

Appendix-8 Bulk chemical analysis results for the petrochemical study.

No.	Sample	Rock	Alteration	SiO ₂ (%)	TiO ₂ (%)	Al ₂ O ₃ (%)	Fe ₂ O ₃ (%)	MnO (%)	MgO (%)	CaO (%)	Na ₂ O (%)	K ₂ O (%)	P ₂ O ₅ (%)	Cr ₂ O ₃ (%)	LOI Total (%)	
1	A00HH012	Andesitic porphyry	Weak	63.1	0.45	17.7	5.14	0.06	1.87	4.22	3.79	1.29	0.15	<0.01	1.64	99.4
2	A00MZ011	Qz porphyry	Weak	63.2	0.31	16.5	2.89	0.15	1.71	4.11	3.14	1.9	0.15	<0.01	4.61	98.7
3	A00MZ013	Dacite porphyry	Fresh	57.4	0.52	17.2	5.16	0.14	3.32	4.61	3.76	1.62	0.16	<0.01	4.66	98.6
4	A00MZ015	Tonalite	Fresh with green Cu stain	62.6	0.46	17.7	4.01	0.11	2.02	5.44	3.52	1.53	0.12	<0.01	1.46	99
5	A00MZ018	Granodiorite	Fresh	61.6	0.62	16	4.96	0.11	2.41	4.51	3.3	3.26	0.17	<0.01	1.68	98.6
6	A00MZ032	Granodiorite (Float)	Fresh	67.3	0.47	15.3	3.8	0.06	1.46	3.51	3.44	2.73	0.11	<0.01	1.16	99.3
7	A00MZ044	Microdiorite	Propylite	51.4	0.9	17.4	8.58	0.18	3.79	8.08	2.93	1.74	0.22	<0.01	4.19	99
8	A00TM009	Tonalite	Fresh	63.7	0.34	18.6	3.23	0.04	1.51	5.09	4.19	1.24	0.25	<0.01	0.98	99.1
9	A00TM018	Tonalite	Weak	62.5	0.69	16.1	4.92	0.14	2.52	4.75	2.69	2.81	0.17	<0.01	1.33	98.6
10	A00TM019	Diorite porphyry	Tourmalinization with qz-epidote vein	52.7	0.92	20.8	6.31	0.21	2.45	5.57	3.33	5.17	0.19	<0.01	1.14	98.8
11	A00TM020	Tonalite	Fresh	61.1	0.55	17.5	5.59	0.14	2.39	6.45	3.17	1.56	0.13	<0.01	0.34	98.8
12	A00TM030	Tonalite	Potassic? with limonite stain	59.2	0.97	15.7	5.96	0.14	4.16	6.35	3.78	1.02	0.19	<0.01	1.77	99.2
13	A00RM013	Granite	Weak qz vein with py diss.	63.7	0.64	15.4	4.84	0.09	2.78	2.43	2.29	3.87	0.12	<0.01	3.11	99.3

No.	Sample	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Co (ppm)	Ni (ppm)	Ba (ppm)	Rb (ppm)	Sr (ppm)	Sn (ppm)	W (ppm)	U (ppm)	Th (ppm)	Cs (ppm)	Ga (ppm)	Hf (ppm)	Nb (ppm)	Ta (ppm)	Tl (ppm)	V (ppm)	La (ppm)	Ce (ppm)	Pr (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Gd (ppm)	Tb (ppm)	Dy (ppm)	Ho (ppm)	Er (ppm)	Tm (ppm)	Yb (ppm)	Lu (ppm)	Y (ppm)	Zr (ppm)
1	A00HH012	<1	12	75	225	5	<5	250	53.4	392	1	1	5	3.7	18	5	5	5	<0.5	<0.5	75	13	26	3.1	12.5	2.7	0.7	2.6	0.4	2.7	0.6	1.8	0.3	2	0.4	16	192
2	A00MZ011	<1	10	80	135	4	<5	727	77.2	432	<1	3	0.5	4	10.6	16	5	5	<0.5	<0.5	50	18	35.5	4.2	16	3.5	0.9	3	0.5	2.7	0.5	1.6	0.2	1.9	0.3	14	175
3	A00MZ013	<1	20	10	50	11	<5	735	62.8	414	<1	<1	1	3	19.1	18	4	3	1	<0.5	115	14	30	3.9	15	3	0.9	3	0.5	2.8	0.6	2	0.3	2.1	0.3	16	127
4	A00MZ015	<1	485	90	165	6	<5	489	55.8	431	1	3	1.5	4	5.5	18	5	3	<0.5	<0.5	80	15	31.5	3.8	15	2.8	0.9	3	0.5	2.3	0.6	1.9	0.3	1.9	0.3	14.5	172
5	A00MZ018	<1	70	10	45	9	5	524	93.6	404	1	<1	5	16	2.2	18	10	6	<0.5	<0.5	95	33.5	71	8.3	33.5	5.7	1.2	5.5	0.8	4.2	0.8	2.4	0.4	2.3	0.4	21.5	324
6	A00MZ032	<1	5	5	25	5.5	<5	528	85.4	193	4	1	2.5	12	3.4	18	8	4	<0.5	<0.5	65	26.5	50	5.5	20.5	3.6	1.1	3.6	0.6	3.8	0.7	2.1	0.3	2	0.4	18.5	277
7	A00MZ044	<1	40	5	65	23.5	10	500	50.2	471	<1	<1	1.5	6	2	18	4	1	<0.5	<0.5	230	17.5	37	4.7	20	4.2	1.3	4.4	0.7	3.9	0.8	2.5	0.3	2.3	0.4	20.5	116
8	A00TM009	<1	10	10	20	3.5	<5	1295	38	737	1	<1	2	10	5.5	20	6	4	0.5	<0.5	45	25.5	48	5.3	17	3.4	1	2.6	0.4	1.8	0.4	1	0.1	1.3	0.2	10.5	200
9	A00TM018	<1	5	50	130	11	5	330	148	306	2	1	5.5	18	7	21	8	5	0.5	<0.5	110	28.5	52	6.1	24	4.6	1.2	3.9	0.5	2.7	0.5	1.6	0.2	1.3	0.3	14	260
10	A00TM019	<1	10	25	140	18	10	694	267	165	1	6	0.5	4	10.1	23	5	4	1	1	190	19.5	41	5.4	23.5	5.3	1.6	5.3	0.8	4.7	0.9	2.8	0.4	2.4	0.3	24	172
11	A00TM020	<1	30	15	70	10.5	<5	367	53.2	393	1	1	1.5	4	4.7	19	7	3	<0.5	<0.5	110	14.5	30	3.7	15	3.3	1	3.3	0.6	3.5	0.6	2.1	0.3	1.9	0.3	17.5	229
12	A00TM030	<1	45	15	85	14.5	35	299	32.8	305	4	1	2	8	4.5	18	8	4	<0.5	<0.5	160	23	51	6.2	24.5	6	1.5	6.2	1	6.7	1.4	4	0.5	3.5	0.5	33	276
13	A00RM013	<1	40	15	65	13	15	545	181	196	4	6	6	22	6.3	18	9	6	0.5	0.5	115	33	66	7.7	30.5	5.9	1.2	5.7	0.9	4.9	1.1	3.1	0.4	2.3	0.4	26.5	307

Appendix-9 Ore grade assay result

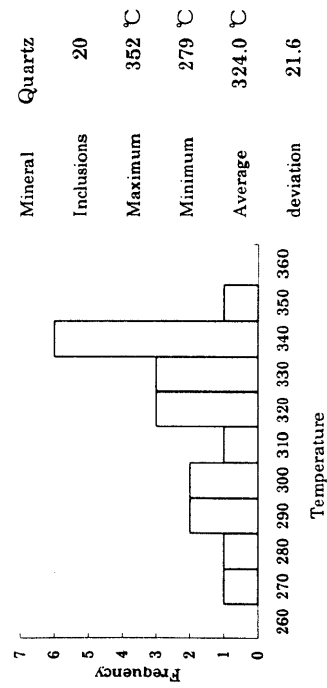
No.	Sample	Mineralization	Au (g/t)	Ag (g/t)	Al (%)	Ba (ppm)	Be (ppm)	Bi (ppm)	Ca (%)	Cd (ppm)	Co (ppm)	Cr (ppm)	Cu (ppm)	Fe (%)	K (%)	Mg (%)	Mn (ppm)	Mo (ppm)	Na (%)	Ni (ppm)	Pb (%)	Sr (ppm)	Ti (%)	V (ppm)	Zn (ppm)
1	A00NK019	gn:cp:py vein	0.24	1.18	0.9	100	<10	<20	0.25	880	30	<10	8080	5.55	0.4	0.05	670	<10	0.15	<10	4.29	50	<0.05	<10	148500
2	A00HH002	qz:py:gn vein	1.71	18	0.45	<100	<10	<20	3.05	10	30	<10	150	7.55	0.1	0.15	1720	<10	<0.05	<10	0.7	20	<0.05	10	1900
3	A00HH024	qz:py:cp:malachite:gn vein	0.24	123	2.5	400	<10	<20	0.45	750	30	<10	15720	6.7	1.6	0.2	1840	<10	0.35	<10	5.91	90	<0.05	10	142000
4	A00MZ010	massive pyrite-limonite	<0.03	11	0.05	<100	<10	40	0.35	<10	10	<10	1420	>30.0	<0.1	<0.05	80	<10	<0.05	<10	0.044	20	<0.05	<10	1240
5	A00MZ012	qz:cal:py:gn vein	152.9	91	1.1	<100	<10	<20	2.35	10	10	<10	1660	13.4	0.5	0.8	750	<10	<0.05	<10	2.18	50	0.05	40	3900
6	A00MZ016	qz:cal:py:gn vein	5.49	14	1.8	<100	<10	<20	5.6	70	10	10	320	6.95	0.7	1.75	5200	<10	<0.05	<10	1.15	80	0.05	40	9120
7	A00MZ019	barite-Fe oxides vein	0.03	31	1.05	7400	<10	<20	0.65	100	10	<10	220	8.55	0.4	0.05	36400	10	<0.05	<10	2.01	2480	<0.05	750	7200
8	A00MZ020	barite:galena:Fe oxides vein	<0.03	912	<0.05	2100	<10	<20	<0.05	30	<10	<10	700	0.2	<0.1	<0.05	1710	<10	<0.05	<10	15.1	910	<0.05	1440	540
9	A00MZ021	qz:malachite veinlet	0.45	15	5	2000	<10	80	0.15	<10	<10	<10	9000	4.2	2.5	0.15	230	140	0.6	<10	0.054	80	0.1	40	100
10	A00MZ028	qz:py:gn:bornite vein	0.18	321	0.9	200	<10	<20	<0.05	90	<10	10	50	15.35	0.3	<0.05	350	<10	<0.05	<10	9.92	10	<0.05	<10	24300
11	A00MZ030	gn:py:cp vein	0.09	74	1.35	400	<10	<20	0.15	1650	50	<10	7270	5.4	1.3	0.05	1360	<10	<0.05	<10	15.4	80	<0.05	<10	263000
12	A00MZ036	cp veinlets and cp diss. in andesite	<0.03	13	8.4	500	<10	20	4.4	<10	50	50	36900	6.3	1.3	2.9	1070	<10	2	60	0.059	290	0.65	270	640
13	A00MZ037	malachite with brecciated andesite	<0.03	22	8.6	100	<10	<20	9.95	<10	20	50	47200	6.95	0.2	1.25	1040	<10	1.1	20	0.021	620	0.7	330	120
14	A00MZ041	qz:py:gn vein	0.12	3	0.9	300	<10	<20	24.2	30	<10	<10	310	1.55	0.1	0.15	25900	<10	<0.05	<10	0.398	120	<0.05	40	6500
15	A00MZ042	galena vein	3.09	17	0.85	300	<10	<20	0.05	930	<10	<10	7390	2.65	0.1	0.3	1470	<10	<0.05	<10	3.82	50	<0.05	20	199500
16	A00MZ046	qz:cp:py:gn vein	4.11	6	1.25	200	<10	20	0.55	<10	<10	<10	4070	3.9	0.4	0.2	750	10	<0.05	<10	0.059	40	0.05	30	1060
17	A00MZ048	white and massive qz vein	2.94	5	0.4	200	<10	<20	0.05	<10	<10	<10	30	0.05	<0.1	<0.05	40	<10	<0.05	<10	0.012	30	<0.05	<10	120
18	A00MZ049	black and white banding qz vein	14.4	3	0.5	<100	<10	<20	0.05	<10	<10	20	40	0.05	0.1	<0.05	20	<10	<0.05	<10	0.003	50	<0.05	<10	60
19	A00MZ055	qz:cp:gn:malachite vein	0.54	18	1.75	<100	<10	<20	<0.05	160	<10	<10	6330	0.5	0.7	0.05	70	200	<0.05	<10	10.9	40	<0.05	10	12940
20	A00MZ068	gn:sp:py vein	0.93	14	0.65	<100	<10	20	<0.05	1310	<10	<10	1150	3.65	<0.1	0.25	370	10	<0.05	<10	3.56	<10	<0.05	<10	134000
21	A00TM049	black qz vein	0.12	<1	3.3	100	<10	<20	0.35	<10	<10	10	10	0.85	2.6	0.05	80	<10	<0.05	<10	0.014	50	0.2	70	280
22	A00TM051	black and white qz vein	0.12	<1	0.45	<100	<10	<20	0.05	<10	<10	10	<10	0.35	0.1	<0.05	10	<10	<0.05	<10	0.004	20	<0.05	<10	60
23	A00RM029	gn:py:cp:green Cu vein	0.06	27	0.6	100	<10	<20	0.05	880	40	<10	3510	6.75	0.4	0.05	1000	<10	<0.05	<10	6.3	30	<0.05	<10	130000
24	A00RM046	white chalcodomic qz vein	42.72	41	0.55	<100	<10	<20	0.05	<10	<10	20	10	0.05	0.1	<0.05	30	<10	<0.05	<10	0.023	20	<0.05	<10	300

Appendix-10

Homogenization temperature and salinity of fluid inclusions of quartz samples (1/13)

Sample A00NK013

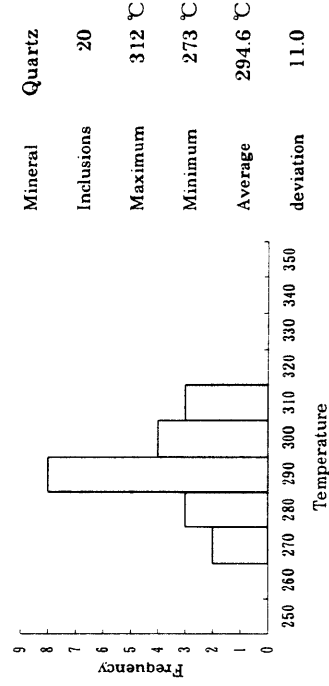
No.	Mineral	Size (mp)	Volume ratio (%)	Form	Temperature (°C)	Melting Temperature (°C)	NaCl Wt (%)
1	Quartz	37.5	17	tu	341	183.0	30.9
2	Quartz	12.5	15	po	347	192.0	31.4
3	Quartz	10.0	15	po	296	234.0	33.5
4	Quartz	10.0	15	po	288	211.0	32.4
5	Quartz	17.5	13	po	306	243.0	34.1
6	Quartz	30.0	13	po	352	225.0	32.9
7	Quartz	17.5	13	po	279	195.0	31.4
8	Quartz	22.5	15	tu	337	201.0	31.9
9	Quartz	15.0	15	po	327	214.0	32.4
10	Quartz	7.5	13	po	343	222.0	32.9
11	Quartz	7.5	13	po	313	225.0	32.9
12	Quartz	22.5	17	tu	325	194.0	31.4
13	Quartz	17.5	17	wg	344	199.0	31.4
14	Quartz	5.0	15	po	335	228.0	32.9
15	Quartz	10.0	15	po	341	204.0	31.9
16	Quartz	7.5	13	po	327	221.0	32.9
17	Quartz	17.5	17	po	338	235.0	33.5
18	Quartz	17.5	15	tu	343	195.0	31.4
19	Quartz	10.0	13	po	303	223.0	32.9
20	Quartz	7.5	13	po	295	201.0	31.9



Homogenization temperature and salinity of fluid inclusions of quartz samples (2/13)

Sample A00NK038

No.	Mineral	Size (mp)	Volume ratio (%)	Form	Temperature (°C)	Melting Temperature (°C)	NaCl Wt (%)
1	Quartz	7.5	15	wg	291	-0.4	0.71
2	Quartz	5.0	15	po	305	-0.4	0.71
3	Quartz	2.5	13	po	282		
4	Quartz	< 2.5	12	po	273		
5	Quartz	< 2.5	10	eg	275		
6	Quartz	10.0	17	po	311	-0.3	0.53
7	Quartz	5.0	15	po	302	-0.4	0.71
8	Quartz	5.0	17	sq	295	-0.2	0.35
9	Quartz	5.0	17	sq	297	-0.2	0.35
10	Quartz	5.0	15	po	303	-0.4	0.71
11	Quartz	2.5	12	po	292		
12	Quartz	< 2.5	10	po	296		
13	Quartz	< 2.5	10	eg	280		
14	Quartz	< 2.5	10	eg	291		
15	Quartz	7.5	15	po	303	-0.2	0.35
16	Quartz	7.5	13	po	312	-0.5	0.88
17	Quartz	5.0	12	po	292	-0.4	0.71
18	Quartz	5.0	15	sq	310	-0.2	0.35
19	Quartz	< 2.5	12	eg	295		
20	Quartz	< 2.5	10	eg	287		

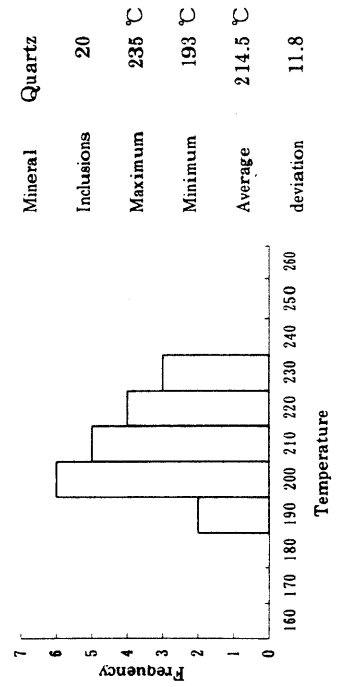


Appendix-10

Homogenization temperature and salinity of fluid inclusions of quartz samples (3/13)

Sample A00MZ012

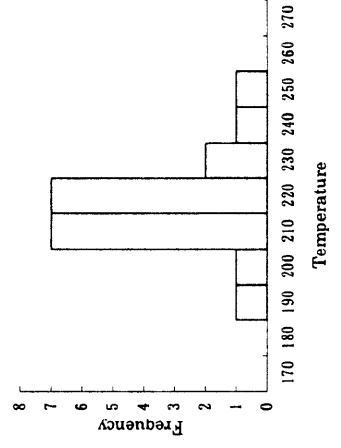
No.	Mineral	Size (mp)	Volume ratio (%)	Form	Temperature (°C)	Melting Temperature (°C)	NaCl Wt (%)
1	Quartz	25.0	15	irr	225	-2.1	3.55
2	Quartz	10.0	13	irr	193	-2.1	3.55
3	Quartz	7.5	13	irr	206	-1.9	3.23
4	Quartz	22.5	15	irr	219	-2.4	4.03
5	Quartz	20.0	17	po	223	-2.1	3.55
6	Quartz	10.0	13	irr	208	-2.2	3.71
7	Quartz	15.0	13	irr	214	-2.1	3.55
8	Quartz	17.5	15	irr	231	-2.4	4.03
9	Quartz	5.0	13	po	223		
10	Quartz	5.0	12	po	214		
11	Quartz	22.5	15	irr	204	-2.2	3.71
12	Quartz	17.5	15	irr	197	-2.1	3.55
13	Quartz	17.5	13	irr	202	-2.1	3.55
14	Quartz	10.0	12	po	201	-2.1	3.55
15	Quartz	7.5	15	po	235		
16	Quartz	5.0	13	po	215		
17	Quartz	5.0	13	po	223		
18	Quartz	12.5	15	wg	232	-2.2	3.71
19	Quartz	5.0	13	po	219		
20	Quartz	5.0	12	po	205		



Homogenization temperature and salinity of fluid inclusions of quartz samples (4/13)

Sample A00MZ016

No.	Mineral	Size (mp)	Volume ratio (%)	Form	Temperature (°C)	Melting Temperature (°C)	NaCl Wt (%)
1	Quartz	27.5	15	irr	223	-3.1	5.11
2	Quartz	10.0	10	po	215	-3.2	5.26
3	Quartz	17.5	10	po	213	-2.7	4.49
4	Quartz	7.5	10	po	216	-3.2	5.26
5	Quartz	7.5	12	po	227	-3.3	5.41
6	Quartz	20.0	13	po	233	-2.6	4.34
7	Quartz	25.0	20	po	253	-3.0	4.96
8	Quartz	12.5	12	irr	221	-2.2	3.71
9	Quartz	10.0	10	irr	208	-1.8	3.06
10	Quartz	7.5	10	po	220		
11	Quartz	7.5	17	po	245		
12	Quartz	17.5	13	irr	226	-2.2	3.71
13	Quartz	25.0	12	irr	228	-3.4	5.56
14	Quartz	10.0	10	tu	198	-2.5	4.18
15	Quartz	7.5	10	po	213		
16	Quartz	7.5	10	po	212		
17	Quartz	10.0	12	po	228	-2.8	4.65
18	Quartz	32.5	13	irr	215	-3.3	5.41
19	Quartz	17.5	15	po	237	-3.2	5.26
20	Quartz	12.5	13	po	213	-2.7	4.49

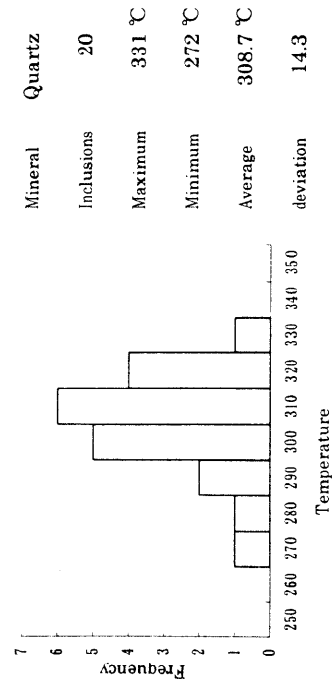


Appendix-10

Homogenization temperatura and salinity of fluid inclusions of quartz samples (5/13)

Sample A00MZ017

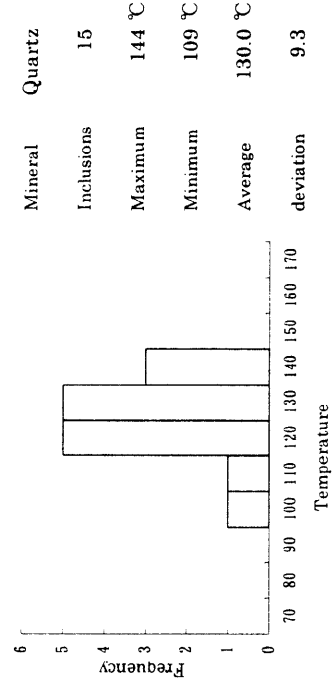
No.	Mineral	Size (mp)	Volume ratio (%)	Form	Temperature (°C)	Melting Temperature (°C)	NaCl Wt (%)
1	Quartz	37.5	15	po	313	-3.0	4.96
2	Quartz	55.0	13	irr	272	-2.1	3.55
3	Quartz	7.5	15	po	308	-0.3	5.26
4	Quartz	7.5	13	po	295	-2.6	4.34
5	Quartz	7.5	13	po	331	-2.6	4.34
6	Quartz	12.5	17	po	311	-3.0	4.96
7	Quartz	2.5	17	po	283		
8	Quartz	12.5	13	po	315	-1.9	3.23
9	Quartz	5.0	13	po	326		
10	Quartz	5.0	13	po	314		
11	Quartz	15.0	15	irr	301	-2.0	3.39
12	Quartz	12.5	17	sq	328	-2.5	4.18
13	Quartz	7.5	15	sq	304	-2.8	4.65
14	Quartz	5.0	13	po	313		
15	Quartz	32.5	13	irr	320	-3.1	5.11
16	Quartz	20.0	13	irr	321	-1.8	3.06
17	Quartz	12.5	13	po	295	-2.5	4.18
18	Quartz	10.0	12	po	304	-2.7	4.49
19	Quartz	7.5	12	po	307		
20	Quartz	10.0	13	po	313	-2.8	4.65



Homogenization temperatura and salinity of fluid inclusions of quartz samples (6/13)

Sample A00MZ043

No.	Mineral	Size (mp)	Volume ratio (%)	Form	Temperature (°C)	Melting Temperature (°C)	NaCl Wt (%)
1	Quartz	12.5	10	irr	128	-0.9	1.57
2	Quartz	5.0	10	irr	109	-1.0	1.74
3	Quartz	< 2.5	7	po	127		
4	Quartz	< 2.5	7	eg	134		
5	Quartz	< 2.5	10	eg	141		
6	Quartz	7.5	12	po	144	-1.2	2.07
7	Quartz	5.0	10	po	136	-1.3	2.24
8	Quartz	5.0	10	irr	122	-0.9	1.57
9	Quartz	2.5	7	po	121		
10	Quartz	< 2.5	7	po	133		
11	Quartz	5.0	10	irr	140	-0.8	1.40
12	Quartz	5.0	7	irr	133	-1.4	2.41
13	Quartz	5.0	7	irr	136	-0.9	1.57
14	Quartz	< 2.5	7	po	129		
15	Quartz	< 2.5	5	eg	117		

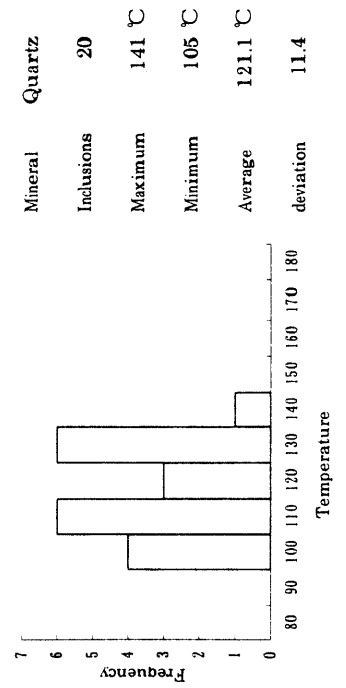


Appendix-10

Homogenization temperatura and salinity of fluid inclusions of quartz samples (7/13)

Sample A00MZ046

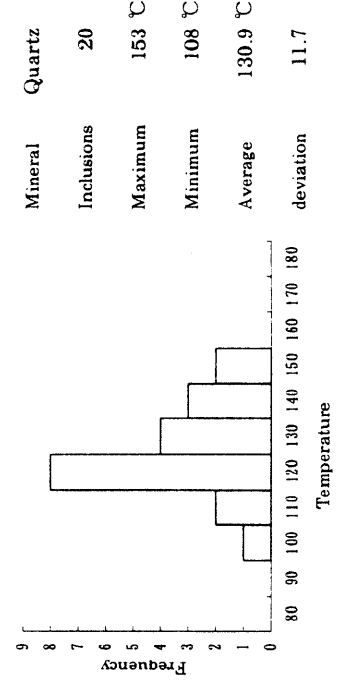
No.	Mineral	Size (mp)	Volume ratio (%)	Form	Temperature (°C)	Melting Temperature (°C)	NaCl Wt (%)
1	Quartz	12.5	10	po	106	-1.6	2.74
2	Quartz	10.0	12	po	112	-1.8	3.06
3	Quartz	5.0	10	po	130		
4	Quartz	5.0	7	po	105		
5	Quartz	7.5	12	po	141	-1.2	2.07
6	Quartz	10.0	12	wg	136	-0.7	1.23
7	Quartz	12.5	12	wg	132	-1.4	2.41
8	Quartz	5.0	10	po	124		
9	Quartz	5.0	10	po	117		
10	Quartz	7.5	12	po	132	-1.5	2.57
11	Quartz	10.0	10	wg	135	-1.2	2.07
12	Quartz	7.5	7	po	109	-1.2	2.07
13	Quartz	17.5	10	irr	115	-1.0	1.74
14	Quartz	12.5	12	irr	121	-0.8	1.40
15	Quartz	5.0	10	po	114		
16	Quartz	5.0	7	po	113		
17	Quartz	10.0	12	po	138	-1.3	2.24
18	Quartz	7.5	10	po	122	-1.7	2.90
19	Quartz	5.0	10	po	112	-1.4	2.41
20	Quartz	5.0	7	po	107		



Homogenization temperatura and salinity of fluid inclusions of quartz samples (8/13)

Sample A00MZ048

No.	Mineral	Size (mp)	Volume ratio (%)	Form	Temperature (°C)	Melting Temperature (°C)	NaCl Wt (%)
1	Quartz	10.0	12	po	135	-0.8	1.40
2	Quartz	5.0	10	po	127	-1.1	1.91
3	Quartz	5.0	13	sq	145	-0.2	0.35
4	Quartz	2.5	10	po	119		
5	Quartz	< 2.5	10	po	123		
6	Quartz	< 2.5	7	eg	108		
7	Quartz	12.5	12	po	137	-0.9	1.57
8	Quartz	7.5	12	po	152	-0.8	1.40
9	Quartz	7.5	10	po	137	-0.6	1.05
10	Quartz	5.0	10	sq	142	-0.8	1.40
11	Quartz	2.5	7	po	125		
12	Quartz	< 2.5	10	eg	153		
13	Quartz	< 2.5	7	eg	129		
14	Quartz	12.5	15	irr	117	-0.8	1.40
15	Quartz	10.0	10	sq	143	-1.0	1.74
16	Quartz	5.0	12	po	125	-0.8	1.40
17	Quartz	5.0	10	po	121		
18	Quartz	5.0	10	po	123	-0.8	1.40
19	Quartz	< 2.5	10	po	135		
20	Quartz	< 2.5	7	eg	122		

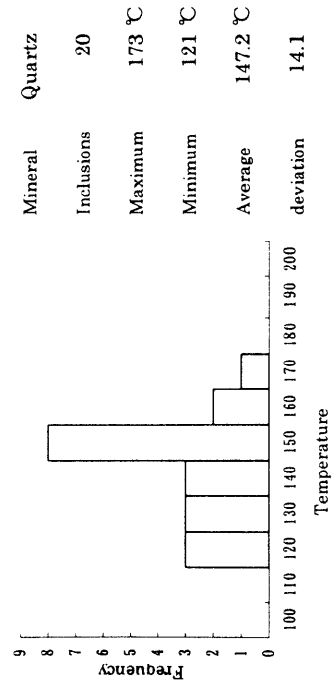


Appendix-10

Homogenization temperatura and salinity of fluid inclusions of quartz samples (9/13)

Sample A00MZ051

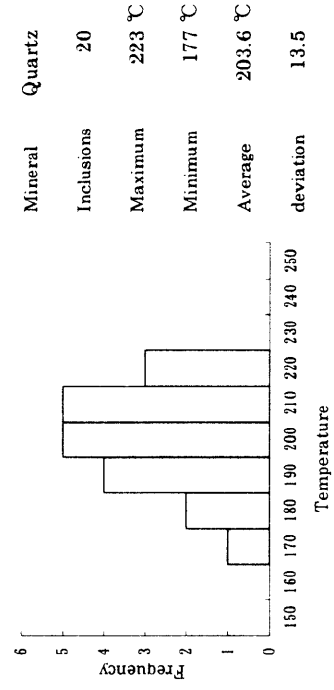
No.	Mineral	Size (mp)	Volume ratio (%)	Form	Temperature (°C)	Melting Temperature (°C)	NaCl Wt (%)
1	Quartz	12.5	12	irr	142	-0.4	0.71
2	Quartz	10.0	10	irr	121	-0.1	0.18
3	Quartz	5.0	13	po	155	-0.6	1.05
4	Quartz	5.0	12	po	132		
5	Quartz	5.0	10	po	124		
6	Quartz	7.5	12	irr	127	-0.6	1.05
7	Quartz	5.0	12	po	157	-0.5	0.88
8	Quartz	< 2.5	10	po	143		
9	Quartz	5.0	15	sq	167	-0.3	0.53
10	Quartz	5.0	13	po	157	-0.2	0.35
11	Quartz	5.0	12	po	138	-0.2	0.35
12	Quartz	10.0	12	wg	155	-0.3	0.53
13	Quartz	7.5	13	po	152	-0.6	1.05
14	Quartz	5.0	12	po	145	-0.8	1.40
15	Quartz	5.0	12	po	161	-0.3	0.53
16	Quartz	5.0	17	sq	173	-0.2	0.35
17	Quartz	5.0	12	po	155		
18	Quartz	2.5	10	po	132		
19	Quartz	< 2.5	7	eg	150		
20	Quartz	5.0	12	po	158	-0.3	0.53



Homogenization temperatura and salinity of fluid inclusions of quartz samples (10/13)

Sample A00MZ066

No.	Mineral	Size (mp)	Volume ratio (%)	Form	Temperature (°C)	Melting Temperature (°C)	NaCl Wt (%)
1	Quartz	10.0	15	po	195	-1.4	2.41
2	Quartz	7.5	15	po	203	-1.6	2.74
3	Quartz	7.5	13	po	211	-1.3	2.24
4	Quartz	5.0	12	sq	209	-1.3	2.24
5	Quartz	5.0	13	sq	223		
6	Quartz	10.0	15	irr	180	-1.5	2.57
7	Quartz	5.0	15	po	203	-1.7	2.90
8	Quartz	2.5	10	po	191		
9	Quartz	< 2.5	10	po	194		
10	Quartz	< 2.5	7	eg	177		
11	Quartz	12.5	13	po	221	-1.3	2.24
12	Quartz	10.0	12	po	215	-1.2	2.07
13	Quartz	5.0	10	sq	201		
14	Quartz	5.0	13	sq	215		
15	Quartz	7.5	12	po	213	-1.5	2.57
16	Quartz	12.5	12	po	195	-1.9	3.23
17	Quartz	10.0	13	sq	222	-1.4	2.41
18	Quartz	5.0	12	po	213		
19	Quartz	5.0	12	po	207		
20	Quartz	7.5	10	po	183	-1.2	2.07

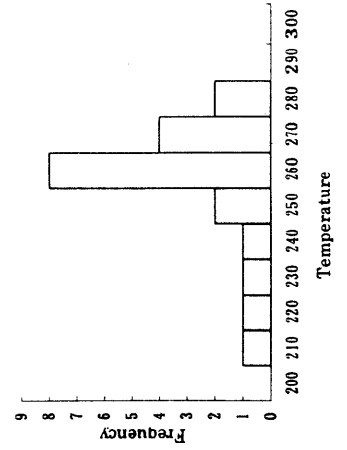


Appendix-10

Homogenization temperatura and salinity of fluid inclusions of quartz samples (11/13)

Sample A00TM039

No.	Mineral	Size (mp)	Volume ratio (%)	Form	Temperature (°C)	Melting Temperature (°C)	NaCl Wt (%)
1	Quartz	12.5	17	po	224	161.0	30.1
2	Quartz	12.5	15	po	265	125.0	28.6
3	Quartz	10.0	20	po	275	166.0	30.1
4	Quartz	10.0	17	po	253	131.0	28.9
5	Quartz	10.0	20	po	277	165.0	30.1
6	Quartz	5.0	20	sq	283	172.0	30.5
7	Quartz	5.0	17	sq	275	177.0	30.5
8	Quartz	7.5	20	po	281	135.0	28.9
9	Quartz	7.5	17	po	263	125.0	28.6
10	Quartz	5.0	13	po	242	117.0	28.3
11	Quartz	12.5	13	irr	215	182.0	30.9
12	Quartz	10.0	17	po	261	131.0	28.9
13	Quartz	7.5	15	irr	237	177.0	30.5
14	Quartz	5.0	15	po	262		
15	Quartz	5.0	13	po	251	125.0	28.6
16	Quartz	10.0	15	po	262	163.0	30.1
17	Quartz	7.5	20	sq	266	152.0	29.7
18	Quartz	10.0	17	wg	263	164.0	30.1
19	Quartz	7.5	17	po	261	162.0	30.1
20	Quartz	7.5	20	po	273		

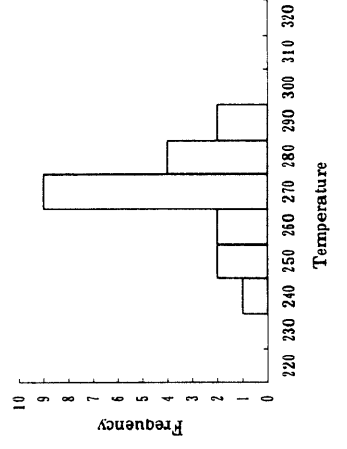


Mineral Quartz
 Inclusions 20
 Maximum 283 °C
 Minimum 215 °C
 Average 259.5 °C
 deviation 17.7

Homogenization temperatura and salinity of fluid inclusions of quartz samples (12/13)

Sample A00TM042

No.	Mineral	Size (mp)	Volume ratio (%)	Form	Temperature (°C)	Melting Temperature (°C)	NaCl Wt (%)
1	Quartz	27.5	13	irr	276	-2.5	4.18
2	Quartz	7.5	13	po	241	-1.2	2.07
3	Quartz	32.5	15	irr	279	-2.0	3.39
4	Quartz	20.0	13	po	251	-3.4	5.56
5	Quartz	22.5	17	irr	270	-3.2	5.26
6	Quartz	17.5	17	irr	271	-2.2	3.71
7	Quartz	12.5	20	po	288	-1.5	2.57
8	Quartz	10.0	17	po	267	-1.7	2.90
9	Quartz	10.0	20	po	282	-2.0	3.39
10	Quartz	5.0	13	po	255		
11	Quartz	17.5	20	irr	289	-2.7	4.49
12	Quartz	10.0	17	po	274	-2.8	4.65
13	Quartz	7.5	20	po	295		
14	Quartz	7.5	17	po	275		
15	Quartz	12.5	17	po	291	-3.0	4.96
16	Quartz	40.0	20	irr	283	-1.3	2.24
17	Quartz	22.5	17	irr	275	-1.5	2.57
18	Quartz	10.0	17	po	279	-2.2	3.71
19	Quartz	5.0	15	po	260		
20	Quartz	12.5	17	po	271	-2.1	3.55



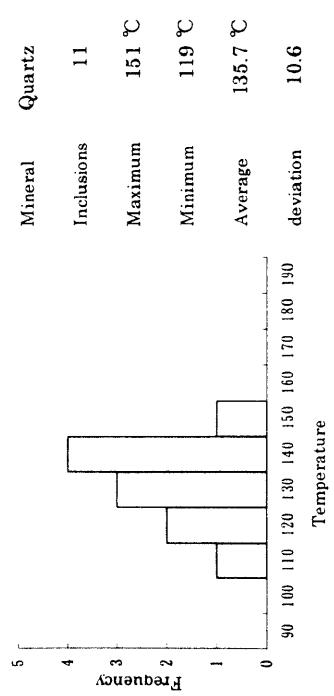
Mineral Quartz
 Inclusions 20
 Maximum 295 °C
 Minimum 241 °C
 Average 273.6 °C
 deviation 13.4

Appendix-10

Homogenization temperature and salinity of fluid inclusions of quartz samples (13/13)

Sample A00TM059

No.	Mineral	Size (μm)	Volume ratio (%)	Form	Temperature (°C)	Melting Temperature (°C)	NaCl Wt (%)
1	Quartz	5.0	13	po	145	-0.8	1.40
2	Quartz	5.0	12	po	132	-0.9	1.57
3	Quartz	2.5	10	po	147		
4	Quartz	< 2.5	7	po	124		
5	Quartz	< 2.5	10	eg	143		
6	Quartz	< 2.5	7	eg	121		
7	Quartz	< 2.5	7	eg	119		
8	Quartz	5.0	12	po	135	-0.4	0.71
9	Quartz	< 2.5	10	eg	151		
10	Quartz	< 2.5	7	eg	144		
11	Quartz	< 2.5	7	eg	132		



Legend of Form
 eg:egg shape; irr:irregular; po:polygon; sq:square; tr:triangle; tu:tube; wg:wedge-shape

Appendix-11 Measurement results of sulfur isotopic composition.

No.	Sample No.	District	Locality	Type	δ 34S (‰)
1	A00MZ012	Andacollo	Mina Sofia, Levell	Pyrite in quartz vein	+3.5
2	A00MZ014	Andacollo	Mina Sofia	Pyrite in black mudstone	-14.9
3	A00MZ029	Mina Maria	Mina Maria	Galena vein	-0.3
4	A00MZ036	Condorcانqui	Condorcانqui	Chalcopyrite in andesite	-26.7
5	A00MZ042	Huemules	Huemules Sur	Galena vein	-1.8
6	A00MZ060	Arroyo Cascada	Arroyo Cascada	Pyrite in quartz vein	+6.6
7	A00MZ066	Ferrocarrilera	Ferrocarrilera	Pyrite in quartz vein	-0.4

Appendix-12 Measurement results of oxygen isotopic composition.

No.	Sample	District	Locality	Type	T(°C) Max	T(°C) Min	T(°C) Average	NaCl(%) Average	δ 18O (‰) qz	δ 18O (‰) qz-water	δ 18O (‰) water
1	A00MZ012	Andacollo	Mina Sofia, Levell	Vein ore	235	193	214	3.6	11.2	10.8	0.4
2	A00MZ043	Huemules	Huemules Sur	Veinlet	144	109	130	1.8	9.2	17.3	-8.1
3	A00MZ046	Huemules	Huemules Sur	Veinlet	141	105	121	2.2	8.5	18.2	-9.7
4	A00MZ048	Joya del Sol	Brancote-Elena Sur	Qz vein	153	108	131	1.4	7.5	17.2	-9.7
5	A00MZ051	Joya del Sol	Brancote-Galadriel	Qz vein	173	121	147	0.7	4.1	15.6	-11.5
6	A00MZ066	Ferrocarrilera	Ferrocarrilera	Vein ore	223	177	204	2.5	10.3	11.4	-1.1
7	A00TM039	Cushamen	Cushamen	Qz vein	283	215	259	29.6	9.7	8.5	1.2
8	A00TM042	Cerro Gonzalo	Cerro Gonzalo	Qz vein	295	241	274	3.7	10.7	7.9	2.8
9	A00TM059	Estrella Gaucha	Estrella Gaucha	Qz vein	151	119	136	1.2	7.3	16.7	-9.4