

Table 2-2 Result of geochemical grade assay

SAMPLE	PROJECT	REFERENCE	Au pbb Pavada	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Co ppm	Cr ppm	Cu ppm	Fe %	Ca ppm	Hg ppm	K %	Zn ppm	Mg %	Mn ppm	Ni ppm	Mo ppm	Se %
TH112	Exhiben Mine site	Fig. II-3-33	15	<1.2	1.14	7	70	4.5	42	0.21	5.5	78	342	2.14	<10	<1	0.71	<10	0.35	150	2	0.03	
TH113	Exhiben Mine site	Fig. II-3-33	250	0.2	1.73	10	30	4.5	42	0.24	4.5	34	375	3.44	<10	<1	0.63	<10	0.92	225	1	0.05	
TH91	Mt. Beganey	Fig. II-3-33	880	4.7	1.10	6	140	4.5	2	0.14	4.5	1.2	4	1.42	<10	<1	0.47	30	0.07	40	1	0.01	
TH94	Mt. Beganey	Fig. II-3-33	6780	6.2	2.47	6	60	4.5	14	0.99	4.5	85	3810	5.75	<10	<1	0.89	<10	0.72	455	8	0.01	
TH95	Mt. Beganey	Fig. II-3-33	2400	6.6	1.34	42	40	4.5	8	0.27	4.5	82	4710	7.98	<10	<1	0.35	<10	0.68	790	5	<0.1	
KV488	Sulala	Fig. II-3-36	<5	<1.2	0.33	116	10	4.5	42	0.02	4.5	73	21	3.45	<10	<1	4.01	<10	0.04	45	1	<0.1	
KV72	Sulala	Fig. II-3-36	<5	<1.2	0.53	14	50	4.5	42	0.01	4.5	2	10	44	3.64	<10	0.06	<10	<0.1	5	1	<0.1	
KV74	Sulala	Fig. II-3-36	<5	<1.2	0.20	74	<10	4.5	42	0.01	4.5	9	139	142	4.90	<10	0.01	<10	<0.1	20	1	<0.1	
SH93	Mt. Culasa	Fig. II-3-37	<5	0.2	0.01	14	470	4.5	42	0.01	4.5	1	84	11	0.59	<10	0.01	<10	<0.1	5	3	<0.1	
SH94	Mt. Culasa	Fig. II-3-37	<5	7.2	0.01	158	30	4.5	84	0.01	4.5	5	35	4.12	<10	<1	0.03	<10	<0.1	30	58	<0.1	
SH100	Mt. Labo	Fig. II-3-39	5	0.2	1.39	12	10	4.5	42	0.03	4.5	7	45	3.22	<10	<1	0.14	<10	0.06	25	4	0.05	
SH101	Mt. Labo	Fig. II-3-39	<5	<1.2	0.79	28	90	4.5	42	0.02	4.5	6	37	4.13	<10	<1	0.03	<10	0.01	20	4	0.04	
SH102	Mt. Labo	Fig. II-3-39	<5	<1.2	0.39	18	140	4.5	42	0.02	4.5	4	38	21	1.98	<10	0.19	<10	<0.1	615	5	0.05	
SH103	Mt. Labo	Fig. II-3-39	<5	1.0	2.39	10	70	4.5	42	0.01	4.5	2	93	16	1.89	<10	0.59	<10	<0.1	40	2	0.11	

Table 2-2 Result of geochemical grade assay

SAMPLE	PROJECT	REFERENCE	ML	P	Pd	Sb	So	Bf	Tl	U	V	W	Zn
			ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
TH0A	Calpa	Fig. II-3-1	41	240	<1	<1	1	132	<0.1	<10	<10	21	<10
TH10	Calpa	Fig. II-3-1	1	430	6	<2	1	172	<0.1	<10	<10	18	<10
TH11	Calpa	Fig. II-3-1	<1	170	<2	<2	1	104	<0.1	<10	<10	39	<10
TH12	Calpa	Fig. II-3-1	5	30	<2	<2	3	17	0.01	<10	<10	4	<10
TH13	Calpa	Fig. II-3-1	5	80	<2	<2	<1	50	<0.1	<10	<10	9	<10
TH14	Calpa	Fig. II-3-1	2	<10	<2	<2	<1	2	<0.1	<10	<10	2	<10
TH18	Calpa	Fig. II-3-1	20	970	44	<2	5	965	0.01	<10	<10	59	<10
TH19	Calpa	Fig. II-3-1	<1	210	<2	<2	1	126	<0.1	<10	<10	34	<10
TH21	Calpa	Fig. II-3-1	3	1026	<2	<2	2	207	<0.1	<10	<10	35	<10
TH22	Calpa	Fig. II-3-1	6	140	<2	<2	3	109	<0.1	<10	<10	16	<10
TH23	Calpa	Fig. II-3-1	2	140	<2	<2	3	86	<0.1	<10	<10	28	<10
TH25	Calpa	Fig. II-3-1	4	160	<2	<2	1	103	<0.1	<10	<10	12	<10
SM15	Manulog	Fig. II-3-1	<1	40	<2	<2	1	21	<0.1	<10	<10	23	<10
SM17	Manulog	Fig. II-3-1	5	270	<2	<2	20	24	0.06	<10	<10	177	<10
KY12	Pili anomaly	Fig. II-3-1	1	160	<2	<2	2	136	<0.1	<10	<10	23	<10
KY15	Pili anomaly	Fig. II-3-1	1	180	<2	<2	1	146	<0.1	<10	<10	13	<10
KY16	Pili anomaly	Fig. II-3-1	40	220	6	<2	14	48	0.19	<10	<10	168	<10
KY18	Pili anomaly	Fig. II-3-1	2	370	<2	<2	4	219	0.01	<10	<10	44	<10
KY20	Pili anomaly	Fig. II-3-1	3	190	<2	<2	7	80	<0.1	<10	<10	43	<10
KY22	Cawayan river	Fig. II-3-1	18	1060	<2	<2	8	286	0.14	<10	<10	132	<10
KY23	Cawayan river	Fig. II-3-1	25	840	4	<2	7	18	<0.1	<10	<10	47	<10
KY24	Cawayan river	Fig. II-3-1	5	20	6	<2	3	15	<0.1	<10	<10	16	<10
KY26	Cawayan river	Fig. II-3-1	5	150	2	<2	3	31	<0.1	<10	<10	22	<10
KY28	Cawayan river	Fig. II-3-1	11	780	2	<2	7	80	<0.1	<10	<10	4	<10
SM21	Cawayan river	Fig. II-3-1	3	310	<2	<2	<1	78	<0.1	<10	<10	15	<10
SM22	Cawayan river	Fig. II-3-1	<1	340	<2	<2	3	253	<0.1	<10	<10	29	<10
SM23	Cawayan river	Fig. II-3-1	6	130	<2	<2	<1	126	<0.1	<10	<10	23	<10
SM25	Cawayan river	Fig. II-3-1	1	90	<2	<2	7	76	<0.1	<10	<10	42	<10
SM27	Tawa	Fig. II-3-7	1	10	<2	<2	10	9	<0.1	<10	<10	3	<10
SM29	Tawa	Fig. II-3-7	28	610	<2	<2	6	566	0.17	<10	<10	50	<10
SM30	Tawa	Fig. II-3-7	28	2110	674	2	8	80	<0.04	<10	<10	3	<10
SM31	Tawa	Fig. II-3-7	5	1140	14	<2	1	890	<0.01	<10	<10	13	<10
SM32	Tawa	Fig. II-3-7	5	440	2	<2	<1	1458	<0.01	<10	<10	20	<10
SM34	Tawa	Fig. II-3-7	5	1320	2	<2	1	78	0.04	<10	<10	13	<10
SM35	Tawa	Fig. II-3-7	<1	50	<2	<2	<1	27	<0.1	<10	<10	8	<10
SM6	Sanabo-Nagan-Kapulaki	Fig. II-3-9	20	<10	<2	<2	<1	142	<0.1	<10	<10	3	<10
KY06	Pio Duran-Kapulaki	Fig. II-3-10	13	190	<2	<2	6	48	0.13	<10	<10	72	<10
KY08	Pio Duran-Kapulaki	Fig. II-3-10	10	200	<2	<2	8	21	0.06	<10	<10	65	<10
KY28A	Pio Duran-Kapulaki	Fig. II-3-10	12	760	<2	<2	6	30	0.11	<10	<10	84	<10
KY29	Pio Duran-Kapulaki	Fig. II-3-10	5	590	<2	<2	3	33	0.07	<10	<10	69	<10
TH24	Monte Calvario	Fig. II-3-12	3	440	<2	<2	2	146	<0.01	<10	<10	14	<10
TH28	Monte Calvario	Fig. II-3-12	5	30	10	<2	<1	54	<0.1	<10	<10	6	<10
TH29	Monte Calvario	Fig. II-3-12	1	400	2	7	3	205	<0.1	<10	<10	51	<10
TH34	Monte Calvario	Fig. II-3-12	3	1730	<2	<2	9	34	0.04	<10	<10	78	<10
TH37	Monte Calvario	Fig. II-3-12	7	50	<2	<2	1	7	<0.1	<10	<10	5	<10
SM38	Saisgon	Fig. II-3-12	<1	90	<2	<2	<1	24	<0.1	<10	<10	20	<10
SM41	Saisgon	Fig. II-3-12	7	80	2	<2	<1	24	<0.1	<10	<10	6	<10
SM42	Saisgon	Fig. II-3-12	1	70	<2	<2	<1	40	<0.1	<10	<10	20	<10
KY21	Bullewan, Gabao	Fig. II-3-12	4	840	<2	<2	3	49	<0.1	<10	<10	5	<10
KY23	Bullewan, Gabao	Fig. II-3-12	10	50	<2	<2	8	31	0.01	<10	<10	171	<10
KY25	Bullewan, Gabao	Fig. II-3-12	18	1590	16	<2	<1	12	<0.1	<10	<10	13	<10
KY26	Bullewan, Gabao	Fig. II-3-12	10	10	<2	<2	3	10	<0.1	<10	<10	19	<10
KY27	Bullewan, Gabao	Fig. II-3-12	<1	540	6	<2	1	69	<0.1	<10	<10	10	<10
KY29	Bullewan, Gabao	Fig. II-3-12	5	1000	2	<2	6	75	0.17	<10	<10	123	<10
KY45	Southern Irosin	Fig. II-3-12	9	1170	<2	<2	12	438	0.07	<10	<10	156	<10
KY46	Southern Irosin	Fig. II-3-12	4	2120	6	<2	3	73	<0.01	<10	<10	19	<10
KY47	Southern Irosin	Fig. II-3-12	11	1120	2	<2	11	63	<0.1	<10	<10	40	<10
KY48	Southern Irosin	Fig. II-3-12	15	1270	2	2	5	111	<0.1	<10	<10	13	<10
TH36	Mogollanes	Fig. II-3-14	1	930	17	<2	16	483	0.23	<10	<10	212	<10
TH39	Mogollanes	Fig. II-3-14	2	390	16	<2	18	170	0.17	<10	<10	171	<10

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SAMPLE	PROSPECT	REFERENCE	K1	F	Pb	Sb	So	Sr	Tl	Tl	U	V	W	Zn
			ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SM7	Bacolod	Fig. II-3-14	5	1290	10	4	4	127	0.04	<10	<10	51	<10	64
SM4	San Roque-Mt. Malobago	Fig. II-3-15	14	40	2	2	41	17	<0.1	<10	<10	8	10	2
SM7	San Roque-Mt. Malobago	Fig. II-3-15	41	210	<2	7	41	79	<0.1	<10	<10	18	<10	2
TM2	Tugas	Fig. II-3-16	10	190	10	<2	15	5	0.21	<10	<10	196	<10	56
TM6	Tugas	Fig. II-3-16	41	250	<2	<2	1	256	<0.1	<10	<10	18	<10	<2
TM8	Tugas	Fig. II-3-16	6	60	<2	2	<1	10	<0.1	<10	<10	6	<10	6
TM9	Tugas	Fig. II-3-16	2	50	<2	<2	1	4.01	<0.1	<10	<10	3	<10	8
TM51	Tugas	Fig. II-3-16	5	30	2	2	22	0.01	<0.1	<10	<10	14	<10	14
KY40	Matnog-Culasi	Fig. II-3-16	9	90	<2	<2	41	49	<0.1	<10	<10	8	<10	6
KY41	Matnog-Culasi	Fig. II-3-16	6	30	8	8	25	73	0.10	<10	<10	184	<10	58
KY42	Matnog-Culasi	Fig. II-3-16	4	60	<2	<2	<1	84	<0.1	<10	<10	12	<10	<2
KY43	Matnog-Culasi	Fig. II-3-16	4	140	<2	<2	41	104	<0.1	<10	<10	12	<10	4
KY44	Matnog-Culasi	Fig. II-3-16	12	550	<2	<2	41	22	<0.1	<10	<10	10	<10	30
SM50	Matnog-Culasi	Fig. II-3-16	1	130	4	4	12	585	0.01	<10	<10	88	<10	34
SM53	Matnog-Culasi	Fig. II-3-16	3	440	12	2	7	64	0.01	<10	<10	155	<10	30
SM55	Matnog-Culasi	Fig. II-3-16	1	50	12	<2	41	25	<0.1	<10	<10	7	<10	<2
TM53	Glubalem	Fig. II-3-16	4	110	16	<2	41	16	<0.1	<10	<10	3	<10	10
SM40	Buayag-Bua	Fig. II-3-17	2	40	<2	<2	3	<0.1	<0.1	<10	<10	2	<10	<2
SM41	Buayag-Bua	Fig. II-3-17	1	80	<2	<2	1	95	<0.1	<10	<10	12	<10	<2
SM45	Buayag-Bua	Fig. II-3-17	41	260	<2	<2	41	511	<0.1	<10	<10	13	<10	<2
SM66	Buayag-Bua	Fig. II-3-17	41	140	<2	<2	1	499	<0.1	<10	<10	27	<10	6
TM71	Siruma	Fig. II-3-19	4	30	<2	4	1	<0.1	<0.1	<10	<10	54	<10	6
TM72	Siruma	Fig. II-3-19	53	310	<2	<2	7	71	0.27	<10	<10	75	<10	34
TM74	Siruma	Fig. II-3-19	3	410	<2	4	1	<0.1	<0.1	<10	<10	30	<10	<2
TM75	Siruma	Fig. II-3-19	7	10	4	<2	41	7	<0.1	<10	<10	5	<10	10
TM77	Siruma	Fig. II-3-19	11	410	<2	<2	41	1	<0.1	<10	<10	6	<10	<2
TM79	Siruma	Fig. II-3-19	76	30	6	<2	15	7	0.03	<10	<10	105	<10	42
TM81	Southern Siruma Bay	Fig. II-3-19	15	410	<2	<2	2	21	<0.1	<10	<10	9	<10	10
TM84	Poppot	Fig. II-3-21	8	940	<2	<2	3	47	<0.1	<10	<10	15	<10	70
TM87	Pamban-Olas	Fig. II-3-21	12	110	<2	<2	3	37	0.07	<10	<10	59	<10	20
TM89	Pamban-Olas	Fig. II-3-21	12	410	<2	<2	1	216	<0.1	<10	<10	11	<10	8
KY67C	Western Coo	Fig. II-3-22	11	100	2	<2	4	10	<0.1	<10	<10	8	<10	76
SM74	Western Pasoco	Fig. II-3-23	29	390	2	<2	11	62	<0.1	<10	<10	82	<10	54
SM75	Western Pasoco	Fig. II-3-23	41	360	<2	<2	7	125	<0.1	<10	<10	34	<10	24
KY57B	Eastern Pasoco	Fig. II-3-24	19	1540	6	<2	5	53	<0.1	<10	<10	40	<10	18
KY57C	Eastern Pasoco	Fig. II-3-24	9	340	2	<2	12	112	<0.1	<10	<10	98	<10	60
KY57D	Eastern Pasoco	Fig. II-3-24	14	130	<2	<2	3	90	<0.1	<10	<10	33	<10	44
KY59A	Eastern Pasoco	Fig. II-3-24	316	410	26	4	3	37	<0.1	<10	<10	10	<10	28
KY59D	Eastern Pasoco	Fig. II-3-24	638	410	<2	<2	5	291	<0.1	<10	<10	15	<10	18
KY60B	Eastern Pasoco	Fig. II-3-24	849	410	<2	<2	8	58	<0.1	<10	<10	23	<10	22
KY61	Eastern Pasoco	Fig. II-3-24	694	410	<2	<2	7	575	<0.1	<10	<10	29	<10	44
SM70	Lake Bubi	Fig. II-3-26	41	290	10	<2	41	44	<0.1	<10	<10	2	<10	6
SM71	Lake Bubi	Fig. II-3-26	1	150	<2	<2	41	421	<0.1	<10	<10	39	<10	10
SM80	Cocassan, Balatan	Fig. II-3-27	1	410	<2	<2	41	741	<0.1	<10	<10	41	<10	2
SM81	Cocassan, Balatan	Fig. II-3-27	28	200	<2	<2	7	84	0.15	<10	<10	97	<10	44
SM82	Cocassan, Balatan	Fig. II-3-27	4	280	<2	<2	7	51	0.04	<10	<10	76	<10	36
SM84	Salatan	Fig. II-3-27	3	410	<2	<2	41	834	<0.1	<10	<10	41	<10	<2
SM87	Salatan	Fig. II-3-27	41	300	6	<2	1	26	<0.1	<10	<10	16	<10	6
SM89	Salatan	Fig. II-3-27	77	10	<2	4	41	3	<0.1	<10	<10	4	<10	14
SM91	Palatan	Fig. II-3-29	3	410	<2	<2	4	4	<0.1	<10	<10	1	<10	<2
KY49C	Southern-Balatan	Fig. II-3-27	42	1110	6	<2	8	48	0.11	<10	<10	72	<10	74
TM57	Sibobo	Fig. II-3-30	41	40	<2	<2	41	51	<0.1	<10	<10	5	<10	<2
TM58	Sibobo	Fig. II-3-30	1	50	<2	<2	41	84	<0.1	<10	<10	14	<10	2
TM60	Sibobo	Fig. II-3-30	41	60	<2	<2	41	95	<0.1	<10	<10	6	<10	<2
TM63	Sibobo	Fig. II-3-30	41	50	<2	<2	41	58	<0.1	<10	<10	14	<10	<2
TM66	Sibobo	Fig. II-3-30	3	90	<2	<2	41	85	<0.1	<10	<10	14	<10	6
TM68	Sibobo	Fig. II-3-30	41	90	<2	<2	41	98	<0.1	<10	<10	7	<10	<2
TM99	Agusan Mine	Fig. II-3-33	151	1000	42	42	50	13	0.04	<10	<10	165	<10	20
TM100	TM1 Mine-Alta	Fig. II-3-33	10	160	420	<2	2	13	<0.1	<10	<10	12	<10	92
TM111	Pangoco	Fig. II-3-33	30	950	<2	<2	12	27	0.15	<10	<10	121	<10	62

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SAMPLE	PROSPECT	REFERENCE	Mn	P	Pb	Bi	Sr	71	71	U	V	W	Zn
			ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
TH12	Exiban Mine site	Fig. II-3-33	1	570	10	5	14	0.05	<10	<10	27	<10	18
TH13	Exiban Mine site	Fig. II-3-33	2	970	2	6	19	0.05	<10	<10	45	<10	24
TH91	Mt. Baguay	Fig. II-3-33	2	160	4	2	17	<0.1	<10	<10	16	<10	2
TH94	Mt. Baguay	Fig. II-3-33	6	930	2	2	24	<0.1	<10	<10	40	<10	52
TH95	Mt. Baguay	Fig. II-3-33	9	810	2	2	13	<0.1	<10	<10	43	<10	38
KV688	Bulala	Fig. II-3-36	6	10	2	2	11	<0.1	<10	<10	7	<10	8
KV72	Bulala	Fig. II-3-36	1	170	6	2	20	<0.1	<10	<10	26	<10	<2
KV74	Bulala	Fig. II-3-36	4	40	4	2	2	<0.1	<10	<10	30	<10	6
SW93	Mt. Culasi	Fig. II-3-37	1	20	4	2	5	<0.1	<10	<10	1	<10	<2
SW94	Mt. Culasi	Fig. II-3-37	9	30	144	4	8	<0.1	<10	<10	4	<10	8
SM100	Mt. Labo	Fig. II-3-39	7	60	12	2	34	<0.1	<10	<10	15	<10	50
SM101	Mt. Labo	Fig. II-3-39	7	80	2	2	22	<0.1	<10	<10	12	<10	10
SM102	Mt. Labo	Fig. II-3-39	2	300	48	2	186	<0.1	<10	<10	31	<10	16
SM103	Mt. Labo	Fig. II-3-39	2	110	12	2	186	0.01	<10	<10	31	<10	24

Table 2-3 Result of ore grade assay

SAMPLE	PROSPECT	REFERENCE	Au	Pb	Ag	Al	As	Ba	Bi	Ca	Co	Cu	Fe	Mg	K	Mn	Mo	Na
			ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
KY11A	P111 anomaly	Fig. II-3-1	<1	0.77	<1	40	45	<10	0.1	<5	<5	45	0.29	<10	0.14	170	<5	0.08
KY13	P111 anomaly	Fig. II-3-1	<1	0.46	<10	40	45	<10	0.05	<5	<5	25	3.43	<10	0.13	<10	<5	0.1
KY14	P111 anomaly	Fig. II-3-1	<1	0.75	<10	240	45	<10	0.08	<5	<5	20	50	<10	0.13	0.01	50	<5
KY21	P111 anomaly	Fig. II-3-1	<1	0.61	<10	20	45	<10	0.04	<5	<5	40	15	1.47	<10	0.07	40	<5
KY26A	Cebuayan river	Fig. II-3-1	25	1.29	<10	80	45	<10	0.07	<5	<5	20	2.22	<10	0.15	<10	<5	0.27
SN7	Yantao-Negras-Cabertan	Fig. II-3-9	10	1.09	<10	<20	45	<10	0.72	35	5	14500	3.31	<10	<0.01	0.79	280	<5
KY05	Pio Duran-Kapulaki	Fig. II-3-10	<5	0.7	10	40	45	<10	0.17	<5	<5	70	30	0.46	<10	0.1	0.18	160
KY28B	Pio Duran-Kapulaki	Fig. II-3-10	640	2.08	<10	20	45	<10	0.56	<5	20	40	13900	0.15	1.89	490	<5	0.08
KY20A	Pio Duran-Kapulaki	Fig. II-3-10	10	4.79	10	40	45	<10	0.23	<5	5	60	230	2.64	<10	0.02	1.04	540
KY14	Bulawan, Cobao	Fig. II-3-12	<5	0.88	<10	40	45	<10	0.1	<5	<5	50	35	2.56	<10	0.12	10	10
KY66A	Western Goa	Fig. II-3-22	<5	0.82	<10	20	45	<10	0.07	<5	<5	380	5	0.63	<10	0.01	0.19	50
KY68B	Western Goa	Fig. II-3-22	60	0.56	<10	20	45	<10	0.06	<5	5	200	25	0.87	<10	0.04	0.05	440
KY67A	Western Goa	Fig. II-3-22	<5	0.51	<10	60	45	<10	0.07	<5	5	100	395	1.45	0.22	0.08	220	<5
KY58A	Eastern Pasacao	Fig. II-3-24	35	0.17	720	13640	45	<10	0.11	<5	15	380	80	0.82	<10	0.04	0.04	20
KY58B	Eastern Pasacao	Fig. II-3-24	10	0.38	1080	3920	45	<10	0.11	<5	50	710	20	1.42	<10	0.04	0.24	90
KY56C	Eastern Pasacao	Fig. II-3-24	10	0.27	180	280	45	<10	0.15	<5	50	810	10	3.95	<10	0.05	7.1	1000
KY59C	Eastern Pasacao	Fig. II-3-24	10	0.15	400	1540	45	<10	1.49	<5	35	430	10	1.31	<10	0.04	0.97	410
KY60A	Eastern Pasacao	Fig. II-3-24	<5	0.12	<10	100	45	<10	1.87	<5	30	270	5	2.33	<10	0.01	7.55	430
SN7A	Coorasan, Balatan	Fig. II-3-27	210	0.4	<10	<20	45	<10	0.13	<5	<5	130	3970	0.97	<10	0.05	0.15	70
KY77A	Paracale	Fig. II-3-32	missing	missing	missing	missing	missing	missing	missing	missing	missing	missing	missing	missing	missing	missing	missing	missing
KY77C	Paracale	Fig. II-3-32	35	0.6	10	<20	45	400	0.04	<5	25	460	6.35	<10	0.02	0.01	50	<5
KY78A	Paracale	Fig. II-3-32	>10000	57.19	48	0.21	<10	<20	45	60	0.04	<5	460	1.84	<10	0.11	0.01	50
KY11A	P111 anomaly	Fig. II-3-1	<5	100	10	10	45	105	<0.01	<20	<20	75						
KY13	P111 anomaly	Fig. II-3-1	<5	100	20	410	45	95	<0.01	<20	<20	15						
KY14	P111 anomaly	Fig. II-3-1	<5	100	15	<10	45	99	<0.01	<20	<20	20						
KY21	P111 anomaly	Fig. II-3-1	<5	200	5	<10	45	115	<0.01	<20	<20	10						
KY26A	Cebuayan river	Fig. II-3-1	5	1260	5	<10	45	180	<0.01	<20	<20	5						
SN7	Yantao-Negras-Cabertan	Fig. II-3-9	10	100	15	<10	45	20	0.04	<20	<20	120						
KY05	Pio Duran-Kapulaki	Fig. II-3-10	10	100	20	<10	45	60	<0.01	<20	<20	470						
KY28B	Pio Duran-Kapulaki	Fig. II-3-10	35	800	20	<10	5	60	0.14	<20	<20	120						
KY20A	Pio Duran-Kapulaki	Fig. II-3-10	5	300	20	<10	45	75	0.09	<20	<20	80						
KY14	Bulawan, Cobao	Fig. II-3-12	<5	200	5	<10	45	155	<0.01	<20	<20	60						
KY66A	Western Goa	Fig. II-3-22	30	<100	45	<10	45	45	<0.01	<20	<20	70						
KY68B	Western Goa	Fig. II-3-22	10	100	5	<10	45	5	<0.01	<20	<20	15						
KY67A	Western Goa	Fig. II-3-22	20	<100	5	<10	45	20	0.01	<20	<20	20						
KY58A	Eastern Pasacao	Fig. II-3-24	180	<100	10	<10	45	345	<0.01	<20	<20	20						
KY58B	Eastern Pasacao	Fig. II-3-24	1180	<100	5	<10	45	85	<0.01	<20	<20	25						
KY59C	Eastern Pasacao	Fig. II-3-24	1055	<100	45	<10	5	330	<0.01	<20	<20	20						
KY60A	Eastern Pasacao	Fig. II-3-24	760	<100	5	10	45	65	<0.01	<20	<20	20						
SN7A	Coorasan, Balatan	Fig. II-3-27	45	<100	15	<10	45	25	0.01	<20	<20	25						
KY77A	Paracale	Fig. II-3-32	missing	missing	missing	missing	missing	missing	missing	missing	missing	missing	missing	missing	missing	missing	missing	missing
KY77C	Paracale	Fig. II-3-32	150	<100	35	<10	45	45	<0.01	<20	<20	420						
KY78A	Paracale	Fig. II-3-32	35	<100	1780	<10	45	5	<0.01	<20	<20	420						

Table 2-5 Result of determination of mineral assemblages by X-ray diffraction

No.	Sample No.	Prospect	Reference of locality	Silicate Minerals										Others	Comments	Preps. method				
				Quartz		Feldspar		Clay minerals		Smectite		Others					Sulfate	Carbonate	Others	
				Si	Al	Si	Al	Si	Al	Si	Al	Si	Al	Si	Al	Si	Al	Si	Al	
101	TH 91	Mt. Bagacay	Fig. II-3-23	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
102	KY 68a	Bulala	Fig. II-3-26	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
103	KY 72	Bulala	Fig. II-3-26	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
104	KY 74	Bulala	Fig. II-3-26	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
105	SM 92	Mt. Cullasi	Fig. II-3-27	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
106	SM 94	Mt. Cullasi	Fig. II-3-27	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
107	SM 96	Mt. Cullasi	Fig. II-3-27	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
108	SM 99	Mt. Labo	Fig. II-3-29	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
109	SM 100	Mt. Labo	Fig. II-3-29	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
110	SM 101	Mt. Labo	Fig. II-3-29	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

NOTE: Ser/Sme : Sericite/Smectite mixed-layer clay mineral
 Chl/Sme : Chlorite/Smectite mixed-layer clay mineral

mineral	(d value)	peak height from base line (unit: chart scale)		Criteria of quantity of mineral
		⊙ (abundant)	△ (few)	
Quartz	(3.34)	more than 100	99 - 50	less than 10
Cristobalite	(4.05)	more than 100	99 - 50	less than 10
Tridymite	(4.27)	more than 40	39 - 20	less than 10
K-feldspar	(3.30)	more than 20	19 - 10	less than 5
Albite	(3.20)			
Sericite	(10.10)			
Chlorite	(7.10)	more than 20	19 - 10	less than 5
Kaolinite	(7.18)			
Smectite	(15.15)			
Halloysite	(4.42)			
Pyrophyllite	(3.04)			
Clinoptilolite	(8.93)	more than 20	19 - 10	less than 5
Hauandite	(8.95)			
Leumontite	(4.16)			
Mordenite	(3.48)			
Hornblend	(8.40)			
Pyroxene	(5.21)	more than 20	19 - 10	less than 5
Hypersthene	(3.18)			
Biotite	(10.10)			
Alunite	(2.99)	more than 45	44 - 20	less than 10
Jarosite	(3.06)			
Barite	(3.45)			
Gypsum	(2.87)			
Calcite	(3.03)	more than 45	44 - 20	less than 10
Ankerite	(2.90)			
Magnesite	(2.74)			
Siderite	(2.80)			
Pyrite	(2.71)			
Anatase	(3.52)			
Rutile	(3.25)			
Hematite	(2.70)	more than 10	9 - 5	less than 3
Goethite	(4.18)			
Marcasite	(2.69)			
Magnetite	(2.53)			
Sphalerite	(3.12)			
Galena	(2.96)			

Table 2-6 Result of measurement of $\delta^{18}\text{O}$ and δD

Sample	Prospect	$\delta^{18}\text{O}$	δD
		(‰, SMOW)	(‰, SMOW)
TH-75	Siruma	+21.7	-58.6

Table 2-7 Result of determination of temperature by isotope geothermometer

Sample	Prospect	$\delta^{34}\text{S}_{\text{CDT}}$	$\delta^{34}\text{S}_{\text{CDT}}$	Temperature (°C)	
		sphalerite	galena	*1	*2
KY-79	Paracale	-2.8	-4.2	417	431

note *1: Kajiwara and Kruee, 1971

*2: Ohmoto and Rye, 1979

Figure 2-1 Result of determination of homogenization temperature and salinity of fluid inclusions (1/22)

sample SM30
 prospect T1w1
 rock type quartz vein within altered andesite breccia
 reference Fig. II-3-7
 fluid inclusions size of vapor vary greatly and it suggests boiling has occurred

No	Mineral	Size (μm)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl Wt (%)
1	Quartz	7.5	15	po	231	-1.2	2.89
2	Quartz	15.0	10	irr	239	-1.3	2.34
3	Quartz	7.5	10	po	239	-1.2	2.87
4	Quartz	5.0	3	sq	242	-	-
5	Quartz	10.0	10	po	244	-1.1	1.91
6	Quartz	12.5	10	po	237	-1.2	2.67
7	Quartz	17.5	12	irr	243	-1.2	2.07
8	Quartz	15.0	10	po	237	-1.4	2.41
9	Quartz	7.5	10	po	238	-1.2	2.07
10	Quartz	2.5	3	sq	232	-	-
11	Quartz	12.5	10	irr	241	-1.4	2.41
12	Quartz	20.0	10	po	231	-1.1	1.91
13	Quartz	10.0	5	tu	227	-1.2	2.07
14	Quartz	12.5	10	po	232	-1.2	2.07
15	Quartz	5.0	12	sq	244	-	-
16	Quartz	5.0	10	po	231	-	-
17	Quartz	2.5	3	sq	233	-	-
18	Quartz	5.0	10	po	236	-	-
19	Quartz	12.5	12	irr	247	-1.2	2.07
20	Quartz	5.0	10	po	237	-	-

sq:egg irr:irregular po:polygon sq:square tr:triangle tu:tube wg:wedge

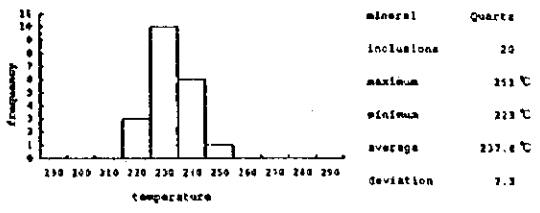


Figure 2-1 Result of determination of homogenization temperature and salinity of fluid inclusions (3/22)

sample SM32
 prospect T1w1
 rock type altered andesite
 reference Fig. II-3-7
 fluid inclusions size of vapor vary greatly and it suggests boiling has occurred

No	Mineral	Size (μm)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl Wt (%)
1	Quartz	7.5	13	po	233	-0.6	1.05
2	Quartz	5.0	15	sq	238	-0.6	1.05
3	Quartz	5.0	12	sq	244	-0.4	0.71
4	Quartz	5.0	10	po	216	-0.5	0.88
5	Quartz	5.0	10	po	208	-0.6	1.05
6	Quartz	5.0	12	sq	224	-0.6	0.71
7	Quartz	7.5	13	po	234	-0.4	0.71
8	Quartz	5.0	12	sq	233	-0.4	0.71
9	Quartz	5.0	12	po	225	-0.4	0.71
10	Quartz	5.0	10	po	209	-	-
11	Quartz	5.0	13	po	242	-0.5	0.88
12	Quartz	5.0	12	sq	238	-0.6	1.05
13	Quartz	2.5	10	po	233	-	-
14	Quartz	2.5	10	po	227	-	-
15	Quartz	10.0	12	irr	248	-0.7	1.23
16	Quartz	7.5	13	po	252	-0.6	1.05
17	Quartz	5.0	13	sq	257	-0.4	0.71
18	Quartz	5.0	12	sq	244	-0.6	1.05
19	Quartz	2.5	10	po	246	-	-
20	Quartz	5.0	13	po	235	-0.6	0.71

sq:egg irr:irregular po:polygon sq:square tr:triangle tu:tube wg:wedge

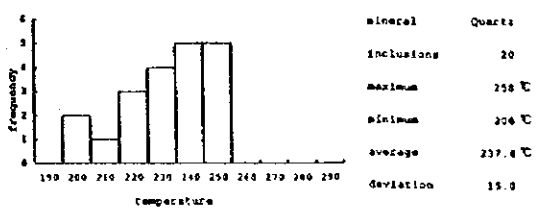


Figure 2-1 Result of determination of homogenization temperature and salinity of fluid inclusions (2/22)

sample SM11
 prospect T1w1
 rock type altered andesite breccia
 reference Fig. II-3-7
 fluid inclusions many other single liquid phase inclusions are observed packing down is also observed

No	Mineral	Size (μm)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl Wt (%)
1	Quartz	20.0	12	sq	249	-0.4	0.71
2	Quartz	12.5	10	tu	249	-0.2	0.35
3	Quartz	10.0	12	po	249	-0.7	1.23
4	Quartz	5.0	10	po	241	-	-
5	Quartz	20.0	3	tu	249	-	-
6	Quartz	20.0	7	irr	241	-0.4	1.05
7	Quartz	22.5	10	po	237	-0.6	1.05
8	Quartz	10.0	15	tr	249	-0.7	1.23
9	Quartz	7.5	10	irr	258	-	-
10	Quartz	5.0	10	po	274	-	-
11	Quartz	15.0	10	irr	245	-0.4	0.71
12	Quartz	10.0	7	irr	252	-0.6	1.05
13	Quartz	10.0	5	irr	241	-0.4	0.71
14	Quartz	2.5	3	sq	245	-	-
15	Quartz	2.5	3	sq	233	-	-
16	Quartz	5.0	10	po	241	-	-
17	Quartz	17.5	10	irr	251	-0.4	1.05
18	Quartz	20.0	12	irr	256	-0.4	0.71
19	Quartz	5.0	10	po	248	-	-
20	Quartz	7.5	10	po	244	-	-

sq:egg irr:irregular po:polygon sq:square tr:triangle tu:tube wg:wedge

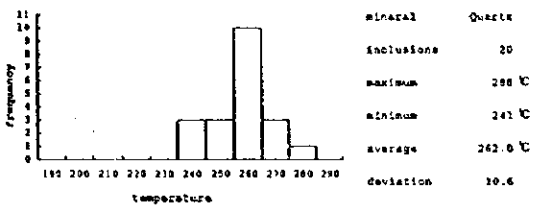


Figure 2-1 Result of determination of homogenization temperature and salinity of fluid inclusions (4/22)

sample SM34
 prospect T1w1
 rock type altered andesite
 reference Fig. II-3-7
 fluid inclusions many other single liquid phase inclusions are observed

No	Mineral	Size (μm)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl Wt (%)
1	Calcite	20.0	15	po	237	-0.2	0.35
2	Calcite	25.0	15	po	231	-0.2	0.35
3	Calcite	5.0	10	po	278	-	-
4	Calcite	25.0	10	sq	280	-0.2	0.35
5	Calcite	5.0	10	sq	233	-	-
6	Calcite	12.5	10	tu	237	-0.3	0.35
7	Calcite	7.5	7	po	276	-	-
8	Calcite	10.0	5	tu	231	-0.2	0.35
9	Calcite	17.5	7	tu	285	-0.1	0.16
10	Calcite	5.0	12	sq	272	-	-
11	Calcite	5.0	10	po	286	-	-
12	Calcite	12.5	10	po	275	-0.2	0.35
13	Calcite	5.0	3	po	232	-	-
14	Calcite	5.0	10	sq	213	-	-
15	Calcite	5.0	10	po	279	-	-
16	Calcite	7.5	5	sq	258	-	-
17	Calcite	10.0	12	po	279	-	-
18	Calcite	10.0	13	sq	243	-0.2	0.35
19	Calcite	7.5	10	po	272	-	-
20	Calcite	3.0	7	po	241	-	-

sq:egg irr:irregular po:polygon sq:square tr:triangle tu:tube wg:wedge

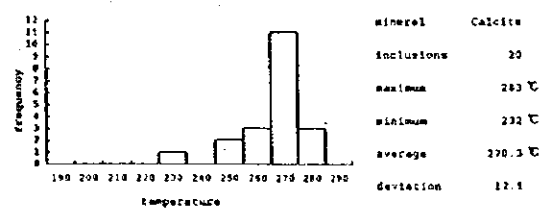


Figure 2-1 Result of determination of homogenization temperature and salinity of fluid inclusions (5/22)

sample SMO3
 prospect Panto-Mogaj-Coberian
 rock type diorite
 reference Fig II-3-9
 fluid inclusions many other single liquid phase inclusions and secondary inclusions are observed suitable inclusions for observation are few because of size

No	Mineral	Size (µm)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl wt (%)
1	Quartz	5.0	7	po	176	-0.4	0.71
2	Quartz	5.0	5	po	161	-0.2	0.35
3	Quartz	2.5	5	po	169	-	-
4	Quartz	2.5	3	sq	152	-	-
5	Quartz	2.5	2	sq	170	-	-
6	Quartz	2.5	2	sq	166	-	-
7	Quartz	7.5	1	po	163	-0.2	0.33
8	Quartz	5.0	3	po	147	-0.2	0.15
9	Quartz	2.5	3	po	161	-	-
10	Quartz	2.5	3	sq	173	-	-
11	Quartz	2.5	5	sq	171	-	-
12	Quartz	2.5	2	sq	154	-	-

eg:egg irr:irregular po:polygon sq:square tr:triangle tu:tube wg:wedge

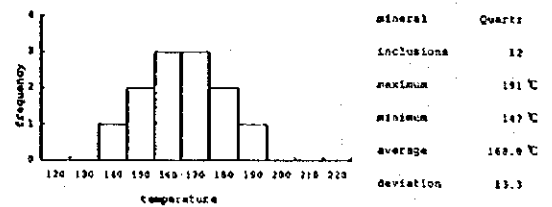


Figure 2-1 Result of determination of homogenization temperature and salinity of fluid inclusions (7/22)

sample TH74
 prospect Siruma
 rock type quartz vein
 reference Fig II-3-19
 fluid inclusions size of vapor vary greatly and it suggests boiling has occurred many other secondary inclusions are observed

No	Mineral	Size (µm)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl wt (%)
1	Quartz	12.5	12	po	173	-0.5	0.88
2	Quartz	7.5	10	irr	149	-0.4	1.09
3	Quartz	7.5	12	po	169	-	-
4	Quartz	5.0	10	po	151	-	-
5	Quartz	12.5	10	irr	176	-0.4	0.72
6	Quartz	7.5	10	po	143	-0.5	0.88
7	Quartz	20.0	10	irr	152	-0.5	0.88
8	Quartz	7.5	12	sq	173	-0.6	1.05
9	Quartz	7.5	12	po	169	-0.5	0.88
10	Quartz	5.0	13	sq	177	-0.7	1.23
11	Quartz	5.0	10	po	148	-	-
12	Quartz	5.0	13	sq	167	-	-
13	Quartz	12.5	10	po	155	-0.4	0.71
14	Quartz	10.0	12	po	173	-0.5	0.88
15	Quartz	5.0	15	sq	162	-0.5	0.88
16	Quartz	5.0	10	po	151	-	-
17	Quartz	10.0	15	po	166	-0.8	1.05
18	Quartz	7.5	10	tu	142	-0.2	0.35
19	Quartz	5.0	12	po	153	-	-
20	Quartz	5.0	12	irr	164	-	-

eg:egg irr:irregular po:polygon sq:square tr:triangle tu:tube wg:wedge

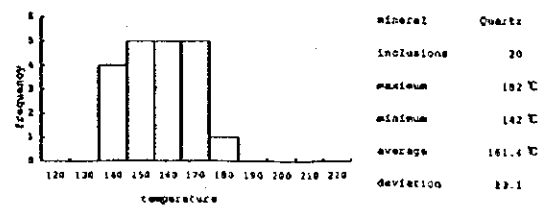


Figure 2-1 Result of determination of homogenization temperature and salinity of fluid inclusions (6/22)

sample KX30a
 prospect Pto Duran-Kapulaki
 rock type quartz vein
 reference Fig II-3-10
 fluid inclusions size of vapor very greatly and it suggests boiling has occurred

No	Mineral	Size (µm)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl wt (%)
1	Calcite	12.5	10	sq	242	-1.5	2.52
2	Calcite	10.0	10	sq	232	-1.4	2.41
3	Calcite	5.0	7	po	204	-	-
4	Calcite	5.0	12	sq	213	-	-
5	Calcite	7.5	10	sq	222	-1.6	2.74
6	Calcite	2.5	7	po	204	-	-
7	Calcite	7.5	10	sq	214	-	-
8	Calcite	7.5	12	sq	228	-1.8	2.93
9	Calcite	5.0	10	sq	232	-1.9	2.97
10	Calcite	5.0	7	po	193	-	-
11	Calcite	15.0	10	po	211	-1.0	1.76
12	Calcite	5.0	12	sq	242	-	-
13	Calcite	5.0	10	po	208	-	-
14	Calcite	2.5	7	sq	231	-	-
15	Calcite	7.5	7	sq	221	-1.6	2.74
16	Calcite	10.0	12	sq	241	-1.7	2.90
17	Calcite	2.5	7	sq	203	-	-
18	Calcite	2.5	5	sq	208	-	-
19	Calcite	5.0	12	sq	237	-1.0	1.74
20	Calcite	7.5	10	sq	216	-1.5	2.57

eg:egg irr:irregular po:polygon sq:square tr:triangle tu:tube wg:wedge

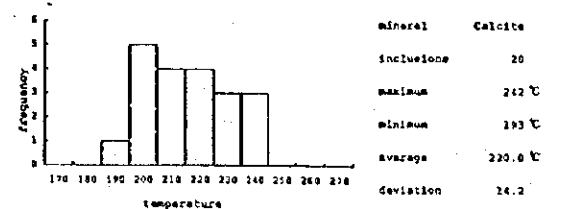


Figure 2-1 Result of determination of homogenization temperature and salinity of fluid inclusions (8/22)

sample KX66b
 prospect Western Goa
 rock type quartz vein
 reference Fig II-3-22
 fluid inclusions many other single liquid phase inclusions and secondary inclusions are observed

No	Mineral	Size (µm)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl wt (%)
1	Quartz	10.0	10	po	167	-1.1	1.91
2	Quartz	7.5	5	po	158	-0.8	1.40
3	Quartz	7.5	10	po	162	-	-
4	Quartz	5.0	5	po	147	-1.1	1.91
5	Quartz	5.0	7	po	155	-1.0	1.74
6	Quartz	5.0	7	irr	169	-1.1	1.91
7	Quartz	2.5	5	po	137	-	-
8	Quartz	2.5	3	sq	139	-	-
9	Quartz	2.5	3	sq	126	-	-
10	Quartz	5.0	7	po	148	-1.2	2.07
11	Quartz	12.5	10	irr	171	-1.0	1.74
12	Quartz	5.0	10	po	157	-1.0	1.74
13	Quartz	5.0	7	po	155	-1.1	1.91
14	Quartz	2.5	3	sq	136	-	-
15	Quartz	2.5	2	sq	131	-	-
16	Quartz	2.5	2	sq	135	-	-
17	Quartz	7.5	10	po	147	-0.8	1.40
18	Quartz	5.0	10	po	166	-1.0	1.74
19	Quartz	5.0	7	po	150	-	-
20	Quartz	2.5	3	po	139	-	-

eg:egg irr:irregular po:polygon sq:square tr:triangle tu:tube wg:wedge

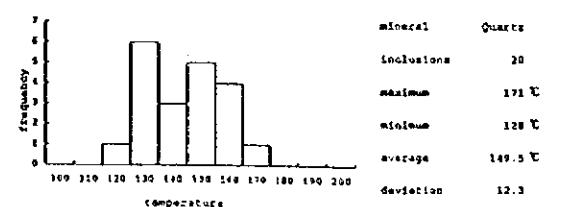


Figure 2-1 Result of determination of homogenization temperature and salinity of fluid inclusions (9/22)

sample K1516
 prospect Eastern Passoco
 rock type Quartz vein
 reference Fig. II-3-23
 fluid inclusions many other single liquid phase inclusions are observed

No	Mineral	Size (μm)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl wt (%)
1	Quartz	5.0	7	po	118	-0.2	0.33
2	Quartz	5.0	3	po	118	-0.2	0.33
3	Quartz	2.5	2	po	103	-	-
4	Quartz	2.5	2	sq	148	-	-
5	Quartz	2.5	2	sq	108	-	-
6	Quartz	2.5	3	to	144	-0.1	0.18
7	Quartz	5.0	3	po	112	0.0	0.00
8	Quartz	5.0	3	po	118	-0.2	0.15
9	Quartz	5.0	3	sq	142	-0.2	0.15
10	Quartz	2.5	3	sq	153	-	-
11	Quartz	2.5	2	sq	107	-	-
12	Quartz	2.5	2	sq	112	-	-
13	Quartz	2.5	2	sq	117	-	-
14	Quartz	2.5	3	po	133	-0.1	0.18
15	Quartz	5.0	3	po	109	0.0	0.00
16	Quartz	2.5	2	po	121	0.0	0.00
17	Quartz	2.5	3	po	115	-	-
18	Quartz	2.5	3	po	141	-	-
19	Quartz	2.5	2	sq	132	-	-
20	Quartz	2.5	2	sq	108	-	-

eg:egg irr:irregular po:polygon sq:square tr:triangle tu:tube wg:wedge

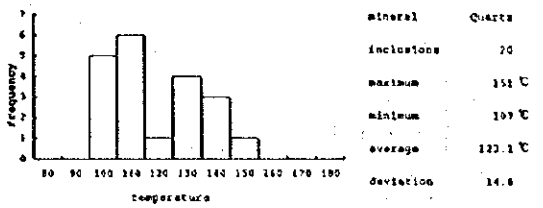


Figure 2-1 Result of determination of homogenization temperature and salinity of fluid inclusions (11/22)

sample K1590
 prospect Eastern Passoco
 rock type quartz vein float
 reference Fig. II-3-24
 fluid inclusions many other single liquid phase inclusions are observed
 necking down is also observed

No	Mineral	Size (μm)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl wt (%)
1	Quartz	22.5	10	po	232	-0.8	1.40
2	Quartz	5.0	3	po	241	-	-
3	Quartz	30.0	10	irr	218	-0.5	0.08
4	Quartz	12.5	12	sq	244	-0.8	1.40
5	Quartz	10.0	12	sq	231	-0.7	1.22
6	Quartz	2.5	5	po	251	-	-
7	Quartz	2.5	5	sq	246	-	-
8	Quartz	2.5	3	sq	232	-	-
9	Quartz	17.5	10	sq	245	-0.8	1.40
10	Quartz	17.5	12	sq	231	-0.8	1.40
11	Quartz	5.0	7	irr	217	-	-
12	Quartz	15.0	7	po	232	-0.7	1.22
13	Quartz	2.5	5	sq	228	-	-
14	Quartz	5.0	10	sq	228	-0.8	1.40
15	Quartz	5.0	10	sq	244	-	-
16	Quartz	17.5	7	tu	260	-0.6	1.05
17	Quartz	15.0	10	po	232	-0.8	1.40
18	Quartz	15.0	12	sq	249	-0.8	1.40
19	Quartz	5.0	7	irr	224	-	-
20	Quartz	5.0	10	irr	246	-	-

eg:egg irr:irregular po:polygon sq:square tr:triangle tu:tube wg:wedge

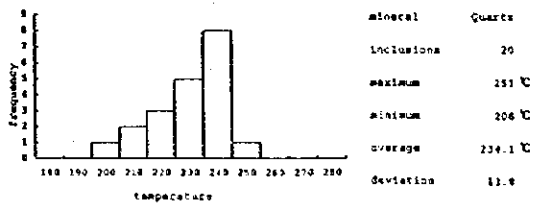


Figure 2-1 Result of determination of homogenization temperature and salinity of fluid inclusions (10/22)

sample K1516
 prospect Eastern Passoco
 rock type quartz vein
 reference Fig. II-3-24
 fluid inclusions many other single liquid phase inclusions are observed
 necking down is also observed

No	Mineral	Size (μm)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl wt (%)
1	Calcite	15.0	12	po	234	-0.3	0.53
2	Calcite	12.5	10	irr	169	-0.3	0.15
3	Calcite	10.0	10	irr	176	-0.1	0.14
4	Calcite	17.5	5	tr	191	-0.2	0.34
5	Calcite	5.0	5	tu	194	-	-
6	Calcite	2.5	5	tu	143	-	-
7	Calcite	10.0	12	po	225	-0.2	0.35
8	Calcite	2.5	5	sq	147	-	-
9	Calcite	2.5	5	sq	164	-	-
10	Calcite	12.5	10	sq	197	-0.1	0.18
11	Calcite	5.0	12	sq	231	-	-
12	Calcite	2.5	10	po	201	-0.3	0.53
13	Calcite	5.0	12	sq	231	-	-
14	Calcite	2.5	7	po	192	-	-
15	Calcite	12.5	12	sq	231	-0.3	0.53
16	Calcite	12.5	10	sq	208	-0.3	0.53
17	Calcite	5.0	10	po	197	-	-
18	Calcite	2.5	7	sq	181	-	-
19	Calcite	5.0	7	irr	178	-	-
20	Calcite	10.0	10	irr	201	-0.2	0.35

eg:egg irr:irregular po:polygon sq:square tr:triangle tu:tube wg:wedge

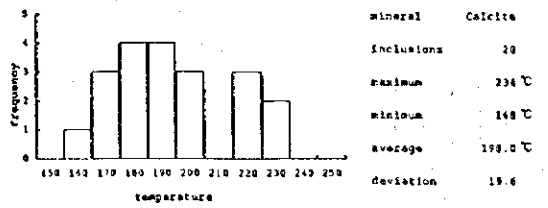


Figure 2-1 Result of determination of homogenization temperature and salinity of fluid inclusions (12/22)

sample K1604
 prospect Eastern Passoco
 rock type quartz vein
 reference Fig. II-3-24
 fluid inclusions many other single liquid phase inclusions are observed
 necking down is also observed

No	Mineral	Size (μm)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl wt (%)
1	Quartz	12.5	10	po	185	-2.3	3.87
2	Quartz	12.5	10	irr	167	-1.6	2.74
3	Quartz	2.5	7	irr	194	-	-
4	Quartz	12.5	10	irr	198	-2.2	3.71
5	Quartz	5.0	7	tr	192	-2.2	3.71
6	Quartz	2.5	7	sq	183	-	-
7	Quartz	2.5	10	po	189	-	-
8	Quartz	2.5	7	sq	171	-	-
9	Quartz	5.0	10	po	202	-	-
10	Quartz	2.5	5	sq	181	-	-
11	Quartz	10.0	10	irr	201	-2.3	3.87
12	Quartz	2.5	5	po	171	-	-
13	Quartz	2.5	5	sq	194	-	-
14	Quartz	2.5	5	sq	182	-	-
15	Quartz	5.0	10	sq	197	-2.2	3.71
16	Quartz	2.5	5	sq	189	-	-
17	Quartz	2.5	7	sq	187	-	-
18	Quartz	2.5	12	sq	202	-2.2	3.71
19	Quartz	2.5	5	sq	192	-	-
20	Quartz	2.5	7	sq	181	-	-

eg:egg irr:irregular po:polygon sq:square tr:triangle tu:tube wg:wedge

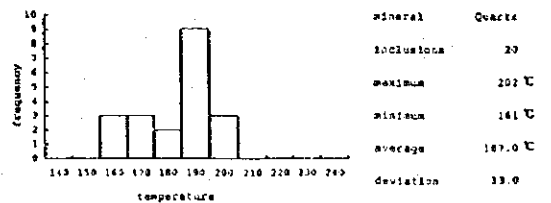
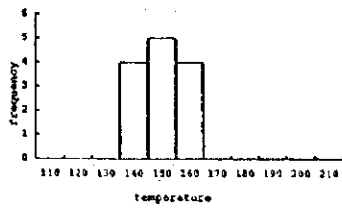


Figure 2-1 Result of determination of homogenization temperature and salinity of fluid inclusions (13/22)

sample SN75c
 prospect Lake Buhl
 rock type altered rock float
 reference Fig. II-3-26
 fluid inclusions suitable inclusions for observation are very few because of size

No	Mineral	Size (µm)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl wt (%)
1	Quartz	5.0	7	ps	141	0.0	0.00
2	Quartz	5.0	7	ps	155	-0.1	0.18
3	Quartz	2.5	5	ps	160	-	-
4	Quartz	2.5	3	cs	151	-	-
5	Quartz	2.5	3	cs	155	-	-
6	Quartz	5.0	7	ps	162	-0.1	0.18
7	Quartz	2.5	3	sg	164	-0.1	0.18
8	Quartz	5.0	7	ps	165	-0.1	0.18
9	Quartz	5.0	7	ps	161	-0.1	0.18
10	Quartz	2.5	3	sg	163	-	-
11	Quartz	2.5	3	sg	159	-	-
12	Quartz	2.5	3	sg	160	-	-
13	Quartz	2.5	2	sg	152	-	-
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eg:egg irr:irregular po:polygon sq:square tr:triangle tu:tube wg:wedge



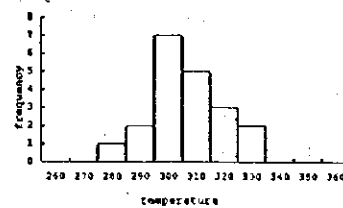
mineral Quartz
 inclusions 13
 maximum 160 °C
 minimum 141 °C
 average 154.0 °C
 deviation 7.9

Figure 2-1 Result of determination of homogenization temperature and salinity of fluid inclusions (14/22)

sample SN71b
 prospect Lake Buhl
 rock type altered rock float
 reference Fig. II-3-26
 fluid inclusions some other gas phase inclusions are observed

No	Mineral	Size (µm)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl wt (%)
1	Quartz	10.0	12	ps	304	-0.2	0.35
2	Quartz	2.5	19	ps	324	-0.2	0.35
3	Quartz	2.5	17	ps	311	-0.4	0.73
4	Quartz	2.5	7	sp	291	-	-
5	Quartz	2.5	5	ps	302	-	-
6	Quartz	2.5	5	ps	304	-	-
7	Quartz	5.0	10	ps	311	-0.2	0.35
8	Quartz	2.5	19	ps	324	-	-
9	Quartz	2.5	7	sp	293	-	-
10	Quartz	2.5	5	ps	311	-	-
11	Quartz	2.5	7	ps	307	-	-
12	Quartz	22.5	10	cs	302	-	-
13	Quartz	17.5	5	cs	311	-	-
14	Quartz	2.5	12	ps	314	-0.2	0.35
15	Quartz	2.5	8	sg	301	-	-
16	Quartz	2.5	7	sp	323	-	-
17	Quartz	2.5	12	ps	306	0.0	0.00
18	Quartz	2.5	12	ps	312	-0.2	0.35
19	Quartz	2.5	10	ps	327	-	-
20	Quartz	2.5	5	sp	288	-	-

eg:egg irr:irregular po:polygon sq:square tr:triangle tu:tube wg:wedge



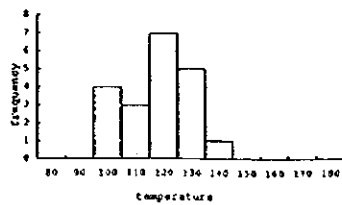
mineral Quartz
 inclusions 20
 maximum 324 °C
 minimum 288 °C
 average 309.9 °C
 deviation 12.5

Figure 2-1 Result of determination of homogenization temperature and salinity of fluid inclusions (15/22)

sample SN78
 prospect Coorsman, Salatan
 rock type quartz vein
 reference Fig. II-3-27
 fluid inclusions many other liquid single phase inclusions are observed

No	Mineral	Size (µm)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl wt (%)
1	Quartz	22.5	10	irr	122	-0.3	0.18
2	Quartz	7.5	7	ps	121	0.0	0.00
3	Quartz	2.5	5	ps	103	-	-
4	Quartz	2.5	3	sg	124	-	-
5	Quartz	2.5	2	sp	118	-	-
6	Quartz	5.0	10	ps	126	-0.1	0.18
7	Quartz	10.0	10	tr	124	-0.1	0.18
8	Quartz	2.5	3	sg	106	-	-
9	Quartz	2.5	3	ps	111	-	-
10	Quartz	2.5	10	ps	142	-	-
11	Quartz	2.5	3	ps	117	-	-
12	Quartz	5.0	18	sg	111	0.0	0.00
13	Quartz	2.5	5	sg	103	-	-
14	Quartz	2.5	3	sg	106	-	-
15	Quartz	2.5	5	sg	117	-	-
16	Quartz	5.0	7	ps	124	-0.1	0.18
17	Quartz	7.5	7	ps	113	-0.2	0.35
18	Quartz	2.5	3	ps	124	-	-
19	Quartz	2.5	3	sg	112	-	-
20	Quartz	2.5	3	sg	125	-	-

eg:egg irr:irregular po:polygon sq:square tr:triangle tu:tube wg:wedge



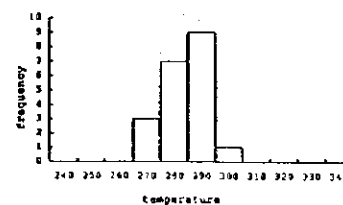
mineral Quartz
 inclusions 20
 maximum 142 °C
 minimum 103 °C
 average 122.2 °C
 deviation 19.6

Figure 2-1 Result of determination of homogenization temperature and salinity of fluid inclusions (16/22)

sample K726a1
 prospect Paracale
 rock type quartz vein
 reference Fig. II-3-12
 fluid inclusions many other single liquid phase inclusions and secondary inclusions are observed

No	Mineral	Size (µm)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl wt (%)
1	Quartz	55.0	13	ps	297	-4.7	7.65
2	Quartz	10.0	7	ps	296	-4.8	7.39
3	Quartz	15.0	12	ps	295	-4.9	7.33
4	Quartz	7.5	10	ps	294	-4.8	7.36
5	Quartz	10.0	10	tr	291	-	-
6	Quartz	2.5	5	sg	301	-	-
7	Quartz	30.0	13	ps	276	-3.7	6.88
8	Quartz	22.5	12	irr	283	-4.6	7.11
9	Quartz	22.5	15	ps	297	-5.6	8.68
10	Quartz	25.0	12	irr	288	-6.1	9.34
11	Quartz	12.5	10	ps	278	-4.6	7.59
12	Quartz	5.0	10	ps	281	-	-
13	Quartz	5.0	10	ps	276	-	-
14	Quartz	5.0	10	tr	282	-	-
15	Quartz	22.5	12	irr	291	-5.8	7.59
16	Quartz	15.0	10	irr	289	-4.6	7.31
17	Quartz	10.0	10	ps	296	-4.4	7.62
18	Quartz	12.5	10	ps	281	-4.4	7.31
19	Quartz	5.0	7	sg	284	-	-
20	Quartz	5.0	10	ps	294	-	-

eg:egg irr:irregular po:polygon sq:square tr:triangle tu:tube wg:wedge



mineral Quartz
 inclusions 20
 maximum 301 °C
 minimum 276 °C
 average 288.3 °C
 deviation 7.2

Figure 2-1 Result of determination of homogenization temperature and salinity of fluid inclusions (17/22)

sample: K175b
 prospect: Paraclete
 rock type: altered granodiorite
 reference: Fig II-3-32
 fluid inclusions: size of vapor vary greatly and it suggests boiling has occurred

No	Mineral	Size (µm)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl wt (%)
1	Quartz	19.9	20	po	252	-0.1	0.10
2	Quartz	5.0	11	po	264	-	-
3	Quartz	7.5	17	po	258	0.0	0.00
4	Quartz	7.5	20	po	312	0.0	0.00
5	Quartz	27.5	20	irr	303	-0.2	0.35
6	Quartz	5.0	20	sq	287	-0.1	0.10
7	Quartz	12.5	17	po	240	0.0	0.00
8	Quartz	5.0	20	sq	314	-	-
9	Quartz	7.5	15	po	270	-0.1	0.10
10	Quartz	7.5	20	po	324	0.0	0.00
11	Quartz	10.0	12	po	274	0.0	0.00
12	Quartz	10.0	12	po	300	0.0	0.00
13	Quartz	17.5	17	irr	297	-0.2	0.25
14	Quartz	5.0	20	sq	294	0.0	0.00
15	Quartz	5.0	17	po	306	0.0	0.00
16	Quartz	7.5	20	po	272	-	-
17	Quartz	19.9	10	po	272	-0.1	0.10
18	Quartz	5.0	17	po	277	0.0	0.00
19	Quartz	7.5	13	po	283	0.0	0.00
20	Quartz	7.5	12	po	293	-0.1	0.10

eg:egg irr:irregular po:polygon sq:square tr:triangle tu:tube wg:wedge

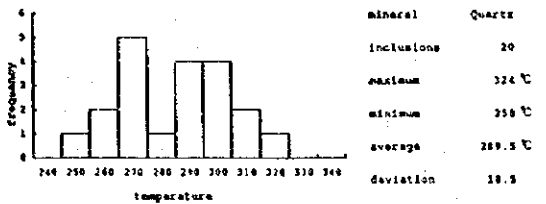


Figure 2-1 Result of determination of homogenization temperature and salinity of fluid inclusions (19/22)

sample: TM103
 prospect: Bessemer Pit
 rock type: hydrothermal biotite
 reference: Fig II-3-33
 fluid inclusions: size of vapor vary greatly and it suggests boiling has occurred

No	Mineral	Size (µm)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl wt (%)
1	Quartz	12.5	7	po	217	-20.9	22.98
2	Quartz	12.5	7	irr	207	-21.0	23.03
3	Quartz	7.5	5	sq	214	-	-
4	Quartz	2.5	5	sq	186	-	-
5	Quartz	2.5	5	sq	182	-	-
6	Quartz	7.5	7	po	199	-	-
7	Quartz	10.0	7	po	204	-20.9	22.98
8	Quartz	10.0	10	sq	204	-	-
9	Quartz	10.0	10	po	207	-	-
10	Quartz	5.0	3	sq	204	-	-
11	Quartz	19.0	7	irr	217	-19.4	22.10
12	Quartz	12.5	3	po	210	-19.1	21.75
13	Quartz	10.0	3	tr	204	-20.2	22.51
14	Quartz	5.0	3	tr	183	-	-
15	Quartz	5.0	3	po	213	-	-
16	Quartz	5.0	3	po	209	-	-
17	Quartz	7.5	7	po	211	-20.3	22.58
18	Quartz	5.0	3	po	204	-	-
19	Quartz	2.5	3	sq	201	-	-
20	Quartz	5.0	7	po	214	-	-

eg:egg irr:irregular po:polygon sq:square tr:triangle tu:tube wg:wedge

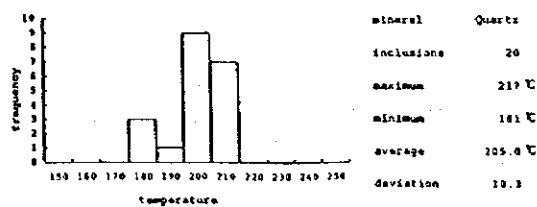


Figure 2-1 Result of determination of homogenization temperature and salinity of fluid inclusions (18/22)

sample: K173
 prospect: Paraclete
 rock type: Sph-Ga-Cp-ore
 reference: Fig II-3-32
 fluid inclusions: many other secondary inclusions are observed

No	Mineral	Size (µm)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl wt (%)
1	Sphalerite	7.5	5	po	212	-0.4	0.21
2	Sphalerite	7.5	3	po	207	-0.5	0.05
3	Sphalerite	5.0	3	sq	204	-0.2	0.35
4	Sphalerite	5.0	3	tr	214	-	-
5	Sphalerite	5.0	3	po	221	-0.4	0.71
6	Sphalerite	5.0	3	po	203	-0.2	0.35
7	Sphalerite	2.5	2	sq	200	-	-
8	Sphalerite	2.5	2	sq	204	-	-
9	Sphalerite	7.5	5	po	252	-0.2	0.35
10	Sphalerite	5.0	3	po	217	-	-
11	Sphalerite	9.0	5	po	273	-	-
12	Sphalerite	3.0	3	tr	240	-0.3	0.88
13	Sphalerite	2.5	2	po	211	-	-
14	Sphalerite	2.5	2	sq	223	-	-
15	Sphalerite	2.5	2	sq	210	-	-
16	Sphalerite	7.5	5	po	241	-0.4	0.71
17	Sphalerite	7.5	3	po	246	-0.3	0.51
18	Sphalerite	5.0	3	sq	233	-0.4	0.71
19	Sphalerite	5.0	2	po	219	-	-
20	Sphalerite	5.0	3	po	222	-	-

eg:egg irr:irregular po:polygon sq:square tr:triangle tu:tube wg:wedge

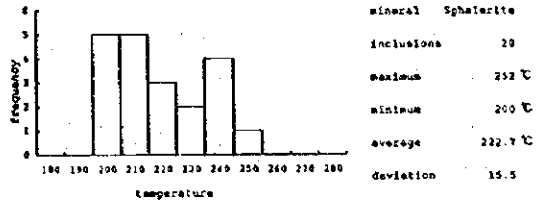


Figure 2-1 Result of determination of homogenization temperature and salinity of fluid inclusions (20/22)

sample: TM91
 prospect: Mt. Bagacay
 rock type: quartz vein float with altered host rock
 reference: Fig II-3-33
 fluid inclusions: many other liquid single phase inclusions are observed necking down is also observed

No	Mineral	Size (µm)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl wt (%)
1	Quartz	61.5	11	po	257	-7.3	10.84
2	Quartz	12.5	15	sq	274	-6.9	10.36
3	Quartz	10.0	13	sq	243	-7.2	10.72
4	Quartz	32.5	13	po	186	-	-
5	Quartz	39.0	13	po	241	-7.3	10.86
6	Quartz	35.0	10	tr	279	-8.5	9.98
7	Quartz	37.5	12	po	258	-7.4	11.22
8	Quartz	5.0	15	tu	270	-	-
9	Quartz	15.0	7	po	262	-6.9	10.36
10	Quartz	17.5	10	po	286	-8.7	10.11
11	Quartz	27.5	12	irr	255	-7.3	10.86
12	Quartz	32.5	12	irr	252	-7.0	10.45
13	Quartz	47.5	12	po	282	-6.4	9.90
14	Quartz	20.0	10	po	291	-7.0	11.22
15	Quartz	19.0	12	sq	270	-6.8	10.24
16	Quartz	20.0	10	irr	280	-6.8	9.96
17	Quartz	53.0	12	irr	233	-7.2	10.72
18	Quartz	17.5	10	po	247	-6.8	10.24
19	Quartz	5.0	10	po	249	-	-
20	Quartz	17.5	12	po	261	-7.0	10.45

eg:egg irr:irregular po:polygon sq:square tr:triangle tu:tube wg:wedge

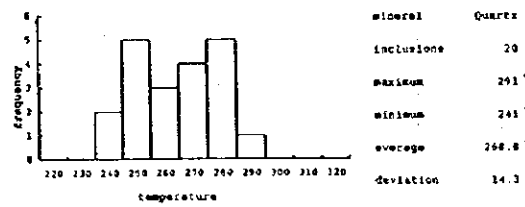


Figure 2-1 Result of determination of homogenization temperature and salinity of fluid inclusions (21/22)

sample TR55
 prospect Mt. Begecay
 rock type quartz vein
 reference fig. II-3-33
 fluid inclusions size of vapor very greatly and it suggests boiling has occurred

No	Mineral	Size (μm)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl Wt (%)
1	Quartz	15.0	10	po	263	-4.6	7.31
2	Quartz	12.5	10	irr	289	-4.2	6.74
3	Quartz	47.5	15	po	264	-5.2	6.01
4	Quartz	37.5	12	irr	243	-4.6	7.31
5	Quartz	22.5	12	po	233	-6.9	10.36
6	Quartz	7.5	10	po	235	-	-
7	Quartz	5.0	10	po	272	-	-
8	Quartz	37.5	12	po	279	-5.4	8.68
9	Quartz	12.5	10	po	274	-	-
10	Quartz	12.5	10	irr	264	-	-
11	Quartz	25.0	13	irr	272	-5.2	8.82
12	Quartz	20.0	12	irr	271	-5.9	9.08
13	Quartz	10.0	12	sq	273	-	-
14	Quartz	17.5	10	po	287	-5.2	8.14
15	Quartz	22.5	10	po	264	-6.1	9.34
16	Quartz	37.5	12	irr	252	-5.3	8.20
17	Quartz	17.5	12	po	279	-4.2	6.74
18	Quartz	12.5	10	po	291	-6.3	7.17
19	Quartz	12.5	10	po	294	-6.2	6.74
20	Quartz	10.0	10	po	285	-	-

eg:egg irr:irregular po:polygon sq:square tr:triangle tu:tube wg:wedge

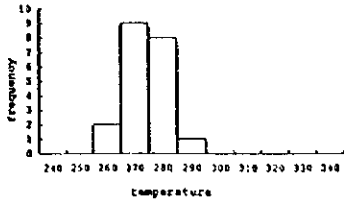


Figure 2-1 Result of determination of homogenization temperature and salinity of fluid inclusions (22/22)

sample SM11
 prospect Mt. Culasi
 rock type silicified rock float
 reference fig. II-3-37
 fluid inclusions many other liquid single phase inclusions are observed suitable inclusions for observation are few because of size

No	Mineral	Size (μm)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl Wt (%)
1	Quartz	7.5	3	po	125	-0.1	0.14
2	Quartz	2.5	3	po	131	-	-
3	Quartz	5.0	3	po	110	-0.2	0.35
4	Quartz	5.0	5	po	142	0.9	0.00
5	Quartz	2.5	2	sq	122	-	-
6	Quartz	2.5	2	sq	126	-	-
7	Quartz	2.5	2	sq	197	-	-
8	Quartz	2.5	2	po	124	-	-
9	Quartz	5.0	3	po	132	0.0	0.00
10	Quartz	5.0	3	po	130	-0.1	0.14
11	Quartz	2.0	2	po	114	-0.1	0.10
12	Quartz	2.5	3	sq	135	-	-
13	Quartz	2.5	2	sq	111	-	-

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eg:egg irr:irregular po:polygon sq:square tr:triangle tu:tube wg:wedge

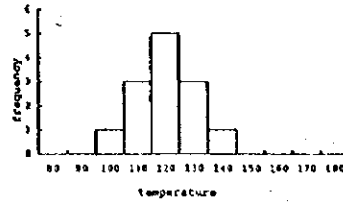
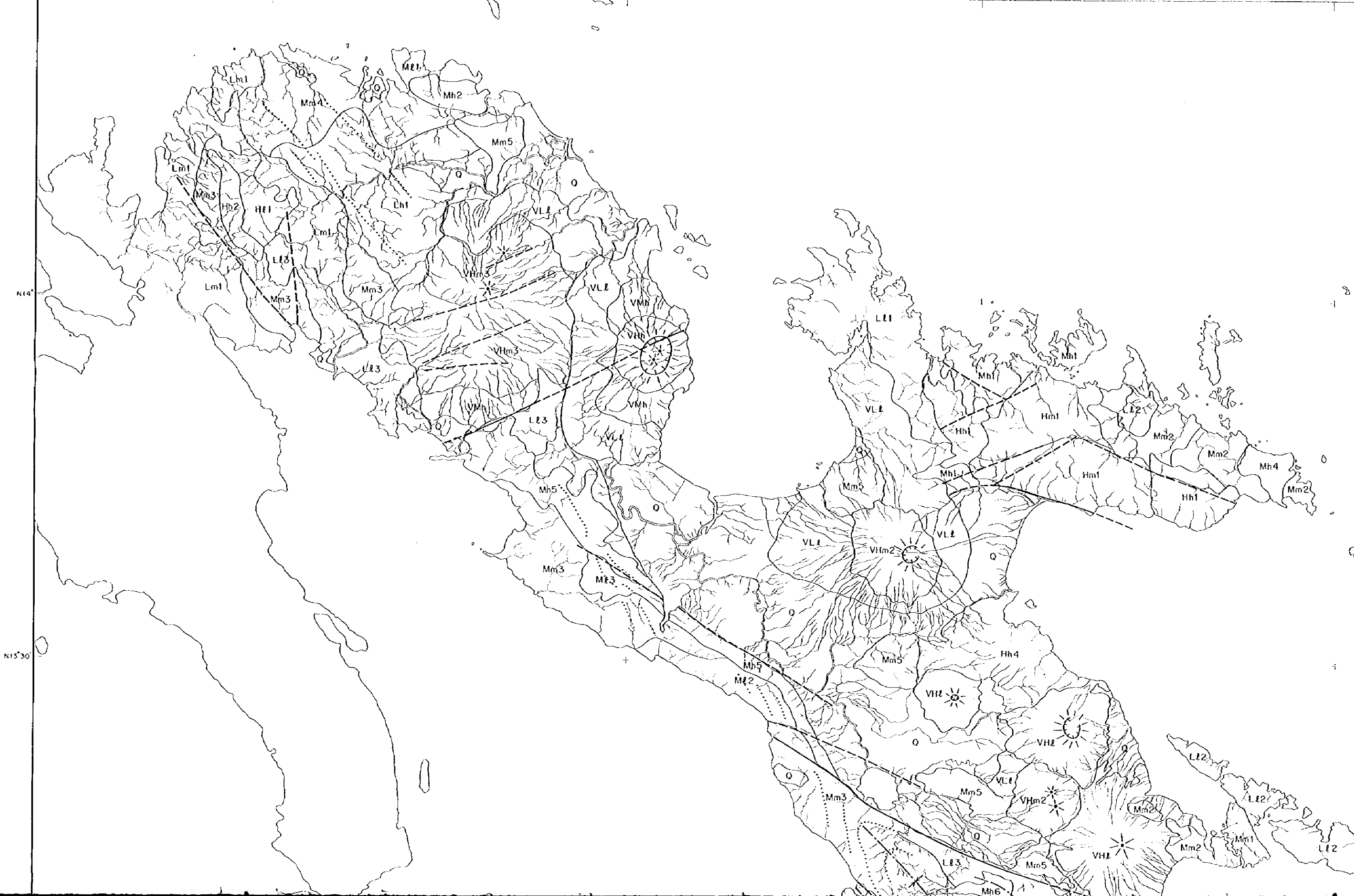
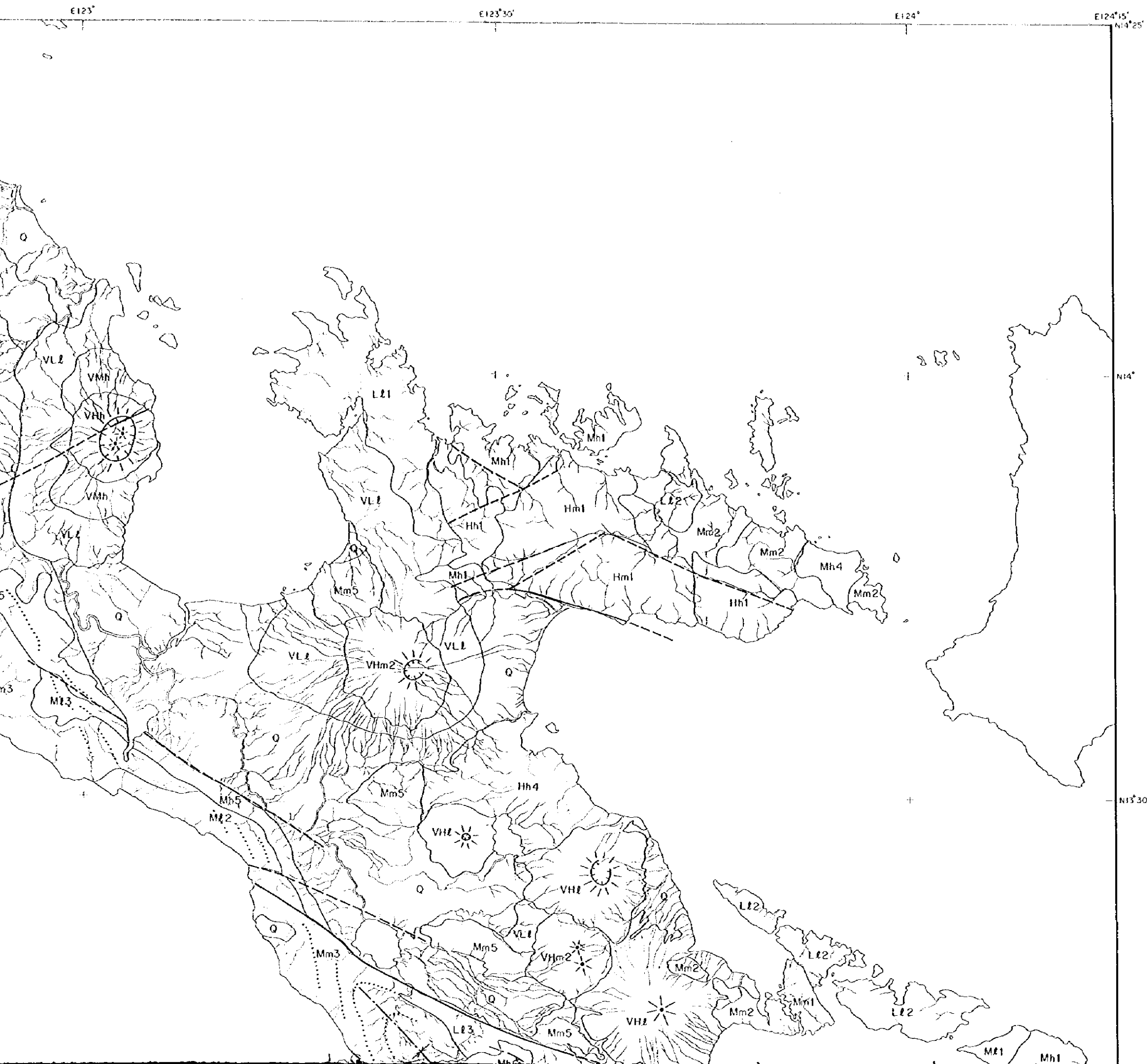


Table 4-1 Abbreviation of minerals

Adu	Aduralia	Hem	Hematite
Alu	Alunite	Hbl	Hornblend
Ang	Anglesite	Ill	Illite
Ank	Ankerite	Jam	Jamesonite
Anh	Anhydrite	Jar	Jarosite
Ap	Apatite	Kln	Kaolinite
Arg	Argentite	Kfs	K-Feldsper
Apy	Arsenopyrite	Lm	Limonite
Ata	Atacamite	Ma	Malachite
Azu	Azurite	Mag	Magnetite
Brt	Barite	Mar	Marcasite
Bt	Biotie	Mo	Molybdenite
Bis	Bismuthinite	Ms	Muscobite
Bn	Bornite	Op	Opal
Bol	Boulangerite	Ol	Olivine
Bor	Bournonite	Phos	Phosphate
Bro	Brochantite	Pl	Plagioclase
Cal	Calcite	Psi	Psilomelane
Car	Carbonate	Px	Pyroxine
Cst	Cassiterite	Py	Pyrite
Cc	Chalcocite	Po	Pyrrhotite
Ce	Cerssite	Pyg	Pyragyrite
Cer	Cervantite	Pyro	Pyrolusite
Chl	Chlorite	Qtz	Quartz
Cov	Covellite	Rds	Rhodochrosite
Ccp	Chalcopyrite	Sch	Scheelite
Ccl	Crysocolla	Ser	Sericite
Crs	Cristobarite	Sd	Siderite
Crp	Cryptomelane	Smc	Smectite
Cup	Cuprite	Smi	Smithsonite
Dg	Digenite	Spc	Specularite
Dol	Dolomite	Sp	Sphaerite
El	Electrum	Stb	Stibnite
Ena	Enargite	Tnt	Tenantite
Ep	Epidote	Tth	Tetrahedrite
Fl	Fluorite	Tnr	Tenorite
Fre	Freibergite	Tor	Tourmaline
Gn	Galena	Ur	Uraninite
Gt	Goethite	Wlf	Wolframite
Gp	Gypsum		

E122°10' E122°30' E123° E123°30' E124°
N14°25' N14° N13°30'





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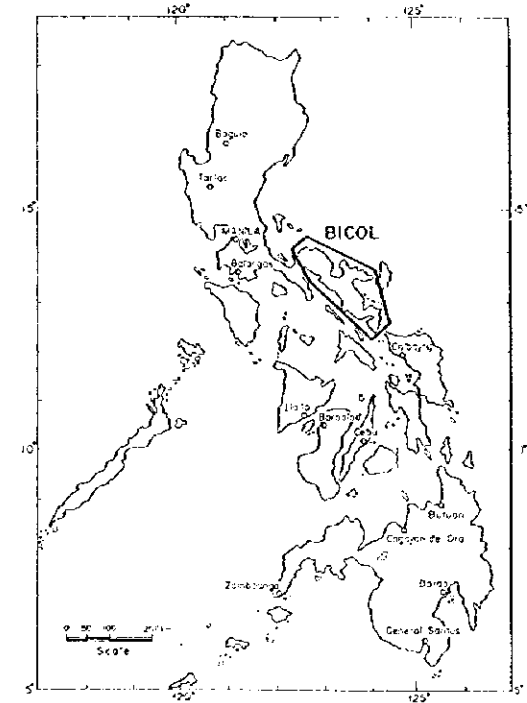
Fig. II-2-6 Geological units distribution from
Landsat-TM/JERS-1 data analysis

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Data of satellite imagery

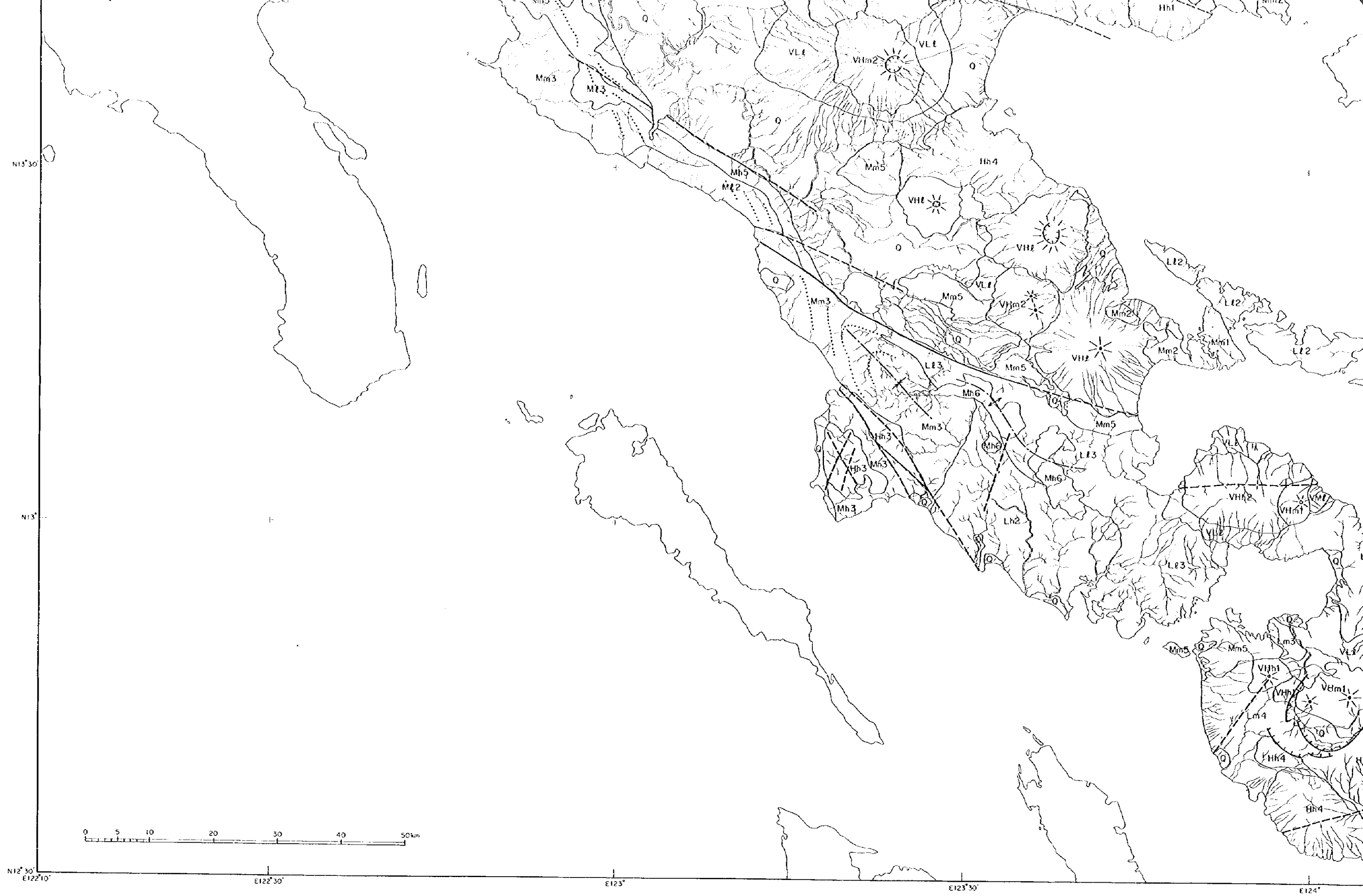
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path	row	date	latitude	longitude	elevation	azimuth	Q1	Q2	Q3	Q4
114	050	05/03/1992	13 29.46	123 39.20	58.66	82.32	20	10	10	10
114	051	04/07/1994	13 14.47	123 38.51	55.24	98.00	10	10	10	10
115	050	02/14/1990	13 59.36	122 13.30	44.15	125.12	40	10	10	0
115	051	04/19/1996	13 41.49	122 13.20	54.36	90.34	10	0	20	10

JERS-1/SAR		Scene center		Sunlight		Quantity of cloud				
path	row	date	latitude	longitude	elevation	azimuth	Q1	Q2	Q3	Q4
083	278	12/09/1996	13 28	124 09	.....	.....	.....	.....	.....	.....
083	279	12/09/1996	12 52	124 02	.....	.....	.....	.....	.....	.....
083	280	12/09/1996	12 16	123 55	.....	.....	.....	.....	.....	.....
084	277	12/10/1996	14 04	123 43	.....	.....	.....	.....	.....	.....
084	278	12/10/1996	13 28	123 36	.....	.....	.....	.....	.....	.....
084	279	12/10/1996	12 52	123 29	.....	.....	.....	.....	.....	.....
085	277	12/11/1996	14 04	123 10	.....	.....	.....	.....	.....	.....
085	278	12/11/1996	13 28	123 03	.....	.....	.....	.....	.....	.....
085	279	12/11/1996	12 52	122 56	.....	.....	.....	.....	.....	.....
086	277	07/03/1995	14 04	122 38	.....	.....	.....	.....	.....	.....
086	278	07/03/1995	13 28	122 31	.....	.....	.....	.....	.....	.....
087	276	12/13/1996	14 39	122 11	.....	.....	.....	.....	.....	.....
087	277	12/13/1996	14 04	122 01	.....	.....	.....	.....	.....	.....



Legend

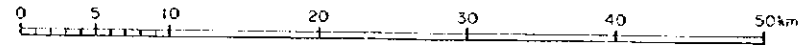
○ Boundary of geologic unit ⊙ Circular structure



N13°30'

N13°

N12°30'



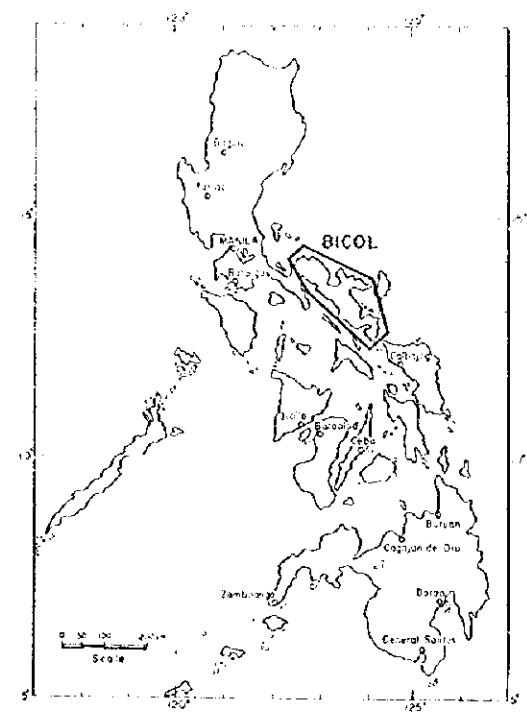
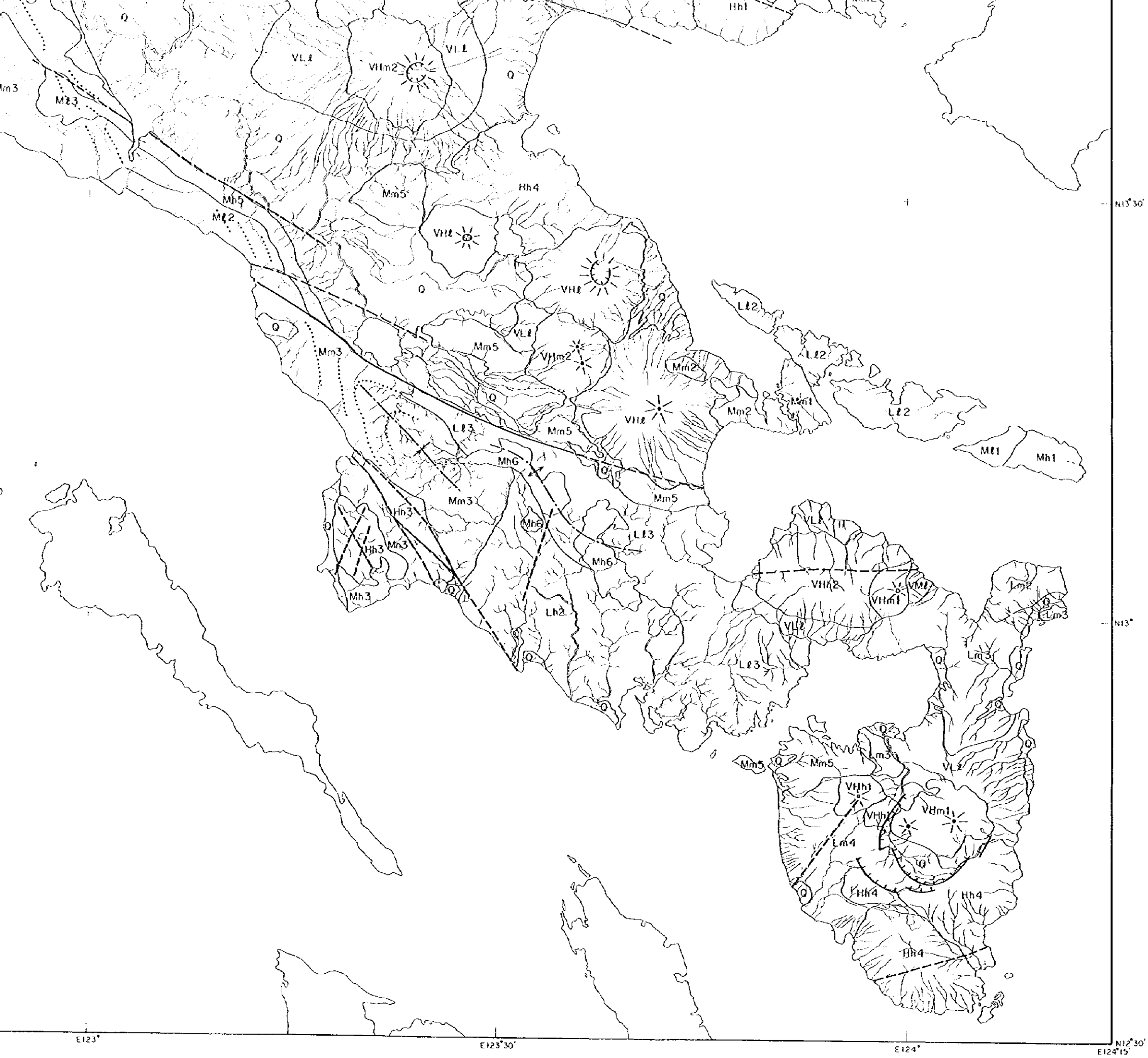
E122°10'

E122°30'

E123°

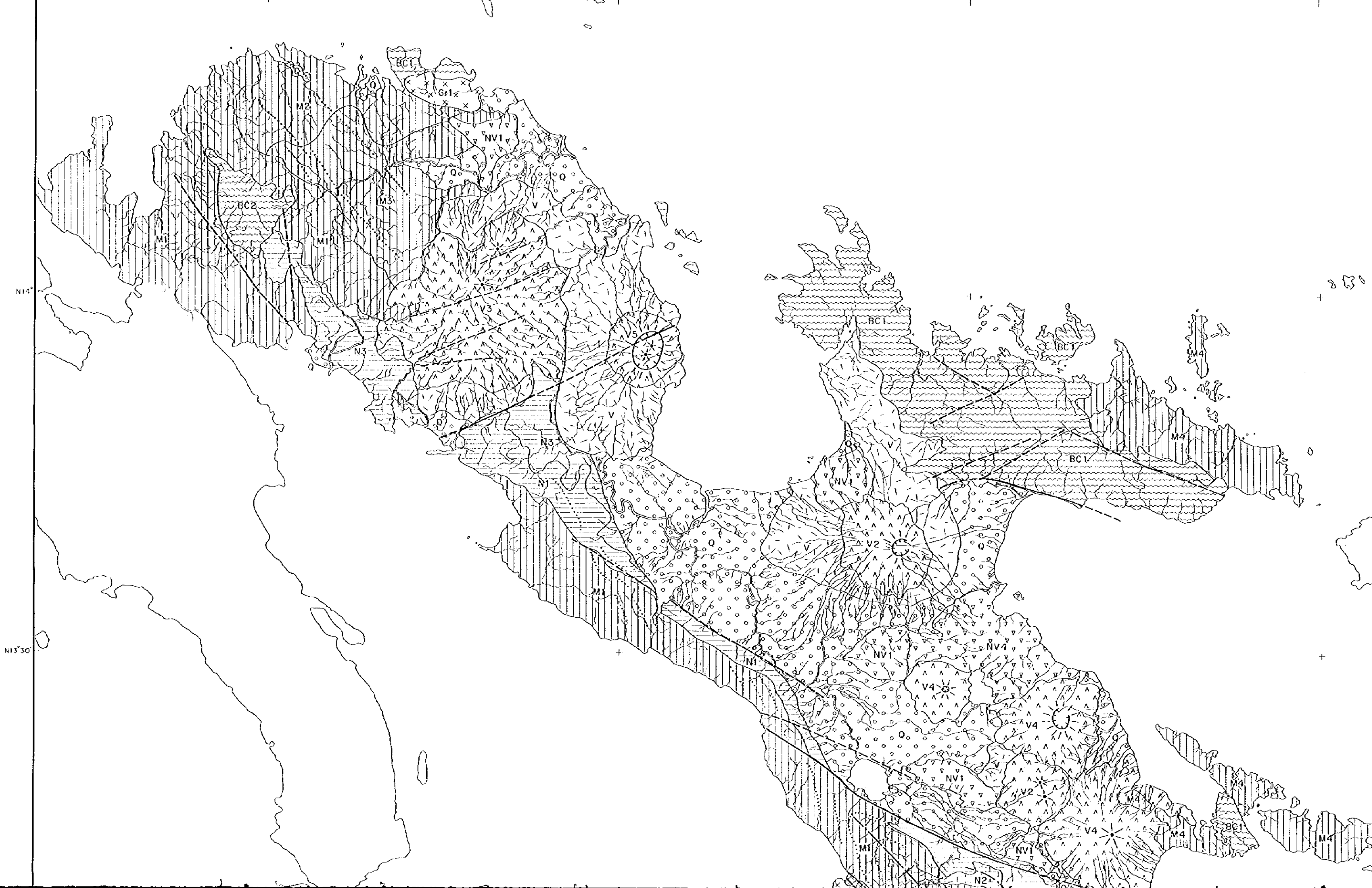
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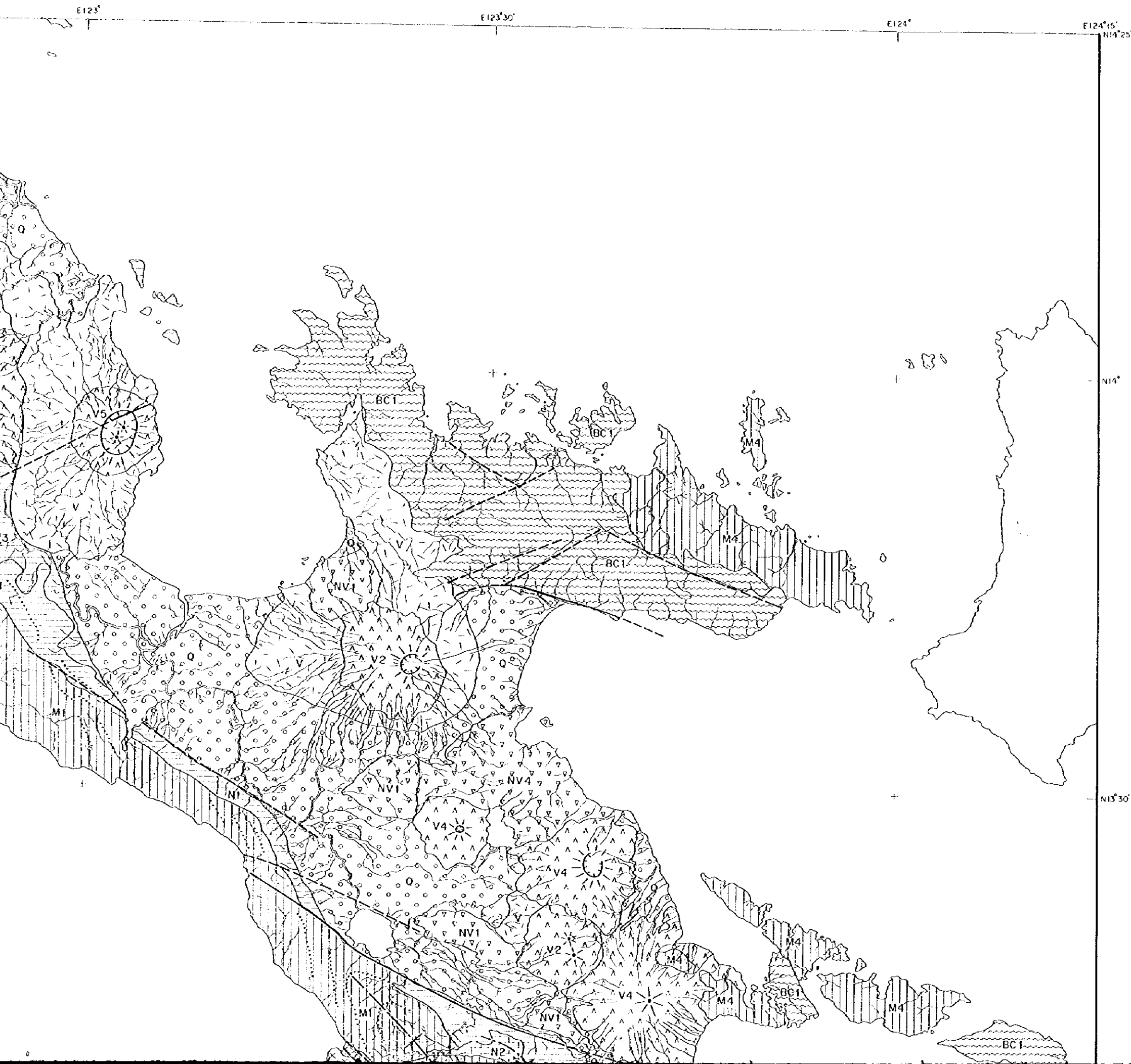
E124°



- Legend
- Boundary of geologic unit
 - Circular structure
 - Hh1 Geologic Unit
 - * Volcanic center
 - Fault and inferred fault
 - Trace of bedding
 - ⌒ Anticline
 - ⌒ Syncline
 - Drainage

E122°10' E122°30' E123° E123°30' E124°
N14°25' N14° N13°30'





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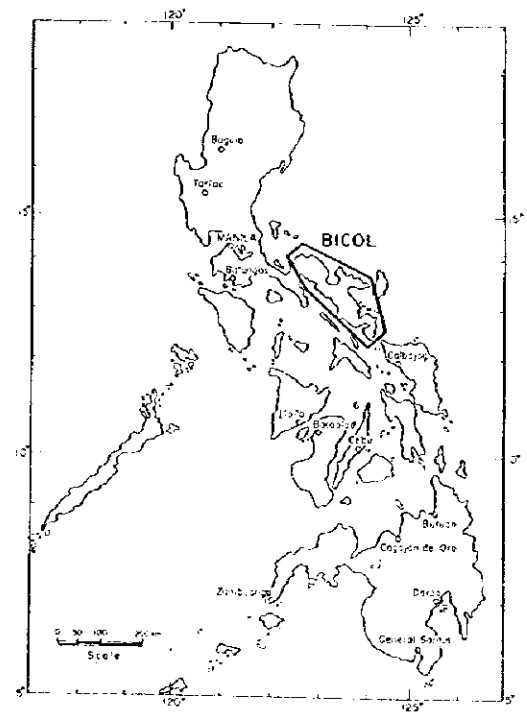
Fig. II-2-7 Interpreted geological map based
on Landsat-TM/JERS-1 image analysis

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Data of satellite imagery

LANDSAT-TM	path	row	date	Scene center		Sunlight		Quantity of cloud			
				latitude	longitude	elevation	azimuth	Q1	Q2	Q3	Q4
	114	050	05/03/1992	13 29.46	123 39.20	58.66	82.32	20	10	10	10
	114	051	04/07/1994	13 14.47	123 38.54	55.24	98.00	10	10	10	10
	115	050	02/14/1990	13 59.36	122 13.30	44.15	125.12	40	10	10	0
	115	051	04/19/1996	13 44.49	122 13.20	54.36	90.34	10	0	20	10

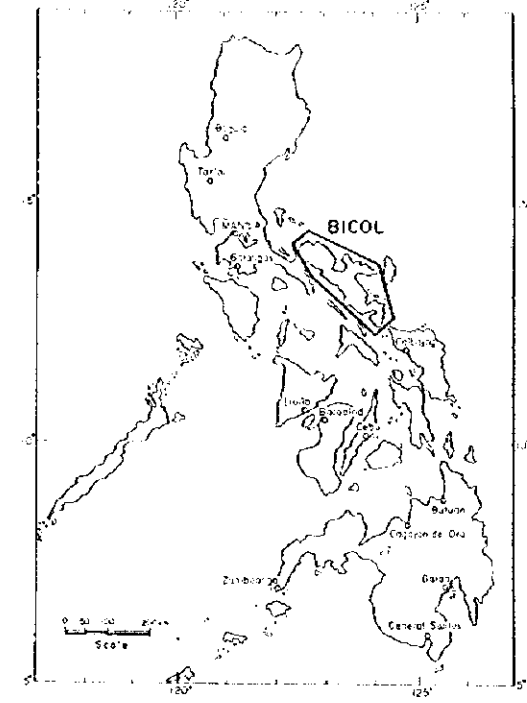
JERS-1/SAR	path	row	date	Scene center		Sunlight		Quantity of cloud			
				latitude	longitude	elevation	azimuth	Q1	Q2	Q3	Q4
	083	278	12/09/1996	13 28	124 09						
	083	279	12/09/1996	12 52	124 02						
	083	280	12/09/1996	12 16	123 55						
	084	277	12/10/1996	14 04	123 43						
	084	278	12/10/1996	13 28	123 36						
	084	279	12/10/1996	12 52	123 29						
	085	277	12/11/1996	14 04	123 10						
	085	278	12/11/1996	13 28	123 03						
	085	279	12/11/1996	12 52	122 56						
	086	277	07/03/1995	14 04	122 38						
	086	278	07/03/1995	13 28	122 31						
	087	276	12/13/1996	14 33	122 11						
	087	277	12/13/1996	14 04	122 04						



Legend

○ Boundary of geological unit ⊙ Circular structure





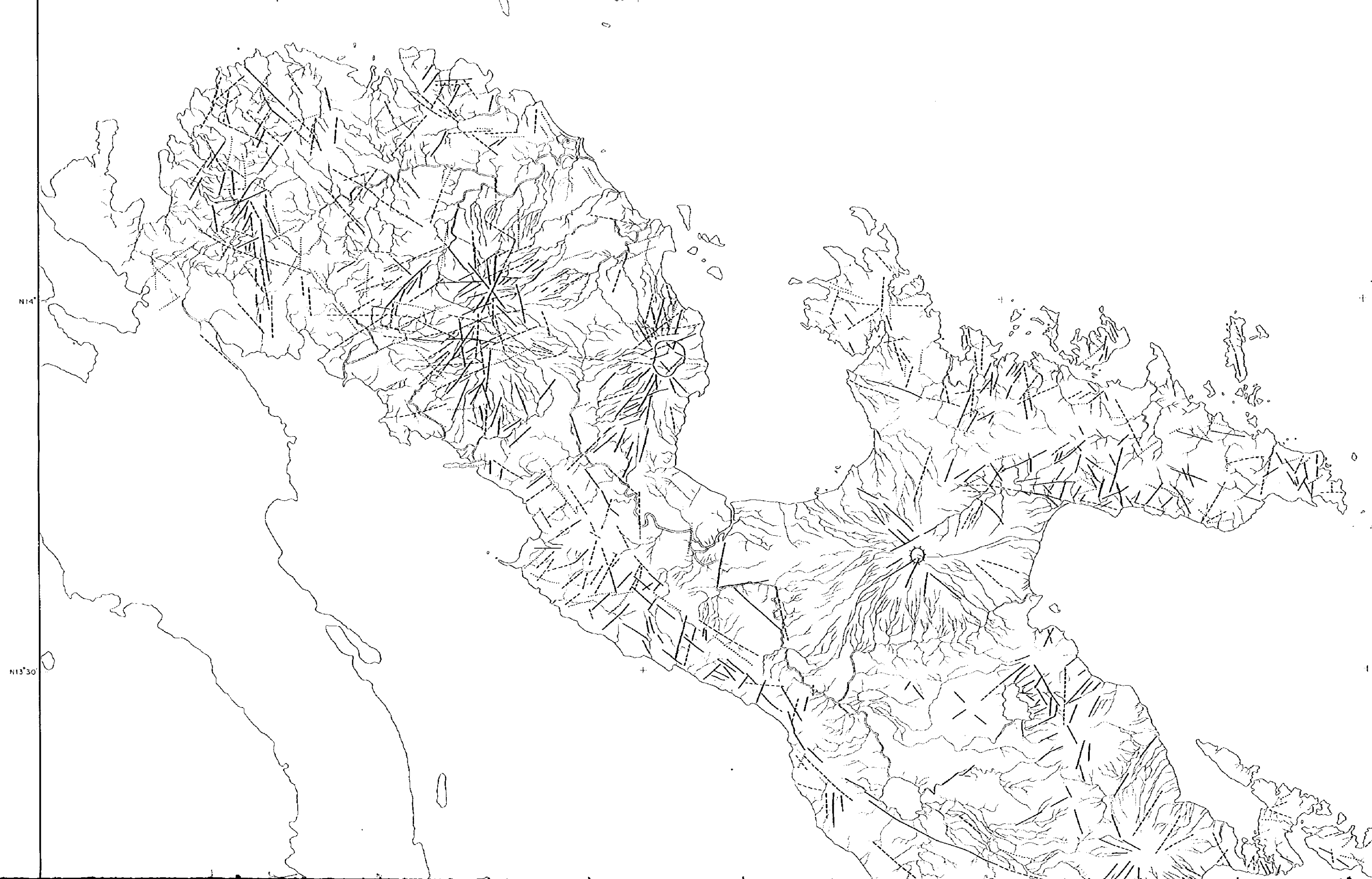
Legend

- Boundary of geological unit
- BC 1 Geological unit
- Fault and inferred fault
- ⋯ Trace of bedding
- ⋈ Anticline
- ⋈ Syncline
- ⊙ Circular structure
- ⋆ Volcanic center
- Drainage

Table II-2-3 Correlation between satellite imagery unit and geologic unit

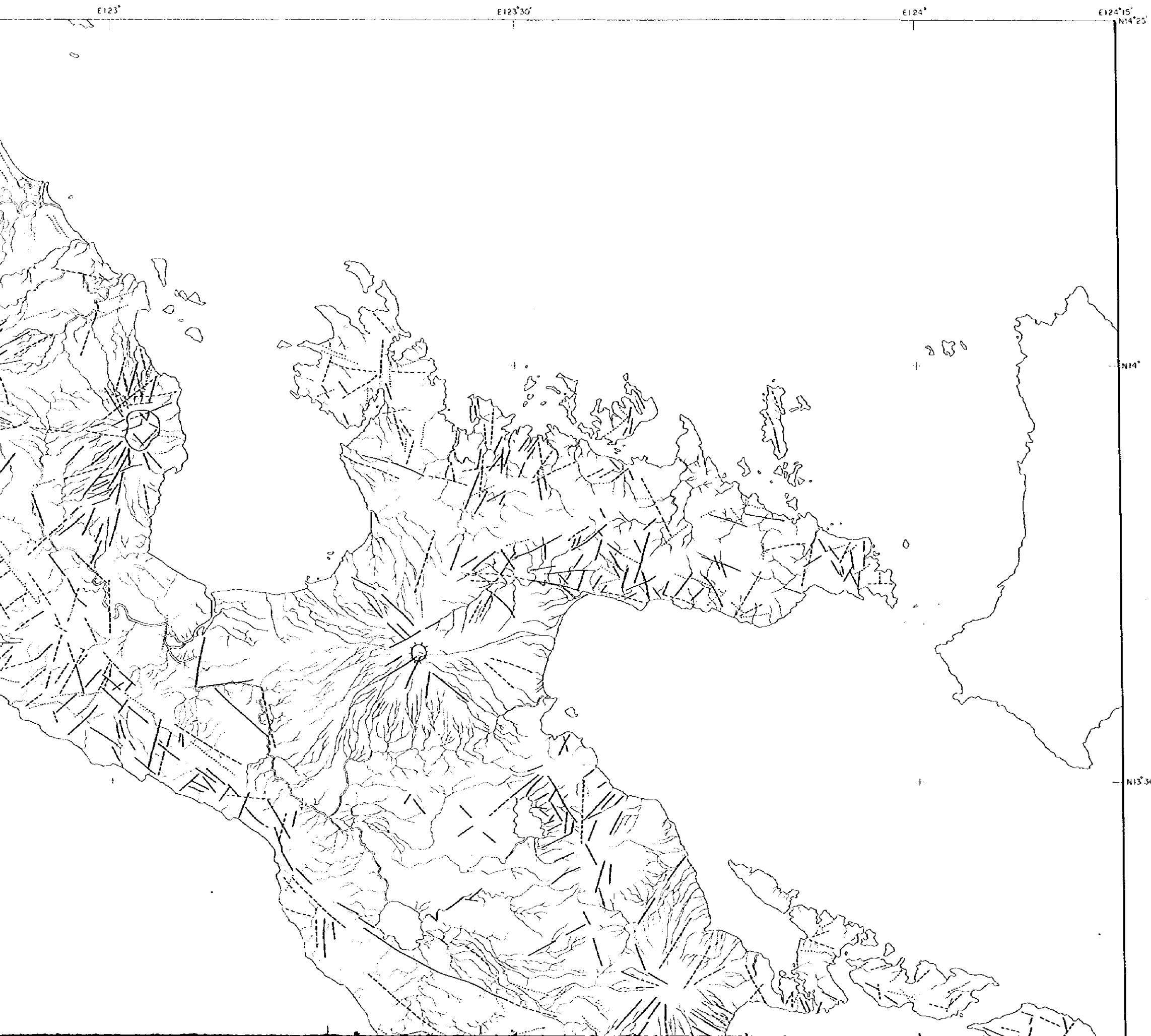
imagery unit	geologic unit	geology and lithology suggested by comprehensive interpretation
Q	Q	Quaternary and/or alluvium
U3	N2	Pliocene to Pleistocene sedimentary rocks with coralline limestone
Lm3	N2	
M6	N1	Miocene sedimentary rocks
Lm5	N1	
Lm1	M1	Miocene sedimentary rocks
Lm2		
M3	M1	Miocene sedimentary rocks
M4		
Mm3	M2	Paleogene sedimentary rocks
Mm4	M2	
Lh1	M3	Paleogene sedimentary rocks
Mh3	M3	
Mh1	M1	pre-Tertiary and ultrabasic rocks
Mh2		
Lh1	BC1	pre-Tertiary and ultrabasic rocks
Lh2		
Lh1	BC1	pre-Tertiary and ultrabasic rocks
Lh2		
V1m1	V1	Quaternary volcanic rocks
V1m2	V2	
V1m3	V3	
V1B	V4	
V1h1	V5	
VU	V	volcaniclastic rocks
Mh5	NV1	Tertiary volcanic rocks
Lm4	NV2	
V1h2	NV3	
Lh4	NV4	
Mh2	G1	Intrusive body of Granitic rocks
Mh3	G2	

E122°10' E122°30' E123° E123°30' E124°



N14°

N13°30'



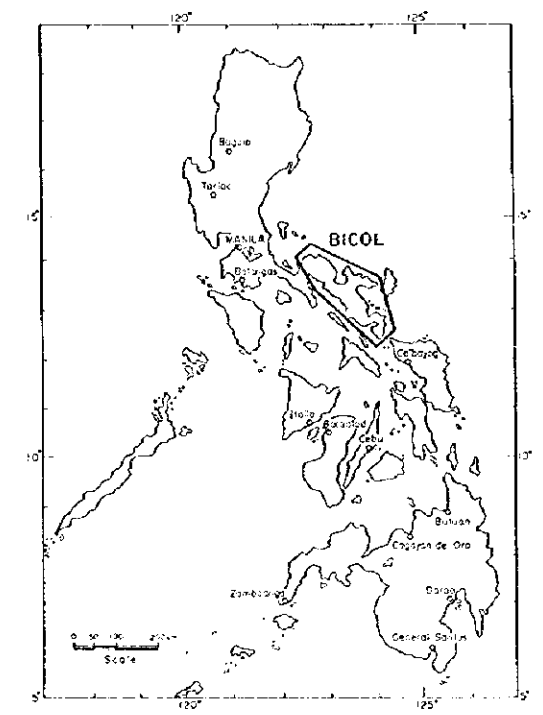
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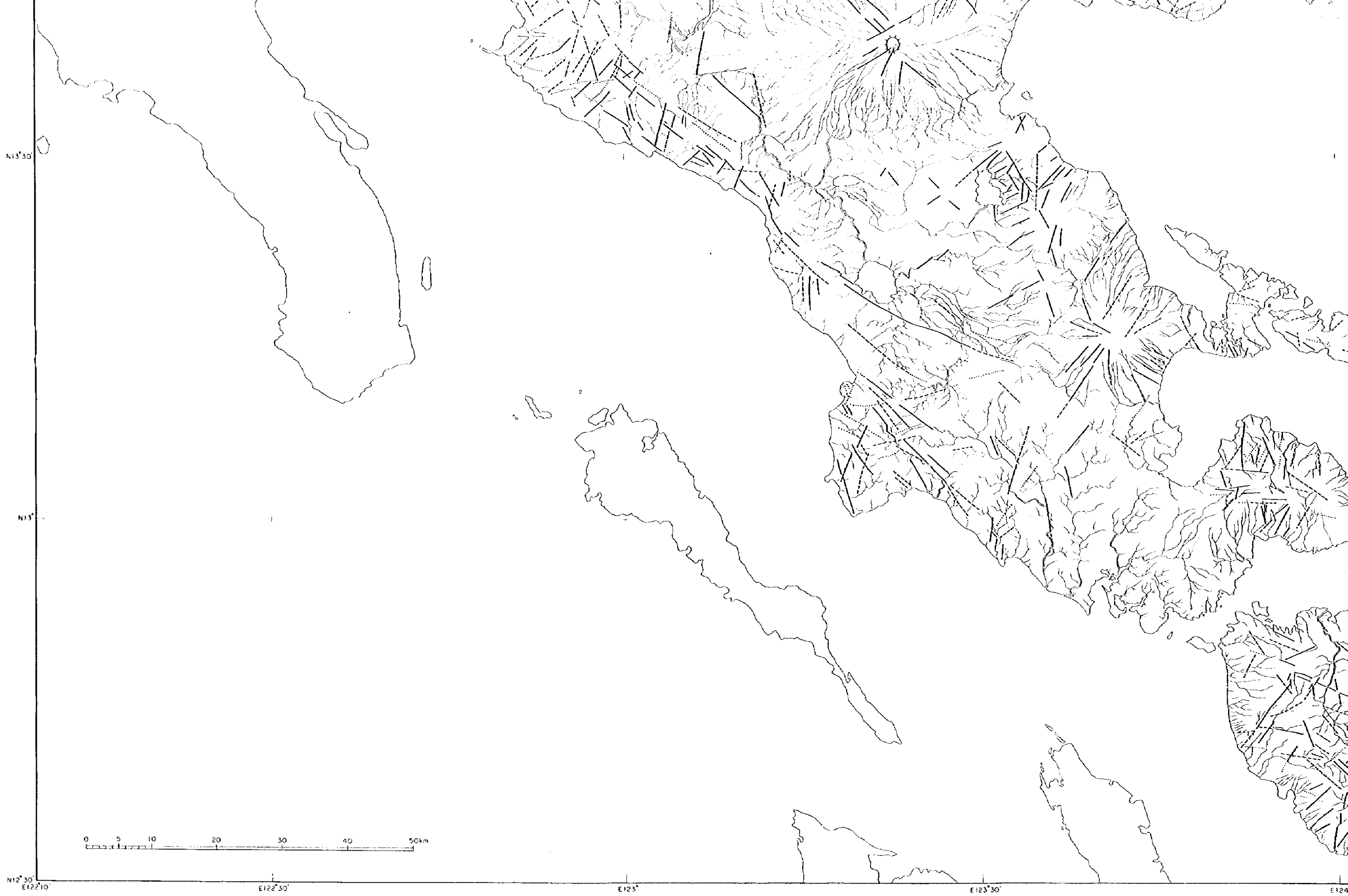
Fig. II-2-8 Distribution map of lineaments from
Landsat-TM image analysis

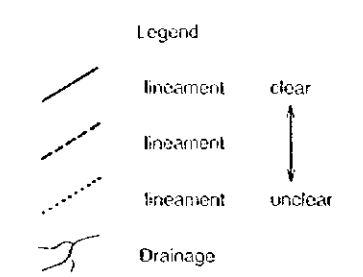
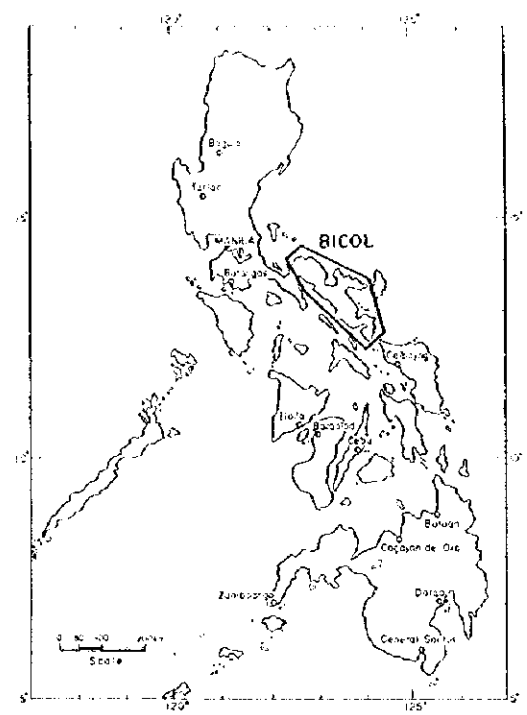
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Data of satellite imagery

LANDSAT-TM	path	row	date	Scene center		Sunlight		Quantity of cloud			
				latitude	longitude	elevation	azimuth	Q1	Q2	Q3	Q4
114	050	0503	1992	13 29.46	123 39.20	58.06	82.32	20	10	10	10
114	051	0407	1994	13 14.47	123 38.54	55.24	95.00	10	10	10	10
115	050	0214	1990	13 50.36	122 13.30	44.15	125.12	40	10	10	0
115	051	0419	1996	13 44.43	122 13.20	54.36	90.34	10	0	20	10

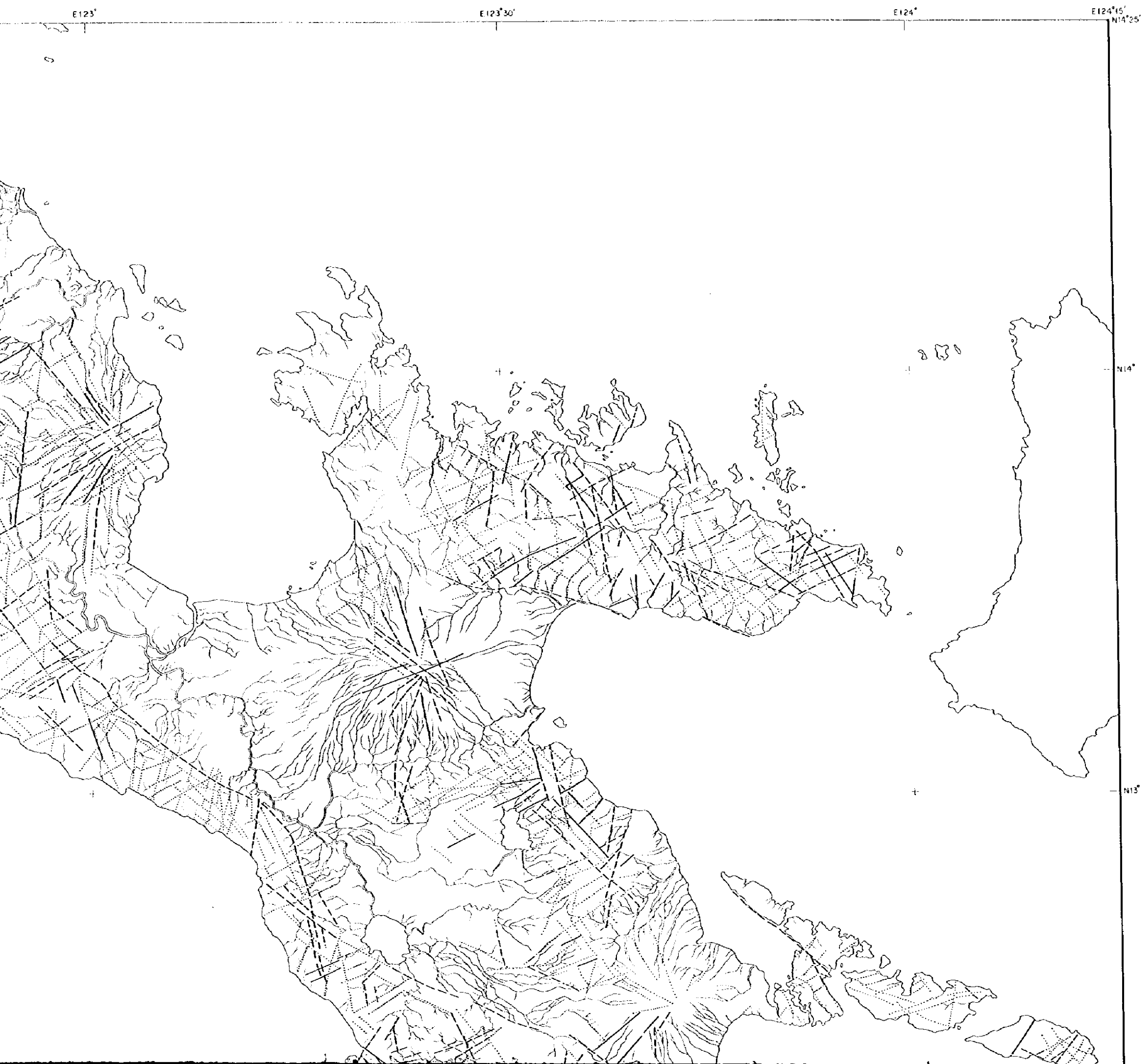






E122°10' N14° 25' E122°30' E123° E123°30' E124°





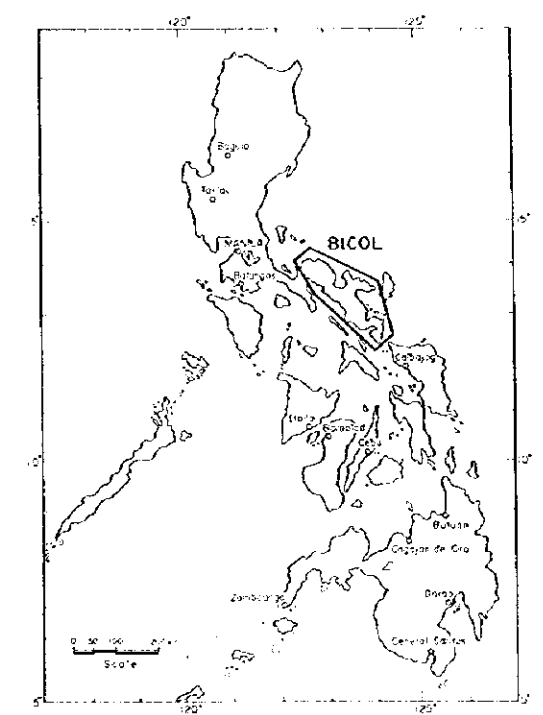
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Fig. II-2-9 Distribution map of lineaments from
JERS-1/SAR image analysis

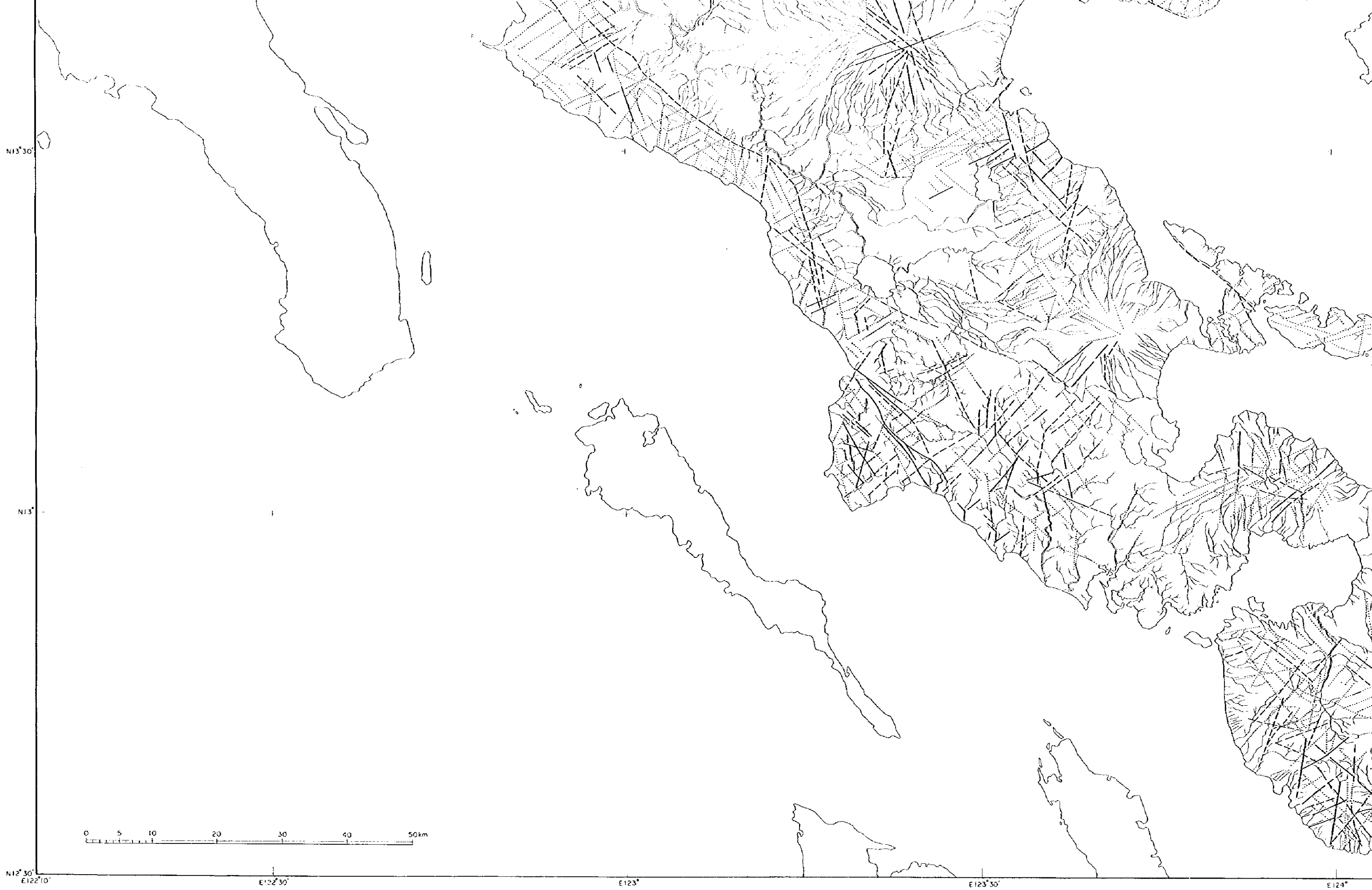
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JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN

Data of satellite imagery

JERS-1/SAR	Scene center		Sunlight		Quantity of cloud		
	row	date	latitude	longitude	elevation	azimuth	Q1 Q2 Q3 Q4
083	278	12/09/1996	13.28	124.09	.....	.....	.....
083	279	12/09/1996	12.52	124.02	.....	.....	.....
083	280	12/09/1996	12.16	123.55	.....	.....	.....
084	277	12/10/1996	14.04	123.43	.....	.....	.....
084	278	12/10/1996	13.28	123.36	.....	.....	.....
084	279	12/10/1996	12.52	123.29	.....	.....	.....
085	277	12/11/1996	14.04	123.10	.....	.....	.....
085	278	12/11/1996	13.28	123.03	.....	.....	.....
085	279	12/11/1996	12.52	122.56	.....	.....	.....
086	277	07/03/1995	14.04	122.38	.....	.....	.....
086	278	07/03/1995	13.28	122.31	.....	.....	.....
087	276	12/13/1996	14.39	122.11	.....	.....	.....
087	277	12/13/1996	14.04	122.04	.....	.....	.....



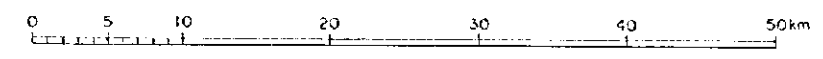
Legend



N13°30'

N13°

N12°30'



E122°10'

E122°30'

E123°

E123°30'

E124°



N13°30'

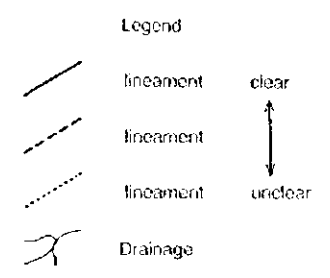
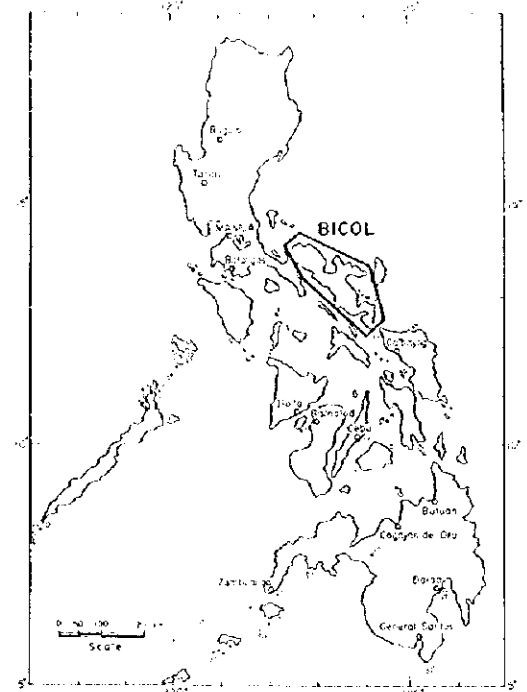
N13°

E123°

E123°30'

E124°

N12°30'
E124°15'

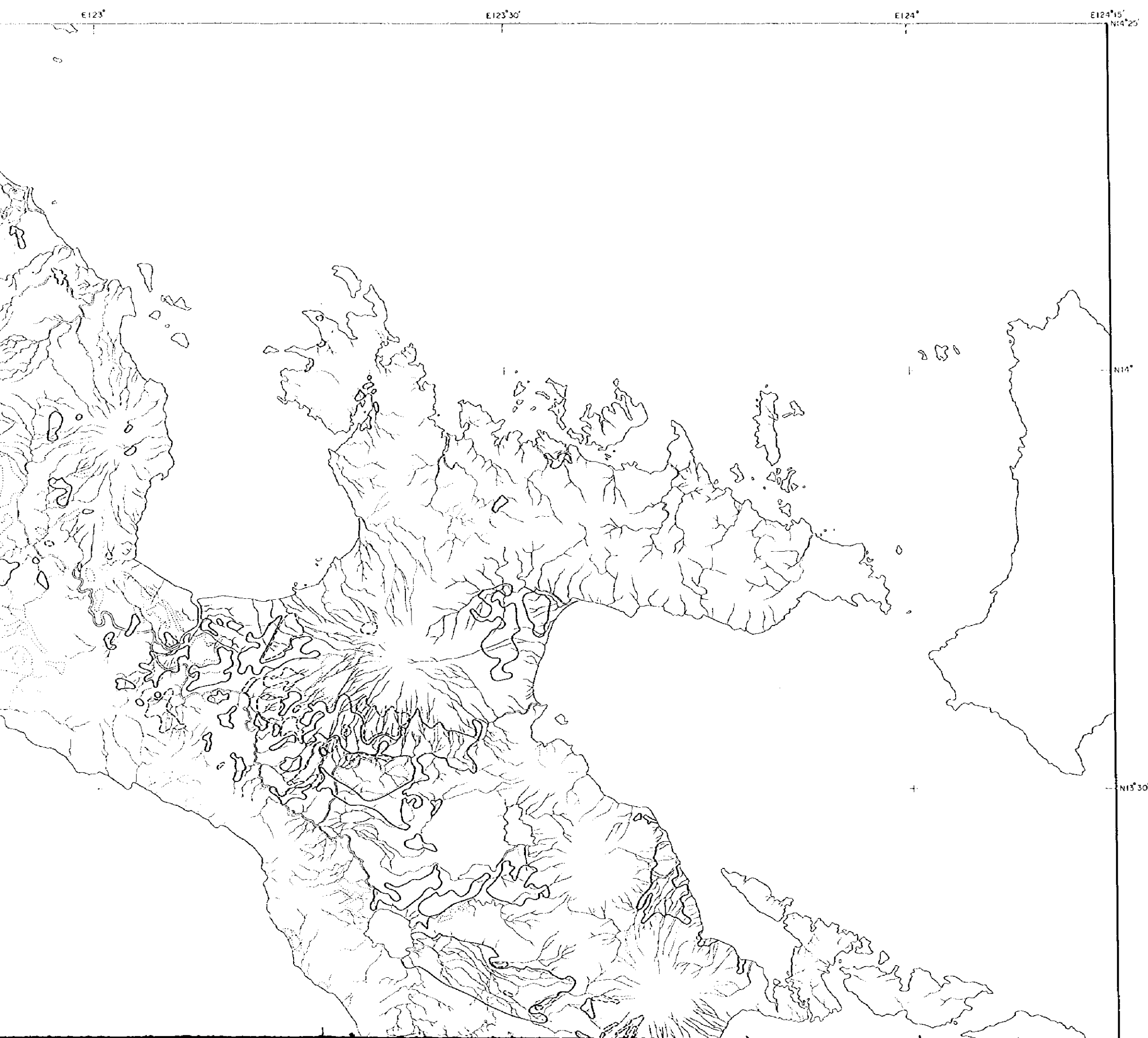


E122°10' E122°30' E123° E123°30' E124°



N14°

N13°30'



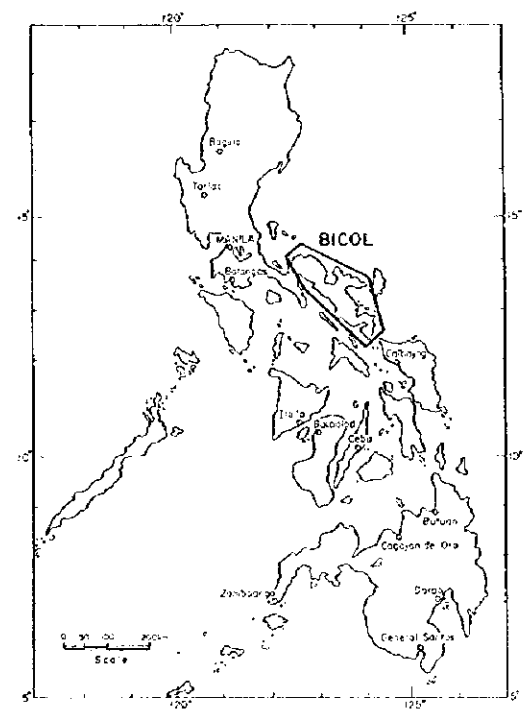
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IN
THE BICOL AREA
THE REPUBLIC OF THE PHILIPPINES
(PHASE I)**

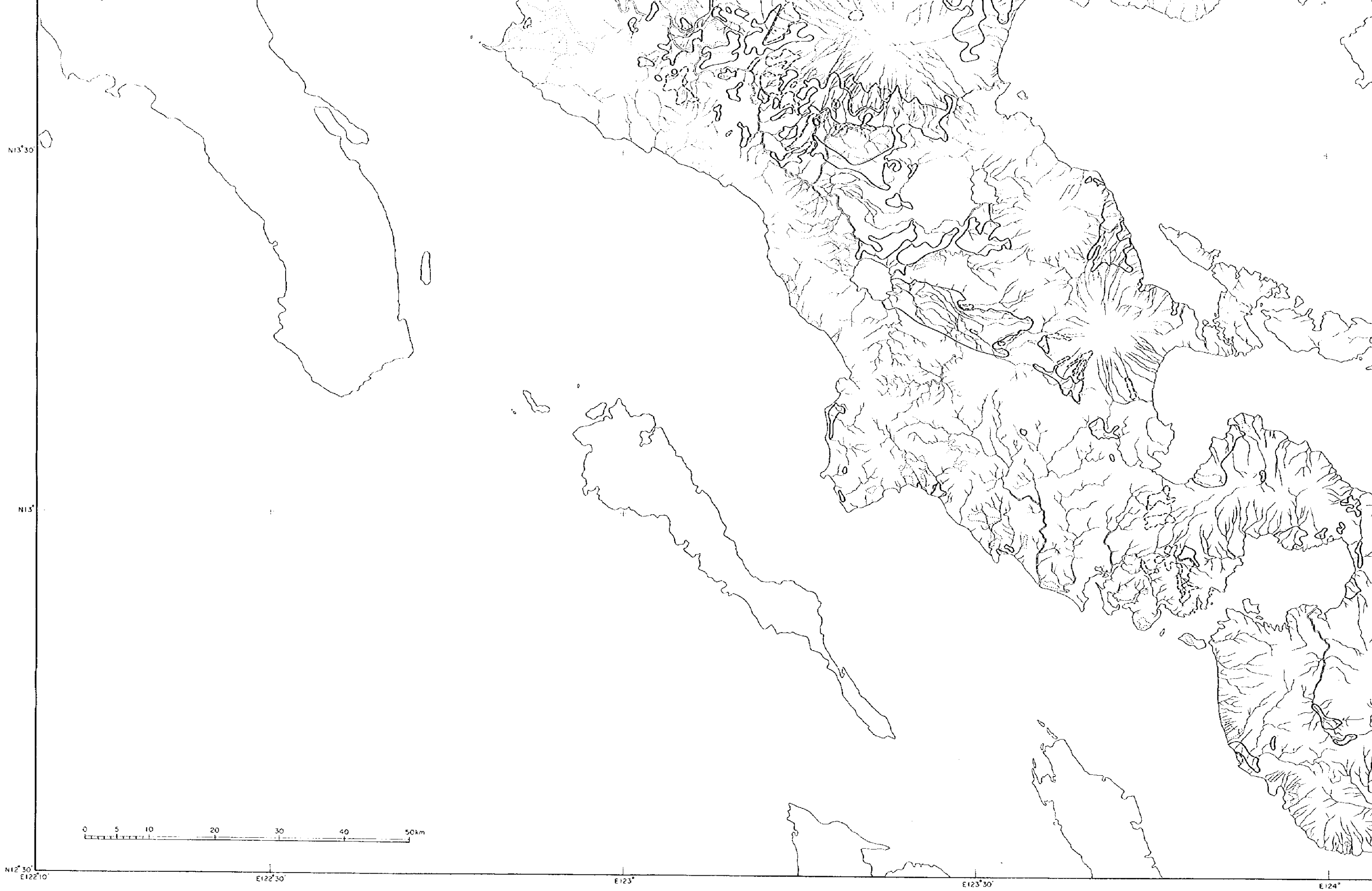
**Fig. II-2-10 Distribution map of inferred
alteration area from Landsat-TM image analysis
(BGR:3/1 5/4 5/7)**

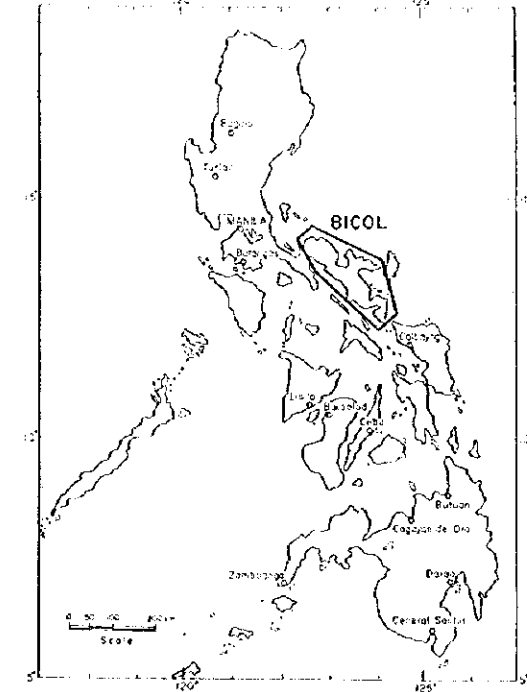
FEBRUARY 1998
JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN





Data of satellite imagery

LANDSAT- TM	Scene center		Sunlight		Quantity of cloud					
	path	row	latitude	longitude	elevation	azimuth	O1	O2	O3	O4
114	050	05/03/1992	13°29'46"	123°39'20"	58.66	82.32	20	10	10	10
114	051	04/07/1994	13°14'47"	123°38'54"	55.24	98.00	10	10	10	10
115	050	02/14/1990	13°59'36"	122°13'30"	44.15	125.12	40	10	10	0
115	051	04/19/1996	13°44'49"	122°13'20"	54.38	90.34	10	0	20	10





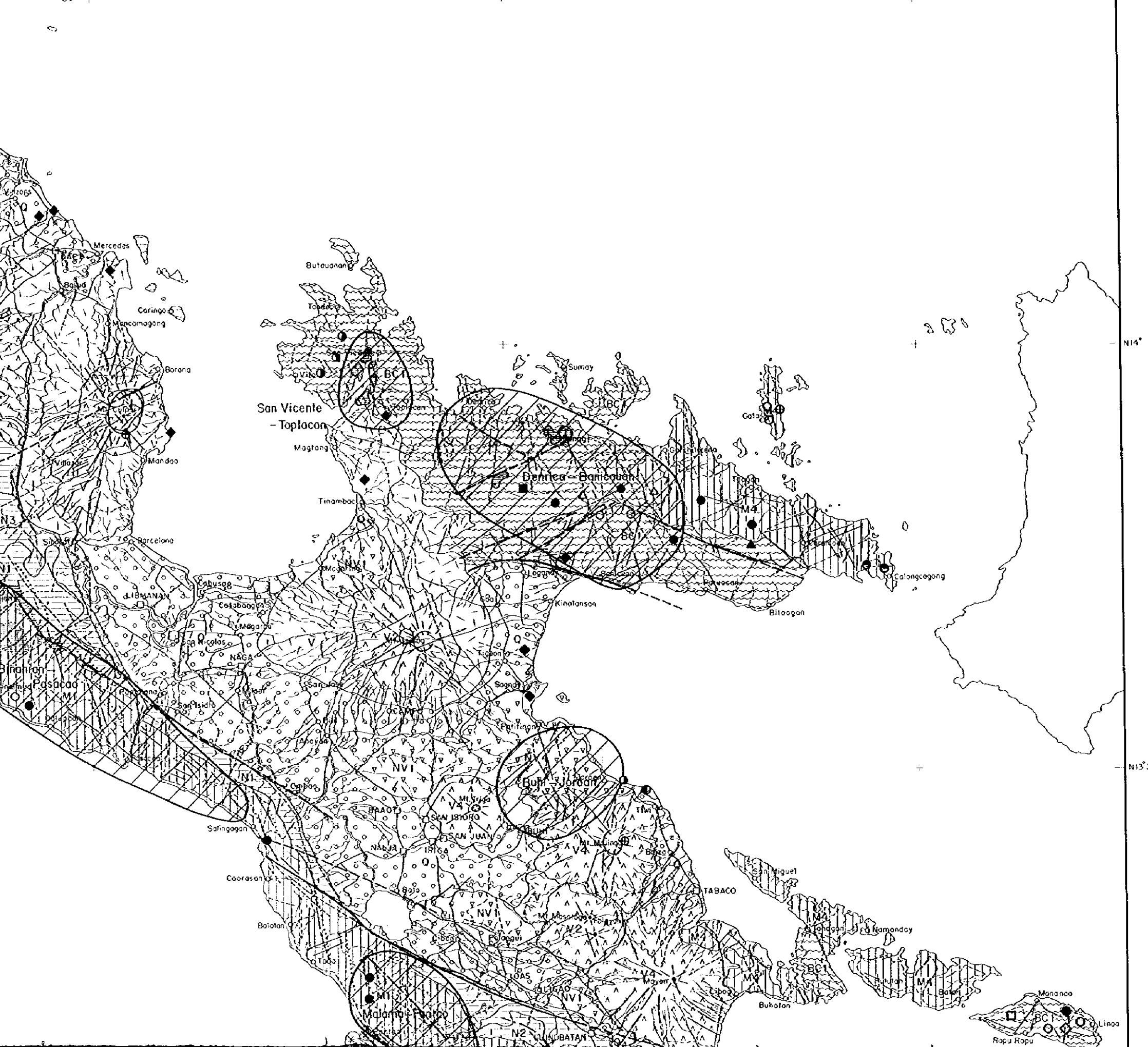


- Legend
-  Reddish colored area (argillized zone?)
 -  Greenish colored area (iron oxide zone?)
 -  Bluish colored area (iron oxide zone?)
 -  Drainage

E122°10' N14°25' E122°30' E123° E123°30' E124°



E123° E123°30' E124° E124°15' N14°25'



**REGIONAL SURVEY FOR MINERAL RESOURCES
IN
THE BICOL AREA
THE REPUBLIC OF THE PHILIPPINES
(PHASE I)**

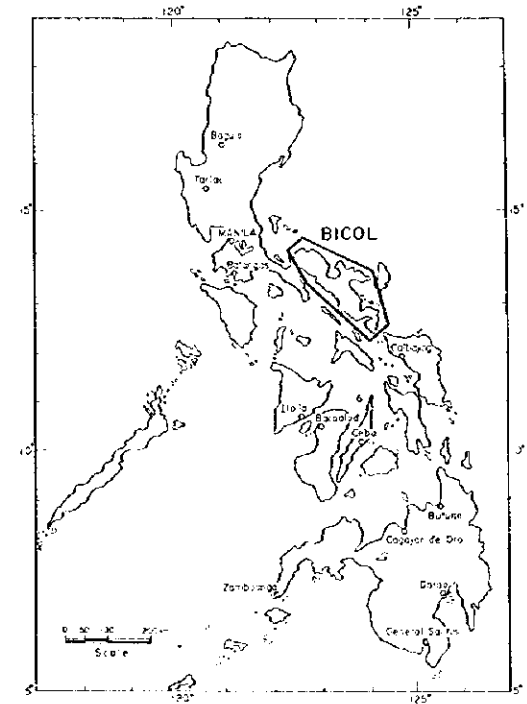
**Fig. II-2-11 Promising areas from
Landsat-TM/JERS-1 image analysis**

**FEBRUARY 1998
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METAL MINING AGENCY OF JAPAN**

Data of satellite imagery

LANDSAT-TM		Scene center		Sunlight		Quantity of cloud				
path	row	date	latitude	longitude	elevation	azimuth	01	02	03	04
114	050	05/03/1992	13 29.46	123 39.20	58.66	82.32	20	10	10	10
114	051	04/07/1991	13 14.47	123 38.54	55.24	98.00	10	10	10	10
115	050	02/14/1990	13 59.36	122.13.30	44.15	125.12	40	10	10	0
115	051	04/19/1996	13 44.49	122.13.20	54.36	90.31	10	0	20	10

JERS-1/SAR		Scene center		Sunlight		Quantity of cloud				
path	row	date	latitude	longitude	elevation	azimuth	01	02	03	04
083	278	12/03/1996	13.28	124.09	.....	.....	.....	.....	.....	.....
083	279	12/09/1996	12.52	124.02	.....	.....	.....	.....	.....	.....
083	280	12/09/1996	12.16	123.55	.....	.....	.....	.....	.....	.....
084	277	12/10/1996	14.04	123.43	.....	.....	.....	.....	.....	.....
084	278	12/10/1996	13.28	123.36	.....	.....	.....	.....	.....	.....
084	279	12/10/1996	12.52	123.29	.....	.....	.....	.....	.....	.....
085	277	12/11/1996	14.04	123.10	.....	.....	.....	.....	.....	.....
085	278	12/11/1996	13.28	123.03	.....	.....	.....	.....	.....	.....
085	279	12/11/1996	12.52	122.56	.....	.....	.....	.....	.....	.....
086	277	07/03/1995	14.04	122.38	.....	.....	.....	.....	.....	.....
086	278	07/03/1995	13.28	122.31	.....	.....	.....	.....	.....	.....
087	276	12/13/1996	14.39	122.11	.....	.....	.....	.....	.....	.....
087	277	12/13/1996	14.04	122.01	.....	.....	.....	.....	.....	.....



Legend

- Boundary of geological unit
- BC 1 Geological unit
- Fault and inferred fault
- ⊙ Circular structure
- ⋆ Volcanic center
- Lineament

N13°30'

N13°

N12°30'

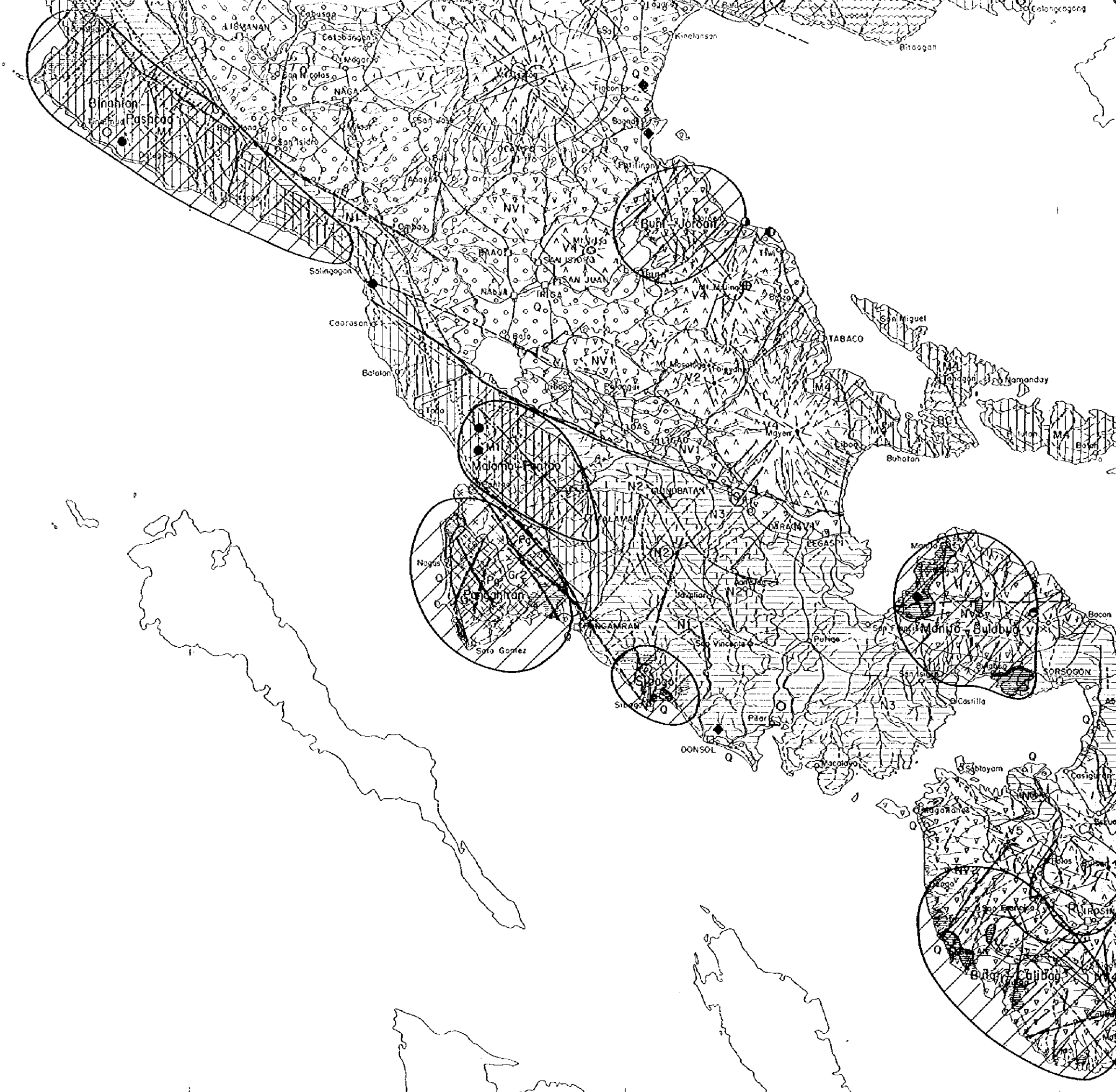
E122°10'

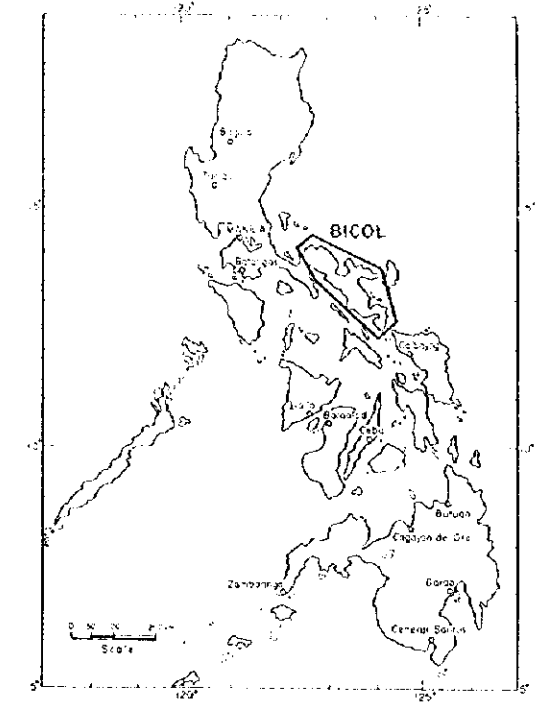
E122°30'

E123°

E123°30'

E124°





Legend

- Boundary of geological unit
 - BC1 Geological unit
 - Fault and inferred fault
 - Trace of bedding
 - Anticline
 - Syncline
 - Inferred alteration zone
 - Circular structure
 - ⋆ Volcanic center
 - Lineament
 - Drainage
 - Road
 - Town
- Ore deposits and Mineral Showings
- Au : GOLD
 - Cu : COPPER
 - △ Pb : LEAD
 - ▲ Zn : ZINC
 - Ni : NICKEL
 - Cr : CHROMIUM
 - ◇ Py : PYRITE
 - ◆ Fe : IRON
 - ⊙ Wc : WHITE CLAY
 - ⊙ Cc : CHINA CLAY
 - ⊙ Fc : FLINT CLAY
 - ⊙ Bc : BENTONITE
 - ⊕ S : SULFUR

Table II-2-4 Promising area of metallic deposit

Promising area	Grand-turb area	Province	Geologic unit *	Prominent lineament	Alteration zone	Commodity (produced)	Commodity (expectation)
Parkale	Parkale	Camarines Norte	NV12	NW-SE, EW	Clay (low)	Au, Cu, Fe	Au, Cu
Morales	Morales	Camarines Norte	BC1, G1	NW-SE, NS	Mylonite (low)	Au, Ni	Au
Morales	Morales	Camarines Norte	M1, N2	NW-SE, NS, NE-SW	Clay (high)	Cu, Fe, Ni	Cu
Gallin	Gallin	Camarines Norte	Q1, Q2	EW-SE	Clay (low)	Wc, Bc	Cu
Panoraso	Panoraso	Camarines Sur	M1	NW-SE, NE-SW	Mylonite (low)	Au, Cu	Au, Cu
San Vicente	San Vicente	Camarines Sur	BC1	NS, NE-SW	Clay (low)		Au
San Juan	San Juan	Camarines Sur	BC1	ENE-WSW, NW-SE, NE-SW	Clay (low)	Au, Cu, Fe, Pb, Cr	Au, Cu
Rangas	Rangas	Albay	N1	NW-SE, NE-SW	Clay (low)		Au
Albay	Albay	Albay	N1	EW-NE, NE-SW, NW-SE	Clay (low)	Fe, Fe	Au
Albay	Albay	Albay	N1, N2	NE-SW, E-W	Clay (low)		Au

*1 see Table II-2-3

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