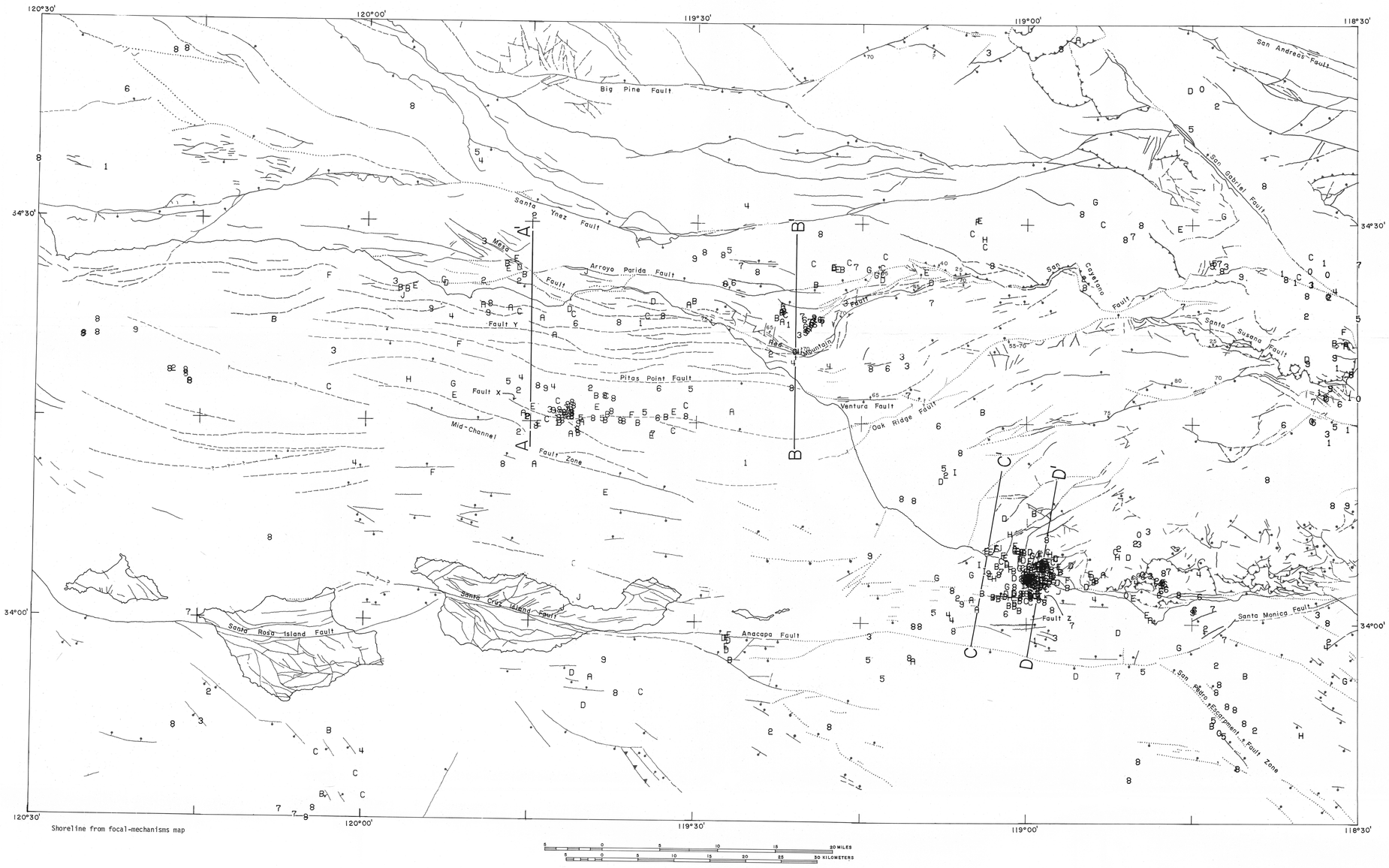
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

MISCELLANEOUS FIELD STUDIES
MAP MF-1032

SHEET 2 OF 2



FAULTS AND FOCAL DEPTHS OF EARTHQUAKES, 1970-75

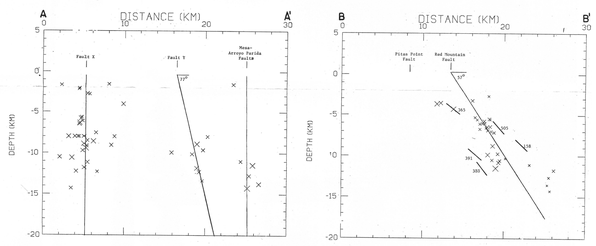
EXPLANATION

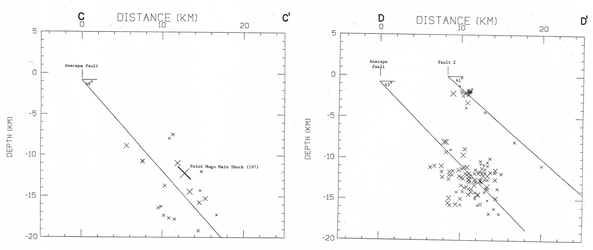
H ----? Fault

Dashed where inferred, dotted where concealed, queried where conjectural. Bar and ball on downthrown side. Sawteeth on upper plate of low-angle fault. Arrows show relative horizontal displacement. Letter indicates geologic time period during which latest surface displacement occurred: H, Holocene; L, late Pleistocene; Q, early Pleistocene; P, late Pliocene; C, early Pliocene; M, late Miocene; unlabeled, unknown

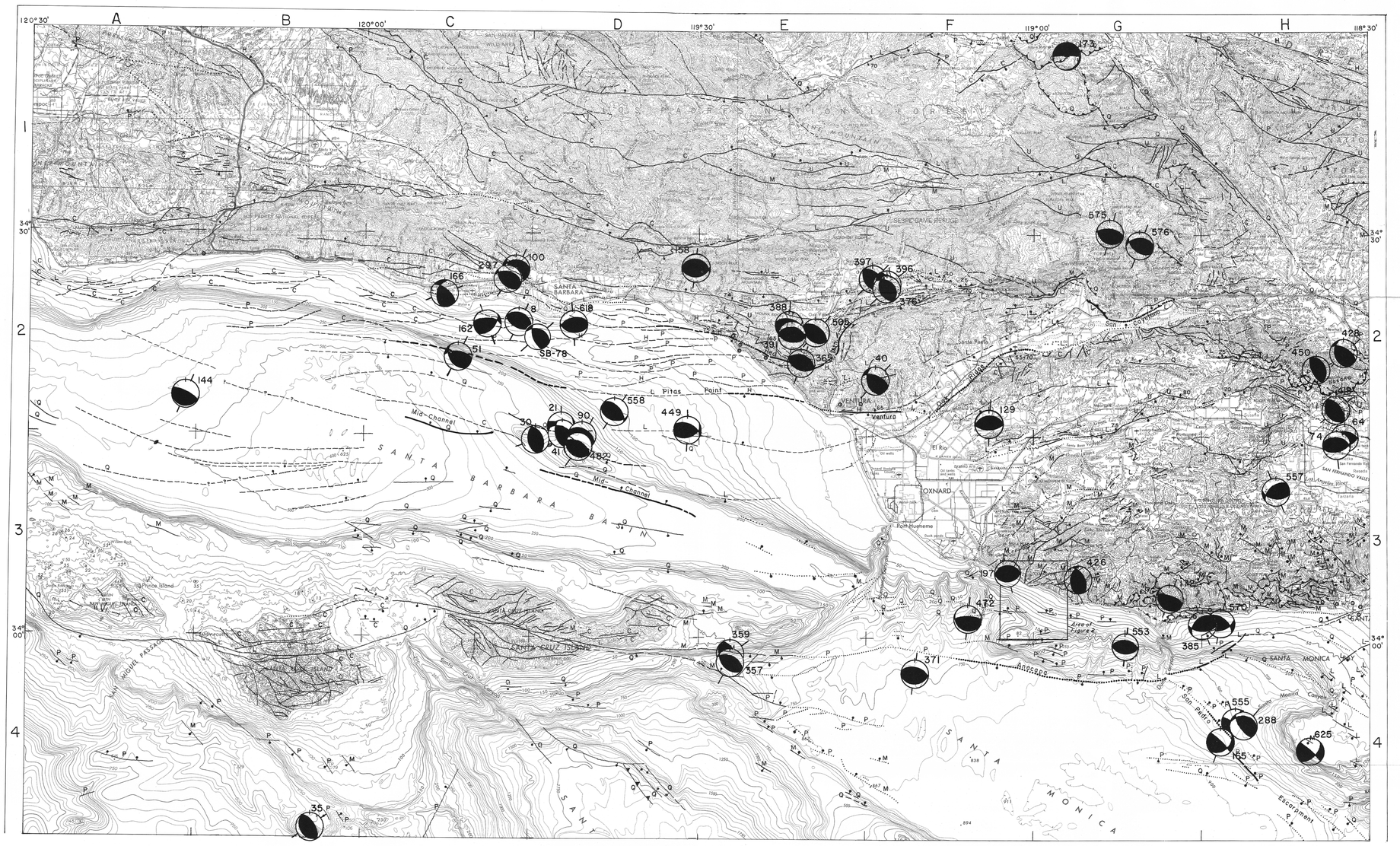
3
Earthquake epicenter

Showing focal depth, in kilometers. Where focal depths exceed 9 km, epicenters are shown by letters: A = 10 km, B = 11 km, and so on





Cross sections along lines A-A', B-B', C-C', and D-D', showing distribution of hypocenters within 5 km of section lines. Size of symbol varies with magnitude of event. Heavy bars indicate apparent dip of primary focal plane (see table 1).



Base from U.S. Geological Survey 1:250 000
Santa Maria, 1959-68; Long Beach, 1957-70;
Los Angeles, 1959-68; and National Ocean
Survey Charts 1206N-15, 1306N-19, and
1306N-20, 1967

FAULTS AND FOCAL MECHANISMS OF SELECTED EARTHQUAKES,1970-75

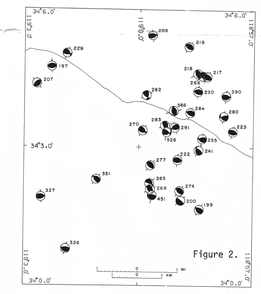
EXPLANATION

H ----? Fault

Dashed where inferred, dotted where concealed, queried where conjectural. Bar and ball on downthrown side. Sawteeth on upper plate of low-angle fault. Arrows show relative horizontal displacement. Letter indicates geologic time period during which latest surface displacement occurred: H, Holocene; L, late Pleistocene; Q, early Pleistocene, P, late Pliocene; C, early Pliocene; M, late Miocene; unlabeled, unknown. Heavy line indicates trace of fault segment geometrically associated with focal mechanisms

41
Focal mechanism

Interpretive diagram of the compressional (dark) and dilatational (light) first-motion quadrants in the lower focal hemisphere. Bar shows orientation of P axis. Diagram located at epicenter of event; numbers correspond to event numbers in table 1



See sheet 1 for sources of fault data

TABLE 1: DATA ON MAPPED FOCAL MECHANISMS

EVENT NO.	MAP COORD	TIME YR-MO-DY	HR:MN:SC	DEPTH (KM)	MAG	FOCAL PLANES PRIMARY AZI	PRIMARY DIP	AUXILIARY AZI	AUXILIARY DIP	P-AXIS AZI	P-AXIS PL	SLIP VECTOR AZI	SLIP VECTOR PL
8	C2	70-02-20	7:35:35	12.3	2.4	116	35N	116	55S	26	0	26	35
21	D2	70-04-19	21:53:48	8.9	2.9	108	76N	50	24S	0	30	304	48
30	D3	70-05-25	2:57:34	8.0	2.7	156	44E	170	46W	72	2	80	44
35	B4	70-06-20	15:27:31	8.0	3.1	146	60E	146	30W	36	3	56	40
40	F2	70-08-26	1: 8:59	8.0	3.6	112	60N	160	40S	42	12	70	60
41	D2	70-08-29	8:14:16	8.0	2.3	118	50N	164	50W	50	0	72	40
51	G2	70-12-06	1:19:33	15.5	2.0	98	60N	144	40W	26	13	54	50
64	H2	71-02-16	4:37: 3	5.4	3.6	96	50N	80	44S	0	0	10	48
74	H3	71-04-02	5:40:24	3.4	3.8	100	42N	78	52S	178	3	147	39
90	D2	71-05-07	2: 3:21	10.4	2.6	118	50N	118	40S	28	5	26	50
100	C2	71-05-13	16:54:13	13.7	2.7	90	35N	138	60W	214	13	46	24
129	F2	71-11-04	19:17:39	11.1	2.5	87	56S	87	34W	176	11	176	56
144	A2	72-01-17	5:49:58	10.3	2.7	116	76N	116	14S	26	21	10	75
158	B4	72-04-04	5: 2:56	8.7	3.1	108	44N	86	48S	186	3	356	42
162	C2	72-04-17	0:28:38	8.9	3.0	95	57N	42	46S	340	6	312	44
165	H4	72-06-11	11: 5: 4	10.9	2.8	134	84N	52	36S	21	25	330	53
166	G2	72-06-15	16:42: 9	13.4	2.7	130	65N	13	45W	68	12	102	45
172	G3	72-07-14	23: 1:15	6.6	2.7	107	70N	134	25S	21	21	46	67
173	G1	72-07-27	1:22: 4	8.0	3.0	90	85N	24	10S	346	45	292	79
197	F3	73-02-21	14:45:57	12.2	5.9	86	44N	86	46S	356	0	347	44
288	H4	73-03-26	1:27:44	8.0	2.3	100	28N	144	70W	220	23	56	20
297	G2	73-03-29	17:54:16	14.2	3.3	108	45N	136	50W	213	4	44	40
357	E4	73-08-06	23:29:16	13.8	3.0	115	50E	130	50S	211	3	44	40
359	E4	73-08-06	23:53:46	13.7	3.1	150	62E	130	30S	33	15	40	60
365	E2	73-08-15	2:16:21	4.3	3.0	112	40E	112	50S	202	5	22	40
371	F4	73-08-20	14: 1:49	8.0	2.3	104	60N	87	30S	8	15	3	60
376	F2	73-08-24	9: 4:55	13.4	2.4	120	50N	156	50S	228	2	74	44
385	H3	73-09-02	6:28: 3	13.9	2.3	46	44N	91	56S	162	6	70	44
388	E2	73-09-04	9:11:25	11.5	3.4	103	52N	62	42S	358	5	340	48
391	E2	73-09-07	15:18:10	9.9	2.6	98	40N	98	50S	189	5	8	40
396	F2	73-09-13	13: 7:45	12.1	2.2	146	48E	136	40W	52	6	47	47
397	F2	73-09-13	23: 8:37	16.0	2.2	142	50E	148	40W	54	5	12	42
418	H2	73-11-14	17:15:31	13.1	2.2	142	60E	142	30W	52	0	52	60
426	G3	73-12-20	14:23:21	13.3	2.1	152	50E	6	44W	5	5	96	44
428	H2	73-12-25	6: 9: 3	11.3	2.1	120	58N	162	36W	48	14	78	48
449	D2	74-02-27	12:25:36	8.0	2.3	114	52N	70	48S	2	2	340	42
450	B2	74-03-03	16:29: 1	12.9	2.2	158	32E	134	66W	66	12	34	32
472	F3	74-04-25	8:23:53	8.9	2.8	91	72N	118	20S	6	27	28	70
482	D3	74-07-09	0:58:49	10.8	2.0	122	60N	122	30S	32	15	36	60
505	E2	74-09-23	2:22:59	6.5	2.0	128	54N	128	36S	36	9	36	54
553	G4	75-01-11	14:44:18	13.0	2.5	85	65N	85	45S	6	0	6	45
555	B4	75-01-23	3:48:42	8.0	2.8	114	90E	24	90E	339	0	114	0
557	B3	75-01-28	5:22:22	8.0	2.4	52	50N	96	50S	344	0	6	40
558	D2	75-01-28	9:45:49	8.0	2.5	137	54E	108	40S	33	7	18	50
570	H3	75-03-01	5:45: 4	6.6	2.0	128	56N	72	52S	11	3	342	38
575	G1	75-03-24	10:32:25	12.2	2.7	98	60N	118	32S	15	15	28	58
576	G2	75-03-24	10:19:26	9.7	2.0	90	44N	126	52S	200	4	34	40
618	D2	75-10-09	6:16:56	11.8	2.6	77	50N	96	42S	356	6	8	48
625	B4	75-11-03	3:47:17	14.6	1.8	132	84N	45	34S	20	35	314	35
88 78	D2	78-08-13	22:54:52	12.5	3.1	114	40N	158	60S	229	10	68	30

MAPS SHOWING FAULTS AND FAULT ACTIVITY, AND EPICENTERS, FOCAL DEPTHS AND FOCAL MECHANISMS FOR 1970-1975 EARTHQUAKES, WESTERN TRANSVERSE RANGES, CALIFORNIA

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1979