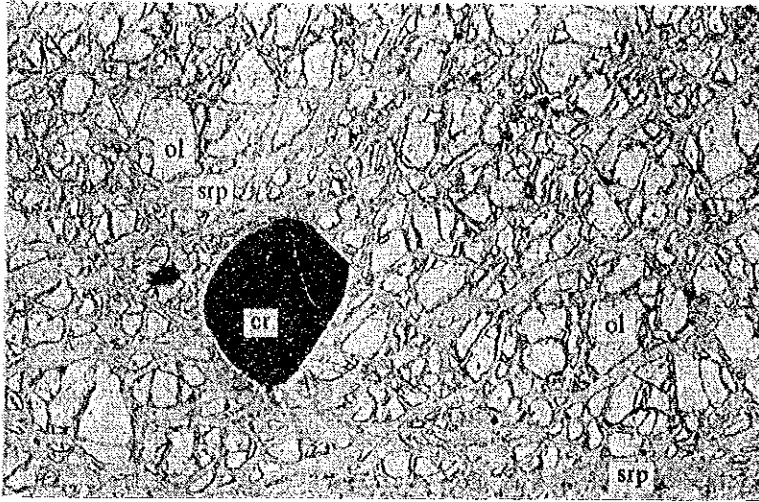


APPENDICES

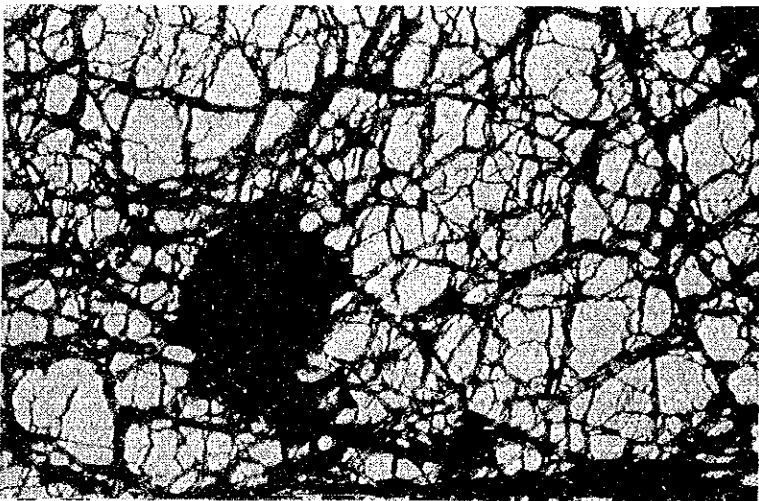
Fig. A—1 Microphotograph of Thin Section

Abbreviation

ol : olivine
en : enstatite
srp : serpentine
tr : tremolite
cr : chromite



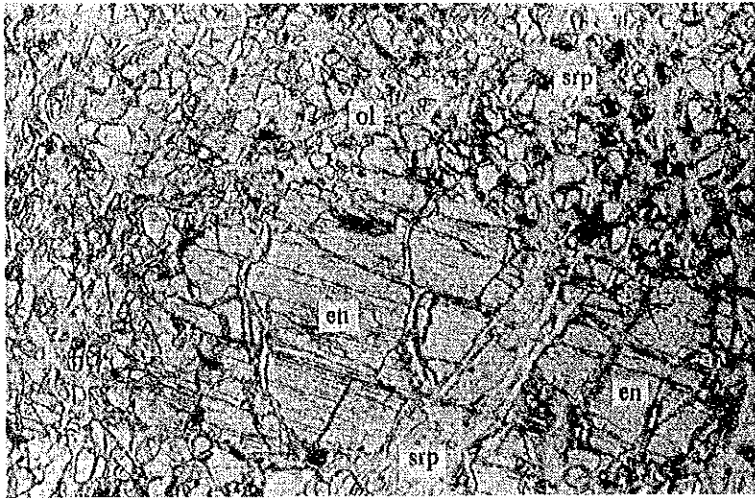
Only lower polar



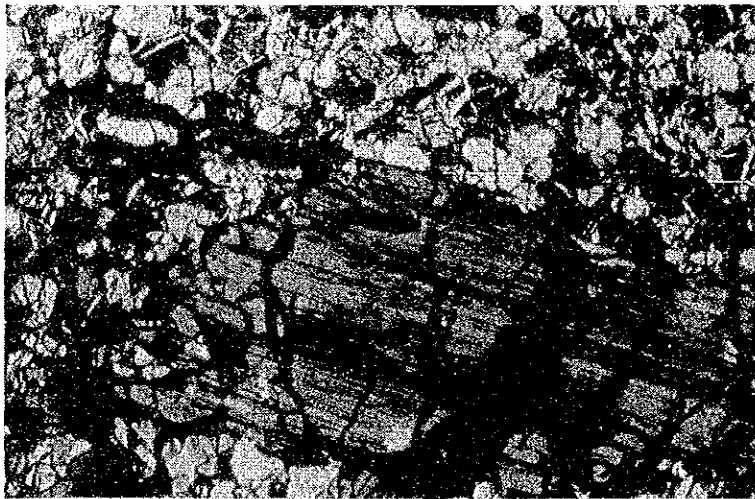
Crossed polars

0 0.5mm

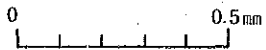
Sample No. : KR3-062
Location : Ogos River
Rock name : dunite



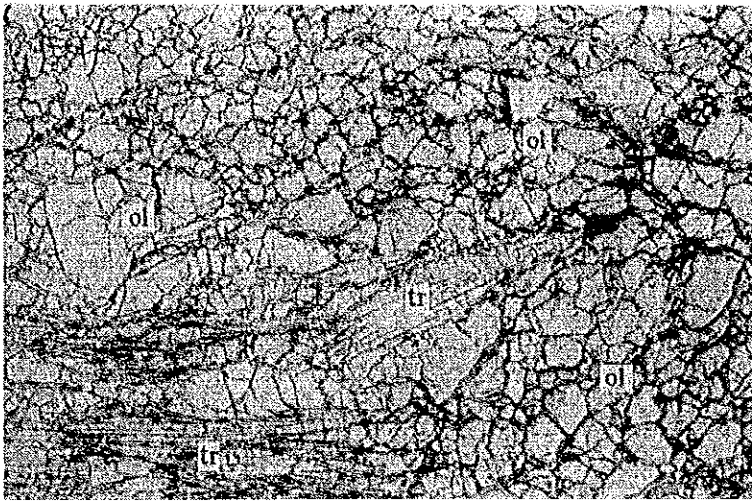
Only lower polar



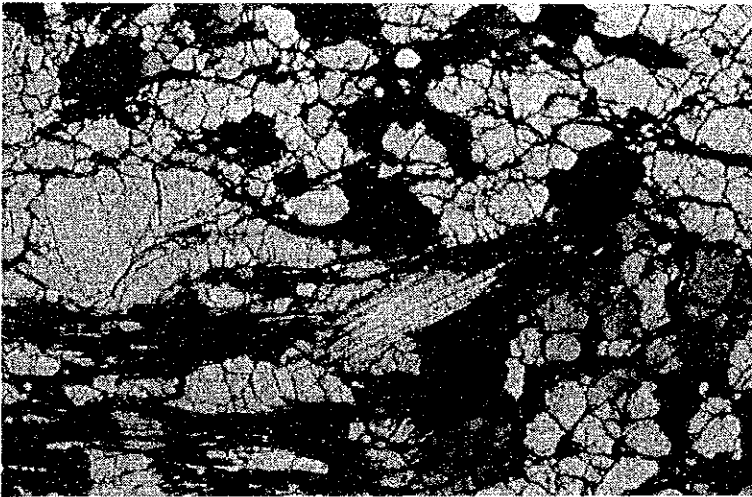
Crossed polars



Sample No. : KR3-018
Location : Pintin River
Rock name : harzburgite



Only lower polar



Crossed polars

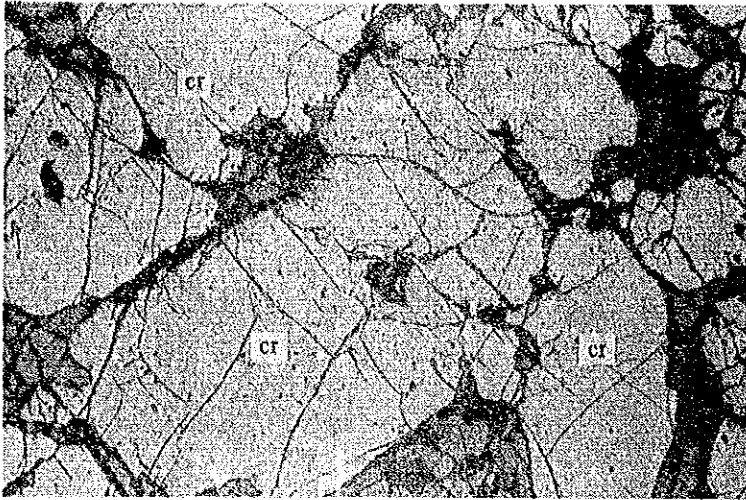
0 0.5 mm

Sample No. : YR3-133
Location : Masbo River
Rock name : wehrlite
(metamorphosed)

Fig. A-2 Microphotograph of Polished Section

Abbreviation

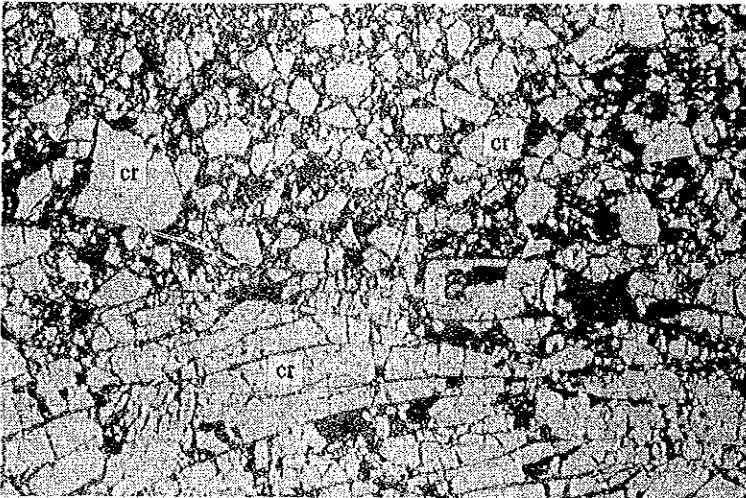
cr : chromite
mt: magnetite
he : hematite
py: pyrite
cp : chalcopyrite
sph : sphalerite



0 0.5mm

Sample No. : KR3-054
Location : Ogos orebody
Ore name : chromite ore

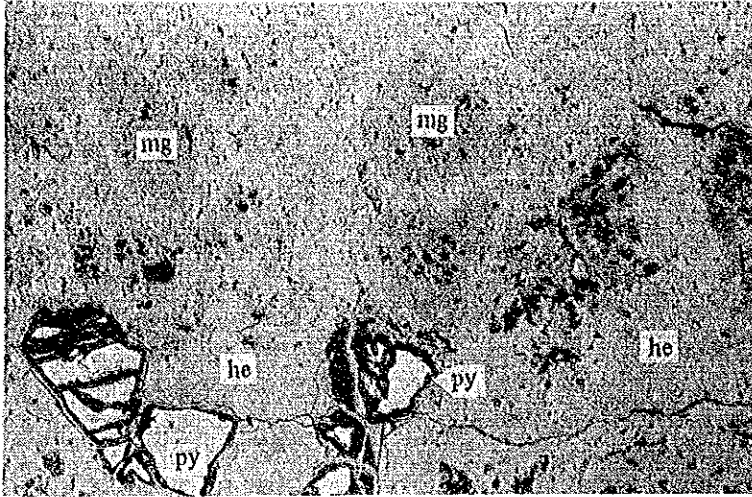
Reflected light
Only lower polar



0 0.5mm

Sample No. : FR3-013
Location : Pintin River
Ore name : chromite ore

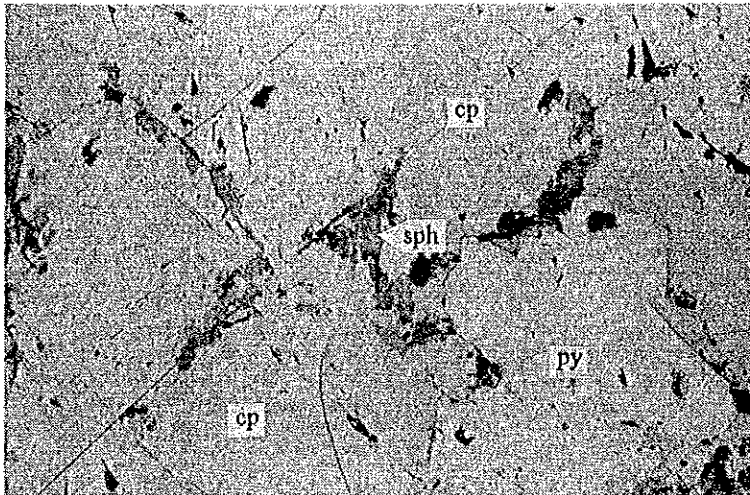
Reflected light
Only lower polar



Sample No. : KR3-028a
Location : Nagsabongan
Ore name : magnetite ore

Reflected light
Only lower polar

0 0.5mm



Sample No. : FR3-025
Location : Shawood (+300m ASL)
Ore name : chalcopyrite ore

Reflected light
Only lower polar

0 0.5mm

Table A-1 List of Microscopic Observation (Thin Section)

(Igneous Rocks)

Sample No.	Location	Rock Name	Texture	Phenocryst										Secondary Minerals										Remarks		
				pl	hb	au	hy	ol	en	op	cr	pic	cal	ser	chl	ep	op	sph	srp	zeo	prh	tr				
YR3-104	Barsud R.	harzburgite	equigranular					(⊙)										•								bastite
YR3-111	do.	dunite	-			•		(⊙)										•								serpentinized
YR3-113	do.	harzburgite	equigranular			•		(⊙)										•								do.
YR3-124	Banus R.	dunite	-					(⊙)										•								do.
YR3-130	Masbo R.	diorite	-	⊙														•			○					altered
YR3-133	do.	wehrlite	-					⊙										•								metamorphosed
YR3-138	do.	harzburgite	equigranular					(⊙)										•								serpentinized
YR3-139	do.	dunite	-					(⊙)										•								do.
YR3-141	do.	dunite	-					(⊙)										•								metamorphosed
YR3-144	Rosanna R.	dunite	-					(⊙)										•								serpentinized
KR3-018	Pintin R.	harzburgite	equigranular					⊙										•								metamorphosed
KR3-022	do.	harzburgite	-					(⊙)										•								serpentinized
KR3-023	do.	chromite ore	dissemination					(○)	(•)									•								in harzburgite
KR3-041	Tangon R.	dunite	-					(⊙)										•								serpentinized
KR3-042	do.	orthopyroxene	-			•			⊙									•								metamorphosed
KR3-044	Hagan R.	gabbro	equigranular	⊙		○	(•)											•	○							altered
KR3-050	Ogos R.	dunite	-					(⊙)										•								serpentinized
KR3-060	do.	chromite ore	dissemination					○										•								in dunite
KR3-062	do.	dunite	-					⊙										•								serpentinized
KR3-075	Amnay R.	gabbro	equigranular	⊙		○	(•)											•	○							An 50-70%

(Others)

Sample No.	Location	Rock Name	Texture	Skarn Minerals							Remarks				
				ga	cpx	ep	chl	mus	op	ap		kf			
KR3-029	Nagsabongan	skarn	crystalloblastic	⊙			•		○		•	•	•		-
KR3-033a	Lapa-ao	skarn	crystalloblastic	•	○	⊙	•	•	○		•	•	•		-

Abbreviation pl: plagioclase, hb: hornblende, au: augite, hy: hypersthene, ol: olivine, en: enstatite, op: opaque minerals, cr: chromite, pic: picotite, cal: calcite, ser: sericite, chl: chlorite, ep: epidote, sph: sphene, srp: serpentine, zeo: zeolite, prh: prehnite, tr: tremolite, ga: garnet, cpx: clinopyroxene, mus: muscovite, ap: apatite, kf: potash feldspar

Table A-2 List of Microscopic Observation (Polished Section)

No.	Sample No.	Location	Name of Ore and Formation	Microscopic Observation	Remarks
1	FR3-006	Dayap	Magnetite Ore (Mansalay F.)	The ore mainly consists of magnetite grains with many irregular cracks. Acicular maghemite and hematite have replaced magnetite along cracks. A small amount of pyrite (<0.3mm in size) are present and are partly replaced by hematite.	Massive Ore
2	FR3-007	Dayap	Magnetite Ore (do)	Same as FR3-006	Massive ore
3	FR3-013	Pintin R.	Chromite Ore (Ultramafic C.)	Xenomorphic chromite crystals (0.05 ~ 1.0 mm in size), with many irregular cracks, show a cataclastic texture.	Massive ore
4	FR3-015	do	Chromite Ore (do)	Chromite crystals have many irregular cracks. Some shear fractures are developed and have broken crystals into an aggregate of fine fragments (0.05 ~ 10 mm in size). Very fine grained pyrite and hematite (<0.02 mm in size) are rarely included.	Massive ore
5	FR3-025	Shawood (+300 m. ASL)	Chalcopyrite Ore (Ultramafic C.)	Chalcopyrite veins fill the fissures in serpentinized harzburgite. Ore minerals are composed of chalcopyrite ≧ sphalerite ≧ pyrite > pyrrhotite. Some cubic pyrite of earliest stage are 0.25 mm in size and are enclosed in chalcopyrite. Sphalerite is filling cracks irregularly which are developed in chalcopyrite. A few amount of pyrrhotite grains (0.2 ~ 0.3 mm in size) occur in sphalerite.	Massive ore
6	FR3-026	Shawood (+400 m. ASL)	Pyrrhotite - Chalcopyrite Ore (Lumintao F.)	Ore minerals consist of pyrrhotite ≧ chalcopyrite > sphalerite > pyrite. Chalcopyrite and sphalerite are in a xenomorphic form (0.02 ~ 0.8 mm in size), occurring in pyrrhotite. A few grains of pyrite (<0.05 mm in size) are visible. A veinlet (0.1 ~ 0.3 mm in width), consisting of hematite, pyrrhotite, sphalerite and gangue minerals, is found in pyrrhotite.	
7	FR3-032	Mason	Pyrrhotite - Chalcopyrite Ore (do)	Ore minerals consist of pyrrhotite > chalcopyrite ≧ sphalerite > pyrite. Sphalerite and pyrite are included in chalcopyrite. Pyrite shows an idiomorphic form (0.01 ~ 0.15 mm in size). Pyrrhotite and chalcopyrite are partly brecciated into fine fragments (0.01 ~ 0.1 m/m in size), and sphalerite, hematite, gangue minerals and a small amount of covellite fill intergranular spaces of fragments.	Brecciated ore

(2)

No.	Sample No.	Location	Name of Ore and Formation	Microscopic Observation	Remarks
8	FR3-033	Aguluban R.	Pyrite-Chalcopyrite Ore (Mansalay F.)	Ore minerals consist of pyrite ≧ chalcopyrite ≧ sphalerite. Pyrite grains (0.05 ~ 2.0 m/m in size) show an idiomorphic form. Chalcopyrite and a small amount of sphalerite (0.01 ~ 0.3 mm in size) are included in pyrite or occur as veinlets.	
9	KR3-028c	Nagsabongan	Magnetite-Hematite Ore (Sablayan G.)	The ore consists mainly of magnetite and hematite. Magnetite is compact and has many irregular cracks, along which hematite is produced. Fine grains (0.05 ~ 0.3 m/m in size) of pyrite are visible in magnetite.	Massive ore
10	YR3-041	Lasala	Magnetite Ore (Sablayan G.)	Magnetite crystals with an idiomorphic ~ hypidiomorphic (0.05 ~ 0.5 mm in size) form have many irregular cracks. They are replaced by hematite and limonite.	Massive ore
11	YR3-042a	Lapa-ao	Magnetite-Hematite Ore (Sablayan F.)	Ore minerals consist of magnetite > hematite > limonite. Magnetite grains (0.05 ~ 0.8 m/m in size) have an idiomorphic ~ hypidiomorphic form showing a spotted texture. Hematite and limonite occur in cracks of magnetite as the replacement minerals.	Spotted ore
12	YR3-043	do	Magnetite Ore (Sablayan G.)	The section is an aggregate of idiomorphic magnetite crystals (0.1 ~ 1.5 mm in size) with many irregular cracks. Acticular maghemite crystals replacing magnetite are found along the cracks.	Massive ore
13	YR3-064	Nagsabongan	Magnetite Ore (Sablayan G.)	Magnetite crystals (0.05 ~ 1.0 mm in size) are replaced by a small amount of acticular maghemite, hematite and limonite along the cracks. Very fine grains (< 0.04 mm in size) of pyrite are included in magnetite.	Massive ore
14	YR3-123	Bongabong R.	Chromite Ore (Ultramafic C.)	Idiomorphic ~ hypidiomorphic chromite crystals (0.05 ~ 1.0 mm in size) with many irregular cracks (0.01 ~ 0.3 mm in width) compose the ore. A very small amount of and fine grains of pyrite (0.02 mm in size) are visible along cracks.	Massive ore
15	YR3-135	do	Chromite Ore (do)	Chromite crystals (0.03 ~ 1.0 mm in size) with many cracks are in an idiomorphic ~ hypidiomorphic form and are partly crushed into small grains (< 0.03 mm in size) by shearing. A very small amount of pyrite is found in gangue minerals.	Massive ore
16	YR3-140	do	Chromite Ore (do)	Same as YR3-135.	Massive ore

(3)

No.	Sample No.	Location	Name of Ore and Formation	Microscopic Observation	Remarks
17	YR3-150	Ogos R.	Chromite Ore (Ultramafic C.)	Idiomorphic chromite crystals (0.5 ~ 2 mm in size) contain many irregular cracks. Very fine grains of pyrite is rarely visible in gangue minerals.	Dense spotted ore
18	YR3-161	Bongabong R.	Chromite Ore (do)	Hypidiomorphic ~ xenomorphic chromite crystals (0.05 ~ 1.0 mm in size) with many irregular cracks show a cataclastic texture.	Spotted ore
19	YR3-165	do	Chromite Ore (do)	Same as YR3-150.	Dense spotted ore
20	YR3-166	do	Chromite Ore (do)	Chromite crystals (0.05 ~ 2.0 mm in size) show a idiomorphic ~ xenomorphic form and have many irregular cracks. They are crushed to fine breccias (<0.04 mm in size) by shearing. Pyrite (2 mm in length and 0.2 mm in thick) is found along crack.	Massive ore
21	YR3-167	do	Chromite Ore (Sablayan G.)	Same as YR3-166.	Massive ore
22	GR3-028	Lasala	Magnetite Ore (do)	Magnetite crystals are idiomorphic ~ xenomorphic and show a banded structure consisting of fine grained and coarse grained parts. Small amount of hematite and maghemite partly replace magnetite.	Banded ore
23	GR3-030	do	Magnetite-Hematite Ore (do)	Magnetite crystals (0.1 ~ 1 mm in size) with many irregular cracks, show an idiomorphic ~ xenomorphic form and are replaced by hematite and limonite along cracks.	Massive ore
24	GR3-031	do	Magnetite Ore (do)	Magnetite grains (0.01 ~ 0.3 mm in size) are composed of xenomorphic ~ hypidiomorphic crystals showing a cataclastic texture. Acicular magnetite and hematite crystals replacing magnetite are rarely found.	Massive ore
25	KR3-005	Pintin R.	Chromite Ore (Ultramafic C.)	Chromite crystals (0.1 ~ 2.0 mm in size) with many irregular cracks are idiomorphic ~ hypidiomorphic, and are crushed to fine breccia (<0.1 mm in size) by shearing, showing a cataclastic texture.	Massive ore
26	KR3-006	do	Chromite Ore (do)	Same as KR3-005.	Massive ore
27	KR3-007	do	Chromite Ore (do)	Same as KR3-005.	Massive ore

(4)

No.	Sample No.	Location	Name of Ore and Formation	Microscopic Observation	Remarks
28	KR3-011b	Pintin R.	Chromite Ore (Ultramafic C.)	Chromite crystals (0.05 ~ 1.0 mm in size) are idiomorphic ~ hypidiomorphic, and are crushed by shearing.	Massive ~ spotted ore
29	KR3-013	do	Chromite Ore (do)	Xenomorphic granular chromite (0.01 ~ 0.4 mm in size) show a cataclastic texture. Shear fractures (0.05 ~ 0.5 mm in width) are found.	Massive ore
30	KR3-014	Balatican Trench No.2	Chromite Ore (do)	Chromite crystals (0.1 ~ 1.0 mm in size) show an idiomorphic ~ hypidiomorphic shape with many cracks.	Dense spotted ore
31	KR3-019a	Pintin R. Trench No.1	Chromite Ore (do)	Same as KR3-013.	Dense spotted ~ massive ore
32	KR3-028a	Nagsabongan	Magnetite Ore (Sablayan G.)	Magnetite crystals have many irregular cracks and are replaced by acicular hematite and limonite along cracks. Idiomorphic pyrite (0.1 ~ 0.8 mm in size) can be found.	Massive ore
33	KR3-032a	Lapa-ao	Magnetite ore (do)	The ore is an aggregate of idiomorphic ~ hypidiomorphic magnetite crystals (0.1 ~ 1.0 mm in size) which are partly replaced by hematite and limonite. A small amount of pyrite is found in magnetite.	Massive ore
34	KR3-032c	do	Magnetite Ore (do)	Same as KR3-032a.	Massive ore
35	KR3-051a	Ogos R.	Chromite Ore (Ultramafic C.)	Granular chromite crystals (0.3 ~ 2.0 mm in size) with many irregular cracks are idiomorphic ~ hypidiomorphic and are brecciated partly by shearing.	Dense spotted ore
36	KR3-051b	do	Chromite Ore (do)	Chromite grains (0.01 ~ 1.0 mm in size) with many irregular cracks and shear fracture show a cataclastic texture.	Dense spotted ~ massive ore
37	KR3-053	do	Chromite Ore (do)	Chromite crystals (0.1 ~ 2 mm in size) are idiomorphic ~ hypidiomorphic with many cracks. A few pyrite grains (0.01 ~ 0.07 mm in size) are included in chromite.	Dense spotted ore
38	KR3-054	do	Chromite Ore (do)	Same as KR3-053, but the chromite grain size is coarse (0.5 ~ 3.0 mm in size).	Massive ~ dense spotted ore

(5)

No.	Sample No.	Location	Name of Ore and Formation	Microscopic Observation	Remarks
39	KR3-055	Ogos R.	Chromite Ore (Ultramafic C.)	Same as KR3-053.	Dense spotted ore
40	KR3-056	do	Chromite Ore (do)	Hypidiomorphic ~ xenomorphic chromite crystals (0.1 ~ 1.3 mm in size), having many irregular cracks, show a cataclastic texture. Shear fractures (0.3 ~ 1.0 mm in width) are developed and crystals are broken into fine fragments (<0.03 mm in size). A few pyrite grains are included in chromite and gangue minerals.	Dense spotted ore

Table A-3 Result of X-ray Diffractive Analysis

Minerals		Sample No.	Location	α-Quartz	Plagioclase	Augite	Garnet	Epidote	Amphibole	Vermiculite	Mera Halloysite	Sericite	Chlorite	Hematite	Remarks
		YR3-057	Nagsabongan deposit		○	○		●							skarn
		YR3-065	Lasala deposit		⊙	●		●	○						do.
		YR3-115	Bansud River								●		●		veinlets in dunite
		KR3-016	Pintin River	⊙	○							●	●	●	red tuffaceous shale
		KR3-029a	Nagsabongan deposit				⊙	●							skarn
		KR3-029b	do.		●	●	⊙								do.
		KR3-036	Lapa-ao deposit		⊙	●			●	○					do.
		KR3-033a	do.		○				●	○			○		do.
		KR3-033b	do.		○	●			●	○					do.
		KR3-057	Ogos River						⊙	⊙					veinlets in dunite
		KR3-061	do.							⊙			○		do.

Table A-4 Result of Chemical Analysis of Ore Samples

Sample No.	Location	Occurrence	Au g/t	Ag g/t	Cu %	Pb %	Zn %	C ₂ O ₃ %	Ni ppm	Co ppm	Fe %	SiO ₂ %	Al ₂ O ₃ %	MgO %	S %	P ppm	Ti ppm	V ppm	
Chrome Ore																			
FR3-013	Pintin	massive Cr ore						51.40	2174	264	17.59	2.96	8.74	11.64					
FR3-015	Ogos	do.						45.82	2040	265	14.00	6.51	9.49	15.17					
GR3-105	do.	disseminated Cr ore						6.19	2956	254	11.57	38.58	1.29	34.42					
KR3-005	Pintin	massive Cr ore (float)						33.18	1573	207	9.86	6.78	26.06	18.74					
KR3-006	do.	do.						30.30	1201	144	9.14	9.02	24.79	13.98					
KR3-007	do.	do.						56.10	2476	300	11.88	6.34	8.76	13.64					
KR3-011a	do.	do.						48.94	1669	274	13.81	6.76	12.38	12.44					
KR3-011b	do.	do.						47.62	2524	314	19.33	8.65	7.76	9.08					
KR3-013	do. (Tr. No.1)	do.						39.81	3163	336	26.63	10.91	6.28	6.97					
KR3-014	do. (Tr. No.2)	do.						40.19	2301	232	14.89	11.26	11.63	14.49					
KR3-019a	do. (Tr. No.1)	do.						38.93	1896	272	19.13	12.96	9.35	13.30					
KR3-019b	do. (do.)	do.						38.14	1419	240	15.05	13.00	10.62	15.84					
KR3-020	do. (do.)	do.						41.30	3098	323	26.89	5.46	6.68	6.77					
KR3-023	do. (Tr. No.2)	do.						39.92	1606	254	14.80	10.11	12.63	15.41					
KR3-051a	Ogos	do. (float)						39.57	2062	194	11.02	9.97	14.41	21.12					
KR3-051b	do.	do.						44.11	1372	243	9.79	10.89	10.06	18.06					
KR3-052	do.	do.						35.23	1496	575	29.34	5.89	9.97	6.29					
KR3-053	do. (Tr.)	do.						33.71	1297	191	12.35	17.54	9.47	21.63					
KR3-054	do. (do.)	do.						30.16	1078	143	11.30	14.63	15.23	22.64					
KR3-055	do. (do.)	densely spotted Cr ore						18.19	1568	152	8.85	27.44	11.10	28.47					
KR3-056	do. (do.)	do.						23.25	1602	160	9.77	22.57	12.43	26.27					
KR3-058	do. (do.)	massive Cr ore (layered)						29.85	1257	173	11.21	14.89	16.88	21.95					
KR3-059	do. (do.)	do.						37.36	1120	196	13.51	8.13	18.15	15.09					
KR3-060	do. (do.)	densely spotted Cr ore						27.05	1291	173	12.69	13.25	14.80	23.05					
KR3-064	do. (do.)	massive Cr ore (layered)						30.64	977	160	11.79	12.45	18.39	19.05					
YR3-114	Bongabong	do.						42.02	978	184	11.65	8.02	10.00	19.79					
YR3-116	do.	do.						46.12	769	203	11.65	6.77	10.76	18.43					
YR3-120	do. (Banus)	do.						37.97	1167	186	10.98	10.73	10.90	21.02					
YR3-121	do. (do.)	do.						46.11	964	187	11.88	4.86	12.69	17.15					
YR3-122	do. (do.)	do.						41.44	712	270	13.90	10.11	8.89	17.26					
YR3-123	do. (do.)	do.						43.50	1170	192	11.47	8.70	10.77	18.48					
YR3-135	do. (Masbo)	do.						44.98	993	186	11.59	8.58	9.79	19.24					
YR3-140	do. (do.)	do.						41.85	994	171	12.17	6.18	15.65	16.85					
YR3-142	do. (do.)	do.						41.47	1204	188	9.86	8.11	13.64	19.47					
YR3-150	Ogos (Siyaub)	do.						37.20	657	192	10.80	11.81	11.97	20.89					
YR3-161	Bongabong (Banus)	do.						41.23	924	171	10.08	9.11	12.85	19.73					
YR3-165	do. (do.)	do.						36.05	989	182	10.70	12.63	12.40	17.71					
YR3-166	do. (do.)	do.						43.43	978	193	11.73	7.06	13.40	16.80					
YR3-167	do. (do.)	do.						45.43	761	189	12.01	4.87	13.00	16.27					
Iron Ore																			
FR3-005	Dayap Dep.	massive Mt ore			0.0213						56.73					22	278	83	
FR3-006	do.	do.			0.0220						70.43					128	98	33	
FR3-007	do.	do.			0.0089						65.37					30	71	32	
GR3-028	Lasala Dep.	do. (float)			0.0046						68.49					114	275	156	
GR3-030	do.	do.			0.1984						54.87					1254	313	47	
GR3-031	do.	do.			0.0078						63.04					142	298	148	
KR3-028a	Nagsabong Dep.	do.			0.0061						67.32					111	44	12	
KR3-028b	do.	do.			0.0028						56.42					432	474	106	
KR3-028c	do.	do.			0.0437						69.46					61	71	11	
KR3-032a	Lapa-ao Dep.	do.			0.0244						55.41					69	28	22	
KR3-032b	do.	do.			0.0026						63.85					41	60	71	
KR3-032c	do.	do.			0.0032						60.24					74	59	71	
YR3-040a	Lasala Dep.	do.			0.0269						59.96					139	85	81	
YR3-040b	do.	do.			0.0290						62.34					139	68	80	
YR3-041	do.	do.			0.0063						57.90					301	59	51	
YR3-042a	Lapa-ao Dep.	do.			0.0243						30.74					177	104	70	
YR3-042b	do.	do.			0.0244						33.11					238	94	73	
YR3-043	do.	do.			0.0037						69.30					55	48	71	
YR3-054	Nagsabong Dep.	do.			0.0356						64.56					256	46	23	
YR3-064	do.	do.			0.0105						69.92					168	122	28	
Copper Ore																			
FR3-023	Mayu R.	Py dissemination (float)	tr.	tr.	0.36	0.12	0.20				22.37					15.42			
FR3-024	do.	do.	1.10	5.6	1.01	0.10	0.30				10.94					12.42			
FR3-025	Shawood Dep.	Cp-Po vein	8.33	4.5	11.93	0.16	0.20				21.99					15.24			
FR3-026	do.	do.	1.90	1.2	0.28	0.17	0.20				37.65					18.91			
FR3-030	Mamon Dep.	do.	tr.	tr.	0.45	0.10	0.20				40.86					23.61			
FR3-031	do.	do.	14.80	5.3	2.38	0.14	0.20				48.88					31.72			
FR3-032	do.	do.	3.70	1.6	2.05	0.13	0.20				46.69					29.34			
FR3-033	Aguban R.	massive pyrite (float)	0.67	4.9	0.42	0.12	0.20				48.64					25.16			
FR3-034	Shawood Cr.	Cp-Py network (do.)	tr.	tr.	2.49	0.10	0.20				11.67					4.74			
FR3-035	Shawood Dep.	Cp-Po vein	tr.	tr.	11.95	0.23	0.61				22.76					15.47			

Abbreviation: Cr: Chromite, Cp: Chalcopyrite, Py: Pyrite, Po: Pyrrhotite, Qz: Quartz, Mt: Magnetite, Tr: Trench

Table A-5 List of Geochemical Data

Soil Samples

Ser. No.	Sample No.	Geol. Unit	Cu ppm	Pb ppm	Zn ppm	Ser. No.	Sample No.	Geol. Unit	Cu ppm	Pb ppm	Zn ppm
1	00-00	LB	37	21	47	51	02-08	LB	26	9	70
2	00-01	LB	26	19	36	52	02-09	LB	37	12	81
3	00-02	LB	24	18	42	53	02-10	LB	30	11	34
4	00-03	LB	22	18	48	54	02-11	LB	42	6	23
5	00-04	LB	31	4	74	55	02-12	LB	41	2	24
6	00-05	LB	56	2	68	56	02-13	LB	24	10	48
7	00-06	LB	20	16	29	57	02-14	LB	32	18	52
8	00-07	LB	38	1	49	58	02-15	LB	31	10	42
9	00-08	LB	27	4	71	59	02-16	LB	37	14	62
10	00-09	LB	13	2	36	60	02-17	LB	45	12	71
11	00-10	LB	18	10	91	61	02-18	LB	46	6	23
12	00-11	LB	40	4	60	62	02-19	LB	37	10	45
13	00-12	LB	26	9	41	63	02-20	LB	34	12	48
14	00-13	LB	35	4	20	64	03-00	LB	42	3	151
15	00-14	LB	21	4	27	65	03-01	LB	28	5	32
16	00-15	LB	21	13	54	66	03-02	LB	13	5	18
17	00-16	LB	31	9	55	67	03-03	LB	35	6	49
18	00-17	LB	31	10	49	68	03-04	LB	46	4	96
19	00-18	LB	23	13	41	69	03-05	LB	39	4	62
20	00-19	LB	32	7	51	70	03-06	LB	24	8	35
21	00-20	LB	27	8	46	71	03-07	LB	35	11	57
22	01-00	LB	37	8	44	72	03-08	BM	33	7	64
23	01-01	LB	9	5	36	73	03-09	BM	42	8	87
24	01-02	LB	32	13	47	74	03-10	BM	50	6	49
25	01-03	LB	30	22	46	75	03-11	LB	45	5	44
26	01-04	LB	29	22	50	76	03-12	LB	54	8	51
27	01-05	LB	30	21	47	77	03-13	LB	39	2	16
28	01-06	LB	24	13	51	78	03-14	LB	46	3	149
29	01-07	LB	29	3	77	79	03-15	LB	41	3	21
30	01-08	LB	23	0	48	80	03-16	LB	52	6	54
31	01-09	LB	17	2	47	81	03-17	LB	26	6	45
32	01-10	LB	13	0	39	82	03-18	LB	10	5	16
33	01-11	LB	27	7	49	83	03-19	LB	56	1	27
34	01-12	LB	17	26	54	84	03-20	LB	25	2	47
35	01-13	LB	56	9	42	85	04-00	LB	35	8	51
36	01-14	LB	14	8	22	86	04-01	LB	21	4	35
37	01-15	LB	24	11	46	87	04-02	LB	33	5	66
38	01-16	LB	25	6	53	88	04-03	LB	38	5	39
39	01-17	LB	22	4	48	89	04-04	LB	39	6	57
40	01-18	LB	36	6	43	90	04-05	LB	34	0	25
41	01-19	LB	33	7	39	91	04-06	LB	38	5	70
42	01-20	LB	27	10	36	92	04-07	LB	23	7	63
43	02-00	LB	41	6	103	93	04-08	LB	16	5	38
44	02-01	LB	16	6	26	94	04-09	BM	39	6	80
45	02-02	LB	10	4	9	95	04-10	BM	40	25	57
46	02-03	LB	17	2	8	96	04-11	LB	20	7	40
47	02-04	LB	10	7	15	97	04-12	LB	21	15	29
48	02-05	LB	3	4	7	98	04-13	LB	41	13	48
49	02-06	LB	24	5	37	99	04-14	LB	47	18	40
50	02-07	LB	32	7	42	100	04-15	LB	53	24	33

Ser. No.	Sample No.	Geol. Unit	Cu ppm	Pb ppm	Zn ppm
101	04-16	LB	67	11	67
102	04-17	LB	10	6	23
103	04-18	LB	39	3	43
104	04-19	LB	18	4	43
105	04-20	LB	21	2	34
106	05-00	LB	34	5	56
107	05-01	LB	53	3	67
108	05-02	LB	22	4	25
109	05-03	LB	38	2	44
110	05-04	LB	23	5	35
111	05-05	LB	27	16	61
112	05-06	LB	30	7	42
113	05-07	LB	43	10	59
114	05-08	LB	30	18	64
115	05-09	BH	25	20	52
116	05-10	BH	27	13	61
117	05-11	BH	25	19	35
118	05-12	BH	37	23	52
119	05-13	LB	34	7	38
120	05-14	LB	23	12	7
121	05-15	LB	47	22	76
122	05-16	LB	26	6	34
123	05-17	LB	32	3	34
124	05-18	LB	29	14	73
125	05-19	LB	14	11	21
126	05-20	LB	28	16	11
127	06-00	LB	34	5	49
128	06-01	LB	51	6	69
129	06-02	LB	31	4	62
130	06-03	LB	23	10	49
131	06-04	LB	33	6	67
132	06-05	LB	37	7	57
133	06-06	LB	56	3	29
134	06-07	LB	20	16	57
135	06-08	LB	26	15	56
136	06-09	LB	16	20	50
137	06-10	BH	35	13	62
138	06-11	BH	37	20	42
139	06-12	BH	41	19	61
140	06-13	BH	40	28	77
141	06-14	LB	41	21	71
142	06-15	LB	37	4	22
143	06-16	LB	20	4	33
144	06-17	LB	24	4	22
145	06-18	LB	44	5	36
146	06-19	LB	36	7	34
147	06-20	LB	13	18	14
148	07-00	LB	58	15	67
149	07-01	LB	53	15	58
150	07-02	LB	36	7	56

Ser. No.	Sample No.	Geol. Unit	Cu ppm	Pb ppm	Zn ppm
151	07-03	BH	28	2	38
152	07-04	BH	40	7	55
153	07-05	BH	19	6	52
154	07-06	LB	32	5	39
155	07-07	LB	37	4	40
156	07-08	LB	35	6	37
157	07-09	LB	35	5	28
158	07-10	LB	34	7	54
159	07-11	LB	28	19	60
160	07-12	LB	17	14	40
161	07-13	LB	12	12	23
162	07-14	LB	15	16	36
163	07-15	LB	18	5	32
164	07-16	LB	26	3	28
165	07-17	LB	22	5	30
166	07-18	LB	58	2	42
167	07-19	LB	16	3	28
168	07-20	LB	85	3	62
169	08-00	LB	27	7	57
170	08-01	LB	24	5	40
171	08-02	BH	52	3	63
172	08-03	BH	33	15	56
173	08-04	BH	23	14	51
174	08-05	BH	35	9	49
175	08-06	BH	34	15	86
176	08-07	BH	11	7	45
177	08-08	LB	18	5	27
178	08-09	LB	90	1	26
179	08-10	LB	48	12	56
180	08-11	LB	33	12	47
181	08-12	LB	18	13	37
182	08-13	LB	24	12	51
183	08-14	LB	27	13	64
184	08-15	LB	16	16	43
185	08-16	LB	26	19	67
186	08-17	LB	40	4	39
187	08-18	LB	33	9	46
188	08-19	LB	26	6	58
189	08-20	LB	33	3	35
190	09-00	LB	33	5	43
191	09-01	LB	33	6	51
192	09-02	LB	53	4	65
193	09-03	BH	44	5	51
194	09-04	BH	39	14	61
195	09-05	BH	48	4	35
196	09-06	BH	29	6	52
197	09-07	LB	49	19	82
198	09-08	LB	45	9	58
199	09-09	LB	47	1	32
200	09-10	LB	83	5	34

Ser. No.	Sample No.	Geol. Unit	Cu ppm	Pb ppm	Zn ppm
201	09-11	LB	47	6	66
202	09-12	LB	24	5	36
203	09-13	LB	32	15	44
204	09-14	LB	44	19	55
205	09-15	LB	75	9	58
206	09-16	LB	89	7	52
207	09-17	LB	67	6	58
208	09-18	LB	90	8	58
209	09-19	LB	43	4	44
210	09-20	LB	39	10	31
211	10-00	LB	25	2	34
212	10-01	LB	24	3	36
213	10-02	BH	28	2	47
214	10-03	BH	34	5	40
215	10-04	BH	33	14	53
216	10-05	BH	24	15	48
217	10-06	BH	29	15	55
218	10-07	BH	43	6	53
219	10-08	BH	60	7	53
220	10-09	LB	36	4	43
221	10-10	LB	29	5	37
222	10-11	LB	10	2	17
223	10-12	LB	40	4	36
224	10-13	LB	28	4	28
225	10-14	LB	9	4	27
226	10-15	LB	29	4	35
227	10-16	LB	30	5	37
228	10-17	LB	168	7	53
229	10-18	LB	34	5	35
230	10-19	LB	24	8	31
231	10-20	LB	34	3	35
232	11-00	LB	98	5	30
233	11-01	LB	33	3	37
234	11-02	BH	46	6	51
235	11-03	BH	60	5	52
236	11-04	LB	22	14	22
237	11-05	LB	27	11	44
238	11-06	BH	34	8	51
239	11-07	BH	38	9	52
240	11-08	BH	27	17	50
241	11-09	BH	31	17	50
242	11-10	LB	36	4	38
243	11-11	LB	39	4	41
244	11-12	LB	11	4	22
245	11-13	LB	17	6	54
246	11-14	LB	45	5	43
247	11-15	LB	56	5	54
248	11-16	LB	34	2	33
249	11-17	LB	28	4	26
250	11-19	LB	49	5	47

Ser. No.	Sample No.	Geol. Unit	Cu ppm	Pb ppm	Zn ppm
251	11-20	LB	39	9	59
252	12-00	LB	26	5	63
253	12-00	LB	26	3	35
254	12-01	LB	48	9	56
255	12-02	LB	27	11	46
256	12-03	BS	26	12	54
257	12-04	BS	31	17	56
258	12-05	BS	38	14	57
259	12-06	LB	62	5	41
260	12-07	LB	21	13	44
261	12-08	LB	46	5	48
262	12-09	LB	22	12	42
263	12-10	LB	18	17	43
264	12-11	BH	47	7	43
265	12-12	LB	48	8	50
266	12-13	LB	50	10	58
267	12-14	LB	48	2	56
268	12-15	LB	30	4	32
269	12-16	LB	50	5	42
270	12-17	LB	99	3	54
271	12-18	LB	34	5	54
272	12-19	LB	47	4	43
273	12-20	LB	46	12	62
274	13-00	LB	42	10	62
275	13-01	LB	34	9	50
276	13-02	BS	26	8	39
277	13-03	BS	33	16	49
278	13-04	BS	35	14	59
279	13-05	BS	27	11	51
280	13-06	LB	21	6	33
281	13-07	LB	16	7	28
282	13-08	BS	35	11	63
283	13-09	BS	34	11	60
284	13-10	BS	34	10	57
285	13-11	BS	30	11	50
286	13-12	BS	43	14	57
287	13-13	LB	49	0	52
288	13-14	BS	58	13	67
289	13-15	BS	39	4	39
290	13-16	LB	36	8	83
291	13-17	LB	34	7	62
292	13-18	LB	31	6	41
293	13-19	LB	41	3	35
294	13-20	LB	24	3	51
295	14-00	BS	25	5	40
296	14-01	BS	23	4	41
297	14-02	BS	41	6	50
298	14-03	BS	41	7	57
299	14-04	BS	25	15	35
300	14-05	BS	23	16	34

Ser. No.	Sample No.	Geol. Unit	Cu ppm	Pb ppm	Zn ppm
301	14-06	BS	34	8	56
302	14-07	LB	28	8	48
303	14-08	LB	43	9	60
304	14-09	LB	24	16	43
305	14-10	LB	36	11	57
306	14-11	LB	22	3	39
307	14-12	LB	36	2	86
308	14-13	LB	41	77	71
309	14-14	LB	55	9	40
310	14-15	LB	24	4	56
311	14-16	LB	31	9	96
312	14-17	BH	53	7	87
313	14-18	BH	34	6	48
314	14-19	BH	38	15	57
315	14-20	BH	38	8	42
316	15-00	BS	24	11	39
317	15-01	BS	21	10	32
318	15-02	BS	18	8	55
319	15-03	BS	24	6	52
320	15-04	BS	24	6	62
321	15-05	BS	29	9	57
322	15-06	LB	29	7	54
323	15-07	LB	28	12	54
324	15-08	LB	30	12	63
325	15-09	LB	28	7	43
326	15-10	LB	30	11	56
327	15-11	LB	30	8	42
328	15-12	BH	19	8	56
329	15-13	BH	26	8	77
330	15-14	BH	20	8	36
331	15-15	BH	41	5	58
332	15-16	BH	33	14	45
333	15-17	BH	42	13	64
334	15-18	BH	38	1	41
335	15-19	BH	29	5	37
336	15-20	BH	51	3	44
337	16-00	BS	42	9	54
338	16-01	BS	40	11	54
339	16-02	BS	41	9	59
340	16-03	BS	40	10	56
341	16-04	BS	37	10	58
342	16-05	LB	23	9	50
343	16-06	LB	31	9	48
344	16-07	LB	32	9	59
345	16-08	LB	11	4	41
346	16-09	LB	37	38	90
347	16-10	BH	24	9	31
348	16-11	BH	27	12	48
349	16-12	BH	45	14	63
350	16-13	BH	26	11	30

Ser. No.	Sample No.	Geol. Unit	Cu ppm	Pb ppm	Zn ppm
351	16-14	BH	36	12	38
352	16-15	BH	40	10	63
353	16-16	BH	47	6	48
354	16-17	BH	40	3	59
355	16-18	LB	35	5	47
356	16-19	LB	42	5	55
357	16-20	LB	32	5	39
358	17-00	BS	38	14	47
359	17-01	BS	35	13	45
360	17-02	BS	39	12	51
361	17-03	BS	33	11	37
362	17-04	LB	20	12	33
363	17-05	LB	24	12	32
364	17-06	LB	28	11	50
365	17-07	LB	36	12	51
366	17-08	LB	33	13	55
367	17-09	BH	35	12	60
368	17-10	BH	23	4	42
369	17-11	BH	24	6	48
370	17-12	BH	37	5	26
371	17-13	BH	54	9	63
372	17-14	BH	56	8	72
373	17-15	LB	29	8	40
374	17-16	LB	35	6	40
375	17-17	LB	41	4	41
376	17-18	LB	31	6	51
377	17-19	LB	27	9	47
378	17-20	LB	27	21	45
379	18-00	BS	27	14	43
380	18-01	BS	36	15	51
381	18-02	BS	36	14	50
382	18-03	BS	37	13	50
383	18-04	BS	33	10	34
384	18-05	LB	23	5	36
385	18-06	LB	39	11	72
386	18-07	LB	29	7	58
387	18-08	LB	31	5	39
388	18-09	LB	26	5	22
389	18-10	LB	72	5	58
390	18-11	LB	39	14	54
391	18-12	LB	30	7	36
392	18-13	UB	40	3	77
393	18-14	UB	30	6	46
394	18-15	LB	29	8	28
395	18-16	LB	26	14	43
396	18-17	LB	36	9	56
397	18-18	LB	37	5	30
398	18-19	LB	51	5	51
399	18-20	LB	27	15	49
400	19-00	BS	28	15	44

Ser. No.	Sample No.	Geol. Unit	Cu ppm	Pb ppm	Zn ppm
401	19-01	BS	32	12	51
402	19-02	BS	48	14	78
403	19-03	BS	42	12	61
404	19-04	BS	39	2	77
405	19-05	LB	48	11	67
406	19-06	LB	50	10	67
407	19-07	LB	30	10	52
408	19-08	LB	58	6	59
409	19-09	LB	55	5	51
410	19-10	LB	60	9	63
411	19-11	LB	70	3	60
412	19-12	LB	47	8	47
413	19-13	LB	41	4	58
414	19-14	LB	42	8	51
415	19-15	LB	31	5	61
416	19-16	LB	53	15	68
417	19-17	LB	25	11	38
418	19-18	BS	35	9	45
419	19-19	BS	15	9	18
420	19-20	LB	33	11	48
421	20-00	BS	46	7	56
422	20-01	BS	34	9	52
423	20-02	BS	32	12	54
424	20-03	BS	33	13	59
425	20-04	BS	37	13	62
426	20-05	LB	29	13	49
427	20-06	LB	30	0	37
428	20-07	LB	42	6	46
429	20-08	LB	57	4	43
430	20-09	LB	54	5	42
431	20-10	LB	64	3	49
432	20-11	LB	42	6	40
433	20-12	LB	37	14	46
434	20-13	LB	143	3	56
435	20-14	LB	41	11	59
436	20-15	LB	29	9	36
437	20-16	BS	11	8	9
438	20-17	BS	14	10	3
439	20-18	BS	25	10	34
440	20-19	BS	24	12	43
441	20-20	BS	22	12	33
442	21-00	LB	63	3	41
443	21-01	LB	33	6	49
444	21-02	BS	19	3	38
445	21-03	BS	26	11	38
446	21-04	BS	31	9	39
447	21-05	LB	30	4	34
448	21-06	LB	21	5	24
449	21-07	LB	39	5	39
450	21-08	LB	34	4	34

Ser. No.	Sample No.	Geol. Unit	Cu ppm	Pb ppm	Zn ppm
451	21-09	LB	48	3	40
452	21-10	LB	49	0	36
453	21-11	BS	40	17	39
454	21-12	BS	16	12	20
455	21-13	BS	23	13	38
456	21-14	BS	13	15	47
457	21-15	BS	40	15	52
458	21-16	LB	32	15	59
459	21-17	LB	53	19	62
460	21-18	LB	26	13	45
461	21-19	BS	16	8	21
462	21-20	BS	13	9	22
463	22-00	LB	58	5	51
464	22-01	LB	109	2	26
465	22-02	LB	39	3	36
466	22-03	BS	27	8	42
467	22-04	LB	27	4	41
468	22-05	LB	28	3	35
469	22-06	LB	41	6	59
470	22-07	LB	59	3	48
471	22-08	LB	42	4	41
472	22-09	LB	61	5	41
473	22-10	LB	44	2	44
474	22-11	LB	20	8	30
475	22-12	LB	12	9	18
476	22-13	BS	36	15	45
477	22-14	BS	43	14	54
478	22-15	LB	25	12	31
479	22-16	LB	20	12	44
480	22-17	LB	26	11	50
481	22-18	LB	40	13	45
482	22-19	BS	35	12	44
483	22-20	BS	40	11	48
484	23-00	LB	39	4	38
485	23-01	LB	154	4	25
486	23-02	LB	10	3	14
487	23-03	LB	16	4	29
488	23-04	LB	58	18	61
489	23-05	LB	48	5	46
490	23-06	LB	62	4	46
491	23-07	LB	36	4	35
492	23-08	LB	32	7	40
493	23-09	BH	27	13	43
494	23-10	BH	22	12	40
495	23-11	BH	32	13	48
496	23-12	BS	49	17	47
497	23-13	BS	28	16	23
498	23-14	BS	16	7	21
499	23-15	BS	8	6	11
500	23-16	BS	9	5	14

Ser. No.	Sample No.	Geol. Unit	Cu ppm	Pb ppm	Zn ppm
501	23-17	BS	15	9	24
502	23-18	BS	6	5	8
503	23-19	BS	11	5	18
504	23-20	BS	36	15	40
505	24-00	LB	76	7	53
506	24-01	LB	48	5	37
507	24-02	LB	13	5	23
508	24-03	LB	29	3	31
509	24-04	BM	65	3	43
510	24-05	LB	73	5	47
511	24-06	LB	51	4	47
512	24-07	LB	32	4	39
513	24-08	LB	25	13	30
514	24-09	BM	22	12	36
515	24-10	BM	17	12	26
516	24-11	BM	19	12	29
517	24-12	BS	11	8	25
518	24-13	BS	10	7	16
519	24-14	BS	12	8	22
520	24-15	BS	7	6	9
521	24-16	BS	10	6	13
522	24-17	BS	12	9	20
523	24-18	BS	18	11	24
524	24-19	BS	27	8	31
525	24-20	BS	25	9	30
526	25-00	LB	45	4	40
527	25-01	LB	43	4	35
528	25-02	LB	56	5	44
529	25-03	BM	49	5	55
530	25-04	BM	46	4	51
531	25-05	BM	43	4	47
532	25-06	BM	76	4	52
533	25-07	BM	58	14	73
534	25-08	BM	34	15	48
535	25-09	BM	42	12	43
536	25-10	BM	21	16	40
537	25-11	BM	32	12	42
538	25-12	BS	46	20	39
539	25-13	BS	13	8	19
540	25-14	BS	6	9	15
541	25-15	BS	9	8	10
542	25-16	BS	12	4	14
543	25-17	BS	35	16	40
544	25-18	BS	28	14	27
545	25-19	BS	27	15	33
546	25-20	BS	30	15	30
547	26-12	LB	14	3	50
548	26-13	LB	10	1	33
549	26-14	LB	32	4	59
550	26-15	LB	42	8	47

Ser. No.	Sample No.	Geol. Unit	Cu ppm	Pb ppm	Zn ppm
551	26-16	LB	30	4	26
552	27-13	LB	33	8	50
553	27-14	LB	37	35	59
554	27-15	LB	103	43	126
555	27-16	LB	8	3	21
556	27-17	LB	39	5	41
557	28-13	LB	39	5	41
558	28-14	LB	19	4	12
559	28-15	LB	33	3	26
560	28-16	LB	35	4	42
561	28-17	LB	45	4	32
562	29-13	LB	25	20	70
563	29-14	LB	45	18	80
564	29-15	LB	50	4	65
565	29-16	LB	24	3	30
566	29-17	LB	25	4	25
567	30-10	UM	35	4	42
568	30-11	LB	9	4	34
569	30-12	LB	12	4	41
570	30-13	LB	33	2	40
571	30-14	LB	46	3	45
572	31-14	LB	27	4	33
573	31-15	UM	26	13	74
574	31-16	UM	28	7	53
575	31-17	LB	35	5	52
576	31-18	LB	38	4	50
577	32-05	LB	31	13	63
578	32-06	LB	38	10	65
579	32-07	LB	22	12	46
580	32-08	LB	37	5	39
581	32-09	LB	41	4	42
582	32-10	LB	40	2	40
583	32-11	LB	46	11	74
584	32-12	UV	46	3	46
585	32-13	LB	26	6	42
586	32-14	LB	56	4	37
587	33-07	LB	27	1	37
588	33-08	LB	44	6	56
589	33-09	LB	46	5	45
590	33-10	LB	28	4	36
591	33-11	LB	50	4	35

Abbreviation

Geological Unit

- LB : Lumintao Basalt
- BM : Mansalay Formation
- BS : Bongabong Sandstone
- UB : Ultramafic Rocks

Stream Sediment Samples

Ser. No.	Sample No.	Geol. Unit	Cu ppm	Pb ppm	Zn ppm
1	G3-001		38	4	25
2	G3-002		35	8	47
3	G3-003		23	7	54
4	G3-004		19	4	36
5	G3-005		25	4	49
6	G3-006		36	8	64
7	G3-007		18	5	36
8	G3-008		38	7	63
9	G3-009		19	2	38
10	G3-010		52	9	66
11	G3-011		42	10	80
12	G3-012		35	8	67
13	G3-013		34	6	65
14	F3-001		39	2	69
15	F3-002		10	3	18
16	F3-003		30	5	39
17	F3-004		28	10	50
18	F3-005		16	3	22
19	F3-006		6	3	16
20	F3-007		4	2	11
21	F3-008		16	5	34
22	F3-009		5	3	13
23	F3-010		36	3	30
24	F3-011		31	2	28
25	M3-001		76	8	42
26	M3-002		154	10	51
27	M3-003		58	5	38

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