

























Appendix 12

List of pan concentrate sample  
in Labuk area



Ser. No.	Sample No.	Coordinates		Topographic Map Sheet	Name of Stream	Weight (g)	Order	Width (m)	Flow *1	Size *2
		N	E							
1	B563	1501.95	4650.90	Tongod	S. Milian	1	4	5.0	4	1
2	F546	1496.55	4653.10	Tongod	S. Tongod	1	4	12.0	3	1
3	Y592	1495.05	4655.30	Tongod	S. Tongod	5	2	2.5	3	2
4	D604	1493.45	4655.70	Tongod	S. Tongod	< 1	2	3.0	3	3
5	N581	1488.55	4652.45	Tongod	S. Mungkuago	2	4	10.0	4	2
6	B564	1482.65	4652.35	Tongod	S. Mungkuago	1	4	7.0	2	3
7	C530	1484.85	4659.60	Tongod	S. Milian	3	3	3.5	2	3
8	Y595	1480.15	4659.45	Tongod	S. Milian	1	3	5.5	2	3
9	N580	1498.25	4663.60	Tongod	S. Mananam	2	4	12.0	4	3
10	N584	1493.95	4663.90	Tongod	S. Mananam	3	2	5.0	3	3
11	N586	1491.05	4664.15	Tongod	S. Tongod	2	4	15.0	4	2
12	N587	1491.15	4664.60	Tongod	S. Mananam	3	4	12.0	4	1
13	M552	1493.65	4669.10	Tongod	S. Melagatan B.	1	3	5.0	1	3
14	F539	1485.35	4669.20	Tongod	S. Tongod	5	5	15.0	3	1
15	P534	1483.15	4661.55	Tongod	S. Milian	1	4	4.0	2	3
16	E526	1499.20	4672.20	Tongod	S. Malagatan B.	< 1	2	5.0	1	3
17	M543	1496.95	4670.65	Tongod	S. Longkabong	34	4	15.0	3	3
18	M544	1496.60	4670.30	Tongod	S. Malagatan B.	< 1	4	17.0	3	3
19	S516	1483.85	4673.10	Tongod	S. Malagatan	1	3	4.0	2	2
20	E527	1481.90	4673.05	Tongod	S. Tongod	< 1	6	18.0	2	3
21	Y597	1474.90	4657.90	Pinangah	S. Melikop	1	4	30.0	2	3
22	P541	1473.85	4659.30	Pinangah	S. Pinangah	< 1	3	9.0	2	2
23	B570	1473.30	4655.70	Pinangah	S. Melikop	< 1	3	3.0	2	4
24	P535	1471.80	4658.95	Pinangah	S. Pinangah	1	3	5.0	3	3
25	B569	1470.10	4654.65	Pinangah	S. Melikop	2	3	10.0	2	3
26	P537	1460.95	4655.80	Pinangah	S. Apau	< 1	3	5.0	3	2
27	J515	1465.83	4667.21	Pinangah	S. Imbak	2	4	4.0	2	3
28	P564	1458.50	4664.47	Pinangah	S. Pinangah	< 1	4	3.5	2	3
29	P536	1457.75	4664.05	Pinangah	S. Pinangah	< 1	5	10.0	3	3
30	C538	1477.23	4672.67	Pinangah	S. Ayop	4	4	10.0	2	2
31	C539	1476.66	4670.25	Pinangah	S. Ayop	2	3	5.0	2	2
32	C540	1476.98	4670.00	Pinangah	S. Ayop	3	2	6.0	2	2
33	C536	1473.30	4676.30	Pinangah	S. Sinarupa	1	4	5.0	3	1
34	C537	1471.55	4675.95	Pinangah	S. Sinarupa	1	3	2.5	2	1
35	S514	1465.65	4671.60	Pinangah	S. Imbak	< 1	3	4.0	3	2
36	S513	1463.70	4676.40	Pinangah	S. Imbak	< 1	4	10.0	3	3
37	P565	1457.62	4671.20	Pinangah	S. Pinangah	< 1	4	5.0	3	3
38	C201	1550.20	4679.20	Kiabau	S. Peraganpang	6	3	10.0	1	1
39	S202	1535.40	4679.60	Kiabau	S. Mailo	203	3	10.0	2	3
40	C206	1561.95	4689.70	Kiabau	S. Soviun	2	4	10.0	2	1
41	P206	1558.70	4688.65	Kiabau	S. Tungud	9	2	7.0	4	1
42	P207	1558.05	4687.30	Kiabau	S. Tungud	< 1	2	4.0	4	2
43	P202	1555.40	4688.25	Kiabau	S. Walun	39	3	7.0	4	1
44	C204	1553.55	4683.40	Kiabau	S. Tabuk	3	3	10.0	2	1
45	C203	1553.15	4683.40	Kiabau	S. Tungud	3	3	15.0	2	1
46	T203	1541.65	4689.85	Kiabau	S. Ensuan	77	4	15.0	3	2
47	S201	1537.48	4680.35	Kiabau	S. Melapi	138	2	4.0	2	3
48	D201	1557.20	4698.85	Kiabau	S. Padau Lawan	5	3	12.0	4	1
49	Y204	1549.20	4692.00	Kiabau	S. Meliau	37	3	20.0	3	2
50	T208	1545.10	4698.45	Kiabau	S. Meliau	182	3	16.0	3	2

Stream flow\*1: none (0), puddle (1), slow (2), moderate (3), fast (4)

Grain size\*2: coarse-grained (1), medium-grained (2), fine-grained (3), clayey (4)

Ser. No.	Sample No.	Coordinates		Topographic Map Sheet	Name of Stream	Weight (g)	Order	Width (m)	Flow *1	Size *2
		N	E							
51	T202	1541.65	4698.30	Kiabau	S. Labuk	51	2	3.5	3	3
52	G201	1554.10	4703.15	Kiabau	S. Padau Lawan	29	3	12.0	4	1
53	H202	1553.60	4703.80	Kiabau	S. Matapatan	30	3	8.0	3	2
54	G202	1549.15	4702.00	Kiabau	S. Labuk	41	2	7.0	2	3
55	N220	1538.00	4701.45	Kiabau	S. Mau	1,180	2	6.0	3	3
56	G217	1536.25	4702.95	Kiabau	S. Kiabau	9	3	6.0	3	1
57	C520	1534.20	4680.15	Telupid	S. Liwagu	< 1	6	20.0	3	1
58	C521	1532.90	4683.15	Telupid	S. Liwagu	3	2	5.0	2	1
59	C525	1524.70	4682.35	Telupid	S. Taviur	< 1	2	2.5	3	1
60	C526	1525.40	4680.75	Telupid	S. Taviur	1	2	3.0	3	1
61	B505	1524.90	4684.35	Telupid	S. Telupid	1	4	10.0	3	2
62	C501	1522.45	4686.80	Telupid	S. Tapang	3	2	5.0	2	1
63	B502	1521.05	4688.30	Telupid	S. Telupid	4	3	7.0	3	1
64	N512	1509.85	4682.30	Telupid	S. Walitanah	182	3	10.0	3	2
65	N510	1507.70	4682.25	Telupid	S. Meliau	161	4	10.0	3	2
66	Y527	1508.80	4683.45	Telupid	S. Meliau	21	2	5.0	4	1
67	Y528	1507.60	4684.95	Telupid	S. Meliau	28	2	3.5	4	1
68	Y521	1534.00	4694.90	Telupid	S. Ensuan	128	3	30.0	4	2
69	B541	1530.05	4698.40	Telupid	S. Tagasau	43	3	6.0	2	3
70	Y501	1521.35	4691.70	Telupid	S. Maile	16	4	40.0	3	2
71	Y529	1507.43	4684.72	Telupid	S. Talibu	85	3	10.0	4	1
72	N579	1520.00	4697.90	Telupid	S. Ruku-Ruku	31	3	8.0	3	2
73	Y515	1516.20	4690.65	Telupid	S. Mailo	52	3	10.0	3	2
74	Y516	1516.40	4691.00	Telupid	S. Mailo	51	4	35.0	3	3
75	B547	1524.45	4700.55	Telupid	S. Ruku-Ruku	2	2	3.0	3	2
76	B546	1520.60	4700.15	Telupid	S. Ruku-Ruku	18	2	2.0	3	3
77	B513	1520.10	4700.30	Telupid	S. Ruku-Ruku	74	3	8.0	3	3
78	B545	1516.75	4701.05	Telupid	S. Ruku-Ruku	34	2	3.0	2	2
79	B527	1515.25	4703.75	Telupid	S. Ruku-Ruku	5	2	8.0	3	3
80	B544	1513.70	4700.85	Telupid	S. Ruku-Ruku	155	2	5.0	3	2
81	B543	1511.45	4703.85	Telupid	S. Ruku-Ruku	28	3	6.0	3	4
82	B542	1510.50	4700.85	Telupid	S. Ruku-Ruku	39	3	6.0	3	2
83	Y532	1505.35	4682.25	S. Karamuak	S. Karamuak	66	2	2.5	3	1
84	S510	1503.20	4680.30	S. Karamuak	S. Karamuak	5	2	8.0	3	2
85	M523	1500.25	4683.56	S. Karamuak	S. Pinanduan	305	2	2.0	3	2
86	S508	1494.90	4683.70	S. Karamuak	S. Radapan	59	4	5.0	2	2
87	M527	1493.42	4686.55	S. Karamuak	S. Liou-Liou	34	2	2.5	3	3
88	M536	1493.00	4685.45	S. Karamuak	S. Karamuak	2	3	3.0	2	4
89	S501	1483.25	4684.00	S. Karamuak	S. Milian	2	3	4.0	2	2
90	S502	1483.60	4684.15	S. Karamuak	S. Bangkulat	11	3	5.0	2	2
91	B548	1506.85	4693.30	S. Karamuak	S. Kun-Kun	39	3	8.0	3	2
92	B549	1506.80	4692.95	S. Karamuak	S. Kun-Kun	22	3	7.0	3	2
93	C522	1502.65	4693.85	S. Karamuak	S. Tangkulap B.	395	3	8.0	3	1
94	C523	1502.80	4693.70	S. Karamuak	S. Tangkulap B.	415	3	8.0	2	2
95	C524	1504.25	4690.55	S. Karamuak	S. Tangkulap B.	188	2	5.0	3	1
96	E501	1491.30	4693.55	S. Karamuak	S. Nunatoi	175	3	7.0	2	3
97	E502	1492.85	4692.65	S. Karamuak	S. Pantagaluang	44	3	10.0	2	3
98	M505	1492.70	4695.05	S. Karamuak	S. Binalik	4	3	5.0	3	4
99	N566	1489.45	4697.50	S. Karamuak	S. Malung	8	3	7.0	3	2
100	E510	1489.40	4698.75	S. Karamuak	S. Karamuak	< 1	3	15.0	2	4

Stream flow\*1: none (0), puddle (1), slow (2), moderate (3), fast (4)

Grain size\*2: coarse-grained (1), medium-grained (2), fine-grained (3), clayey (4)

Ser. No.	Sample No.	Coordinates		Topographic Map Sheet	Name of Stream	Weight (g)	Order	Width (m)	Flow *1	Size *2
		N	E							
101	C527	1485.30	4699.40	S. Karamuak	S. Karamuak	8	5	10.0	2	3
102	S503	1482.00	4690.20	S. Karamuak	S. Milian	19	3	8.0	1	2
103	S512	1481.30	4692.70	S. Karamuak	S. Melian	5	2	3.0	1	3
104	C516	1503.70	4701.10	S. Karamuak	S. Tangkulap B.	98	4	10.0	2	2
105	C515	1503.30	4701.05	S. Karamuak	S. Kun Kun	118	4	10.0	2	2
106	B562	1483.45	4704.15	S. Karamuak	S. Milian	< 1	4	4.0	2	4
107	F522	1478.55	4678.40	S. Imbak	S. Sinarupa	< 1	5	17.0	3	1
108	M537	1463.50	4680.00	S. Imbak	S. Imbak	< 1	4	8.0	4	2
109	M535	1478.35	4687.65	S. Imbak	S. Imbak	< 1	3	6.0	3	3
110	E515	1478.05	4687.95	S. Imbak	S. Imbak	< 1	4	1.0	3	4
111	M517	1470.45	4688.50	S. Imbak	S. Imbak	3	4	5.0	2	3
112	E514	1467.70	4683.30	S. Imbak	S. Imbak	< 1	4	15.0	2	3
113	M519	1467.60	4684.90	S. Imbak	S. Imbak	< 1	4	10.0	3	4
114	M533	1464.55	4682.95	S. Imbak	S. Imbak	< 1	5	15.0	1	3
115	M553	1459.80	4687.35	S. Imbak	S. Imbak	< 1	3	8.0	2	3
116	M539	1458.10	4682.50	S. Imbak	S. Imbak	< 1	4	6.0	4	2
117	M520	1472.70	4691.55	S. Imbak	S. Imbak	16	3	6.0	3	3
118	C528	1471.80	4699.10	S. Imbak	S. Sinoa	43	3	3.5	3	1
119	M581	1465.00	4698.45	S. Imbak	S. Sinoa	19	3	5.0	3	1
120	F528	1456.70	4693.55	S. Imbak	S. Imbak	< 1	4	4.0	2	1
121	N560	1474.60	4704.20	S. Imbak	S. Bangan	< 1	4	10.0	3	3
122	C529	1469.65	4701.45	S. Imbak	S. Sinoa	1	4	10.0	2	1
123	M583	1462.95	4704.00	S. Imbak	S. Sinoa	18	3	5.0	3	1
124	E516	1451.90	4701.05	S. Imbak	S. Kasuyan	< 1	4	10.0	3	2
125	P211	1587.80	4705.90	Sungai Sungai	S. Sugut	2	3	5.0	2	3
126	Y215	1586.85	4705.90	Sungai Sungai	S. Sugut	2	2	6.0	2	4
127	H203	1568.70	4714.25	Sungai Sungai	S. Botitian	1	3	5.0	2	3
128	H208	1563.15	4721.95	Sungai Sungai	S. Wanyang	5	2	8.0	3	3
129	G203	1553.85	4705.62	Terusan Sapi	S. Paliaw	13	2	14.0	2	1
130	G206	1552.75	4707.05	Terusan Sapi	S. Bidu Bidu	47	3	10.0	4	1
131	N217	1548.25	4712.95	Terusan Sapi	S. Sualog	260	3	9.0	3	1
132	N201	1548.25	4714.10	Terusan Sapi	S. Sualog	68	3	8.0	3	1
133	N202	1544.30	4713.40	Terusan Sapi	S. Bangau Bangau	245	3	20.0	4	1
134	N205	1537.35	4717.55	Terusan Sapi	S. Kibut	37	2	8.0	4	1
135	N219	1536.00	4714.90	Terusan Sapi	—	205	2	8.0	4	2
136	N218	1540.90	4726.00	Terusan Sapi	S. Pandan Pandan	7	3	12.0	1	3
137	N223	1536.55	4722.90	Terusan Sapi	S. Mandaring	1	2	15.0	2	3
138	N524	1515.25	4706.00	S. Luan Pori	S. Ruku-Ruku	1	2	5.0	3	3
139	N547	1509.80	4706.25	S. Luan Pori	S. Ruku-Ruku	12	4	12.0	4	3
140	N519	1534.30	4718.40	S. Luan Pori	S. Tambatang.	65	4	8.0	3	3
141	N520	1534.45	4719.05	S. Luan Pori	S. Sapapaya	2	5	12.0	2	3
142	N543	1533.80	4719.66	S. Luan Pori	S. Sapapaya	34	3	5.0	4	3
143	Y518	1527.15	4713.05	S. Luan Pori	S. Sapapaya	1	3	25.0	2	2
144	Y519	1527.40	4713.25	S. Luan Pori	S. Sapapaya	< 1	2	10.0	3	2
145	N548	1519.65	4713.15	S. Luan Pori	S. Luan Pori	1	3	10.0	2	3
146	N536	1518.20	4718.30	S. Luan Pori	S. Luan Pori	< 1	3	5.0	3	3
147	N551	1507.75	4714.60	S. Luan Pori	S. Lokan	< 1	2	4.0	3	2
148	N521	1520.15	4720.95	S. Luan Pori	S. Luan Pori	2	4	7.0	4	3
149	N522	1520.45	4723.45	S. Luan Pori	S. Luan Pori	2	2	4.0	3	2
150	N540	1519.30	4725.55	S. Luan Pori	S. Luan Pori	1	2	5.0	3	2

Stream flow\*1: none(0), puddle(1), slow(2), moderate(3), fast(4)

Grain size\*2: coarse-grained(1), medium-grained(2), fine-grained(3), clayey(4)



Ser. No.	Sample No.	Coordinates		Topographic Map Sheet	Name of Stream	Weight (g)	Order	Width (m)	Flow *1	Size *2
		N	E							
151	N528	1511.20	4720.70	S. Luan Pori	S. Lokan	2	3	7.0	2	3
152	N546	1511.75	4720.60	S. Luan Pori	S. Lokan	1	5	10.0	4	3
153	Y567	1511.10	4727.80	S. Luan Pori	S. Lokan	1	2	3.0	3	3
154	N541	1525.05	4731.65	S. Luan Pori	S. Luan Pori	1	2	5.0	3	3
155	Y571	1511.70	4731.40	S. Luan Pori	S. Luan Pori	< 1	4	20.0	2	3
156	Y572	1511.70	4731.25	S. Luan Pori	S. Lokan	13	5	30.0	3	3
157	N549	1505.70	4708.60	Tangkulap	S. Ruku Ruku	< 1	2	3.5	3	2
158	B561	1490.65	4708.50	Tangkulap	S. Tangkulap B.	4	5	7.0	3	2
159	B557	1486.20	4709.70	Tangkulap	S. Milian	< 1	3	2.5	3	3
160	Y570	1505.40	4713.40	Tangkulap	S. Ruku Ruku	45	3	8.0	3	2
161	B556	1486.45	4713.95	Tangkulap	S. Tangkulap K.	< 1	3	2.5	2	3
162	Y568	1499.40	4724.10	Tangkulap	S. Rawog	< 1	4	8.0	2	3
163	Y569	1499.25	4723.95	Tangkulap	S. Rawog	1	3	8.0	2	3
164	B555	1495.10	4727.20	Tangkulap	S. Rawog	1	4	6.0	2	1
165	N558	1486.80	4725.50	Tangkulap	S. Balakang	1	4	5.0	1	2
166	B558	1481.85	4720.20	Tangkulap	S. Milian	1	3	2.0	2	4
167	N559	1480.10	4725.10	Tangkulap	S. Balakang	1	4	9.0	3	3
168	N550	1501.00	4731.90	Tangkulap	S. Rawog	9	5	10.0	3	2
169	B554	1498.95	4731.55	Tangkulap	S. Rawog	< 1	4	9.0	2	3

Stream flow\*1: none (0), puddle (1), slow (2), moderate (3), fast (4)

Grain size\*2: coarse-grained (1), medium-grained (2), fine-grained (3), clayey (4)

## Appendix 13

Results of qualitative mineral examination of  
pan concentrates in Labuk area



Ser. No.	Sample No.	Native gold	Native silver	Magnetite	Chromite	Spinel	hematite	ilmenite	leucocoxene	rutile	brookite	pyrite	goethite	chalcocopyrite	bornite	olivine	augite	hypersthene	hornblende	actinolite	clinzoisite	tourmaline	garnet	zircon	monazite	quartz	feldspar	apatite	biotite	muscovite	epidote	cinnabar	clastics	
1	B653			14			7	tr																	71	3						3		
2	F546			13			15	tr																tr	55	6	1					4		
3	Y592			15	4		1	tr																	37	1						6		
4	D604			15			28	tr																4	32	6	1					6		
5	N581			24	1		34	tr																1	60	1						5		
6	B564			12			25	tr																1	52							6		
7	C530			8			29	tr				1												1	38	2						6		
8	Y595			15		tr	29	tr																2	38	2		4				11		
9	N580			28	2		50	tr								12	tr							2	2	2						3		
10	N584			20	10		27	tr								30								tr	8	1	tr						1	
11	N586			11	1		13	tr								1								1	60	2						8		
12	N587			24	5		23	tr								32								1	5	2						1		
13	M552			8	tr		78	tr				tr												tr	8	8								
14	F539			4	2		72	tr				tr												2	8	7								
15	P534			4			2	tr																	87	4							1	
16	E526						19	tr																3	78	tr								
17	M543			tr			93																	tr	4	1								
18	M544			12	tr		20	tr																tr	14	tr								
19	S516			21	21	1	14	tr																3	29	3							3	
20	E527			4			31	tr																	49	tr								
21	Y597			9			18	tr																3	59	2							9	
22	P541			2			3																	1	90	2							tr	
23	B570			13			13	tr																1	63	2							7	
24	P535			4			17	tr																3	69	3							1	
25	B569			8			19	tr																1	67	1							3	
26	P537			tr			2																		84	2							12	
27	J515			tr		tr	2	tr																	78	6							6	
28	P564			4			5	tr																2	70	7							12	
29	P537			1																					91	3							3	
30	C538			6			25	tr																1	52	4							9	
31	C539			9			27	tr																2	50	2							9	
32	C540			6			9	tr																1	56	12							13	
33	C536			7			13	tr																2	67	3							6	
34	C537			7			14	tr																3	59	2							9	
35	S514						7	tr																5	84	8								
36	S513						9	tr																tr	79	tr								
37	P565			7			29	tr																1	50	6							6	
38	C201			20	32		27	tr																tr	1	10								
39	S202			29			71	tr																tr	tr	tr								
40	C206						5	tr																8	89	tr								
41	P206			1	60		36	tr																	2	1								
42	P207			tr	12		7	tr																24	53	tr								
43	P202			16	36		46																		tr	1								
44	C204			2	3		7	tr																3	85	tr								
45	C203			15	8		46	tr																6	25	tr								
46	T203			22	32		43																		tr	1								
47	S201			4	10		86																	tr	tr	1								
48	D201			3	75		19	tr																tr	tr	2								
49	Y204			6	79		12																		tr	1								
50	T208			5	65		28																	tr	tr	2								

Ser. No.	Sample No.	Native gold	Native silver	Magnetite	Chromite	Spinel	Hematite	Ilmenite	Leucosene	Rutile	Brookite	Pyrite	Goethite	Chalcopyrite	Bornite	Olivine	Augite	Epyersthene	Holblende	Actinolite	Clinzoisite	Tourmaline	Garnet	Zircon	Monazite	Quartz	Feldspar	Apatite	Biotite	Muscovite	Epidote	Cinnabar	Clastics	
51	T202		4	55			30			tr							1	tr							tr	3	1							
52	G201		4	84			11			tr							1	tr						tr	tr	1	9							
53	H202		2	76			11	tr		tr							1	tr						tr	tr	1	1							
54	G202		7	57			32										tr	tr						tr	tr	1	1							
55	N220		9	35			55										tr	tr						tr	tr	1	1							
56	G217		4	43			4	tr									tr	tr						tr	tr	44	1	5						
57	C520		39	tr			20	1	2	tr						1	tr	tr						tr	tr	28	1	5				8		
58	C521		34	9		3	26	1	tr	tr	tr					23	tr	tr						tr	tr	1	1					2		
59	C525		38	4			19			tr						20	tr	tr						tr	tr	1	1					3		
50	C526		22	tr			39	tr	tr	tr						1									29	1						8		
61	B505		23	tr			6	tr	1	9														4		40		tr				17		
62	C501		24	16			31	tr	1							15	1	1						tr	tr	10	1	tr				1		
63	B502		16	44			4	tr	5	tr		1				21	1	3						tr	tr	3	tr							
64	N512		16	42			40	tr	tr	tr						1	1																	
65	N510		17	53	tr		20	tr	tr	tr						8																	5	
66	Y527		24	44			26	tr	1							5																		
67	Y528		21	28			33	tr								16		2																
68	Y521		41	33			20	1	tr	tr						2	1	1							tr	tr								
69	B541		6	53			39	tr	tr	tr						tr									tr	tr								
70	Y501		19	46		4	19	tr	tr	tr						10		1							tr	tr								
71	Y529		16	51			20	tr	1				1			5									tr	tr								
72	N579		11	20			36	tr	tr	1						24	1	6							tr	tr	1	1					1	
73	Y515		12	47		5	22	tr	tr	1	1					11																		
74	Y516		8	50		1	16	tr								22	1								1									
75	B547		33	8			5	1				1				1	tr							tr									23	
76	B546		12	26	tr		56									6	tr								27	1	tr	tr					tr	
77	B513		8	42	tr		33	tr	tr	tr						16		tr							tr	tr	tr	1					tr	
78	B545		12	54	tr		30	tr	tr	tr						2	tr								tr	tr	1							
79	B527		6	38	tr		35	tr	tr	tr						1								tr	tr	17	1	tr					2	
80	B544		7	36		3	47	tr	tr	tr						5		tr						tr	tr	tr	1						1	
81	B543		7	46		6	29	tr	tr	tr						13		tr	tr					tr	tr	tr	tr						tr	
82	B542		49	27			17	1	tr							6		tr						tr	tr									
83	Y532		28	11			38	1					1			tr																		
84	S510		6				61	tr	tr		tr					8		tr					tr	tr	tr	20	10							
85	M523		8				5	tr									3	tr	tr	tr						tr	tr	1						
86	S508		4	51			43	tr	tr	tr							tr	tr	tr					tr		tr	1	1						
87	M527		4	32			38	tr	tr							13		tr	tr	tr						tr	1	3						
88	M536		1	65			7		tr	tr																16	11							
89	S501		1	tr			82	tr	tr	tr							tr							tr		15	1							
80	S502		7	65			25	tr		tr		tr	tr				tr						tr	3		1	1							
91	B548		20	47			20	tr	tr							11		tr								1								
92	B549		16	51		1	23	tr	tr	2						3	1								2	tr								
93	C522		3	38			52	tr	tr	tr						6	tr									tr	tr							
94	C523		tr	tr			19	tr	tr	tr	tr	tr	tr										tr		3	tr	tr							
95	C524		6	50		2	35		2							3									tr	tr	1							
96	E501		3	30			3										tr	tr								tr	5							
97	E502		4	69	tr		16	tr		tr						5	tr	tr	tr	2						2	2							tr
98	M505		1	58			38		tr	tr		tr	tr													2	2							
99	N566		3	21		8	30							5	tr	tr								2	tr	30	tr							1
100	E510		3	25			21	tr	tr	tr	tr	tr	tr									tr		tr	1	50	tr							

Ser. No.	Sample No.	Native gold	Native silver	Magnetite	Chromite	Spinel	hematite	Ilmenite	Leucosene	Rutile	Brookite	Pyrite	Goethite	Chalcopyrite	Bornite	Olivine	Augite	Hypersthene	Hornblende	Actinolite	Clinozoisite	Tourmaline	Carnet	Zircon	Monazite	Quartz	Feldspar	Apatite	Biotite	Muscovite	Epidote	Cinnabar	Clastics			
101	C527			37	8	5	45	tr	1																											
102	S503			27	30	tr	20	tr	1	tr																6	2							1		
103	S512			8	18		66	tr	tr	tr													tr	tr	tr	2	2									
104	C516			10	42	tr	29	tr	tr	1						16	tr	tr							tr	tr	1									
105	C515			7	28		49	tr	tr	2						11	tr	tr							tr	tr	1									
106	B562			6	2		35	tr		1														2	4	tr	tr							4		
107	F522			tr	tr		53	tr															tr	tr	2	4	tr	tr								
108	M537	tr		28			1	tr				tr	23										tr	tr	9	4	tr	tr								
109	M535			tr			40	tr					tr										tr	tr	3	4	tr	tr								
100	E515			11			36		4	1			1												3	4	tr	tr						5		
111	M517			37	18	1	13	1	1	1						5	tr	1						tr	tr	19	3							1		
112	E514						9		tr	tr		tr	tr											tr	8	83										
113	M519			tr			37		tr	tr		tr	tr											tr	3	60	tr									
114	M533						14		tr	tr		tr	tr											tr	3	81	tr									
115	M553						21		tr	tr		tr	tr											tr	3	81	tr									
116	M539			13				tr		tr		tr	tr											tr	4	66	tr									
117	M520			13	43		20	tr	tr			1													tr	15	tr							tr		
118	C528			17	49	tr	24	tr								6	tr	1							tr	2	tr									
119	M581			20	30		6	tr		1						5	tr	1							tr	23	4							2		
120	F528			tr	5		10		1	tr	tr												tr	4	8	70	tr									
121	M560			10	1		25	tr	tr	tr		15												tr	tr	45	tr							3		
122	C529			39	5	tr	21	tr	tr	tr						9	tr	1						tr	tr	18	tr							2		
123	M583			22	25		10	tr	tr	1						5	tr	1						tr	tr	23	4							2		
124	E516			5	28		13	tr																tr	tr	46	tr									
125	P211			3													tr	tr							tr	97	tr									
126	Y215			18	4		7		tr	tr		tr	tr											tr	14	56	tr									
127	M203			2	7		3		tr	tr		tr	tr												tr	88	tr									
128	M208			8	31		6		tr	tr		tr	tr											tr	tr	24	tr									
129	G203			4	89		5																		tr	tr	15									
130	G206			11	67		22																	tr		tr	2									
131	M217			6	71		22						tr											tr	tr	tr	1									
132	M201			3	84		7						tr											tr	tr	tr	3									
133	M202			10	71		18																		tr	tr	1									
134	M205			28	39		6	tr		tr			tr												tr	25	tr									
135	M219			22	72		5						tr												tr	tr	1									
136	M218			7	25		8		tr	tr			tr												55	5	tr									
137	M223			3	10		23		tr	tr		tr	tr											tr	16	48	tr									
138	M524			17	33		32	tr		1															1	9										
139	M547			3	48		36									1	3									tr	2									3
140	M519			5	74		20	tr		tr						tr										1	tr									
141	M520			48	18		10	1																tr		17										3
142	M543			15			3	tr				4	2	tr	tr											30										
143	M518			28	4		30	1	1	tr														1	30	tr	tr									3
144	M519			29	2		19	1	1	tr														1	36	tr	7	tr								4
145	M548			41			22		1	tr														1	33	tr										2
146	M536			5				tr	1	tr														1	84	tr										9
147	M551			70	tr		5	1	tr	tr														tr	22	tr										1
148	M521			51	tr		25																	tr	tr	tr										5
149	M522			50			35	1	tr	tr														tr	tr	12	tr									2
150	M540			39	3		35	1	tr	tr														tr	tr	20	tr									1

Ser. No.	Sample No.	Native gold	Native silver	Magnetite	Chromite	Spinel	Hematite	Ilmenite	Leucosene	Kutile	Brookite	Pyrite	Goethite	Chalcopyrite	Bornite	Olivine	Augite	Epyersthene	Edenblende	Actinolite	Clinzoisite	Tourmaline	Garnet	Zircon	Monazite	Quartz	Feldspar	Apatite	Biotite	Muscovite	Epidote	Cinnabar	Clastics
151	N528			22	5	1	41	tr	1	tr						1		tr							28						2		
152	N546			48	9	tr	25	tr	1	tr						2	tr	tr							13	tr					2		
153	Y567			35	6		39	1	1	tr						tr	tr							1	14	tr					3		
154	N541			50	1		18	1	tr	tr						1	tr	tr						tr	26						2		
155	Y571			36			23	1																1	37	1	tr				1		
156	Y572			9	71	tr	16	4								1									2	tr					tr		
157	N549			53	tr		4	1	1	tr														tr	36	tr					4		
158	B561			10	25		55	tr	tr	tr						4							tr	6	6						1		
159	B557			15	8		46	tr	tr	1						1	tr							tr	25	tr					3		
160	Y570			2	67	tr	20	tr	tr							3		1						tr	4	2					tr		
161	B556			33			33	1		tr						tr	tr					tr		tr	29	tr	tr				3		
162	Y568			34			37	1	1							tr	tr							tr	20	tr	tr				8		
163	Y569			26	15	tr	26	1	tr	tr														1	25	tr	tr				4		
164	B555			49	1		28	1	tr	tr						tr	tr							1	15	2	1				3		
165	B558			53	tr		23	1	1	1						tr								tr	18	tr	tr				2		
166	B558			20	1		55	tr	1	1														tr	18	tr	tr				3		
167	N559			45			29	1	1	1														tr	22	tr	tr				1		
168	N550			29	1	tr	44	1	tr							tr	tr							tr	22	tr	1				2		
169	B554			45			27	1	2	1		tr				tr								tr	19	1					4		

Appendix 14

List of rock geochemical samples  
in Labuk area





Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Name of Stream	Descriptions	Geol. Unit
		N	E				
1	B564	1504.67	4661.34	Tongod	S. Mananam	sandstone	P <sub>2</sub> Cr
2	B566	1499.64	4663.54	Tongod	S. Mananam	basalt	KPCs
3	M547	1506.60	4671.01	Tongod	S. Longkabong	peridotite	Ub
4	Y594	1503.76	4651.11	Tongod	S. Tongod	sandstone	P <sub>2</sub> Cr
5	N585	1466.06	4649.60	Pinangah	S. Melikop	sandstone	P <sub>3</sub> Lb
6	P538	1460.96	4655.73	Pinangah	S. Apau	sandstone	N <sub>2</sub> Tj
7	P563	1452.88	4664.04	Pinangah	S. Inarat	sandstone	N <sub>2</sub> Tj
8	P566	1458.59	4670.40	Pinangah	S. Pinangah	sandstone	N <sub>2</sub> Tj
9	Y596	1472.22	4652.20	Pinangah	S. Melikop	sandstone	KPSP
10	C202	1547.90	4678.87	Kiabau	S. Peraganpang	gabbro	Ub
11	S202	1539.65	4677.85	Kiabau	S. Mailo	microgabbro	Ub
12	P204	1551.85	4687.85	Kiabau	S. Walun	gabbro	Ub
13	T206	1544.65	4687.90	Kiabau	S. Ensuan	basalt	KPCs
14	Y202	1546.80	4693.16	Kiabau	S. Meliau	peridotite	Ub
15	Y201	1541.10	4690.45	Kiabau	S. Ensuan	peridotite	Ub
16	T201	1541.80	4696.57	Kiabau	—	gabbro	Ub
17	S201	1534.95	4690.95	Kiabau	—	microgabbro w/pyrite	Ub
18	G204	1561.35	4702.20	Kiabau	—	peridotite	Ub
19	G213	1545.88	4703.70	Kiabau	S. Porog	peridotite	Ub
20	N221	1539.83	4703.85	Kiabau	S. Kiabau	specularite(float)	Ub
21	B508	1523.30	4681.14	Telupid	S. Taviur	basalt	KPCs
22	C509	1513.81	4691.98	Telupid	S. Mailo	peridotite	Ub
23	C512	1531.88	4690.91	Telupid	—	basalt	KPCs
24	C513	1526.85	4685.43	Telupid	S. Liwagu	basalt	KPCs
25	C517	1532.34	4694.67	Telupid	S. Katai	peridotite	Ub
26	N509	1519.24	4686.09	Telupid	S. Telupid	basalt	KPCs
27	N518	1517.34	4680.23	Telupid	S. Telupid	basalt	KPCs
28	N567	1511.52	4677.16	Telupid	S. Karamuak	basalt	KPCs
29	N568	1514.14	4683.43	Telupid	S. Walitanah	gabbro	Ub
30	N570	1519.59	4693.48	Telupid	—	chert	KPCs
31	Y504	1519.75	4689.24	Telupid	S. Mailo	peridotite	Ub
32	Y511	1514.67	4685.46	Telupid	S. Walitanah	gabbro	Ub
33	Y587	1520.36	4697.39	Telupid	S. Ruku-Ruku	chert	KPCs
34	Y588	1512.13	4684.37	Telupid	S. Mansan	gabbro	Ub
35	E512	1472.03	4694.01	Sungai Imbak	S. Imbak	sandstone	KPSP
36	F523	1474.77	4678.88	Sungai Imbak	S. Sinarupa	sandstone	KPSP
37	F536	1454.19	4699.09	Sungai Imbak	S. Kasuyan	sandstone	KPSP
38	M518	1468.32	4684.97	Sungai Imbak	S. Imbak	sandstone	KPSP
39	M528	1467.79	4690.58	Sungai Imbak	S. Imbak	sandstone	KPSP
40	M531	1473.60	4692.21	Sungai Imbak	S. Imbak	serpentinite	Ub
41	M532	1460.96	4684.95	Sungai Imbak	S. Imbak	sandstone	P <sub>3</sub> Lb
42	M538	1458.58	4682.72	Sungai Imbak	S. Imbak	mudstone	N <sub>2</sub> Tj
43	M540	1453.91	4681.47	Sungai Imbak	S. Imbak	mudstone	N <sub>2</sub> Tj
44	M541	1453.45	4682.54	Sungai Imbak	S. Imbak	shale	N <sub>2</sub> Tj
45	M542	1453.81	4682.46	Sungai Imbak	S. Imbak	diorite porphyry	I <sub>1</sub>
46	M546	1456.90	4691.95	Sungai Imbak	S. Kasuyan	sandstone	KPSP
47	M574	1461.95	4695.13	Sungai Imbak	S. Sinoa	peridotite	Ub
48	N561	1472.18	4703.17	Sungai Imbak	—	shale	N <sub>2</sub> Tj
49	H204	1575.74	4709.67	Sungai Sungai	—	sandstone	P <sub>2</sub> Cr
50	H205	1571.20	1707.43	Sungai Sungai	—	sandstone	P <sub>3</sub> Kd

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Name of Stream	Descriptions	Geol. Unit
		N	E				
51	N222	1538.87	4705.15	Terusan Sapi	S. Mormud	peridotite	Ub
52	G218	1548.95	4712.15	Terusan Sapi	S. Sualog	basalt	KPCs
53	G219	1548.07	4711.90	Terusan Sapi	—	pillow lava	KPCs
54	G209	1541.58	4711.50	Terusan Sapi	S. Bangau B.	serpentinite	Ub
55	N225	1537.32	4717.75	Terusan Sapi	S. Kibut	siltstone	P <sub>4</sub> Gr
56	N224	1536.53	4724.77	Terusan Sapi	—	sandstone	P <sub>4</sub> Gr
57	N523	1526.85	4727.05	Sungai Luan Pori	—	sandstone	P <sub>2</sub> Ks
58	N527	1508.25	4722.98	Sungai Luan Pori	—	sandstone	P <sub>2</sub> Ks
59	N533	1517.46	4720.38	Sungai Luan Pori	S. Luan Pori	shale	P <sub>2</sub> Ks
60	N534	1516.75	4715.25	Sungai Luan Pori	S. Luan Pori	shale	P <sub>2</sub> Ks
61	N535	1516.75	4715.25	Sungai Luan Pori	S. Luan Pori	sandstone	P <sub>2</sub> Ks
62	N544	1523.91	4728.76	Sungai Luan Pori	—	sandstone	P <sub>2</sub> Ks
63	N545	1523.91	4728.76	Sungai Luan Pori	—	shale	P <sub>2</sub> Ks
64	Y517	1533.07	4709.80	Sungai Luan Pori	S. Tambalangb.	sandstone	P <sub>2</sub> Cr
65	Y520	1527.82	4713.33	Sungai Luan Pori	S. Sapapaya	sandstone	P <sub>2</sub> Cr
66	Y524	1526.90	4711.46	Sungai Luan Pori	S. Sapapaya	sandstone	P <sub>2</sub> Cr
67	Y585	1534.47	4705.71	Sungai Luan Pori	S. Kiabau	sandstone	P <sub>2</sub> Cr
68	Y627	1534.47	4705.71	Sungai Luan Pori	S. Kiabau	sandstone	P <sub>2</sub> Cr
69	B560	1482.89	4712.78	Tangkulap	S. Milian	sandstone	N <sub>2</sub> Tj
70	Y586	1498.43	4706.46	Tangkulap	S. Tangkulap B	sandstone	P <sub>2</sub> Ks

Appendix 15

Analytical results of rock geochemical samples  
in Labuk area



List of Geochemical Analysis (1)

Ser. No.	Sample No.	As	Au	Ba	Co	Cr	Cu	Hg	K	Mg	Mn	Mo	Na	Ni	Pb	S	Sb	Sr	Ti	U	W	Zn
		ppm	ppb	ppm	ppm	ppm	ppm	ppb	%	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
1	B564	1	1	10	37	96	43	10	.28	3.23	925	2	1.59	37	>	.140	6.5	148	.54	>	23	82
2	B566	1	1	9	39	86	36	10	.26	2.43	806	1	1.64	33	>	.141	5.9	135	.60	>	71	75
3	M547	1	1	7	38	153	39	10	.03	3.23	670	1	1.89	69	>	.122	8.2	94	.68	>	56	77
4	Y594	7	1	145	18	106	8	10	.68	.69	474	2	.73	24	2	.066	6.3	60	.15	1.0	178	38
5	N595	23	1	139	17	106	7	10	.74	.17	511	1	.55	16	7	.135	>	505	.06	.6	124	21
6	P598	11	1	51	20	150	7	10	.34	.22	216	1	.33	21	7	.178	.6	29	.21	2.0	177	36
7	P563	22	1	104	33	109	17	22	1.05	.81	79	2	1.18	47	2	.353	1.3	72	.31	1.8	90	65
8	P566	15	1	97	27	139	105	15	1.03	.90	394	2	1.11	43	12	.126	2.9	70	.30	1.6	134	85
9	Y596	15	1	136	20	173	7	14	.82	.20	5	2	.76	17	12	.045	1.4	57	.19	1.0	163	25
10	C202	1	1	28	40	313	38	10	.25	5.20	882	1	2.54	232	>	.093	>	155	.58	>	24	75
11	S201	1	1	11	46	35	9	10	.06	3.63	824	2	1.94	39	>	.059	4.7	82	.46	>	82	51
12	P204	1	1	11	39	99	25	10	.38	4.28	1008	1	3.23	55	>	.060	8.7	196	.87	>	38	84
13	T206	1	1	10	24	21	1	10	.07	1.55	549	2	2.60	15	>	.038	6.2	101	.85	>	54	35
14	Y202	1	1	10	101	789	30	10	.01	21.06	1038	1	.30	1792	>	.088	>	14	.10	>	19	178
15	Y201	5	1	10	121	724	5	10	.01	24.71	1103	1	.01	2262	>	.011	>	1	.01	>	108	205
16	T201	1	1	10	45	122	21	10	.08	4.27	604	1	1.85	89	>	.068	1.2	92	.22	>	44	56
17	S201	1	1	64	43	118	30	10	.17	4.14	1404	1	2.94	71	>	.207	6.4	731	.86	>	27	113
18	G204	1	1	10	89	997	30	10	.01	20.13	1037	1	2.10	1673	>	.056	>	10	.08	>	12	116
19	G213	1	1	10	95	1155	19	10	.01	21.20	1001	1	.03	1944	>	.032	>	6	.02	>	>	>
20	N221	1	1	10	337	1868	40	10	.01	.09	247	5	.01	942	>	.031	37.4	1	.01	>	61	52
21	B568	1	1	24	25	141	33	10	.15	3.00	778	1	1.82	63	>	.134	6.1	55	.54	>	10	73
22	C509	1	2	2	89	1125	22	11	.01	20.45	885	1	.03	1837	>	.026	>	1	.01	>	3	166
23	C512	1	1	6	25	26	30	10	.02	1.91	946	2	4.19	8	>	.024	8.6	50	.86	>	29	93
24	C513	1	1	13	38	110	46	11	.38	3.25	1012	2	2.67	59	>	.067	3.7	131	.84	>	37	91
25	C517	1	1	2	94	1047	10	10	.01	19.32	922	1	.08	1945	3	.012	>	1	.01	>	>	>
26	N509	1	1	122	37	99	45	15	.19	3.14	765	2	2.53	97	>	.067	5.0	389	.77	>	8	94
27	N518	1	1	6	39	272	53	10	.11	4.46	816	2	2.18	111	>	.095	10.7	114	.52	>	12	82
28	N567	1	1	15	30	136	37	10	.26	2.36	792	1	2.36	54	>	.115	4.6	97	.72	>	23	78
29	N568	2	1	4	48	306	4	10	.01	2.98	5	2	1.91	102	>	.067	>	111	.09	>	96	33
30	N570	4	1	82	48	232	43	10	.17	1.14	117	2	.07	12	>	.009	>	38	.05	>	512	18
31	Y504	12	1	6	92	523	8	10	.01	20.37	965	1	.06	2000	>	.011	>	2	.01	>	3	166
32	Y511	8	1	16	46	594	83	10	.13	5.71	75	1	1.22	334	>	.112	>	94	.07	>	96	60
33	Y587	1	1	548	54	162	126	10	.05	1.44	16148	3	.02	74	21	.008	>	17	.02	.6	375	34
34	Y598	3	1	6	13	164	39	10	.05	.23	5	1	1.82	51	>	.074	>	125	.08	>	48	23
35	E512	18	1	45	34	119	5	10	.35	.39	423	1	.53	10	4	.091	1.9	54	.12	1.0	330	25
36	F523	4	1	131	36	244	6	10	.41	.42	4371	2	.73	21	6	.032	>	35	.15	1.2	329	34
37	F536	29	1	46	89	128	13	257	.25	.28	2570	4	1.10	105	14	2.331	4.3	19	.08	.6	292	48
38	M518	7	1	84	17	182	7	10	.43	.20	112	1	.40	14	4	.009	1.6	21	.13	.6	160	24
39	M528	14	1	91	47	83	8	19	.51	.43	95	1	.74	15	>	.017	.6	33	.20	1.4	357	33
40	M531	5	1	2	95	1440	25	10	.01	19.13	945	1	.02	1853	>	.047	>	1	.02	>	3	165
41	M532	9	1	82	19	232	5	34	.52	.47	159	1	1.05	44	>	.196	8.2	77	.16	1.0	143	35
42	M538	3	1	145	15	90	31	24	1.62	1.16	256	1	.63	52	>	.142	3.0	65	.35	2.0	8	81
43	M540	8	1	128	22	100	19	164	1.21	.72	5	4	.75	42	>	.503	1.7	70	.33	1.8	51	64
44	M541	28	4	200	50	128	45	10	2.47	.87	5	1	.66	54	>	.935	4.9	41	.45	2.2	30	48
45	M542	11	1	107	10	64	57	28	.99	1.28	650	2	1.64	50	>	.123	2.4	301	.26	4.8	8	233
46	M546	5	1	81	22	68	8	11	.64	.56	383	2	.73	21	>	.021	7.1	51	.14	1.2	155	41
47	M574	1	1	4	83	1444	8	10	.01	16.52	749	1	.01	1700	>	.019	>	1	.01	>	>	>
48	N561	11	1	224	36	94	28	76	1.94	.86	5	2	.44	63	11	.286	2.4	66	.43	2.6	8	115
49	H204	4	1	302	52	40	7	10	1.08	.11	5	1	.76	20	5	.013	>	71	.18	1.2	360	19
50	H205	4	1	402	29	24	8	10	1.70	.43	48	2	1.51	24	5	.133	1.3	119	.17	1.0	238	31

List of Geochemical Analysis ( 2 )

Set. No.	Sample No.	As	Au	Ba	Co	Cr	Cu	Hg	K	Mg	Mn	Mb	Na	Ni	Pb	S	Sb	Sr	Ti	U	W	Zn
		ppm	ppb	ppm	ppm	ppm	ppm	ppb	%	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
51	N222	6	>	10	104	655	13	10	.01	21.72	951	>	.07	2078	>	.041	>	2	.01	>	>	186
52	G218	>	>	13	38	189	60	10	.23	5.86	622	>	3.09	94	>	.061	4.7	86	.64	>	47	95
53	G219	>	>	10	42	190	76	10	.08	5.40	764	>	2.68	89	>	.056	2.7	100	.66	>	20	103
54	G209	>	>	10	92	915	28	10	.01	19.98	974	>	.09	1723	>	.180	>	5	.08	>	13	172
55	N225	>	>	271	22	86	35	34	2.13	1.98	482	>	.47	51	>	.072	6.2	171	.41	2.2	>	90
56	N224	6	>	303	26	52	13	37	.84	.70	759	>	.88	40	17	.311	2.0	118	.27	1.6	55	57
57	N523	13	>	147	15	45	7	13	.68	.41	377	>	.48	27	3	.027	5.8	86	.12	1.2	73	23
58	N527	17	2	94	18	196	6	13	.39	.13	29	>	.02	12	3	.010	.9	12	.15	1.2	139	20
59	N533	>	>	209	13	52	21	26	2.02	1.56	188	>	.22	38	13	.042	7.8	56	.30	3.0	>	85
60	N534	19	>	407	22	64	37	24	1.85	.94	5	>	.23	56	15	.088	3.4	73	.41	3.2	>	108
61	N535	12	>	169	23	70	8	10	.64	.15	5	>	.07	11	3	.006	3	24	.15	1.2	147	21
62	N544	11	>	243	60	63	8	22	.91	.30	18	>	.51	15	3	.140	1.0	57	.18	1.6	259	26
63	N545	16	1	179	22	74	29	46	1.95	1.17	248	>	.22	64	15	.048	1.0	54	.39	2.4	>	153
64	Y517	4	>	69	15	136	7	10	.62	.25	5	2	.03	16	2	.009	>	10	.18	1.4	90	30
65	Y520	14	>	138	30	45	7	16	.74	.37	554	>	.64	14	3	.028	7.6	86	.13	1.0	162	24
66	Y524	2	>	179	15	91	10	12	.87	.53	271	>	.72	16	6	.028	6.3	88	.21	1.4	78	32
67	Y585	15	>	80	28	105	8	16	.75	.41	258	2	.83	18	3	.032	5.4	71	.17	1.2	265	34
68	Y627	10	>	69	23	67	7	14	.62	.35	5	2	.66	15	7	.008	>	29	.17	1.6	229	33
69	B560	14	>	42	25	83	3	10	.20	.05	12	2	.01	14	3	.008	.6	15	.11	.4	281	11
70	Y586	>	>	119	20	127	12	24	1.09	.89	180	1	.98	30	2	.055	7.2	75	.22	1.6	128	47

## Appendix 16

List and analytical results of  
soil geochemical samples in Labuk area





Area: Labuk Area

Ser. No.	Sample No.	Coordinates N	Coordinates E	1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. #1	S. #2	T. #3	E. #4	Vegetation	Al %	Co ppm	Cr ppm	Fe %	Ni ppm	Pt ppb
1	S517	1494.38	4871.82	Tongod	peridotite	Ub	30	B.G.	R	S	S	W	Secondary forest	2.28	292	3119	8.95	2406	10
2	S518	1496.30	4875.25	Tongod	peridotite	Ub	30	L.B.G.	R	C	S	W	Secondary forest	6.92	52	172	6.42	69	< 5
3	F525	1500.51	4860.50	Tongod	peri. boulder	Q <sub>1</sub>	15	L.B.	F	C	M	W	Secondary forest	6.68	178	266	8.74	63	< 5
4	F526	1499.76	4862.42	Tongod	peri. boulder	Q <sub>1</sub>	20	L.R.B.	F	C	M	W	Secondary forest	11.01	37	238	12.47	109	< 5
5	F527	1499.25	4862.80	Tongod	peri. boulder	Q <sub>1</sub>	15	L.B.	F	C	M	W	Secondary forest	9.02	87	379	11.16	188	< 5
6	M548	1490.96	4874.25	Tongod	peridotite	Ub	35	D.G.B.	R	C	F	D	Secondary forest	3.73	70	903	5.28	1181	5
7	M549	1491.80	4875.38	Tongod	peridotite	Ub	15	B.	F	C	F	W	Secondary forest	4.07	27	175	3.29	73	< 5
8	M551	1501.73	4875.50	Tongod	peri. pebble	Q <sub>1</sub>	15	R.B.	R	C	F	D	Secondary forest	10.79	36	220	9.93	156	< 5
9	B567	1501.92	4862.00	Tongod	basalt	KPOs	20	B.	M	S	S	W	Primary forest	11.11	58	315	12.11	89	< 5
10	B568	1499.22	4863.67	Tongod	basalt	KPOs	30	L.R.B.	F	S	S	W	Primary forest	11.93	47	279	11.46	104	15
11	C209	1561.80	4893.26	Kiabau	serpentinite	Ub	25	L.B.	R	C	M	W	Secondary forest	1.94	407	7600	16.04	3285	30
12	P205	1555.25	4888.13	Kiabau	serpentinite	Ub	20	L.Y.B.	R	C	M	W	Secondary forest	8.99	422	5526	35.95	3297	20
13	T213	1554.10	4886.92	Kiabau	serpentinite	Ub	10	R.	R	C	S	W	Secondary forest	7.63	150	8235	26.18	2301	15
14	T211	1547.80	4877.80	Kiabau	serpentinite	—	20	R.B.	R	C	S	W	Secondary forest	8.28	40	220	6.21	451	< 5
15	T210	1546.42	4878.13	Kiabau	serpentinite	Ub	15	R.B.	R	C	M	W	Secondary forest	11.71	45	175	11.69	107	< 5
16	T207	1542.20	4890.42	Kiabau	serpentinite	Ub	15	L.B.	R	C	M	W	Secondary forest	8.07	744	7798	35.24	5170	25
17	T204	1541.63	4889.60	Kiabau	serpentinite	Ub	15	R.B.	R	C	M	W	Secondary forest	10.76	529	7690	38.46	3056	35
18	T209	1544.50	4898.14	Kiabau	serpentinite	Ub	20	B.G.	R	C	M	W	Secondary forest	12.98	84	4771	28.86	958	10
19	G214	1545.85	4702.77	Kiabau	serpentinite	Ub	30	L.B.	R	C	M	W	Secondary forest	2.17	541	9054	22.71	7587	30
20	G215	1545.40	4702.60	Kiabau	serpentinite	Ub	20	L.B.	R	C	M	W	Secondary forest	2.91	646	12450	36.17	5350	50
21	G216	1544.50	4701.80	Kiabau	serpentinite	Ub	20	L.B.	R	C	M	W	Secondary forest	6.96	928	8957	45.38	5426	25
22	N607	1550.70	4830.30	Kiabau	dunite	Ub	30	B.	R	C	M	W	Secondary forest	8.64	285	5738	26.65	2182	30
23	N608	1556.45	4890.85	Kiabau	serpentinite	Ub	30	B.	R	C	M	D	Secondary forest	6.82	251	6518	23.42	2654	30
24	N610	1553.73	4888.55	Kiabau	—	Ub	20	B.	R	C	F	W	Secondary forest	12.63	54	279	12.72	104	< 5
25	N611	1552.12	4888.00	Kiabau	serpentinite	Ub	20	R.B.	R	C	M	W	Secondary forest	11.65	55	191	9.97	72	< 5
26	N612	1540.70	4890.55	Kiabau	dunite	Ub	30	B.	R	C	M	W	Secondary forest	8.50	121	5303	31.39	2334	15
27	N614	1541.80	4890.15	Kiabau	—	Ub	20	B.	R	C	F	W	Secondary forest	7.92	107	6922	27.14	1412	15
28	N618	1548.67	4897.90	Kiabau	serpentinite	Ub	50	Y.B.	R	C	M	W	Secondary forest	6.44	532	5198	36.48	5132	45
29	N619	1545.75	4896.85	Kiabau	serpentinite	Ub	50	B.	R	C	M	W	Secondary forest	2.64	478	12432	48.24	3734	30
30	N626	1539.05	4701.77	Kiabau	—	Ub	30	D.B.	R	C	F	D	Secondary forest	6.28	251	9196	43.22	2975	60

\*1Gravel: Many (M), Few (F), Rare or none (R)      \*\*Grain size: Sandy (S), Clayey (C)

\*\*Topography: Steep (S), Moderate (M), Flat (F)      \*\*Humidity: Dry (D), Wet (W)

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. %	S. %	T. %	H. %	Vegetation	Al %	Co ppm	Cr ppm	Fe %	Ni ppm	Pb ppb
		N	E																
31	N627	1545.00	4701.95	Kiabau	serpentinite	Ub	50	D.B.	R	C	M	W	Secondary forest	5.88	713	7583	39.75	5085	45
32	N629	1540.13	4701.52	Kiabau	—	Ub	30	D.B.	R	C	M	W	Secondary forest	4.61	734	10609	39.18	3810	45
33	N630	1537.37	4703.70	Kiabau	—	Ub	30	D.B.	R	C	F	W	Secondary forest	6.18	103	7844	30.85	1550	15
34	N631	1537.95	4703.30	Kiabau	—	Ub	30	D.B.	R	C	M	W	Secondary forest	3.48	470	9574	44.80	3533	60
35	B503	1521.45	4688.32	Telupid	serpentinite	Ub	40	B.	R	C	S	D	Secondary forest	2.30	868	11382	45.52	10587	75
36	B515	1515.92	4699.10	Telupid	peridotite	Ub	30	L.B.	R	C	M	D	Secondary forest	9.18	314	3345	22.10	2710	30
37	B516	1516.97	4699.23	Telupid	peridotite	Ub	40	D.R.B.	R	C	M	D	Secondary forest	3.99	387	5943	18.37	4094	15
38	B517	1515.33	4699.30	Telupid	peridotite	Ub	50	B.	R	C	M	D	Secondary forest	4.49	430	8777	24.22	5866	30
39	B518	1514.58	4699.87	Telupid	peridotite	Ub	50	B.	R	C	M	D	Secondary forest	4.75	420	5829	22.71	5087	15
40	B521	1512.40	4699.80	Telupid	peridotite	Ub	30	L.B.	M	S	S	D	Secondary forest	6.98	335	7648	23.17	2507	30
41	B522	1513.82	4699.48	Telupid	peridotite	Ub	40	D.B.	M	S	S	D	Secondary forest	4.25	318	5446	16.76	4734	15
42	B524	1510.38	4698.75	Telupid	—	Ub	30	L.Y.B.	R	C	M	W	Secondary forest	5.98	11	67	3.51	35	< 5
43	B525	1509.87	4698.10	Telupid	—	Ub	20	D.B.	R	C	M	W	Secondary forest	2.32	384	5743	16.76	4153	15
44	B528	1508.78	4698.12	Telupid	peridotite	Ub	30	D.R.B.	R	C	M	W	Secondary forest	1.66	402	5957	17.56	4190	30
45	B529	1509.22	4697.33	Telupid	peridotite	Ub	-25	B.	R	C	M	W	Secondary forest	4.03	193	2543	9.34	2808	15
46	B531	1525.32	4697.55	Telupid	serpentinite	Ub	20	W.B.	F	C	S	D	Primary forest	6.09	12	38	2.69	56	< 5
47	B532	1526.10	4696.82	Telupid	serpentinite	Ub	20	R.B.	F	C	M	W	Primary forest	6.86	55	490	5.82	497	< 5
48	B533	1525.80	4698.00	Telupid	serpentinite	Ub	15	L.R.B.	R	S	S	D	Primary forest	5.00	22	112	2.72	169	< 5
49	B535	1527.12	4699.68	Telupid	basalt	KPCs	20	L.B.	R	C	S	W	Primary forest	4.98	465	4474	25.05	3218	15
50	B536	1529.82	4698.25	Telupid	basalt	KPCs	30	G.	F	S	M	W	Primary forest	4.55	12	55	2.59	48	< 5
51	B537	1529.23	4697.92	Telupid	basalt	KPCs	20	L.B.	R	C	F	W	Secondary forest	5.74	124	1107	7.98	1221	5
52	B538	1528.62	4697.20	Telupid	basalt	KPCs	30	B.	R	C	F	D	Secondary forest	4.07	176	2231	9.10	1637	10
53	B539	1528.50	4695.85	Telupid	basalt	KPCs	25	B.	R	C	S	D	Secondary forest	3.67	248	4700	12.73	2917	15
54	B540	1527.67	4696.68	Telupid	basalt	KPCs	30	D.B.	F	C	S	D	Secondary forest	3.64	172	5425	9.14	1891	10
55	N507	1517.28	4686.07	Telupid	harzbergite	Ub	30	B.	R	C	M	D	Secondary forest	6.12	426	7873	23.40	2877	15
56	N508	1517.87	4684.58	Telupid	—	Ub	30	L.R.B.	R	C	M	D	Secondary forest	15.04	44	1422	18.02	296	15
57	N511	1508.43	4682.80	Telupid	—	Ub	30	R.B.	R	C	M	D	Secondary forest	3.93	532	7717	38.30	4680	60
58	N513	1514.15	4682.48	Telupid	serpentinite	Ub	30	R.B.	R	C	M	D	Secondary forest	10.38	57	2905	20.27	1463	15
59	N514	1515.83	4682.85	Telupid	—	Ub	30	L.R.B.	R	C	M	D	Secondary forest	10.22	22	342	18.51	95	5
60	N515	1518.86	4686.29	Telupid	—	Ub	30	R.B.	R	C	F	D	Secondary forest	13.58	30	773	14.00	94	5

\*1Gravel: Many (M), Few (F), Rare or none (R)

\*\*Grain size: Sandy (S), Clayey (C)

\*\*Topography: Steep (S), Moderate (M), Flat (F)

\*\*Humidity: Dry (D), Wet (W)

Area: Labuk Area

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. *1	S. *2	T. *3	H. *4	Vegetation	Al %	Co ppm	Cr ppm	Fe %	Ni ppm	Pt ppb
		N	E																
61	N516	1519.47	4688.42	Telupid	—	Ub	30	L.R.B.	R	C	M	D	Secondary forest	15.91	43	1761	15.55	850	15
62	N526	1518.18	4694.23	Telupid	harzburgite	Ub	30	B.	R	C	M	D	Secondary forest	4.17	574	7870	35.06	5882	45
63	N529	1523.78	4703.36	Telupid	serpentinite	Ub	30	R.B.	R	C	M	D	Secondary forest	5.71	417	5456	34.99	4772	30
64	N530	1523.32	4703.38	Telupid	serpentinite	Ub	30	D.R.B.	R	C	M	D	Secondary forest	6.73	474	5191	32.53	3825	30
65	N531	1521.88	4702.32	Telupid	serpentinite	Ub	30	L.R.B.	R	C	M	D	Secondary forest	6.29	44	703	7.87	181	5
66	N571	1519.87	4692.10	Telupid	peridotite	Ub	30	R.B.	R	C	M	D	Secondary forest	8.13	562	7934	34.38	2356	15
67	N572	1521.87	4688.60	Telupid	peridotite	Ub	30	D.B.	R	C	M	D	Secondary forest	3.06	462	10857	45.97	6429	45
68	N573	1521.28	4685.13	Telupid	peridotite	Ub	30	D.B.	R	C	M	D	Secondary forest	7.19	499	6492	36.25	3520	30
69	N575	1521.44	4684.50	Telupid	peridotite	Ub	30	L.B.	R	C	M	D	Secondary forest	11.08	24	54	11.21	39	< 5
70	N576	1521.42	4685.68	Telupid	peridotite	Ub	30	L.R.B.	R	C	F	D	Secondary forest	9.94	17	346	7.01	68	< 5
71	N577	1520.59	4685.70	Telupid	peridotite	Ub	30	B.	R	C	F	D	Secondary forest	4.36	425	9115	29.19	5064	30
72	N578	1521.74	4689.50	Telupid	peridotite	Ub	30	D.R.B.	R	C	M	D	Secondary forest	2.55	832	7303	40.84	6220	< 5
73	C503	1524.53	4683.75	Telupid	basalt	KPCs	30	L.Y.B.	R	C	M	D	Secondary forest	10.37	37	380	10.68	130	< 5
74	C504	1524.63	4684.86	Telupid	basalt	KPCs	30	B.	R	C	M	D	Secondary forest	10.68	74	319	9.55	127	< 5
75	C514	1526.40	4681.65	Telupid	dolerite	KPCs	20	L.B.	F	C	M	D	Secondary forest	11.93	39	34	14.22	40	< 5
76	C518	1532.47	4695.80	Telupid	serpentinite	Ub	30	D.R.B.	R	C	M	D	Primary forest	6.16	289	5482	30.01	3305	30
77	Y502	1520.39	4690.18	Telupid	peridotite	Ub	35	L.R.	R	C	S	W	Secondary forest	13.48	35	784	16.75	273	< 5
78	Y503	1519.78	4689.33	Telupid	peridotite	Ub	30	B.	R	C	S	W	Secondary forest	3.23	582	9771	41.96	5395	60
79	Y505	1518.60	4698.98	Telupid	—	Ub	30	B.	R	C	M	W	Secondary forest	4.12	460	8852	31.28	4524	45
80	Y507	1518.62	4688.53	Telupid	peridotite	Ub	30	D.B.	R	C	M	D	Secondary forest	4.50	642	8163	32.84	6289	30
81	Y508	1519.67	4696.32	Telupid	—	Ub	30	D.B.	R	C	M	D	Secondary forest	3.45	473	7360	21.79	4703	15
82	Y509	1519.36	4696.50	Telupid	—	Ub	35	L.R.B.	R	C	M	D	Secondary forest	6.11	289	11449	36.08	5806	15
83	Y513	1513.12	4683.09	Telupid	—	Ub	30	L.R.B.	R	C	M	D	Secondary forest	16.86	413	668	18.08	503	15
84	Y514	1513.75	4683.13	Telupid	—	Ub	30	L.G.	R	C	S	D	Secondary forest	7.94	39	161	6.48	76	< 5
85	Y522	1533.77	4693.73	Telupid	—	Ub	20	D.R.B.	R	C	M	W	Secondary forest	8.02	121	4707	26.93	1769	15
86	Y523	1533.08	4693.98	Telupid	peridotite	Ub	15	D.R.B.	R	C	M	D	Secondary forest	4.62	821	7943	39.37	6286	30
87	Y525	1508.60	4683.32	Telupid	serpentinite	Ub	30	R.B.	R	C	S	D	Secondary forest	4.21	342	9886	44.27	4919	75
88	Y526	1509.37	4683.28	Telupid	serpentinite	Ub	30	R.B.	R	C	M	D	Secondary forest	4.58	290	9332	43.22	4539	30
89	Y535	1519.92	4698.82	Telupid	—	Ub	30	B.	R	C	F	D	Secondary forest	4.95	792	9946	29.41	6832	30
90	Y536	1519.95	4699.52	Telupid	—	Ub	30	B.	R	C	F	D	Secondary forest	5.45	531	8615	33.26	6117	45

\*1Gravel: Many (M), Few (F), Rare or none (R) \*2Grain size: Sandy (S), Clayey (C)

\*3Topography: Steep (S), Moderate (M), Flat (F) \*4Humidity: Dry (D), Wet (W)

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. % <sup>1</sup>	S. % <sup>2</sup>	T. % <sup>3</sup>	H. % <sup>4</sup>	Vegetation	Al %	Co ppm	Cr ppm	Fe %	Ni ppm	Pt ppb
		N	E																
91	Y537	1519.91	4700.12	Telupid	serpentinite	Ub	30	W.B.	R	S	F	D	Secondary forest	4.67	5	28	2.07	24	< 5
92	Y538	1524.42	4709.37	Telupid	serpentinite	Ub	30	D.R.B.	R	C	F	D	Secondary forest	9.30	123	60	6.00	55	15
93	Y539	1523.08	4699.55	Telupid	serpentinite	Ub	35	D.B.	R	C	M	D	Secondary forest	4.81	479	7005	36.81	4453	45
94	Y540	1524.33	4699.65	Telupid	serpentinite	Ub	30	B.	R	C	M	D	Secondary forest	6.31	129	6200	31.38	2338	30
95	Y541	1524.40	4698.10	Telupid	serpentinite	Ub	30	D.B.	R	C	M	D	Secondary forest	4.29	364	7824	40.45	4195	105
96	Y542	1523.35	4697.17	Telupid	serpentinite	Ub	30	B.	R	C	M	D	Secondary forest	5.55	386	9063	38.95	4425	45
97	Y543	1522.68	4696.15	Telupid	serpentinite	Ub	30	B.	R	C	M	D	Secondary forest	6.11	333	7003	32.54	3431	30
98	Y544	1521.60	4694.77	Telupid	serpentinite	Ub	30	B.	R	C	M	D	Secondary forest	5.36	514	7947	35.74	3853	45
99	Y545	1521.20	4694.10	Telupid	serpentinite	Ub	30	B.	R	C	M	D	Secondary forest	5.57	828	8123	37.69	5466	30
100	Y546	1520.62	4692.70	Telupid	—	Ub	30	D.B.	R	C	F	D	Secondary forest	6.51	509	7378	32.53	4204	30
101	Y547	1520.26	4692.00	Telupid	serpentinite	Ub	30	D.B.	R	C	M	D	Secondary forest	5.82	616	5743	35.64	4472	30
102	Y548	1518.92	4687.60	Telupid	—	Ub	30	R.B.	R	C	F	D	Secondary forest	12.51	56	2898	16.47	681	< 5
103	Y549	1518.00	4685.42	Telupid	serpentinite	Ub	30	D.B.	R	C	F	D	Secondary forest	3.84	389	9694	42.47	3040	45
104	Y550	1516.88	4683.58	Telupid	—	Ub	30	B.	R	C	F	D	Secondary forest	9.48	210	9809	29.71	2678	15
105	Y551	1515.00	4683.00	Telupid	—	Ub	30	B.	R	C	F	D	Secondary forest	12.57	86	9146	25.54	1155	15
106	Y552	1513.35	4682.18	Telupid	—	Ub	30	B.	R	C	F	D	Secondary forest	12.38	90	2893	25.99	1251	15
107	Y553	1509.00	4682.80	Telupid	—	Ub	30	B.	R	C	M	D	Secondary forest	4.63	690	8018	41.41	6439	75
108	Y554	1510.18	4683.43	Telupid	serpentinite	Ub	30	R.B.	R	C	F	D	Secondary forest	12.39	108	494	12.62	1970	< 5
109	Y555	1511.40	4683.87	Telupid	serpentinite	Ub	30	L.Y.B.	R	C	F	D	Secondary forest	14.03	44	491	14.23	167	< 5
110	Y556	1512.30	4684.35	Telupid	—	Ub	30	L.Y.B.	R	C	F	D	Secondary forest	13.67	74	2431	19.03	1415	15
111	Y557	1513.48	4684.90	Telupid	—	Ub	30	B.	R	C	F	D	Secondary forest	6.69	240	6270	20.35	2163	15
112	Y561	1519.90	4690.37	Telupid	serpentinite	Ub	30	B.	R	C	F	D	Secondary forest	1.34	2173	11173	46.37	9024	15
113	Y562	1519.45	4691.60	Telupid	serpentinite	Ub	30	L.R.B.	R	C	M	D	Secondary forest	13.60	89	193	11.41	587	< 5
114	Y563	1519.20	4692.48	Telupid	peridotite	Ub	30	L.B.	R	C	M	D	Secondary forest	5.53	8	84	5.58	37	5
115	Y564	1519.67	4693.78	Telupid	—	Ub	30	B.	R	C	F	D	Secondary forest	5.30	589	8372	30.42	4412	30
116	Y565	1520.12	4694.97	Telupid	—	Ub	30	R.B.	R	C	F	D	Secondary forest	7.92	389	5736	27.70	3211	45
117	Y566	1519.95	4696.56	Telupid	peridotite	Ub	30	L.B.	R	C	F	D	Secondary forest	10.91	27	522	12.17	198	5
118	N616	1535.55	4695.15	Telupid	—	Ub	150	B.	R	C	F	W	Secondary forest	9.95	326	4504	25.23	2880	15
119	N632	1521.95	4703.10	Telupid	—	Ub	30	D.B.	R	C	M	W	Secondary forest	9.11	58	7059	30.59	987	15
120	N633	1522.45	4701.95	Telupid	—	Ub	10	D.B.	R	C	M	W	Secondary forest	3.50	241	8341	44.85	3113	45

<sup>1</sup>Gravel: Many (M), Few (F), Rare or none (R)      <sup>2</sup>Grain size: Sandy (S), Clayey (C)

<sup>3</sup>Topography: Steep (S), Moderate (M), Flat (F)

<sup>4</sup>Humidity: Dry (D), Wet (W)

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. S. #1 #2	T. H. #3 #4	Vegetation	Al %	Co ppm	Cr ppm	Fe %	Ni ppm	Pt ppb	
		N	E															
121	Y533	1504.50	4682.98	S. Karamuak	serpentinite	Ub	30	D.B.	R	C	M	D	4.52	499	12551	42.71	3587	90
122	Y534	1505.05	4682.41	S. Karamuak	serpentinite	Ub	30	D.B.	K	C	M	D	4.25	843	8753	40.33	5898	45
123	Y558	1507.05	4682.29	S. Karamuak	—	Ub	30	R.E.	R	C	F	D	7.73	83	3957	16.74	1270	15
124	Y559	1505.86	4682.34	S. Karamuak	serpentinite	Ub	30	D.R.B.	R	C	F	D	5.23	184	7961	37.93	5138	15
125	Y560	1504.15	4681.55	S. Karamuak	serpentinite	Ub	30	D.R.B.	R	C	F	D	4.53	630	8001	38.25	8166	15
126	B550	1506.53	4688.33	S. Karamuak	peridotite	Ub	20	B.	F	C	M	D	6.30	253	4648	14.81	2728	15
127	B551	1505.88	4699.18	S. Karamuak	peridotite	Ub	25	D.R.B.	F	C	M	D	3.67	227	3749	12.12	3405	15
128	B552	1505.50	4699.13	S. Karamuak	peridotite	Ub	30	L.B.	F	C	M	D	3.92	211	3297	12.10	3173	5
129	B553	1507.07	4698.57	S. Karamuak	peridotite	Ub	30	L.B.	F	C	M	D	4.56	177	3027	10.10	2546	5
130	E503	1495.25	4690.97	S. Karamuak	peridotite	Ub	15	R.B.	R	C	M	W	7.42	275	8878	34.35	3650	30
131	E504	1491.93	4691.82	S. Karamuak	peridotite	Ub	15	R.B.	M	C	M	W	3.54	991	7347	42.59	4787	45
132	E505	1492.07	4686.50	S. Karamuak	peridotite	Ub	10	W.B.	R	C	S	W	5.22	6	60	2.84	19	< 5
133	E506	1498.02	4693.42	S. Karamuak	peridotite	Ub	30	B.G.	R	C	F	W	5.45	185	3834	10.92	2376	5
134	E507	1497.12	4694.77	S. Karamuak	peridotite	Ub	40	L.R.B.	R	C	M	W	9.65	44	260	10.25	146	< 5
135	E508	1500.68	4686.36	S. Karamuak	peridotite	Ub	30	D.B.	R	C	S	W	3.48	673	11068	36.71	6136	30
136	E509	1499.65	4684.47	S. Karamuak	peridotite	Ub	40	D.B.	R	C	F	W	3.55	613	12093	31.24	4400	45
137	E524	1498.70	4696.88	S. Karamuak	peridotite	Ub	35	D.R.B.	R	C	S	W	6.09	223	6257	33.73	3152	30
138	E525	1497.12	4696.54	S. Karamuak	peridotite	Ub	15	D.B.	F	S	S	W	5.44	360	5353	13.05	2853	10
139	S504	1483.93	4690.65	S. Karamuak	peridotite	Ub	50	L.B.G.	R	S	M	D	2.34	30	579	2.31	257	15
140	S505	1490.96	4683.90	S. Karamuak	peridotite	Ub	40	B.G.	R	C	M	D	7.77	319	2522	15.82	2048	15
141	S506	1495.12	4680.52	S. Karamuak	peridotite	Ub	30	L.B.G.	R	S	F	D	6.01	147	1928	8.10	647	5
142	S507	1496.98	4678.82	S. Karamuak	peridotite	Ub	30	B.	R	S	S	D	8.62	500	7974	28.89	4349	< 5
143	S509	1502.85	4679.25	S. Karamuak	peridotite	Ub	30	L.B.	R	S	F	D	2.23	61	1660	3.29	432	15
144	S511	1492.02	4678.35	S. Karamuak	peridotite	Ub	20	B.G.	R	S	S	W	6.31	115	1056	6.10	399	< 5
145	M507	1496.52	4691.90	S. Karamuak	peridotite	Ub	20	G.	F	C	F	W	3.10	312	6355	10.38	2364	5
146	M508	1499.13	4686.08	S. Karamuak	peridotite	Ub	20	B.	F	C	M	D	8.53	211	6733	26.57	2409	15
147	M510	1496.62	4695.64	S. Karamuak	peridotite	Ub	20	R.B.	F	C	M	W	6.59	312	6471	22.56	6415	15
148	M511	1493.55	4690.82	S. Karamuak	peridotite	Ub	30	L.R.B.	F	C	F	W	7.53	39	505	5.43	280	< 5
149	M512	1493.55	4689.46	S. Karamuak	peridotite	Ub	15	B.G.	M	C	F	W	13.32	146	1200	9.71	1270	15
150	M513	1494.33	4687.45	S. Karamuak	peridotite	Ub	35	D.R.B.	F	C	M	W	10.14	154	7306	35.02	2593	15

\*Gravel: Many (M), Few (F), Rare or none (R)      \*\*Grain size: Sandy (S), Clayey (C)

\*Topography: Steep (S), Moderate (M), Flat (F)      \*\*Humidity: Dry (D), Wet (W)

Ser. No.	Sample No.	Coordinates N E	1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. *1	S. *2	T. *3	H. *4	Vegetation	Al %	Co ppm	Cr ppm	Fe %	Ni ppm	Pt ppb
151	M514	1494.68	S. Karamuak	peridotite	Ub	55	L.B.	M	C	F	W	Secondary forest	6.77	427	5066	24.33	4849	30
152	M516	1495.88	S. Karamuak	peridotite	Ub	15	D.G.	M	C	S	D	Secondary forest	3.36	136	4709	5.58	1061	< 5
153	M521	1497.90	S. Karamuak	peridotite	Ub	15	L.B.	M	C	M	W	Secondary forest	5.60	309	5809	17.84	1987	15
154	M522	1500.43	S. Karamuak	—	Ub	15	D.R.B.	R	C	M	W	Secondary forest	4.30	310	10679	44.00	5034	45
155	M524	1501.20	S. Karamuak	peridotite	Ub	25	D.B.	R	C	M	W	Secondary forest	3.71	441	10630	33.33	4771	45
156	M525	1501.77	S. Karamuak	peridotite	Ub	25	D.B.	R	C	M	W	Secondary forest	4.33	802	8221	42.46	6124	75
157	M526	1501.61	S. Karamuak	—	Ub	25	D.B.	R	C	M	D	Secondary forest	5.23	212	6005	31.02	4586	30
158	M545	1488.46	S. Karamuak	—	Ub	35	L.B.	M	C	F	W	Secondary forest	7.90	62	355	8.19	154	< 5
159	M554	1484.97	S. Karamuak	—	Ub	15	W.B.	R	C	F	D	Secondary forest	8.35	21	121	5.06	73	5
160	M555	1485.88	S. Karamuak	peridotite	Ub	25	B.	M	C	M	D	Secondary forest	4.66	310	4568	18.37	3462	15
161	M556	1486.80	S. Karamuak	peridotite	Ub	35	L.B.	F	C	M	W	Secondary forest	9.64	81	505	9.85	997	< 5
162	M557	1487.55	S. Karamuak	peridotite	Ub	25	L.B.G.	F	C	M	D	Secondary forest	8.23	74	306	9.82	98	< 5
163	M558	1488.02	S. Karamuak	peridotite	Ub	35	D.R.B.	R	C	M	D	Secondary forest	5.26	465	4709	17.45	2697	15
164	M559	1487.62	S. Karamuak	peridotite	Ub	25	R.B.	R	S	M	D	Secondary forest	8.95	45	377	6.44	320	< 5
165	M550	1487.50	S. Karamuak	peridotite	Ub	15	L.Y.B.	F	S	M	D	Secondary forest	11.86	60	1182	14.40	819	< 5
166	M551	1487.62	S. Karamuak	peridotite	Ub	25	R.B.	F	S	F	D	Secondary forest	14.89	383	137	12.45	339	< 5
167	M552	1487.45	S. Karamuak	peridotite	Ub	15	L.B.G.	M	S	M	D	Secondary forest	9.53	32	312	5.21	128	< 5
168	M553	1487.48	S. Karamuak	peridotite	Ub	25	B.	M	S	M	D	Secondary forest	3.94	179	3206	12.97	2938	5
169	M554	1487.78	S. Karamuak	peridotite	Ub	25	R.B.	R	S	F	D	Secondary forest	5.20	477	8112	35.34	2895	30
170	M555	1487.78	S. Karamuak	peridotite	Ub	15	B.	M	S	M	D	Secondary forest	6.38	233	3523	17.13	2584	15
171	M556	1488.20	S. Karamuak	—	Ub	15	W.B.	F	C	F	W	Secondary forest	6.10	11	98	3.45	40	5
172	F506	1484.32	S. Karamuak	peridotite	Ub	15	D.B.	R	C	F	W	Secondary forest	6.44	617	8409	23.61	5162	15
173	F508	1487.88	S. Karamuak	peridotite	Ub	15	L.R.B.	R	C	M	W	Secondary forest	8.10	18	130	6.55	50	< 5
174	F509	1491.77	S. Karamuak	peridotite	Ub	15	W.B.	F	C	M	W	Secondary forest	12.43	64	249	10.82	89	< 5
175	F310	1490.08	S. Karamuak	peridotite	Ub	15	D.B.	F	C	M	W	Secondary forest	6.74	385	7818	25.34	3548	15
176	F314	1487.72	S. Karamuak	peridotite	Ub	30	D.R.B.	R	S	M	W	Secondary forest	7.07	266	8471	37.99	3104	15
177	F315	1485.70	S. Karamuak	peridotite	Ub	15	B.	R	C	F	W	Secondary forest	5.13	23	57	3.41	26	< 5
178	F316	1486.07	S. Karamuak	sandstone	P <sub>2</sub> Cr	15	L.R.B.	R	C	F	W	Secondary forest	6.83	25	188	5.81	115	< 5
179	F517	1485.84	S. Karamuak	sandstone	P <sub>2</sub> Cr	30	L.R.B.	R	C	F	W	Secondary forest	9.83	14	68	5.43	29	< 5
180	F518	1492.17	S. Karamuak	peridotite	Ub	30	L.R.B.	M	C	M	W	Secondary forest	8.36	47	671	7.18	362	< 5

\*Gravel: Many (M), Few (F), Rare or none (R)

\*\*Grain size: Sandy (S), Clayey (C)

\*\*Topography: Steep (S), Moderate (M), Flat (F)

\*\*Humidity: Dry (D), Wet (W)

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. S. *1	T. H. *2	Vegetation	Al %	Co ppm	Cr ppm	Fe %	Ni ppm	Pt ppb
		N	E														
181	M519	1492.48	4677.71	S. Karamak	peridotite	Ub	30	L.R.B.	M	W	Secondary forest	9.67	17	69	5.71	36	< 5
182	M521	1492.22	4678.12	S. Karamak	peridotite	Ub	20	R.B.	R	W	Secondary forest	10.52	20	143	7.37	37	< 5
183	M529	1476.45	4691.72	S. Imbak	peridotite	Ub	25	D.B.	R	W	Secondary forest	8.99	100	6122	29.07	1722	30
184	M530	1473.50	4692.17	S. Imbak	peridotite	Ub	25	D.B.	R	W	Secondary forest	6.67	809	7826	35.19	5361	30
185	M575	1461.33	4695.35	S. Imbak	harzburgite	Ub	15	D.B.	F	W	Primary forest	2.77	623	9875	32.16	2426	45
186	M576	1463.00	4695.82	S. Imbak	harzburgite	Ub	25	B.	F	W	Primary forest	1.95	462	5850	24.86	5121	30
187	M577	1464.02	4697.10	S. Imbak	harzburgite	Ub	15	D.R.B.	M	W	Primary forest	2.41	450	5934	21.58	7948	30
188	M578	1462.68	4686.80	S. Imbak	harzburgite	Ub	15	B.	F	D	Primary forest	3.37	295	4802	15.41	1646	15
189	M579	1462.66	4697.26	S. Imbak	harzburgite	Ub	15	D.R.B.	F	D	Primary forest	2.59	396	5840	23.23	3769	10
190	M580	1463.87	4697.77	S. Imbak	harzburgite	Ub	15	L.B.	F	D	Primary forest	3.64	82	682	10.33	655	5
191	M582	1463.40	4699.52	S. Imbak	---	Ub	15	D.B.	F	D	Primary forest	1.84	317	3658	9.42	1851	10
192	M584	1461.45	4701.85	S. Imbak	harzburgite	Ub	15	D.B.G.	M	W	Primary forest	1.08	256	2773	12.09	3451	15
193	M585	1463.17	4701.52	S. Imbak	harzburgite	Ub	25	L.B.	M	D	Primary forest	4.61	396	5235	27.03	4196	60
194	M586	1463.35	4700.98	S. Imbak	harzburgite	Ub	15	R.B.	F	D	Primary forest	3.34	446	5182	35.02	5715	30
195	M588	1467.58	4700.47	S. Imbak	---	Ub	15	L.B.	F	W	Primary forest	4.69	122	1410	7.04	871	< 5
196	M589	1467.58	4697.60	S. Imbak	---	Ub	15	W.B.	F	W	Primary forest	6.15	16	162	3.99	86	< 5
197	M590	1469.45	4697.32	S. Imbak	---	Ub	15	L.B.	R	W	Primary forest	7.07	370	7862	26.58	3374	15
198	M563	1476.72	4696.33	S. Imbak	harzburgite	Ub	30	L.R.B.	F	D	Secondary forest	4.31	25	264	3.12	221	< 5
199	M564	1477.45	4695.67	S. Imbak	dolerite	XPCs	30	D.B.	F	D	Secondary forest	4.85	436	5179	22.77	3768	15
200	E513	1475.24	4692.52	S. Imbak	peridotite	Ub	30	B.	R	W	Secondary forest	9.58	242	7850	35.48	2815	30
201	E517	1455.73	4701.84	S. Imbak	peridotite	Ub	15	B.	R	W	Secondary forest	3.46	139	1620	9.03	2046	10
202	E518	1456.98	4702.45	S. Imbak	peridotite	Ub	20	B.	R	W	Secondary forest	7.59	38	134	5.70	55	< 5
203	E519	1457.85	4703.57	S. Imbak	peridotite	Ub	10	L.B.	R	W	Secondary forest	8.15	36	134	5.57	59	5
204	E520	1459.56	4704.22	S. Imbak	peridotite	Ub	20	L.B.	R	W	Secondary forest	8.66	45	159	7.89	80	5
205	F529	1455.42	4697.20	S. Imbak	peridotite	Ub	15	B.	F	W	Secondary forest	2.77	81	977	4.05	695	< 5
206	F530	1454.50	4698.00	S. Imbak	peridotite	Ub	15	W.B.	R	W	Secondary forest	4.20	8	74	2.28	38	< 5
207	F531	1453.64	4699.27	S. Imbak	peridotite	Ub	15	R.B.	F	W	Secondary forest	4.75	100	1044	8.06	1225	10
208	F532	1455.03	4699.26	S. Imbak	peridotite	Ub	20	R.B.	R	W	Secondary forest	3.24	126	1068	10.04	2185	5
209	F533	1455.78	4699.75	S. Imbak	peridotite	Ub	20	W.B.	R	W	Secondary forest	4.41	17	169	2.53	154	5
210	F534	1456.80	4700.15	S. Imbak	peridotite	Ub	20	B.	R	W	Secondary forest	8.70	51	128	8.06	72	15

\*1Gravel: Many (M), Few (F), Rare or none (R) \*2Grain size: Sandy (S), Clayey (C)

\*\*Topography: Steep (S), Moderate (M), Flat (F)

\*\*Humidity: Dry (D), Wet (W)



Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. #1	S. #2	T. #3	H. #4	Vegetation	Al %	Co ppm	Cr ppm	Fe %	Ni ppm	Pt ppb
		N	E																
211	F535	1456.77	4698.73	S. Imbak	peridotite	Ub	15	B.	R	C	S	W	Secondary forest	8.05	57	296	7.75	270	< 5
212	G205	1555.25	4710.65	Terusan Sapi	serpentinite	Ub	10	L.R.B.	R	C	M	W	Plantation	9.53	120	5425	35.67	1707	20
213	G208	1552.65	4708.80	Terusan Sapi	serpentinite	Ub	20	B.	R	C	M	W	Secondary forest	7.46	474	6200	29.79	5483	15
214	N211	1552.32	4707.18	Terusan Sapi	peridotite	Ub	30	R.B.	R	C	F	W	Secondary forest	10.04	536	6454	33.74	3141	25
215	N210	1550.95	4706.32	Terusan Sapi	harzburgite	Ub	10	D.R.B.	R	C	M	W	Secondary forest	6.55	470	5124	26.52	4473	20
216	N209	1550.45	4706.50	Terusan Sapi	harzburgite	Ub	20	B.	R	C	M	W	Secondary forest	7.17	451	7666	36.65	3740	20
217	G211	1542.13	4708.73	Terusan Sapi	serpentinite	Ub	15	L.B.	R	C	M	W	Secondary forest	5.26	457	10550	48.89	3246	30
218	N216	1544.95	4713.52	Terusan Sapi	serpentinite	Ub	30	L.B.	R	C	F	W	Plantation	10.09	32	209	6.99	304	< 5
219	N203	1543.72	4713.55	Terusan Sapi	serpentinite	Ub	30	R.	R	C	M	W	Secondary forest	9.84	215	1221	19.79	1951	5
220	N215	1542.50	4714.91	Terusan Sapi	serpentinite	Ub	30	B.	R	C	M	W	Secondary forest	5.08	1087	7618	43.34	5858	25
221	N214	1539.72	4718.05	Terusan Sapi	serpentinite	Ub	30	L.B.	R	C	M	W	Secondary forest	7.00	1014	7650	39.43	5101	20
222	N213	1537.97	4717.80	Terusan Sapi	serpentinite	Ub	30	R.B.	R	C	F	W	Secondary forest	8.24	475	4270	34.06	4957	25
223	N221	1541.40	4716.53	Terusan Sapi	serpentinite	Ub	20	D.B.	R	C	F	W	Secondary forest	6.05	422	9635	37.58	5741	30
224	N223	1553.75	4711.25	Terusan Sapi	serpentinite	Ub	100	D.B.	R	C	F	W	Secondary forest	8.27	303	4776	31.31	2573	15
225	N224	1553.45	4709.90	Terusan Sapi	serpentinite	Ub	100	D.B.	R	C	F	W	Secondary forest	7.15	628	8579	37.04	4608	45

\*Gravel: Many (M), Few (F), Rare or none (R)

\*\*Topography: Steep (S), Moderate (M), Flat (F)

\*\*Grain size: Sandy (S), Clayey (C)

\*\*Humidity: Dry (D), Wet (W)

Appendix 17

List of soil geochemical samples  
in Area A



Area: S. Sabahan - S. Diwata Area (Area A)

Ser. No.	Sample No.	Coordinates N E	1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. *1	S. *2	T. *3	H. *4	Vegetation
1	GA001	1444.88	Silam	—	Csba	25	R.B.	M	C	S	W	Secondary forest
2	GA002	1444.83	Silam	serpentinite	Pr	25	R.B.	M	C	S	W	Secondary forest
3	GA003	1444.90	Silam	—	Gb	25	B.	F	C	S	W	Primary forest
4	GA004	1444.43	Silam	basalt	Csba	30	D.B.	R	C	S	W	Secondary forest
5	GA005	1444.63	Silam	—	Csba	25	B.	R	C	S	W	Primary forest
6	GA006	1444.53	Silam	—	Csba	30	B.	R	C	S	W	Primary forest
7	GA007	1444.43	Silam	basaltic tuff	Csba	25	B.	R	C	S	W	Primary forest
8	GA008	1444.10	Silam	vol. breccia	Csba	30	B.	F	C	S	W	Secondary forest
9	GA009	1444.30	Silam	vol. breccia	Csba	25	B.	R	C	M	W	Secondary forest
10	GA010	1444.08	Silam	—	Gs	30	B.	F	C	S	W	Secondary forest
11	GA011	1444.29	Silam	vol. breccia	Csba	30	L.B.	F	C	S	W	Secondary forest
12	GA012	1444.08	Silam	—	Gs	30	B.	R	C	M	W	Secondary forest
13	GA013	1444.05	Silam	—	Gs	25	B.	M	C	F	W	Secondary forest
14	GA014	1444.09	Silam	basaltic tuff	Csba	30	B.	R	C	M	W	Secondary forest
15	GA015	1444.05	Silam	—	Csba	25	B.	R	C	M	W	Secondary forest
16	GA016	1444.19	Silam	—	Csba	30	B.	R	C	M	W	Primary forest
17	GA017	1444.15	Silam	—	Csba	25	B.	R	C	M	W	Primary forest
18	GA018	1444.41	Silam	—	Csba	25	B.	R	C	S	W	Primary forest
19	GA019	1444.54	Silam	—	Csba	25	B.	R	C	S	W	Primary forest
20	GA020	1443.04	Silam	—	Csba	30	B.	R	C	S	W	Secondary forest
21	GA021	1443.11	Silam	vol. breccia	Csba	25	G.B.	R	C	M	W	Secondary forest
22	GA022	1443.60	Silam	—	Csba	35	Y.B.	F	C	M	W	Secondary forest
23	GA023	1443.85	Silam	—	Gs	25	Y.B.	R	C	F	W	Secondary forest
24	GA024	1443.35	Silam	—	Gs	25	R.B.	F	C	M	W	Secondary forest
25	GA025	1443.46	Silam	—	Gs	25	Y.B.	R	C	M	W	Secondary forest
26	GA026	1443.73	Silam	—	P <sub>4</sub> Km	30	Y.B.	F	C	M	W	Secondary forest
27	GA027	1443.10	Silam	—	Gs	30	B.	F	C	M	W	Secondary forest
28	GA028	1443.83	Silam	—	P <sub>4</sub> Km	25	Y.B.	R	C	M	W	Secondary forest
29	GA029	1443.31	Silam	—	Gs	30	B.	F	C	M	W	Secondary forest
30	GA030	1443.43	Silam	—	Gs	30	B.	R	C	M	W	Secondary forest

\*1Gravel: Many (M), Few (F), Rare or none (R)

\*2Grain size: Sandy (S), Clayey (C)

\*3Topography: Steep (S), Moderate (M), Flat (F)

\*4Humidity: Dry (D), Wet (W)

Ser. No.	Sample No.	Coordinates N E	1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. *1	S. *2	T. *3	H. *4	Vegetation
31	GA031	1443.76	Silam	—	Gs.	25	B.	F	C	F	W	Secondary forest
32	GA032	1443.22	Silam	—	Csba	30	Y.B.	R	C	M	W	Secondary forest
33	GA033	1443.62	Silam	basalt	Csba	30	B.	F	C	S	W	Secondary forest
34	GA034	1443.60	Silam	—	Csba	25	B.	R	C	M	W	Secondary forest
35	GA035	1443.06	Silam	—	Csba	30	B.	R	C	M	W	Secondary forest
36	GA036	1443.10	Silam	vol. breccia	Csba	25	B.	R	C	M	W	Secondary forest
37	GA037	1443.82	Silam	vol. breccia	Csba	25	B.	R	C	M	W	Cocoa plantation
38	GA038	1443.88	Silam	—	Csba	30	B.	R	C	F	W	Secondary forest
39	GA039	1443.12	Silam	vol. breccia	Csba	25	B.	F	C	M	W	Secondary forest
40	GA040	1443.03	Silam	vol. breccia	Csba	25	B.	F	C	S	W	Secondary forest
41	GA041	1443.65	Silam	—	P.Km	30	B.	R	C	M	W	Secondary forest
42	GA042	1443.91	Silam	—	Csba	30	B.	F	C	S	W	Secondary forest
43	GA043	1443.30	Silam	—	Csba	30	B.	R	C	M	W	Secondary forest
44	GA044	1442.23	Silam	—	Csba	30	Y.B.	M	C	M	W	Secondary forest
45	GA045	1442.53	Silam	—	Csba	30	R.B.	F	C	S	W	Secondary forest
46	GA046	1442.21	Silam	basaltic tuff	Csba	35	L.B.	F	C	S	W	Secondary forest
47	GA047	1442.80	Silam	vol. breccia	Csba	30	B.	F	C	M	W	Secondary forest
48	GA048	1442.22	Silam	—	Csba	30	Y.B.	F	C	S	W	Secondary forest
49	GA049	1442.18	Silam	vol. breccia	Csba	25	R.B.	F	C	F	W	Secondary forest
50	GA050	1442.70	Silam	vol. breccia	Csba	30	D.B.	M	S	M	W	Secondary forest
51	GA051	1442.30	Silam	vol. breccia	Csba	25	B.	F	C	F	W	Secondary forest
52	GA052	1442.67	Silam	vol. breccia	Csba	30	D.B.	M	S	S	W	Secondary forest
53	GA053	1442.53	Silam	—	Csba	25	B.G.	F	C	F	W	Secondary forest
54	GA054	1442.07	Silam	—	Csba	30	B.	M	C	M	W	Secondary forest
55	GA055	1442.12	Silam	—	Csba	30	B.	R	C	S	W	Secondary forest
56	GA056	1442.71	Silam	vol. breccia	Csba	25	B.	F	C	M	W	Secondary forest
57	GA057	1442.80	Silam	—	Csba	30	L.B.	F	C	F	W	Secondary forest
58	GA058	1442.17	Silam	—	Csba	25	B.	F	C	M	W	Secondary forest
59	GA059	1442.78	Silam	—	Csba	25	D.B.	M	C	F	W	Secondary forest
60	GA060	1442.11	Silam	vol. breccia	Csba	30	D.B.	M	C	S	W	Secondary forest

\*1Gravel: Many (M), Few (F), Rare or none (R)

\*2Grain size: Sandy (S), Clayey (C)

\*3Topography: Steep (S), Moderate (M), Flat (F)

\*4Humidity: Dry (D), Wet (W)

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. #1	S. #2	T. #3	H. #4	Vegetation
		N	E										
61	GA061	1442.07	4800.50	Silam	vol. breccia	Csba	25	D.B.	F	C	S	W	Secondary forest
62	GA062	1442.34	4800.88	Silam	vol. breccia	Csba	25	B.G.	M	S	S	W	Secondary forest
63	GA063	1442.35	4801.20	Silam	vol. breccia	Csba	25	B.	F	C	S	W	Secondary forest
64	GA064	1442.14	4801.48	Silam	basalt	Csba	25	L.B.	F	C	M	W	Secondary forest
65	GA065	1442.77	4801.77	Silam	—	Csba	30	D.B.	F	C	S	W	Secondary forest
66	GA066	1442.45	4801.82	Silam	basalt	Csba	30	L.B.	F	C	M	W	Secondary forest
67	GA067	1442.86	4802.12	Silam	basalt	Csba	35	D.B.	F	C	M	W	Secondary forest
68	GA068	1442.38	4802.44	Silam	—	Csba	30	D.B.	F	C	F	W	Secondary forest
69	GA069	1442.73	4802.55	Silam	—	Csba	30	D.B.	F	C	F	W	Secondary forest
70	GA070	1442.62	4802.86	Silam	basalt	Csba	25	B.	F	C	M	W	Secondary forest
71	GA071	1442.53	4799.15	Silam	vol. breccia	Csba	35	D.B.	F	C	S	W	Secondary forest
72	GA072	1441.00	4796.42	Silam	—	Csba	25	D.B.	F	C	M	W	Secondary forest
73	GA073	1441.40	4796.25	Silam	—	Csba	35	B.	F	C	M	W	Secondary forest
74	GA074	1441.08	4796.54	Silam	—	Csba	30	L.B.	R	C	F	W	Secondary forest
75	GA075	1441.41	4796.72	Silam	vol. breccia	Csba	25	Y.B.	F	C	M	W	Secondary forest
76	GA076	1441.65	4796.95	Silam	—	Csba	25	R.B.	F	C	M	W	Secondary forest
77	GA077	1441.82	4797.36	Silam	—	Csba	25	D.B.	F	C	S	W	Secondary forest
78	GA078	1441.10	4797.35	Silam	vol. breccia	Csba	30	B.	F	C	S	W	Secondary forest
79	GA079	1441.45	4797.73	Silam	vol. breccia	Csba	25	B.	F	C	M	W	Secondary forest
80	GA080	1441.23	4798.11	Silam	vol. breccia	Csba	30	Y.B.	R	C	M	W	Secondary forest
81	GA081	1441.43	4798.58	Silam	—	Csba	25	B.	R	C	M	W	Secondary forest
82	GA082	1441.05	4798.48	Silam	—	Csba	25	B.	R	C	M	W	Secondary forest
83	GA083	1441.61	4798.88	Silam	—	Csba	30	B.	R	C	M	W	Secondary forest
84	GA084	1441.80	4799.30	Silam	—	Csba	30	B.	R	C	S	W	Secondary forest
85	GA085	1441.51	4799.35	Silam	basalt	Csba	25	B.	F	C	S	W	Secondary forest
86	GA086	1441.69	4799.75	Silam	basalt	Csba	25	L.B.	F	C	F	W	Secondary forest
87	GA087	1441.40	4799.75	Silam	basalt	Csba	25	B.	R	C	S	W	Cocoa plantation
88	GA088	1441.68	4800.30	Silam	—	Csba	30	B.	F	C	F	W	Secondary forest
89	GA089	1440.94	4800.17	Silam	basalt	Csba	25	B.	R	C	M	W	Cocoa plantation
90	GA090	1441.40	4800.60	Silam	—	Csba	30	D.B.	F	C	M	W	Secondary forest

\*\*Gravel: Many (M), Few (F), Rare or none (R)

\*\*Grain size: Sandy (S), Clayey (C)

\*\*Topography: Steep (S), Moderate (M), Flat (F)

\*\*Humidity: Dry (D), Wet (W)

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. #1	S. #2	T. #3	H. #4	Vegetation
		N	E										
91	GA091	1441.58	4800.90	Silam	basalt	Csba	30	D.B.	F	C	M	W	Secondary forest
92	GA092	1441.45	4801.22	Silam	—	Csba	35	D.B.	R	C	F	W	Vesitable firm
93	GA093	1441.86	4801.36	Silam	—	Csba	30	Y.B.	R	C	M	W	Secondary forest
94	GA094	1441.02	4801.90	Silam	—	Csba	25	B.G.	F	C	F	W	Secondary forest
95	GA095	1441.48	4801.96	Silam	—	Csba	30	D.B.	R	C	F	W	Secondary forest
96	GA096	1441.81	4802.28	Silam	—	Csba	30	L.B.	R	C	S	W	Secondary forest
97	GA097	1441.33	4802.65	Silam	—	Csba	30	B.G.	R	C	F	W	Secondary forest
98	GA098	1441.79	4802.86	Silam	—	Csba	30	D.B.	R	C	M	W	Secondary forest
99	GA099	1441.11	4802.92	Silam	—	Csba	25	B.	R	C	F	W	Secondary forest
100	GA100	1441.13	4797.82	Silam	—	Csba	25	B.	F	C	M	W	Secondary forest
101	GA101	1440.26	4794.42	Silam	—	Csba	30	D.G.B.	F	C	S	W	Primary forest
102	GA102	1440.53	4794.83	Silam	—	Csba	30	B.	F	C	M	W	Primary forest
103	GA103	1440.12	4794.77	Silam	—	Csba	30	B.	F	C	M	W	Primary forest
104	GA104	1440.12	4795.44	Silam	—	Csba	25	B.	F	C	S	W	Primary forest
105	GA105	1440.85	4798.30	Silam	—	Csba	30	D.B.	F	C	S	W	Primary forest
106	GA106	1440.23	4795.96	Silam	—	Csba	25	B.	R	C	S	W	Secondary forest
107	GA107	1440.36	4796.27	Silam	—	Csba	30	Y.B.	R	C	M	W	Secondary forest
108	GA108	1440.66	4796.67	Silam	vol. breccia	Csba	25	L.B.	F	C	F	W	Secondary forest
109	GA109	1440.25	4796.87	Silam	vol. breccia	Csba	30	D.B.	M	C	S	W	Secondary forest
110	GA110	1440.15	4796.56	Silam	vol. breccia	Csba	30	Y.B.	F	C	F	W	Secondary forest
111	GA111	1440.54	4797.20	Silam	—	Csba	25	D.B.	F	C	S	W	Secondary forest
112	GA112	1440.23	4797.50	Silam	—	Csba	20	B.	R	C	M	W	Secondary forest
113	GA113	1440.71	4797.67	Silam	—	Csba	30	B.	F	C	S	W	Secondary forest
114	GA114	1440.45	4797.88	Silam	—	Csch	30	B.	F	C	M	W	Secondary forest
115	GA115	1440.16	4798.22	Silam	basalt	Csba	30	B.	R	C	M	W	Secondary forest
116	GA116	1440.68	4798.27	Silam	—	Csba	30	B.	R	C	M	W	Secondary forest
117	GA117	1440.64	4798.68	Silam	—	Csba	25	B.	R	C	M	W	Secondary forest
118	GA118	1440.35	4798.96	Silam	—	Csba	25	B.	R	C	M	W	plantation
119	GA119	1440.46	4799.20	Silam	basalt	Csba	25	B.	R	C	M	W	plantation
120	GA120	1440.87	4799.40	Silam	basalt	Csba	30	B.	F	C	M	W	Cocoa plantation
													Cocoa plantation

\*1Gravel: Many (M), Few (F), Rare or none (R)      \*\*Grain size: Sandy (S), Clayey (C)

\*3Topography: Steep (S), Moderate (M), Flat (F)

\*4Humidity: Dry (D), Wet (W)

Area: S. Sabahan - S. Diwata Area (Area A)

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. *1	S. *2	T. *3	H. *4	Vegetation
		N	E										
121	GAI21	1440.46	4799.64	Silam	basalt	Csba	25	R.B.	F	C	M	W	Cocoa plantation
122	GAI22	1440.22	4799.87	Silam	basalt	Csba	25	R.B.	R	C	M	W	Cocoa plantation
123	GAI23	1440.27	4800.18	Silam	—	Csba	30	R.B.	R	C	M	W	Secondary forest
124	GAI24	1440.16	4800.52	Silam	basalt	Csch	30	B.	F	C	F	W	Cocoa plantation
125	GAI25	1440.11	4800.76	Silam	basalt	Csba	30	R.B.	R	C	M	W	Secondary forest
126	GAI26	1440.57	4801.16	Silam	—	Csba	25	B.	R	C	M	W	Secondary forest
127	GAI27	1440.34	4801.46	Silam	—	Csba	25	L.B.	F	C	M	W	Secondary forest
128	GAI28	1440.55	4801.91	Silam	basalt	Csba	25	B.	F	C	M	W	Secondary forest
129	GAI29	1440.20	4801.78	Silam	basalt	Csba	30	B.G.	R	C	M	W	Secondary forest
130	GAI30	1440.75	4802.23	Silam	basalt	Csba	30	D.B.	R	C	F	W	Secondary forest
131	GAI31	1440.36	4802.42	Silam	basal	Csba	25	G.	F	C	M	W	Secondary forest
132	GAI32	1440.66	4802.73	Silam	—	Csba	25	G.	R	C	F	W	Secondary forest
133	GAI33	1440.43	4802.87	Silam	—	Csba	30	B.G.	R	C	F	W	Vesitable firm
134	GAI34	1434.50	4800.14	Silam	—	Gs	10	B.	F	C	M	W	Secondary forest
135	GAI35	1439.05	4793.29	Silam	—	P4Km	25	Y.B.	F	C	M	W	Secondary forest
136	GAI36	1439.44	4793.62	Silam	—	P4Km	35	R.B.	F	C	S	W	Secondary forest
137	GAI37	1439.19	4793.90	Silam	—	P4Km	35	B.	R	C	S	W	Secondary forest
138	GAI38	1439.05	4794.18	Silam	—	P4Km	25	Y.B.	R	C	S	W	Secondary forest
139	GAI39	1439.53	4794.18	Silam	—	P4Km	30	B.	F	C	S	W	Secondary forest
140	GAI40	1439.16	4794.54	Silam	—	P4Km	35	Y.B.	F	C	S	W	Secondary forest
141	GAI41	1439.45	4794.93	Silam	—	P4Km	30	B.	R	C	M	W	Primary forest
142	GAI42	1439.77	4795.11	Silam	—	Csba	30	B.	R	C	S	W	Primary forest
143	GAI43	1439.62	4795.47	Silam	basalt	Csba	30	D.B.	F	C	S	W	Primary forest
144	GAI44	1439.02	4795.47	Silam	—	P4Km	30	B.	F	C	S	W	Secondary forest
145	GAI45	1439.70	4795.90	Silam	—	Csba	25	B.	R	C	S	W	Secondary forest
146	GAI46	1439.31	4795.89	Silam	—	Csba	25	B.	F	C	S	W	Secondary forest
147	GAI47	1439.18	4796.21	Silam	—	Csba	25	B.	F	C	S	W	Secondary forest
148	GAI48	1439.78	4796.40	Silam	—	Csba	25	R.B.	F	C	S	D	Secondary forest
149	GAI49	1439.56	4796.95	Silam	basalt	Csba	30	B.	F	C	M	W	Secondary forest
150	GAI50	1439.10	4796.86	Silam	—	Csba	25	B.	R	C	M	W	Secondary forest

\*1Gravel: Many (M), Few (F), Rare or none (R) \*2Grain size: Sandy (S), Clayey (C)

\*3Topography: Steep (S), Moderate (M), Flat (F) \*4Humidity: Dry (D), Wet (W)



Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. #1	S. #2	T. #3	H. #4	Vegetation
		N	E										
151	GAI151	1439.23	4797.20	Silam	—	Csba	20	B.	R	C	F	W	Cocoa plantation
152	GAI152	1439.52	4797.35	Silam	basalt	Csba	20	R.B.	R	C	M	W	Cocoa plantation
153	GAI153	1439.60	4797.65	Silam	—	Csba	25	B.	R	C	S	W	Secondary forest
154	GAI154	1439.80	4797.84	Silam	—	Csba	25	B.	R	C	M	W	Cocoa plantation
155	GAI155	1439.12	4797.82	Silam	basalt	Csba	20	R.B.	R	C	M	W	Secondary forest
156	GAI156	1439.76	4798.17	Silam	—	Q <sub>2</sub>	30	B.	R	C	M	W	Cocoa plantation
157	GAI157	1439.18	4798.13	Silam	—	Csba	25	B.	R	C	M	W	Cocoa plantation
158	GAI158	1439.52	4798.41	Silam	—	Q <sub>2</sub>	25	B.	R	C	M	W	Cocoa plantation
159	GAI159	1439.30	4798.47	Silam	—	Q <sub>2</sub>	25	D.B.	R	C	F	W	Cocoa plantation
160	GAI160	1439.35	4798.80	Silam	basalt	Csba	15	D.B.	R	C	M	W	Cocoa plantation
161	GAI161	1439.15	4799.16	Silam	basalt	Csba	20	D.B.	R	C	M	W	Plantation
162	GAI162	1439.73	4799.28	Silam	—	Q <sub>2</sub>	30	D.B.	F	C	F	W	Firm
163	GAI163	1439.98	4799.45	Silam	basalt	Csba	25	R.B.	F	C	M	W	Secondary forest
164	GAI164	1439.10	4799.52	Silam	basalt	Csba	30	D.B.	F	C	M	W	Cocoa plantation
165	GAI165	1435.12	4797.60	Silam	—	Csba	30	B.	F	C	F	W	Cocoa plantation
166	GAI166	1439.84	4800.92	Silam	basalt	Csba	25	B.G.	F	C	S	W	Secondary forest
167	GAI167	1439.51	4800.85	Silam	basalt	Csba	25	R.B.	F	C	M	W	Secondary forest
168	GAI168	1439.73	4801.16	Silam	basalt	Csba	25	R.B.	R	C	M	W	Secondary forest
169	GAI169	1439.67	4801.54	Silam	—	Csba	30	R.B.	R	C	M	W	Secondary forest
170	GAI170	1439.78	4801.88	Silam	—	Csba	30	D.B.	R	C	F	W	Cocoa plantation
171	GAI171	1439.90	4802.21	Silam	basalt	Csba	25	B.	F	C	M	W	Secondary forest
172	GAI172	1439.99	4802.50	Silam	—	Csba	25	D.B.	R	C	M	W	Cocoa plantation
173	GAI173	1439.13	4802.47	Silam	basalt	Csba	25	L.B.	F	C	S	W	Primary forest
174	GAI174	1439.80	4802.87	Silam	basalt	Csba	25	B.G.	R	C	M	W	Secondary forest
175	GAI175	1439.35	4802.87	Silam	basalt	Csba	30	B.	M	C	M	W	Secondary forest
176	GAI176	1438.50	4793.10	Silam	—	P <sub>4</sub> Km	30	B.G.	F	C	S	W	Cocoa plantation
177	GAI177	1438.32	4793.27	Silam	—	P <sub>4</sub> Km	25	D.B.	F	C	S	W	Cocoa plantation
178	GAI178	1438.13	4793.59	Silam	—	P <sub>4</sub> Km	30	D.B.	F	C	S	W	Cocoa plantation
179	GAI179	1438.49	4793.76	Silam	—	P <sub>4</sub> Km	30	L.B.	F	C	S	W	Cocoa plantation
180	GAI180	1438.16	4793.87	Silam	—	P <sub>4</sub> Km	25	B.	F	C	M	W	Cocoa plantation

\*1Gravel: Many (M), Few (F), Rare or none (R)

\*2Grain size: Sandy (S), Clayey (C)

\*3Topography: Steep (S), Moderate (M), Flat (F)

\*4Humidity: Dry (D), Wet (W)

## Area: S. Sabahan - S. Diwata Area (Area A)

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. #1	S. #2	T. #3	H. #4	Vegetation
		N	E										
181	GA181	1438.70	4794.16	Silam	—	P <sub>4</sub> Km	35	Y.B.	F	C	S	W	Secondary forest
182	GA182	1438.78	4794.46	Silam	—	P <sub>4</sub> Km	35	R.B.	R	C	S	W	Secondary forest
183	GA183	1438.17	4794.37	Silam	—	P <sub>4</sub> Km	30	Y.B.	R	C	M	W	Cocoa plantation
184	GA184	1438.31	4794.75	Silam	—	P <sub>4</sub> Km	25	R.B.	R	C	F	W	Secondary forest
185	GA185	1438.63	4795.22	Silam	—	P <sub>4</sub> Km	30	B.	F	C	S	W	Secondary forest
186	GA186	1438.13	4795.18	Silam	—	P <sub>4</sub> Km	30	B.	R	C	S	W	Secondary forest
187	GA187	1438.50	4795.57	Silam	—	Csba	25	B.	R	C	M	W	Secondary forest
188	GA188	1438.56	4799.56	Silam	basalt	Csba	25	R.B.	R	C	M	W	Cocoa plantation
189	GA189	1438.02	4795.56	Silam	—	Csba	30	B.	R	C	M	W	Secondary forest
190	GA190	1438.67	4795.87	Silam	basalt	Csba	25	L.B.	F	C	M	W	Secondary forest
191	GA191	1438.77	4796.16	Silam	basalt	Csba	30	B.	F	C	S	W	Secondary forest
192	GA192	1438.55	4796.56	Silam	basalt	Csba	25	B.	R	C	M	W	Secondary forest
193	GA193	1438.15	4796.39	Silam	basalt	Csba	30	B.	R	C	S	W	Cocoa plantation
194	GA194	1438.20	4796.82	Silam	basalt	Csba	30	B.	F	C	M	W	Cocoa plantation
195	GA195	1438.63	4796.94	Silam	basalt	Csba	25	B.	F	C	S	W	Cocoa plantation
196	GA196	1438.67	4797.17	Silam	basalt	Csba	25	B.	F	C	S	W	Cocoa plantation
197	GA197	1438.79	4797.67	Silam	basalt	Csba	20	D.B.	R	C	M	W	Cocoa plantation
198	GA198	1438.52	4797.90	Silam	basalt	Csba	25	D.B.	R	C	M	W	Cocoa plantation
199	GA199	1438.25	4798.12	Silam	basalt	Csba	30	D.B.	R	C	M	W	Cocoa plantation
200	GA200	1438.44	4798.38	Silam	basalt	Csba	20	D.B.	R	C	M	W	Cocoa plantation
201	GA201	1438.25	4798.75	Silam	basalt	Csba	20	D.B.	R	C	M	W	Cocoa plantation
202	GA202	1438.08	4798.63	Silam	basalt	Csba	25	D.B.	R	C	M	W	Cocoa plantation
203	GA203	1438.53	4799.22	Silam	basalt	Csba	35	R.B.	R	C	S	W	Secondary forest
204	GA204	1438.12	4799.04	Silam	—	Csba	30	R.B.	R	C	M	W	Cocoa plantation
205	GA205	1438.64	4799.67	Silam	basalt	Csba	30	D.B.	F	C	M	W	Cocoa plantation
206	GA206	1437.11	4797.69	Silam	—	Csba	30	Y.B.	R	C	F	W	Cocoa plantation
207	GA207	1437.75	4793.05	Silam	—	P <sub>4</sub> Km	30	B.	F	C	S	W	Cocoa plantation
208	GA208	1437.35	4793.23	Silam	—	P <sub>4</sub> Km	30	B.	F	C	S	W	Cocoa plantation
209	GA209	1437.84	4793.45	Silam	—	P <sub>4</sub> Km	30	L.B.	F	C	S	W	Cocoa plantation
210	GA210	1437.44	4793.86	Silam	—	P <sub>4</sub> Km	20	L.B.	R	C	S	W	Primary forest

\*1Gravel: Many (M), Few (F), Rare or none (R)

\*2Grain size: Sandy (S), Clayey (C)

\*3Topography: Steep (S), Moderate (M), Flat (F)

\*4Humidity: Dry (D), Wet (W)

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. *1	S. *2	T. *3	H. *4	Vegetation
		N	E										
211	GA211	1437.87	4794.19	Silam	—	P <sub>4</sub> Km	30	L.B.	R	C	M	W	Cocoa plantation
212	GA212	1437.53	4794.40	Silam	—	P <sub>4</sub> Km	20	L.B.	F	C	F	W	Primary forest
213	GA213	1437.90	4794.77	Silam	—	P <sub>4</sub> Km	30	L.B.	R	C	F	W	Secondary forest
214	GA214	1437.71	4795.10	Silam	—	P <sub>4</sub> Km	35	B.	R	C	M	W	Cocoa plantation
215	GA215	1437.44	4794.92	Silam	—	P <sub>4</sub> Km	20	Y.B.	R	C	F	W	Oil palm plant.
216	GA216	1437.50	4795.73	Silam	—	P <sub>4</sub> Km	30	B.	F	C	M	W	Cocoa plantation
217	GA217	1437.87	4795.88	Silam	—	Csba.	30	B.	F	C	M	W	Cocoa plantation
218	GA218	1437.88	4796.16	Silam	—	Csba.	30	B.	F	C	F	W	Cocoa plantation
219	GA219	1437.38	4796.16	Silam	—	P <sub>4</sub> Km	20	B.	R	S	F	W	Cocoa plantation
220	GA220	1437.88	4796.62	Silam	—	Csba.	30	B.	F	C	F	W	Cocoa plantation
221	GA221	1437.37	4796.86	Silam	—	P <sub>4</sub> Km	30	B.	F	C	F	W	Cocoa plantation
222	GA222	1437.89	4797.17	Silam	—	Csba.	25	Y.B.	R	C	M	W	Cocoa plantation
223	GA223	1437.45	4797.18	Silam	—	Csba	30	B.	R	C	F	W	Cocoa plantation
224	GA224	1437.73	4797.60	Silam	—	Q <sub>2</sub>	35	L.B.	R	C	M	W	Cocoa plantation
225	GA225	1437.29	4797.70	Silam	—	Csba	35	D.B.	R	C	F	W	Cocoa plantation
226	GA226	1437.57	4798.10	Silam	vol. breccia	Csba	35	L.B.	F	C	S	W	Cocoa plantation
227	GA227	1437.84	4798.27	Silam	basalt	Csba	25	D.B.	R	C	S	W	Cocoa plantation
228	GA228	1437.50	4798.55	Silam	—	Csba	30	L.B.	R	C	F	W	Cocoa plantation
229	GA229	1437.87	4798.83	Silam	basalt	Csba	25	D.B.	R	C	M	W	Cocoa plantation
230	GA230	1437.62	4799.05	Silam	—	Csba	30	B.	R	C	F	W	Cocoa plantation
231	GA231	1437.75	4799.35	Silam	—	Q <sub>2</sub>	30	B.	F	C	F	W	Cocoa plantation
232	GA232	1437.30	4799.92	Silam	—	Csba	30	D.B.	R	C	F	W	Cocoa plantation
233	GA233	1437.48	4800.20	Silam	—	Csba	25	B.G.	R	C	F	W	Cocoa plantation
234	GA234	1437.89	4800.60	Silam	basalt	Csba	30	R.B.	R	C	M	W	Secondary forest
235	GA235	1437.40	4795.33	Silam	—	P <sub>4</sub> Km	30	D.B.	F	C	F	W	Cocoa plantation
236	GA236	1437.07	4795.75	Silam	—	P <sub>4</sub> Km	10	L.B.	F	C	M	W	Secondary forest
237	GA237	1437.12	4793.10	Silam	—	P <sub>4</sub> Km	30	R.B.	R	C	S	W	Cocoa plantation
238	GA238	1437.28	4799.15	Silam	—	Csba	30	D.B.	R	C	F	W	Cocoa plantation
239	GA239	1437.26	4798.65	Silam	—	Csba	30	D.B.	F	C	F	W	Cocoa plantation
240	GA240	1436.86	4793.54	Silam	—	P <sub>4</sub> Km	20	L.B.	F	C	F	W	Primary forest

\*1Gravel: Many (M), Few (F), Rare or none (R)

\*2Topography: Steep (S), Moderate (M), Flat (F)

\*3Grain size: Sandy (S), Clayey (C)

\*4Humidity: Dry (D), Wet (W)

## Area: S. Sabahan - S. Diwata Area (Area A)

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. #1	S. #2	T. #3	H. #4	Vegetation
		N	E										
241	GA241	1436.42	4793.40	Silam	—	P4Km	20	L.B.	R	C	F	W	Primary forest
242	GA242	1436.15	4793.28	Silam	—	P4Km	20	B.	R	C	M	W	Primary forest
243	GA243	1436.30	4793.72	Silam	—	P4Km	20	L.B.	R	C	F	W	Primary forest
244	GA244	1436.61	4794.18	Silam	—	P4Km	20	Y.	F	C	M	W	Secondary forest
245	GA245	1436.16	4794.52	Silam	—	P4Km	30	Y.	F	C	F	W	Secondary forest
246	GA246	1436.73	4794.90	Silam	—	P4Km	20	B.	F	C	M	W	Secondary forest
247	GA247	1436.26	4794.87	Silam	—	P4Km	20	L.B.	R	C	F	W	Secondary forest
248	GA248	1436.60	4795.32	Silam	—	P4Km	10	L.B.	R	C	F	W	Secondary forest
249	GA249	1436.83	4795.60	Silam	—	P4Km	10	L.B.	F	C	M	W	Oil palm plant.
250	GA250	1436.15	4795.65	Silam	—	P4Km	10	D.B.	F	C	M	W	Oil palm plant.
251	GA251	1436.57	4796.08	Silam	—	P4Km	10	B.	R	C	M	W	Cocoa plantation
252	GA252	1436.80	4796.39	Silam	—	P4Km	10	L.B.	R	C	M	W	Cocoa plantation
253	GA253	1436.20	4796.61	Silam	—	P4Km	20	L.B.	R	S	M	D	Cocoa plantation
254	GA254	1436.64	4796.85	Silam	—	P4Km	30	L.B.	R	C	M	W	Cocoa plantation
255	GA255	1436.80	4797.32	Silam	—	P4Km	30	L.B.	R	C	M	W	Cocoa plantation
256	GA256	1436.37	4797.18	Silam	—	P4Km	30	B.	R	C	S	F	Cocoa plantation
257	GA257	1436.88	4797.65	Silam	—	Csba	30	R.B.	R	C	F	W	Cocoa plantation
258	GA258	1436.29	4797.72	Silam	basalt	Csba	25	B.	F	C	F	W	Cocoa plantation
259	GA259	1436.22	4798.34	Silam	—	Csba	20	B.	F	C	M	W	Cocoa plantation
260	GA260	1436.54	4798.47	Silam	basalt	Csba	30	B.	F	C	M	D	Cocoa plantation
261	GA261	1436.89	4798.81	Silam	—	Csba	30	Y.B.	R	C	M	W	Cocoa plantation
262	GA262	1436.45	4798.80	Silam	basalt	Csba	20	R.B.	F	C	S	W	Cocoa plantation
263	GA263	1436.30	4799.13	Silam	—	Csba	30	D.B.	R	C	M	W	Cocoa plantation
264	GA264	1436.95	4799.26	Silam	—	Csba	30	D.B.	F	C	F	W	Cocoa plantation
265	GA265	1436.54	4799.43	Silam	—	Csba	30	B.	R	C	F	W	Cocoa plantation
266	GA266	1436.62	4799.88	Silam	—	Qz	30	D.B.	R	C	F	W	Cocoa plantation
267	GA267	1436.17	4799.73	Silam	—	Qz	30	R.B.	R	C	M	W	Secondary forest
268	GA268	1436.41	4800.18	Silam	—	Qz	30	B.	R	C	F	W	Cocoa plantation
269	GA269	1436.61	4800.71	Silam	—	Csba	30	D.B.	R	C	F	W	Farm
270	GA270	1436.47	4801.40	Silam	basalt	Csba	30	R.B.	F	C	S	W	Secondary forest

\*1Gravel: Many (M), Few (F), Rare or none (R)

\*2Grain size: Sandy (S), Clayey (C)

\*3Topography: Steep (S), Moderate (M), Flat (F)

\*4Humidity: Dry (D), Wet (W)

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. #1	S. #2	T. #3	H. #4	Vegetation
		N	E										
271	GA271	1435.85	4798.18	Silam	—	Csba	30	D.B.	R	C	F	W	Cocoa plantation
272	GA272	1436.46	4795.89	Silam	—	P <sub>4</sub> Km	10	L.B.	M	C	M	W	Cocoa plantation
273	GA273	1435.77	4793.12	Silam	—	P <sub>4</sub> Km	20	B.	R	C	F	W	Secondary forest
274	GA274	1435.20	4793.08	Silam	—	P <sub>4</sub> Km	15	L.B.	M	C	M	D	Secondary forest
275	GA275	1435.91	4793.70	Silam	—	P <sub>4</sub> Km	10	B.	R	C	F	W	Primary forest
276	GA276	1435.43	4793.73	Silam	—	P <sub>4</sub> Km	20	L.B.	F	C	M	W	Primary forest
277	GA277	1435.91	4794.12	Silam	sandstone	P <sub>4</sub> Km	10	L.B.	R	S	F	D	Primary forest
278	GA278	1435.13	4794.24	Silam	—	P <sub>4</sub> Km	10	Y.	R	S	M	D	Cocoa plantation
279	GA279	1435.89	4794.77	Silam	—	P <sub>4</sub> Km	10	L.B.	R	C	M	W	Cocoa plantation
280	GA280	1435.45	4794.74	Silam	—	P <sub>4</sub> Km	20	B.	R	C	M	W	Cocoa plantation
281	GA281	1435.75	4795.26	Silam	—	P <sub>4</sub> Km	10	Y.B.	R	S	F	D	Secondary forest
282	GA282	1435.25	4795.13	Silam	—	P <sub>4</sub> Km	10	Y.B.	R	S	F	W	Secondary forest
283	GA283	1435.58	4795.67	Silam	—	P <sub>4</sub> Km	20	Y.B.	M	S	F	W	Secondary forest
284	GA284	1435.82	4795.83	Silam	—	P <sub>4</sub> Km	15	D.B.	M	C	M	W	Cocoa plantation
285	GA285	1435.22	4795.77	Silam	—	P <sub>4</sub> Km	15	L.B.	R	C	M	W	Cocoa plantation
286	GA286	1435.20	4796.17	Silam	—	P <sub>4</sub> Km	40	B.	F	C	M	W	Cocoa plantation
287	GA287	1435.89	4796.48	Silam	—	P <sub>4</sub> Km	10	B.	R	C	M	W	Cocoa plantation
288	GA288	1435.58	4796.38	Silam	—	P <sub>4</sub> Km	10	L.B.	R	S	M	D	Cocoa plantation
289	GA289	1435.12	4796.79	Silam	—	Csba	30	E.	F	C	M	W	Cocoa plantation
290	GA290	1435.36	4797.17	Silam	—	KMb	30	L.B.	F	C	M	W	Cocoa plantation
291	GA291	1435.67	4797.38	Silam	—	Csba	30	B.	F	C	S	W	Cocoa plantation
292	GA292	1435.76	4797.77	Silam	basalt	Csba	25	B.	R	C	F	W	Cocoa plantation
293	GA293	1435.49	4797.86	Silam	—	Csba	25	R.B.	F	C	F	D	Secondary forest
294	GA294	1435.47	4798.17	Silam	basalt	Csba	30	R.B.	F	C	S	W	Secondary forest
295	GA295	1435.87	4798.38	Silam	basalt	Csba	20	R.B.	R	C	S	W	Secondary forest
296	GA296	1435.71	4798.83	Silam	basalt	Csba	20	R.B.	F	C	S	D	Secondary forest
297	GA297	1435.22	4798.86	Silam	basalt	Csba	25	R.B.	F	S	M	W	Secondary forest
298	GA298	1435.85	4799.19	Silam	basalt	Csba	30	D.B.	R	C	M	W	Secondary forest
299	GA299	1435.55	4799.25	Silam	basalt	Csba	30	R.B.	F	C	M	W	Secondary forest
300	GA300	1435.82	4799.58	Silam	basalt	P <sub>4</sub> Km	30	B.	R	C	M	W	Secondary forest

\*1Gravel: Many (M), Few (F), Rare or none (R)      \*2Grain size: Sandy (S), Clayey (C)

\*3Topography: Steep (S), Moderate (M), Flat (F)

\*4Humidity: Dry (D), Wet (W)

## Area: S. Sabahan - S. Diwata Area (Area A)

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. #1	S. #2	T. #3	H. #4	Vegetation
		N	E										
301	GA301	1435.92	4800.40	Silam	—	Csba	30	R.B.	R	C	M	W	Primary forest
302	GA302	1435.55	4800.48	Silam	—	Csba	25	R.B.	R	C	M	W	Primary forest
303	GA303	1435.48	4800.18	Silam	—	Csba	25	L.B.	R	C	M	W	Secondary forest
304	GA304	1435.18	4800.62	Silam	—	Gs	30	R.B.	R	C	S	W	Secondary forest
305	GA305	1435.94	4801.66	Silam	basalt	Csba	30	R.B.	R	C	M	W	Secondary forest
306	GA306	1434.90	4793.35	Silam	sandstone	P <sub>4</sub> Km	10	B.	R	S	M	D	Secondary forest
307	GA307	1434.63	4793.45	Silam	sandstone	P <sub>4</sub> Km	20	L.B.	M	S	M	W	Secondary forest
308	GA308	1434.18	4793.28	Silam	—	P <sub>4</sub> Km	30	B.	R	S	F	D	Secondary forest
309	GA309	1434.84	4793.79	Silam	—	P <sub>4</sub> Km	10	L.B.	F	C	S	W	Primary forest
310	GA310	1434.27	4793.80	Silam	—	P <sub>4</sub> Km	10	Y.	R	S	M	D	Cocoa plantation
311	GA311	1434.44	4794.11	Silam	sandstone	P <sub>4</sub> Km	20	L.B.	M	S	M	W	Cocoa plantation
312	GA312	1434.12	4794.36	Silam	—	P <sub>4</sub> Km	10	Y.	R	S	M	D	Cocoa plantation
313	GA313	1434.85	4794.45	Silam	sandstone	P <sub>4</sub> Km	20	L.B.	F	C	M	W	Cocoa plantation
314	GA314	1434.12	4794.75	Silam	sandstone	P <sub>4</sub> Km	10	B.	M	S	M	D	Cocoa plantation
315	GA315	1434.74	4795.00	Silam	—	P <sub>4</sub> Km	15	L.B.	R	C	M	W	Cocoa plantation
316	GA316	1434.80	4795.26	Silam	—	P <sub>4</sub> Km	15	Y.B.	R	S	F	W	Cocoa plantation
317	GA317	1434.24	4795.35	Silam	—	P <sub>4</sub> Km	15	B.	R	S	F	D	Cocoa plantation
318	GA318	1434.80	4795.81	Silam	sandstone	P <sub>4</sub> Km	20	L.B.	R	C	F	W	Cocoa plantation
319	GA319	1434.43	4795.85	Silam	—	P <sub>4</sub> Km	10	Y.	R	S	M	D	Cocoa plantation
320	GA320	1434.07	4795.80	Silam	—	P <sub>4</sub> Km	10	Y.	R	S	M	D	Cocoa plantation
321	GA321	1434.86	4796.10	Silam	—	Csba	15	B.	F	C	M	W	Cocoa plantation
322	GA322	1434.43	4796.26	Silam	—	Csba	10	B.	M	S	M	D	Cocoa plantation
323	GA323	1434.66	4796.46	Silam	—	Csba	30	B.	F	C	M	W	Cocoa plantation
324	GA324	1434.85	4796.62	Silam	—	Csba	20	B.	F	C	M	W	Cocoa plantation
325	GA325	1434.19	4796.45	Silam	—	P <sub>4</sub> Km	10	L.B.	R	C	M	W	Cocoa plantation
326	GA326	1434.42	4797.16	Silam	—	Csba	10	L.B.	F	C	M	W	Cocoa plantation
327	GA327	1434.36	4797.32	Silam	—	Csba	20	B.	F	C	M	W	Cocoa plantation
328	GA328	1434.70	4797.56	Silam	—	Csba	30	R.B.	R	C	S	W	Cocoa plantation
329	GA329	1434.48	4797.74	Silam	—	Csba	30	B.	R	C	F	W	Cocoa plantation
330	GA330	1434.12	4797.67	Silam	—	P <sub>4</sub> Km	10	R.B.	F	C	M	W	Secondary forest

\*<sup>1</sup>Gravel: Many (M), Few (F), Rare or none (R)\*<sup>2</sup>Grain size: Sandy (S), Clayey (C)\*<sup>3</sup>Topography: Steep (S), Moderate (M), Flat (F)\*<sup>4</sup>Humidity: Dry (D), Wet (W)

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. <sup>*1</sup>	S. <sup>*2</sup>	T. <sup>*3</sup>	H. <sup>*4</sup>	Vegetation
		N	E										
331	GA331	1434.59	4798.12	Silam	---	Csba	30	R.B.	F	C	M	W	Cocoa plantation
332	GA332	1434.75	4798.43	Silam	---	Csba	30	R.B.	F	C	M	D	Cocoa plantation
333	GA333	1434.92	4798.65	Silam	basalt	Csba	25	R.B.	F	C	S	D	Cocoa plantation
334	GA334	1434.86	4799.34	Silam	---	Csba	25	Y.B.	F	C	M	W	Primary forest
335	GA335	1434.15	4799.35	Silam	---	Csba	30	B.	F	C	M	W	Secondary forest
336	GA336	1434.07	4799.88	Silam	---	Gs	20	L.B.	F	C	M	W	Cocoa plantation
337	GA337	1434.18	4800.17	Silam	phyllitic rock	Gs	10	L.G.	M	C	S	D	Secondary forest
338	GA338	1434.83	4800.34	Silam	---	Q <sub>2</sub>	25	Y.B.	M	C	S	W	Secondary forest
339	GA339	1434.55	4794.54	Silam	---	P <sub>4</sub> Mm	10	L.B.	M	S	M	W	Cocoa plantation
340	GA340	1434.10	4796.77	Silam	---	Csba	10	Y.	F	S	M	D	Cocoa plantation

\*<sup>1</sup>Gravel: Many (M), Few (F), Rare or none (R)\*<sup>3</sup>Topography: Steep (S), Moderate (M), Flat (F)\*<sup>2</sup>Grain size: Sandy (S), Clayey (C)\*<sup>4</sup>Humidity: Dry (D), Wet (W)

Appendix 18

Analytical results of soil  
geochemical samples in Area A





List of Geochemical Analysis ( 1 )

Ser. No.	Sample No.	Location (km)	As	Au	Ba	Co	Cr	Cu	Hg	K	Mg	Mn	Mo	Na	Ni	Pb	S	Sb	Sr	Ti	U	W	Zn
		X-coord Y-coord	ppm	ppb	ppm	ppm	ppm	ppm	ppb	%	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
1	GA001	4793.850 1444.880	40	2	183	1366	29	55	.01	11.77	1827	1	1	.07	3208	2	.013	4.6	1	.02	2	2	125
2	GA002	4800.150 1444.830	30	1	8	217	35	64	.01	9.62	2333	1	1	.09	3549	2	.014	15.2	3	.05	2	2	139
3	GA003	4802.110 1444.900	26	1	12	251	16	55	.01	13.83	3055	1	1	.06	2443	2	.008	12.2	2	.07	2	2	180
4	GA004	4798.960 1444.430	29	1	12	283	31	105	.01	10.53	3112	1	1	.04	2567	2	.019	20.2	3	.07	2	2	153
5	GA005	4801.700 1444.630	18	1	14	233	22	35	.01	12.51	2308	1	1	.08	3162	2	.008	17.9	2	.04	2	2	169
6	GA006	4801.960 1444.530	18	1	45	43	53	14	.10	3.72	1062	1	1	1.95	209	2	.033	4.2	154	.31	2	2	74
7	GA007	4800.470 1444.430	27	1	75	118	848	51	.09	2.42	1418	2	2	.99	772	2	.010	10.8	26	.83	1.2	2	85
8	GA008	4798.330 1444.100	3	1	33	41	154	75	.09	1.36	1161	2	2	1.82	59	2	.030	5.8	107	.51	2	2	76
9	GA009	4798.680 1444.300	1	1	28	34	73	90	.05	.61	450	2	2	.70	58	2	.017	5.4	32	.79	4	2	79
10	GA010	4799.170 1444.080	1	1	28	37	92	46	.03	.73	1217	2	2	1.46	39	2	.025	8.5	93	.43	4	2	47
11	GA011	4799.480 1444.290	1	1	14	32	372	52	.03	2.19	541	1	1	1.49	131	2	.025	5.0	101	.35	2	2	60
12	GA012	4798.880 1444.080	54	3	46	103	2159	88	.08	4.71	1233	1	1	.29	1750	2	.011	16.2	14	.51	4	2	111
13	GA013	4800.250 1444.050	7	3	23	173	1623	37	.07	1.51	2762	2	2	2.54	147	2	.019	11.3	204	.55	2	2	65
14	GA014	4800.770 1444.090	7	3	27	147	802	50	.01	1.12	2915	2	2	.76	404	2	.013	3.7	23	1.25	2	2	110
15	GA015	4801.120 1444.050	1	4	27	147	802	50	.01	1.12	2915	2	2	.76	404	2	.013	3.7	23	1.25	2	2	86
16	GA016	4801.500 1444.190	33	1	88	205	4571	51	.06	6.25	2003	1	1	.38	2865	2	.015	22.5	20	1.44	6	2	138
17	GA017	4801.810 1444.150	1	1	20	40	62	69	.02	2.30	1397	3	3	2.33	26	2	.017	8.9	70	.67	2	2	67
18	GA018	4802.310 1444.410	1	3	45	40	338	35	.10	2.30	806	2	2	1.98	143	2	.029	4.9	140	.39	4	2	60
19	GA019	4802.850 1444.540	37	1	19	136	104	124	.01	1.15	1474	1	1	.05	1883	2	.016	5.3	66	.57	4	2	125
20	GA020	4797.270 1443.040	1	6	77	37	104	124	.32	3.64	1779	3	3	2.07	64	2	.030	5.1	111	.41	4	2	307
21	GA021	4797.600 1443.110	1	1	70	28	165	42	.14	1.55	958	2	2	1.86	65	2	.018	5.2	86	.56	4	2	68
22	GA022	4797.900 1443.600	1	1	98	30	223	60	.20	1.33	517	1	1	.89	97	2	.030	6.6	52	.48	4	2	76
23	GA023	4798.240 1443.950	3	1	82	46	393	33	.17	2.44	1188	1	1	1.39	245	2	.011	7.9	101	.76	6	2	35
24	GA024	4798.280 1443.350	1	1	8	144	13	28	.28	.35	55	1	1	.08	44	2	.006	5.5	16	.81	2.0	2	65
25	GA025	4798.780 1443.460	1	1	23	39	54	30	.01	.71	1430	1	1	2.23	25	2	.020	7.4	71	.70	2	2	58
26	GA026	4799.150 1443.730	1	1	232	15	71	20	1.04	.55	182	2	2	1.19	34	5	.013	5.0	52	.48	2.4	2	71
27	GA027	4799.190 1443.530	7	1	199	13	60	25	1.51	.89	84	3	3	1.63	82	13	.007	6.6	64	.41	2.8	2	86
28	GA028	4799.570 1443.310	1	10	17	51	232	63	.01	1.50	1889	1	1	1.63	81	2	.021	9.9	53	.70	2	2	94
29	GA029	4799.860 1443.430	12	1	49	57	203	62	.06	1.74	1745	2	2	1.96	54	2	.014	1.7	87	.73	2	2	83
30	GA030	4800.150 1443.430	1	1	32	47	71	57	.02	1.64	1819	1	1	.52	116	2	.021	8.4	15	1.20	2	2	63
31	GA031	4800.420 1443.760	1	6	27	104	148	92	.01	.48	2917	2	2	1.19	54	2	.030	6.3	70	.86	2	2	101
32	GA032	4800.800 1443.220	2	1	35	140	381	56	.03	.64	3473	1	1	1.08	71	2	.018	9.2	33	.90	2	2	103
33	GA033	4800.880 1443.620	1	1	45	48	126	60	.06	.75	1887	1	1	1.97	57	2	.024	8.6	70	.86	6	2	67
34	GA034	4801.170 1443.600	1	1	9	64	256	85	.03	1.64	1610	1	1	1.31	83	2	.016	8.5	42	.66	2	2	96
35	GA035	4801.090 1443.060	3	1	78	71	267	65	.01	1.50	1601	2	2	.55	64	2	.023	16.1	11	.10	2	2	155
36	GA036	4801.660 1443.100	1	1	17	17	171	64	.01	.31	1806	1	1	1.18	2721	2	.023	16.1	11	.10	2	2	93
37	GA037	4801.750 1443.820	14	2	16	204	4362	35	.01	11.70	2293	1	1	.60	70	2	.022	2.5	33	.70	2	2	155
38	GA038	4802.200 1443.880	4	1	52	59	198	57	.10	.66	2510	2	2	1.07	96	2	.022	2.5	33	.70	2	2	54
39	GA039	4802.240 1443.120	4	1	20	54	296	70	.02	1.58	1232	1	1	1.68	571	2	.018	12.8	54	.74	2	2	76
40	GA040	4802.640 1443.030	2	1	32	72	1090	32	.02	2.11	1384	1	1	1.68	571	2	.018	10.1	84	.42	2	2	70
41	GA041	4802.750 1443.650	2	1	26	37	198	67	.08	1.61	1137	2	2	1.57	75	2	.037	9.9	128	.43	2	2	65
42	GA042	4798.810 1443.910	1	1	43	84	227	69	.09	1.10	3078	3	3	1.54	104	2	.015	14.6	38	.30	1.8	2	31
43	GA043	4801.340 1443.300	1	1	123	13	74	10	.46	.34	124	1	1	1.15	109	2	.006	6.7	39	.66	2.2	2	144
44	GA044	4796.500 1442.230	9	1	277	29	88	127	2.12	1.23	3352	1	1	1.73	121	2	.023	8.4	56	.66	2.2	2	78
45	GA045	4796.710 1442.530	2	1	42	338	73	32	.83	.46	53	4	4	1.09	59	5	.007	2.2	17	.33	2.6	2	45
46	GA046	4796.860 1442.210	4	1	83	12	92	44	.01	1.59	1026	1	1	1.89	96	2	.020	13.1	51	.53	2.6	2	45
47	GA047	4797.200 1442.800	9	1	26	56	324	66	.18	1.97	841	1	1	1.41	83	2	.023	11.4	61	.98	2	2	94
48	GA048	4797.300 1442.220	1	1	47	40	270	74	.08	1.97	841	1	1	1.41	83	2	.023	11.4	61	.98	2	2	94
49	GA049	4797.690 1442.180	1	1	24	292	101	101	.09	2.65	1364	1	1	1.43	108	2	.033	15.2	87	.68	2	2	119
50	GA050	4797.850 1442.700	1	1	40	48	292	101	.09	2.65	1364	1	1	1.43	108	2	.033	15.2	87	.68	2	2	119

List of Geochemical Analysis ( 2 )

Ser. No.	Sample No.	Location (km)	X-coord	Y-coord	As	Au	Ba	Co	Cr	Cu	Hg	K	Mg	Mn	Mo	Na	Ni	Pb	S	Sb	Sr	Ti	U	W	Zn	
					ppm	ppb	ppm	ppm	ppm	ppm	ppb	%	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm
51	GA051	4796.210	1442.300	1442.300	>	>	22	46	400	74	38	.06	2.97	937	1	1.14	178	>	.027	9.4	80	.61	.2	>	80	
52	GA052	4796.390	1442.670	1442.670	>	>	16	47	369	82	30	.01	3.08	1427	1	.86	189	>	.035	15.4	84	.65	.2	>	87	
53	GA053	4796.770	1442.530	1442.530	>	>	29	39	427	71	72	.12	2.66	873	1	1.43	134	>	.027	7.8	86	.83	.2	>	73	
54	GA054	4796.820	1442.070	1442.070	4	3	36	35	88	26	41	.07	1.46	1043	2	2.47	40	>	.011	7.8	67	.93	.2	>	63	
55	GA055	4796.300	1442.120	1442.120	>	3	26	43	340	78	60	.07	1.97	773	2	1.20	90	>	.035	11.7	111	.71	.4	>	82	
56	GA056	4799.600	1442.710	1442.710	>	>	30	43	190	57	53	.05	1.79	1248	1	2.70	82	>	.022	2.8	94	.60	.2	>	86	
57	GA057	4799.900	1442.800	1442.800	>	>	28	39	159	23	41	.02	1.19	1392	2	1.85	64	>	.021	15.6	81	1.07	.2	>	78	
58	GA058	4798.870	1442.170	1442.170	>	>	11	42	578	107	44	.02	2.27	943	1	1.47	242	>	.031	17.8	58	.72	.2	>	134	
59	GA059	4800.280	1442.780	1442.780	>	>	31	39	204	61	22	.17	1.41	1571	1	1.20	75	>	.026	10.4	79	.77	.2	>	88	
60	GA060	4800.180	1442.110	1442.110	>	>	22	55	418	99	28	.40	2.22	1207	2	1.33	139	>	.036	8.3	91	.51	.2	>	80	
61	GA061	4800.500	1442.070	1442.070	>	>	12	45	231	64	10	.04	2.63	1097	1	1.72	99	>	.029	10.6	68	.63	.2	>	79	
62	GA062	4800.880	1442.340	1442.340	>	>	17	47	417	82	26	.04	3.97	972	1	.94	242	>	.024	11.2	56	.62	.2	>	95	
63	GA063	4801.200	1442.350	1442.350	>	>	16	59	187	74	12	.05	2.88	1567	1	1.99	79	>	.021	11.7	74	.75	.2	>	109	
64	GA064	4801.480	1442.140	1442.140	>	>	21	63	443	78	51	.02	1.46	1696	4	1.46	116	>	.028	13.7	54	.96	.2	>	96	
65	GA065	4801.770	1442.770	1442.770	>	>	35	40	313	76	49	.02	1.70	1339	1	.97	122	>	.022	13.2	69	.57	.2	>	96	
66	GA066	4801.820	1442.450	1442.450	>	>	21	59	446	115	38	.03	2.31	1699	2	1.12	147	>	.022	13.2	51	.85	.2	>	147	
67	GA067	4802.120	1442.860	1442.860	>	>	28	38	262	84	45	.05	1.35	1125	1	1.65	92	>	.017	14.5	56	.53	.2	>	94	
68	GA068	4802.440	1442.390	1442.390	>	>	27	92	373	84	117	.02	1.37	3017	2	1.55	121	>	.027	14.3	58	.93	.2	>	78	
69	GA069	4802.550	1442.730	1442.730	>	>	22	59	301	76	47	.03	1.95	2315	3	1.47	112	>	.025	13.8	60	.80	.2	>	90	
70	GA070	4802.860	1442.620	1442.620	>	>	16	51	349	68	26	.03	2.25	1507	2	1.75	154	>	.020	12.0	71	.70	.2	>	86	
71	GA071	4799.150	1442.530	1442.530	>	>	28	40	242	49	65	.11	1.94	1278	3	1.45	119	>	.024	12.9	76	1.08	.2	>	94	
72	GA072	4796.420	1441.000	1441.000	>	>	48	40	123	68	30	.20	2.19	1404	2	1.88	96	>	.025	8.8	93	.81	.2	>	125	
73	GA073	4796.250	1441.400	1441.400	>	>	28	49	193	39	36	.04	2.27	749	1	1.49	100	>	.036	11.2	127	.58	.2	>	52	
74	GA074	4796.540	1441.080	1441.080	>	>	26	38	95	53	75	.02	.99	1337	1	2.24	40	>	.042	9.3	108	.57	.2	>	55	
75	GA075	4796.720	1441.410	1441.410	>	>	82	28	128	38	13	.75	2.15	1247	2	1.38	61	>	.015	12.6	73	.62	.2	>	95	
76	GA076	4796.950	1441.650	1441.650	>	>	85	38	194	51	45	.60	2.03	1305	4	1.64	87	>	.023	12.3	109	.65	.4	>	77	
77	GA077	4797.360	1441.820	1441.820	>	>	99	27	246	52	75	.37	1.67	1102	1	1.39	102	>	.026	6.2	89	.57	.6	>	83	
78	GA078	4797.350	1441.100	1441.100	>	>	52	40	256	108	31	.12	1.62	1183	5	2.28	69	>	.020	11.4	97	.97	.2	>	103	
79	GA079	4797.730	1441.450	1441.450	>	>	52	58	74	63	55	.05	1.07	1735	2	1.90	45	>	.016	4.2	65	1.24	.4	>	54	
80	GA080	4796.110	1441.230	1441.230	>	>	19	67	205	58	67	.17	.62	1313	1	1.08	48	>	.018	4.1	40	1.20	.4	>	71	
81	GA081	4796.580	1441.430	1441.430	>	>	21	32	121	39	67	.01	.72	1543	2	1.52	52	>	.022	10.9	79	.76	.2	>	102	
82	GA082	4796.480	1441.050	1441.050	>	>	45	45	92	17	66	.04	.86	1769	2	2.24	32	>	.014	6.4	80	1.00	.2	>	46	
83	GA083	4796.880	1441.610	1441.610	>	>	39	36	83	69	55	.04	1.33	1189	2	2.48	39	>	.015	5.7	74	.89	.2	>	158	
84	GA084	4796.300	1441.800	1441.800	>	>	30	29	112	52	57	.06	1.95	1379	1	2.15	61	>	.026	8.6	104	.83	.2	>	85	
85	GA085	4799.350	1441.510	1441.510	>	>	22	36	89	83	51	.02	2.86	1042	2	1.78	55	>	.017	8.7	76	.84	.2	>	86	
86	GA086	4799.750	1441.690	1441.690	>	>	40	145	283	94	66	.01	.78	4863	3	.59	113	>	.014	18.0	24	1.08	.2	>	82	
87	GA087	4799.750	1441.400	1441.400	>	>	32	41	93	98	76	.07	1.45	1766	3	2.03	40	>	.019	9.3	63	.86	.2	>	78	
88	GA088	4800.300	1441.680	1441.680	>	>	35	57	294	72	64	.07	1.45	1766	3	2.18	85	>	.033	12.6	103	.70	.2	>	80	
89	GA089	4800.170	1440.940	1440.940	>	>	29	48	290	80	58	.05	1.25	1069	1	1.24	52	>	.019	8.8	50	.61	.2	>	67	
90	GA090	4800.600	1441.400	1441.400	>	>	40	56	241	70	45	.12	2.02	1457	3	2.07	83	>	.035	13.7	102	.69	.2	>	90	
91	GA091	4800.900	1441.580	1441.580	>	>	21	77	311	56	86	.02	1.39	2532	3	1.30	116	>	.032	7.4	60	.86	.2	>	66	
92	GA092	4801.220	1441.450	1441.450	>	>	24	46	192	68	62	.05	1.46	1360	3	2.23	67	>	.029	6.9	96	.68	.2	>	83	
93	GA093	4801.360	1441.860	1441.860	>	>	16	117	389	125	45	.01	.72	1629	3	.22	99	>	.011	3.1	7	1.09	.2	>	78	
94	GA094	4801.900	1441.020	1441.020	>	>	19	44	196	61	81	.07	1.67	1274	2	2.02	64	>	.048	8.8	102	.63	.2	>	81	
95	GA095	4801.960	1441.480	1441.480	>	>	15	72	148	53	64	.01	1.54	2198	2	1.37	55	>	.026	9.5	64	.86	.2	>	55	
96	GA096	4802.280	1441.330	1441.330	>	>	14	44	404	168	73	.02	2.94	1198	1	1.30	108	>	.023	13.4	52	.61	.2	>	64	
97	GA097	4802.650	1441.800	1441.800	>	>	15	90	342	91	73	.01	1.23	2759	1	.82	110	>	.021	14.2	42	.75	.2	>	64	
98	GA098	4802.860	1441.790	1441.790	>	>	20	70	332	56	89	.02	1.52	1760	3	1.35	97	>	.022	4.0	42	1.06	.2	>	76	
99	GA099	4802.920	1441.110	1441.110	>	>	16	83	331	89	103	.01	.84	2858	1	.90	101	>	.024	4.2	37	.78	.2	>	78	
100	GA100	4797.820	1441.130	1441.130	>	>	51	55	355	80	56	.09	.62	587	2	.43	81	>	.012	5.3	27	.68	.2	>	65	

List of Geochemical Analysis ( 3 )

Ser. No.	Sample No.	Location (km)	As	Au	Ba	Co	Cr	Cu	Hg	K	Mg	Mn	Mo	Na	Ni	Pb	S	Sb	Sr	Ti	U	W	Zn
		X-coord Y-coord	ppm	ppb	ppm	ppm	ppm	ppm	ppb	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
101	GA101	4794.420 1440.260	>	>	45	40	173	87	66	.18	3.27	1102	>	1.88	54	>	.023	10.3	67	.67	>	>	68
102	GA102	4794.890 1440.590	>	>	16	34	137	59	51	.06	2.56	559	>	1.75	47	>	.022	6.5	66	.70	>	>	60
103	GA103	4794.770 1440.120	>	1	43	33	108	54	82	.03	1.41	1095	>	1.98	53	>	.025	7.9	97	.54	.2	>	90
104	GA104	4795.440 1440.120	>	>	34	56	260	69	58	.14	1.95	1399	1	1.52	73	>	.023	11.5	100	.79	>	>	94
105	GA105	4796.300 1440.850	>	>	30	37	237	44	42	.39	1.32	562	1	1.14	83	>	.029	8.3	91	.45	>	>	90
106	GA106	4795.960 1440.230	>	>	54	27	72	98	39	.04	2.01	1138	3	2.51	32	>	.030	12.3	107	.64	.2	>	59
107	GA107	4796.270 1440.360	>	>	54	49	138	46	71	.18	1.31	1632	1	1.90	50	>	.025	2.1	108	.66	.2	>	58
108	GA108	4796.670 1440.660	>	>	17	38	65	63	34	.01	2.06	866	1	1.30	31	>	.037	5.0	138	.66	.2	>	71
109	GA109	4796.870 1440.250	>	>	48	37	88	46	60	.13	1.32	1291	1	2.20	28	>	.029	6.6	104	.80	>	>	68
110	GA110	4796.560 1440.150	>	>	49	31	168	52	17	.24	2.22	1038	1	2.12	76	>	.025	9.4	131	.75	>	>	80
111	GA111	4797.200 1440.540	>	>	68	31	99	58	60	.33	2.20	1113	1	1.51	48	>	.036	8.0	110	.62	.2	>	82
112	GA112	4797.500 1440.230	>	>	56	56	129	63	73	.09	1.72	1362	4	1.47	47	>	.020	14.3	91	1.01	.2	>	200
113	GA113	4797.670 1440.710	>	>	56	46	349	89	34	.37	1.66	986	2	1.18	111	>	.018	9.8	56	.66	.2	>	94
114	GA114	4797.880 1440.450	>	2	83	58	155	46	71	.15	.29	855	1	.07	42	>	.012	4.0	18	.53	.6	>	45
115	GA115	4798.220 1440.160	>	>	23	43	28	102	40	.01	.96	1578	1	2.33	13	>	.012	5.0	68	.94	.2	>	60
116	GA116	4798.270 1440.680	>	>	32	57	10	28	75	.02	.62	2395	2	2.11	3	>	.013	8.4	58	1.71	.4	>	52
117	GA117	4798.680 1440.640	>	>	14	52	31	94	65	.01	.93	2809	1	.93	12	>	.012	11.3	22	1.15	.2	>	74
118	GA118	4798.960 1440.350	>	>	50	132	307	99	44	.06	1.27	4595	3	.72	195	>	.012	9.1	30	.78	>	>	84
119	GA119	4799.200 1440.460	>	>	19	27	54	71	44	.03	1.36	1510	1	2.86	19	>	.017	9.8	80	.83	>	>	96
120	GA120	4799.400 1440.870	>	>	26	52	371	64	60	.07	1.96	1251	1	1.71	115	>	.033	2.2	58	.75	>	>	65
121	GA121	4799.640 1440.460	>	>	25	44	458	96	76	.02	1.96	942	1	1.35	118	>	.021	9.0	48	.65	>	>	79
122	GA122	4799.870 1440.220	>	>	14	53	101	56	67	.34	1.28	1651	2	1.68	42	>	.030	9.3	78	1.07	.2	>	82
123	GA123	4800.180 1440.270	>	>	21	63	271	67	97	.22	1.22	1953	2	1.58	77	>	.038	7.2	83	.64	.2	>	70
124	GA124	4800.520 1440.160	>	>	18	47	305	74	30	.07	2.23	1345	2	1.34	106	>	.031	11.2	68	.64	>	>	82
125	GA125	4800.760 1440.110	>	>	15	55	155	49	80	.02	1.11	871	1	.65	44	>	.014	5.7	34	.74	.2	>	55
126	GA126	4801.160 1440.570	>	>	27	58	134	108	55	.01	2.25	1321	3	1.48	48	>	.018	10.9	48	1.01	.2	>	90
127	GA127	4801.460 1440.340	>	>	10	38	173	136	55	.01	2.23	1321	1	1.04	52	>	.016	5.7	35	.69	>	>	92
128	GA128	4801.910 1440.550	>	>	8	41	134	92	48	.02	1.75	1065	1	1.48	42	>	.037	10.5	96	.78	>	>	67
129	GA129	4801.780 1440.200	>	>	9	38	304	84	70	.01	1.91	761	1	1.37	85	>	.026	8.0	54	.60	>	>	49
130	GA130	4802.230 1440.750	>	>	15	51	170	88	93	.01	1.47	1456	1	1.68	52	>	.035	12.0	53	.93	>	>	69
131	GA131	4802.420 1440.360	>	>	11	31	200	91	34	.01	2.47	1053	1	1.39	60	>	.034	6.7	68	.70	>	>	85
132	GA132	4802.730 1440.660	>	>	8	42	197	64	58	.01	1.64	953	1	1.74	59	>	.031	9.6	64	.75	>	>	318
133	GA133	4802.870 1440.430	>	>	15	45	251	73	88	.01	1.74	1268	2	1.65	75	>	.022	9.4	65	.66	>	>	87
134	GA134	4800.140 1434.500	>	>	19	50	790	92	49	.01	4.29	985	1	1.01	376	>	.030	9.8	107	.66	>	>	89
135	GA135	4793.290 1439.050	>	>	166	16	117	47	63	.26	1.41	594	1	1.64	29	>	.017	9.9	223	.59	.6	>	55
136	GA136	4793.620 1439.440	>	>	81	29	130	44	46	.46	1.10	993	3	1.75	65	>	.012	8.7	85	.70	1.0	>	79
137	GA137	4793.900 1439.190	>	>	19	62	259	68	94	.01	.76	2201	1	1.04	86	>	.026	14.3	93	1.55	>	>	55
138	GA138	4794.180 1439.050	>	>	19	38	154	50	56	.01	1.12	995	1	2.63	82	>	.010	4.7	88	.82	>	>	88
139	GA139	4794.180 1439.530	>	>	78	42	256	50	56	.12	2.05	1394	1	1.87	101	>	.023	8.5	108	.89	.2	>	74
140	GA140	4794.540 1439.160	>	>	14	42	211	50	66	.01	1.65	1282	1	1.16	83	>	.029	14.8	146	1.19	.2	>	52
141	GA141	4794.930 1439.450	>	>	36	41	140	86	60	.37	1.44	1110	2	1.07	50	>	.011	10.1	44	.91	.2	>	98
142	GA142	4795.110 1439.770	>	>	23	40	30	42	83	.01	1.25	1015	1	2.65	13	>	.016	11.4	82	1.09	.2	>	91
143	GA143	4795.470 1439.620	>	>	36	44	434	88	66	.07	3.67	680	2	2.03	49	>	.029	13.3	62	.50	>	>	159
144	GA144	4795.470 1439.020	>	2	46	45	110	71	37	.09	2.09	1689	2	2.31	25	>	.020	5.4	70	.78	>	>	83
145	GA145	4795.900 1439.700	>	>	31	42	55	46	63	.04	1.83	1154	2	2.71	25	>	.027	7.1	96	.94	>	>	63
146	GA146	4795.890 1439.310	>	>	30	48	101	54	65	.04	1.41	1410	3	2.43	39	>	.036	8.9	148	.63	>	>	77
147	GA147	4796.210 1439.180	>	>	36	40	175	51	55	.03	2.42	1066	3	1.94	64	>	.036	11.4	130	.57	.2	>	82
148	GA148	4796.400 1439.780	>	2	41	41	238	49	81	.10	1.45	811	1	2.52	69	>	.043	7.3	106	.57	.2	>	59
149	GA149	4796.950 1439.560	>	>	24	47	104	61	54	.03	1.25	1408	2	1.92	44	>	.035	5.8	135	.67	.2	>	84
150	GA150	4796.860 1439.100	>	>	32	50	85	72	57	.04	1.65	1765	3	2.28	37	>	.019	10.6	83	1.14	>	>	81

List of Geochemical Analysis ( 4 )

Ser. No.	Sample No.	Location (km)	X-coord	Y-coord	As	Au	Ba	Co	Cr	Cu	Hg	K	Mg	Mn	Mg	Na	Ni	Pb	S	Sb	Sr	Ti	U	W	Zn
					ppm	ppb	ppm	ppm	ppm	ppm	ppb	%	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
151	GA151	4797.200	1439.230	>	>	>	38	138	310	59	91	.02	.67	4094	3	.97	98	>	.019	4.5	29	1.12	.2	>	73
152	GA152	4797.350	1439.520	>	>	>	77	72	74	52	66	.27	1.15	2753	2	2.00	39	>	.018	9.3	101	1.33	.4	>	90
153	GA153	4797.850	1439.600	>	>	>	44	60	124	96	76	.03	1.46	1701	3	1.91	42	>	.018	8.3	76	.98	.4	>	172
154	GA154	4797.840	1439.800	>	>	>	34	52	117	59	51	.04	.95	2081	2	2.31	44	>	.017	2.3	86	.85	.2	>	103
155	GA155	4797.820	1439.120	>	>	>	48	48	437	101	40	.10	2.13	1299	2	2.85	148	>	.014	7.1	46	.76	.2	>	80
156	GA156	4798.170	1439.760	>	>	>	52	56	314	71	64	.08	1.33	2128	2	1.54	94	>	.028	7.9	97	.75	.2	>	71
157	GA157	4798.130	1439.180	>	>	>	19	71	49	42	57	.01	.64	2020	2	1.72	20	>	.011	6.4	75	1.33	.2	>	78
158	GA158	4798.410	1439.520	>	>	>	41	62	118	54	59	.05	1.14	2542	3	1.70	47	>	.017	9.7	79	1.13	.3	>	99
159	GA159	4798.470	1439.300	>	>	>	48	77	133	58	54	.07	1.00	2374	3	1.78	48	>	.022	11.0	80	.94	.2	>	72
160	GA160	4798.800	1439.350	>	>	>	63	56	78	48	54	.47	1.09	2020	3	1.60	40	>	.017	11.6	92	1.19	.2	>	84
161	GA161	4799.160	1439.150	>	>	>	40	95	301	85	49	.26	.94	2079	1	2.15	78	>	.020	6.6	47	.94	.2	>	82
162	GA162	4799.280	1439.730	>	>	>	40	46	218	79	246	.24	2.25	1565	1	1.20	80	50	.052	6.4	114	.67	.2	>	144
163	GA163	4799.450	1439.980	>	>	>	32	55	296	93	44	.80	1.40	1557	2	1.34	95	>	.047	11.0	109	.68	.2	>	105
164	GA164	4799.520	1439.100	>	>	>	34	53	268	94	19	.26	2.74	1724	1	1.70	101	>	.035	10.8	100	.84	.2	>	101
165	GA165	4797.600	1439.120	>	>	>	118	42	71	35	96	.97	.87	1327	1	1.13	31	>	.023	20.6	70	3.05	1.2	>	121
166	GA166	4800.320	1439.840	>	>	>	17	40	330	59	10	.09	2.89	1106	2	2.19	91	>	.037	8.4	85	.74	.2	>	81
167	GA167	4800.850	1439.510	>	>	>	35	39	393	81	44	.10	1.59	1130	1	1.52	108	>	.031	6.3	85	.94	.2	>	86
168	GA168	4801.160	1439.730	>	>	>	18	46	353	98	40	.01	2.01	1003	1	1.84	74	>	.028	19.6	91	.91	.2	>	84
169	GA169	4801.540	1439.670	>	>	>	21	63	412	91	66	.01	1.39	1762	2	1.32	104	>	.025	5.9	59	.97	.2	>	94
170	GA170	4801.880	1439.900	>	>	>	24	57	338	60	71	.08	2.06	1479	2	1.62	108	>	.040	10.6	115	.57	.2	>	89
171	GA171	4802.210	1439.900	>	>	>	18	60	250	85	23	.03	2.02	1272	2	2.03	98	>	.032	9.7	89	1.04	.2	>	84
172	GA172	4802.500	1439.990	>	>	>	19	82	236	71	76	.02	1.21	2573	1	1.66	110	>	.042	6.5	58	1.01	.2	>	79
173	GA173	4802.470	1439.130	>	>	>	13	48	228	59	13	.03	2.93	1426	1	1.74	87	>	.040	11.1	92	.84	.2	>	74
174	GA174	4802.870	1439.800	>	>	>	18	49	215	101	56	.04	2.28	1486	1	2.43	71	>	.042	11.8	115	.92	.2	>	76
175	GA175	4802.870	1439.350	>	>	>	15	40	217	243	28	.03	2.50	1212	1	2.26	81	>	.026	9.7	73	.98	.2	>	85
176	GA176	4793.100	1438.500	>	>	>	377	29	84	42	33	1.38	1.09	886	1	1.80	37	>	.024	6.3	186	.68	.2	>	78
177	GA177	4793.270	1438.320	>	>	>	347	28	182	62	15	.97	1.84	1006	1	2.17	92	>	.026	7.6	206	.64	.2	>	87
178	GA178	4793.590	1438.130	>	>	>	458	24	85	44	27	.83	1.01	888	1	2.28	40	>	.030	8.9	230	.60	.2	>	75
179	GA179	4793.760	1438.490	>	>	>	215	34	142	49	30	.35	2.26	1040	1	2.23	49	>	.031	12.1	192	1.00	.2	>	96
180	GA180	4793.870	1438.160	5	>	>	73	63	361	68	70	.04	2.77	1043	1	2.12	160	>	.029	13.3	131	.53	.2	>	73
181	GA181	4794.160	1438.700	>	>	>	53	54	283	88	28	.02	2.11	1931	1	2.20	134	>	.017	8.9	124	1.06	.2	>	94
182	GA182	4794.460	1438.170	12	>	>	15	64	248	40	34	.01	1.44	1415	2	3.01	104	>	.022	12.7	141	1.03	.2	>	88
183	GA183	4794.370	1438.170	>	>	>	35	81	249	85	59	.03	.73	2896	1	2.65	84	>	.027	10.9	81	1.23	.2	>	90
184	GA184	4794.750	1438.310	>	>	>	38	62	230	74	38	.18	.80	742	1	3.00	91	>	.007	4.9	6	1.01	.6	>	86
185	GA185	4795.220	1438.630	>	>	>	3	59	450	82	26	.08	2.09	1494	1	2.35	106	>	.021	13.1	95	.98	.2	>	84
186	GA186	4795.180	1438.130	3	>	>	34	72	406	81	21	.09	2.33	1874	1	1.78	144	>	.020	9.8	86	.94	.2	>	95
187	GA187	4795.570	1438.500	>	>	>	32	52	302	64	54	.07	2.56	1064	1	2.18	94	>	.026	8.4	90	.82	.2	>	88
188	GA188	4795.560	1438.560	>	>	>	20	55	403	88	39	.08	1.97	1377	1	1.56	119	>	.024	10.9	54	.85	.2	>	84
189	GA189	4795.560	1438.020	>	>	>	42	51	108	56	29	.16	1.49	1659	1	2.30	44	>	.028	13.0	93	1.04	.6	>	118
190	GA190	4795.870	1438.670	>	>	>	30	58	386	85	35	.06	3.71	875	1	.95	261	>	.034	9.5	74	.63	.2	>	94
191	GA191	4796.160	1438.770	17	>	>	806	14	6	1	34	.10	.41	592	3	3.56	2	>	.015	5.8	87	.71	.2	>	50
192	GA192	4796.560	1438.550	10	>	>	830	39	210	66	23	.23	2.22	923	1	3.00	58	>	.021	12.3	110	.83	.2	>	157
193	GA193	4796.390	1438.150	10	>	>	21	7	52	1	31	.05	1.0	439	1	3.00	16	>	.021	5.2	35	.77	.8	>	38
194	GA194	4796.820	1438.200	1	>	>	751	32	52	2	15	.07	1.42	639	1	2.16	26	>	.021	9.7	116	1.18	.2	>	53
195	GA195	4796.940	1438.630	1	>	>	988	68	239	74	38	.27	1.40	2141	1	2.12	86	>	.024	14.0	107	.87	.4	>	97
196	GA196	4797.170	1438.670	17	>	>	807	57	43	32	26	.13	1.59	1534	1	2.56	21	>	.012	14.2	94	1.37	.2	>	125
197	GA197	4797.600	1438.790	6	>	>	980	41	145	74	26	.17	2.60	906	1	1.53	61	>	.015	12.4	82	.88	.2	>	186
198	GA198	4797.900	1438.520	1	>	>	35	39	75	53	38	.06	2.27	1319	1	1.33	39	>	.017	14.0	86	1.02	.2	>	151
199	GA199	4798.120	1438.250	1	>	>	715	41	35	38	23	.26	2.33	952	1	1.51	21	>	.021	9.1	91	.82	.2	>	104
200	GA200	4798.390	1438.440	1	>	>	324	41	120	71	39	.65	1.52	1199	1	2.28	68	>	.049	13.9	162	.64	.2	>	79

List of Geochemical Analysis ( 5 )

Ser. No.	Sample No.	Location (km)	As ppm	Au ppb	Ba ppm	Co ppm	Cr ppm	Cu ppm	Hg ppb	K %	Mg %	Mn ppm	Mb ppm	Na %	Ni ppm	Pb ppm	S %	Sb ppm	Sr ppm	Ti %	U ppm	W ppm	Zn ppm
201	GA201	4798.750	1438.250	>	35	55	53	65	63	.80	1.52	1188	>	1.95	43	>	.036	8.5	136	.81	>	>	89
202	GA202	4798.630	1438.080	>	26	45	192	82	14	.29	2.36	1146	>	1.64	82	>	.025	13.0	105	.81	.2	>	102
203	GA203	4799.220	1438.530	>	48	64	312	93	33	.21	2.08	2266	>	1.64	100	>	.025	10.9	91	.84	.6	>	99
204	GA204	4799.040	1438.120	>	62	83	402	54	31	.19	1.48	1466	>	1.60	161	>	.026	14.8	104	1.00	.6	>	63
205	GA205	4799.670	1438.640	>	36	53	268	91	26	.93	2.75	1517	>	1.52	116	>	.031	4.3	84	.72	.2	>	126
206	GA206	4797.690	1437.110	>	25	113	480	105	49	.02	1.56	2882	>	.89	190	>	.015	6.5	39	.81	>	>	85
207	GA207	4793.050	1437.750	6	32	129	1430	87	87	.01	3.13	1606	>	.97	650	>	.024	8.9	45	.37	>	>	86
208	GA208	4793.230	1437.350	5	71	61	658	57	27	.36	3.99	1165	>	1.07	637	>	.022	10.5	57	.44	.8	>	95
209	GA209	4793.450	1437.840	4	64	78	761	86	32	.11	5.33	1252	>	.66	735	>	.038	14.4	61	.42	.4	>	92
210	GA210	4793.860	1437.440	3	107	48	462	73	36	.26	2.23	541	>	1.29	287	>	.019	2.5	69	.35	.6	>	59
211	GA211	4794.190	1437.870	3	5	53	139	45	74	.30	1.25	1392	3	2.14	126	>	.030	14.0	109	.83	.2	>	85
212	GA212	4794.400	1437.530	>	912	59	333	51	31	.11	2.78	1433	>	2.40	126	>	.021	11.2	95	1.04	.2	>	74
213	GA213	4794.770	1437.900	16	957	71	133	41	51	.08	1.98	1054	>	1.46	90	>	.021	15.6	55	.80	.2	>	92
214	GA214	4795.100	1437.710	20	815	61	513	88	38	.07	2.17	1106	>	1.02	157	>	.014	4.3	17	.44	1.2	>	30
215	GA215	4794.920	1437.440	7	236	12	222	19	53	.05	1.42	10	>	.08	70	>	.024	11.0	102	1.14	.4	>	106
216	GA216	4795.730	1437.500	4	869	55	83	43	40	.25	1.42	2272	>	1.89	39	>	.024	12.1	71	1.05	.2	>	120
217	GA217	4795.880	1437.870	>	811	67	81	66	42	.11	.96	1831	1	1.44	48	>	.034	9.7	98	.48	.4	>	76
218	GA218	4796.160	1437.880	>	752	76	101	57	59	.08	1.12	2283	>	2.15	48	>	.030	2.8	140	.94	.2	>	95
219	GA219	4796.160	1437.880	>	648	69	46	19	44	.09	.97	2035	>	2.90	33	>	.018	6.7	119	1.43	.2	>	89
220	GA220	4796.620	1437.880	>	662	42	36	14	16	.15	1.83	1112	>	3.23	23	>	.024	13.0	121	.86	.2	>	70
221	GA221	4796.860	1437.370	>	34	42	87	76	29	.19	2.12	1907	>	1.48	39	>	.021	14.7	76	1.07	.2	>	200
222	GA222	4797.170	1437.890	>	15	65	77	120	60	>	1.10	1345	>	1.56	34	>	.011	.2	39	1.25	.2	>	143
223	GA223	4797.180	1437.450	>	39	34	69	33	62	.05	.72	1166	>	2.79	28	>	.022	6.1	85	.22	.4	>	78
224	GA224	4797.600	1437.730	>	64	37	126	105	43	.06	1.41	1076	>	1.49	44	>	.014	9.7	98	.48	.4	>	76
225	GA225	4797.700	1437.290	9	292	31	197	28	60	.47	.98	1204	2	1.05	138	>	.024	5.9	98	.40	1.2	>	65
226	GA226	4798.100	1437.570	>	59	35	158	86	32	.16	2.38	1058	>	2.47	85	>	.024	6.2	159	.73	.2	>	83
227	GA227	4798.270	1437.840	>	73	43	368	63	44	.12	2.48	795	>	1.51	184	>	.031	9.7	128	.95	.2	>	87
228	GA228	4798.550	1437.500	>	36	22	127	11	67	.02	.24	961	>	2.93	49	>	.019	.8	125	.88	.4	>	25
229	GA229	4798.830	1437.870	>	30	74	402	106	45	.07	2.02	1965	>	1.11	154	>	.024	8.2	51	.84	.6	>	95
230	GA230	4799.050	1437.620	14	244	30	189	24	49	.39	.84	1195	>	1.06	110	>	.018	4.3	69	.45	1.6	>	55
231	GA231	4799.350	1437.750	9	452	29	249	36	49	.64	1.07	915	>	1.03	157	>	.015	7.3	56	.48	1.4	>	74
232	GA232	4799.920	1437.300	>	87	35	267	51	31	.61	1.90	905	>	1.08	118	>	.047	10.1	72	.51	1.6	>	83
233	GA233	4800.200	1437.480	>	106	4	270	26	44	.74	.78	109	7	1.29	72	>	.046	2.2	85	.46	3.8	>	50
234	GA234	4800.600	1437.890	19	34	79	444	81	53	.12	1.66	1934	>	1.27	129	>	.029	8.3	63	.67	.2	>	79
235	GA235	4795.330	1437.400	>	99	47	251	94	52	.14	.39	993	>	1.85	136	>	.025	7.4	154	1.05	1.0	>	85
236	GA236	4795.750	1437.070	>	68	45	284	44	41	.12	2.29	1464	2	.83	174	>	.021	5.5	51	.36	2.2	>	74
237	GA237	4793.100	1437.120	>	318	35	315	35	46	.88	1.62	1340	>	.92	145	>	.018	7.5	52	.46	1.6	>	44
238	GA238	4799.150	1437.260	>	110	29	235	40	50	.40	1.32	903	>	1.15	175	>	.035	11.3	95	.93	.4	>	76
239	GA239	4798.650	1437.660	>	94	49	279	64	22	.45	3.09	1167	>	.64	108	>	.012	8.0	23	.35	1.8	>	118
240	GA240	4793.540	1436.860	5	130	22	134	30	44	.93	1.16	609	1	1.10	34	>	.010	4.2	31	.45	2.4	>	50
241	GA241	4798.400	1436.420	9	101	8	75	15	43	.69	.42	5	>	.17	42	>	.009	6.0	29	.31	2.2	>	51
242	GA242	4793.280	1436.150	14	191	10	75	16	45	.79	.48	77	>	.27	51	>	.010	2.0	28	.27	2.4	>	66
243	GA243	4793.720	1436.300	19	180	12	70	19	46	1.02	.72	169	>	.33	72	>	.007	6.4	33	.36	2.4	>	84
244	GA244	4794.180	1436.160	>	498	16	86	36	33	1.26	.84	484	>	.06	33	>	.008	1.8	31	.40	2.2	>	51
245	GA245	4794.520	1436.160	19	248	8	69	21	47	.57	.34	931	>	1.08	26	>	.013	12.4	25	3.87	1.6	>	83
246	GA246	4794.900	1436.730	>	87	47	122	29	85	.50	.60	931	>	.06	37	>	.008	1.8	31	.40	2.2	>	51
247	GA247	4794.870	1436.260	>	81	12	64	14	52	.39	.23	270	>	1.06	26	>	.005	4	20	.24	1.8	>	34
248	GA248	4795.320	1436.600	>	117	17	137	28	49	.90	.84	192	2	.27	84	>	.008	5.9	32	.38	2.6	>	60
249	GA249	4795.600	1436.830	>	210	35	163	41	35	.31	.64	961	>	1.45	75	>	.010	5.9	95	.66	.8	>	47
250	GA250	4795.650	1436.150	>	584	21	202	21	76	.87	.98	1119	>	.59	150	>	.016	5.3	43	.30	2.6	>	62

List of Geochemical Analysis( 6)

Ser. No.	Sample No.	Location (km)	X-coord	Y-coord	As	Au	Ba	Co	Cr	Cu	Hg	K	Mg	Mn	Mo	Na	Ni	Pb	S	Sb	Sr	Ti	U	W	Zn	
					ppm	ppb	ppm	ppm	ppm	ppm	ppb	%	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
251	GA251	4796.080	1436.570		>	>	368	51	690	34	77	15	94	965	>	63	207	2	.020	5.7	101	.52	1.0	>	45	
252	GA252	4796.390	1436.800		>	>	876	65	342	67	68	.20	1.17	916	2	1.38	124	>	.020	5.1	64	.80	.4	>	65	
253	GA253	4796.610	1436.200		>	>	413	38	186	32	68	.07	.99	1234	1	1.46	112	>	.016	5.0	94	1.05	.8	>	52	
254	GA254	4796.850	1436.640		>	>	920	56	121	54	42	.81	.83	2079	2	1.75	41	>	.015	14.0	110	1.31	1.0	>	74	
255	GA255	4797.320	1436.800		>	2	691	87	46	46	84	.47	1.11	1477	1	1.80	41	>	.022	11.0	162	.90	.8	>	85	
256	GA256	4797.180	1436.370		5	>	448	26	109	37	98	1.05	.92	1168	2	.28	77	4	.018	7.3	46	.58	2.4	3	72	
257	GA257	4797.650	1436.880		>	>	75	26	215	54	167	.98	.30	3084	>	.03	97	8	.027	4.4	51	.88	1.6	52		
258	GA258	4797.720	1436.290		>	>	157	50	82	36	53	.38	1.09	1749	>	1.09	46	>	.027	14.9	145	2.21	.8	>	119	
259	GA259	4796.340	1436.220		>	>	873	71	299	54	46	.17	.46	2424	>	.51	429	>	.021	19.9	49	3.53	2.4	>	102	
260	GA260	4796.470	1436.540		>	>	572	70	280	78	52	.08	1.10	1369	>	2.29	92	>	.014	18.4	152	2.28	1.0	>	101	
261	GA261	4796.810	1436.890		>	>	822	44	289	73	39	.63	2.33	671	2	1.37	96	>	.016	9.8	59	1.22	.2	>	111	
262	GA262	4798.800	1436.450		>	>	31	87	300	82	75	.03	.80	2329	1	1.67	107	>	.031	18.7	117	.78	.4	>	91	
263	GA263	4799.130	1436.950		>	>	437	40	225	41	39	.56	1.70	1156	>	1.69	80	>	.019	2.3	44	.99	.2	>	77	
264	GA264	4799.260	1436.950		>	>	206	27	207	33	44	.49	1.72	767	>	1.10	141	>	.031	13.3	83	.64	1.2	>	83	
265	GA265	4799.430	1436.540		>	>	3006	25	220	31	63	.56	1.25	914	>	.82	151	>	.054	9.2	238	.40	1.2	>	66	
266	GA266	4798.880	1436.170		>	>	597	53	373	99	38	.08	1.49	818	1	.97	106	>	.017	8.0	108	.95	.2	>	84	
267	GA267	4798.730	1436.170		>	>	165	24	223	33	49	.38	1.04	641	>	.70	109	>	.019	6.0	60	.50	1.4	>	79	
268	GA268	4800.180	1436.410		>	>	240	26	281	32	38	.44	1.92	651	>	.94	177	>	.025	7.2	71	.42	1.2	>	62	
269	GA269	4800.710	1436.610		2	>	50	33	75	88	15	.26	2.27	1652	1	2.21	42	>	.019	6.5	93	.67	.2	>	69	
270	GA270	4801.400	1436.470		>	>	297	33	196	31	45	.21	.60	984	1	.65	77	1017	.019	27.5	54	.56	1.6	>	157	
271	GA271	4798.180	1436.950		>	>	155	8	49	7	59	.24	1.15	101	>	.06	18	12	.009	3.7	25	.28	1.8	>	71	
272	GA272	4795.890	1436.450		2	>	376	19	53	26	34	.95	.69	680	2	.36	44	3	.010	>	37	.22	2.4	>	68	
273	GA273	4793.120	1435.170		>	>	166	14	73	21	52	.94	.60	497	1	.23	40	14	.011	>	31	.38	2.4	>	59	
274	GA274	4793.080	1435.200		>	>	339	28	96	19	60	.71	.51	1055	1	.23	95	14	.012	>	33	.27	2.4	2	60	
275	GA275	4793.700	1435.910		>	>	187	10	107	38	28	1.91	1.62	222	3	.56	75	6	.008	>	38	.25	3.0	>	98	
276	GA276	4793.900	1435.430		>	>	169	6	53	12	47	.29	1.21	73	2	.05	23	6	.010	>	26	.29	2.2	>	32	
277	GA277	4794.120	1435.910		>	>	91	6	37	9	51	.90	.20	6	1	.02	18	6	.010	2.4	25	.24	2.2	>	29	
278	GA278	4794.240	1435.130		>	>	198	13	34	19	61	.66	.40	875	3	.36	28	9	.011	2.4	37	.37	1.6	>	47	
279	GA279	4794.770	1435.890		>	>	137	20	93	36	35	.90	.77	357	1	.57	62	2	.011	6.6	24	.46	2.0	>	59	
280	GA280	4794.740	1435.450		8	>	85	10	51	14	68	.36	.23	71	1	.03	21	11	.011	>	24	.27	2.2	>	34	
281	GA281	4795.260	1435.750		>	>	57	7	48	12	85	.29	.20	5	2	.04	22	9	.013	1.5	22	.35	2.2	>	33	
282	GA282	4795.130	1435.250		4	>	88	7	77	21	39	.57	.30	2866	1	2.20	47	10	.018	8.9	155	2.03	.8	>	116	
283	GA283	4795.670	1435.580		10	>	137	60	92	52	45	.54	.62	225	2	.26	40	6	.014	3.7	46	.29	2.4	>	49	
284	GA284	4795.850	1435.820		12	>	132	68	611	84	48	.07	3.49	2234	1	1.05	408	2	.015	10.3	72	2.15	.8	>	117	
285	GA285	4795.770	1435.220		>	>	439	40	189	34	67	.40	.65	787	2	.53	71	2	.011	3.9	64	.55	1.8	>	50	
286	GA286	4796.480	1435.890		>	4	137	40	95	29	78	.35	.38	3488	2	.17	35	14	.020	6.1	74	.90	1.8	>	51	
287	GA287	4796.380	1435.580		>	>	74	43	62	33	45	.11	1.12	1259	1	.78	34	2	.018	11.6	102	2.18	.6	>	121	
288	GA288	4796.790	1435.120		>	>	236	44	29	23	53	.84	1.19	1744	>	1.42	29	2	.026	9.4	131	2.36	1.2	>	130	
289	GA289	4797.170	1435.360		>	>	190	49	58	25	57	.23	1.36	1290	2	.83	35	2	.017	16.6	137	2.64	1.6	>	157	
290	GA290	4797.380	1435.670		>	>	138	45	61	42	33	.70	2.37	1819	1	.64	51	2	.020	10.4	72	1.78	1.2	>	132	
291	GA291	4797.770	1435.760		>	>	107	45	176	50	189	.52	.48	4901	4	1.48	43	3	.027	6.2	23	1.20	1.6	>	64	
292	GA292	4797.860	1435.490		>	>	47	57	474	78	49	.03	2.69	1474	1	1.48	222	2	.018	12.8	72	.77	.2	>	90	
293	GA293	4797.860	1435.470		>	>	34	63	397	72	80	.04	1.84	1602	2	1.11	155	2	.043	6.8	68	.78	.2	>	97	
294	GA294	4798.380	1435.870		>	>	27	44	447	93	60	.04	1.92	474	2	1.11	194	2	.018	12.6	64	.81	.2	>	99	
295	GA295	4798.830	1435.710		>	>	74	43	344	76	53	.33	1.99	1054	1	1.55	177	2	.023	10.9	112	1.05	.4	>	93	
296	GA296	4798.850	1435.200		>	>	52	49	615	82	68	.09	2.35	1155	1	1.40	190	2	.047	11.7	89	1.76	.4	>	105	
297	GA297	4799.190	1435.850		>	>	141	45	134	70	79	.20	.94	4095	2	.92	62	2	.041	7.1	84	1.09	.4	>	88	
298	GA298	4799.250	1435.550		>	>	20	101	349	69	74	.01	1.22	2907	2	1.44	110	2	.017	5.3	47	1.00	.2	>	68	
299	GA299	4799.580	1435.820		>	>																				
300	GA300				>	>																				

List of Geochemical Analysis (7)

Ser. No.	Sample No.	X-coord	Y-coord	Location (km)	As	Au	Ba	Co	Cr	Cu	Hg	K	Mg	Mn	Mo	Na	Ni	Pb	S	Sb	Sr	Ti	U	W	Zn
					ppm	ppb	ppm	ppm	ppm	ppm	ppb	%	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
301	GA301	4800.400	1435.920		1	62	56	51	339	75	40	.22	1.97	1679	1	1.44	120	2	.031	4.2	94	.84	.2	2	93
302	GA302	4800.480	1435.660		1	1	91	74	257	68	83	.13	1.00	3557	2	1.65	85	2	.029	5.6	77	1.04	.4	2	83
303	GA303	4800.180	1435.480		1	1	101	9	72	14	82	.02	0.05	379	1	1.29	14	3	.020	1.7	13	1.04	.6	2	83
304	GA304	4800.620	1435.180		1	1	40	43	148	66	35	.09	2.12	1062	1	1.29	59	2	.020	9.9	69	1.41	.2	2	104
305	GA305	4801.660	1435.940		5	1	1000	75	157	50	97	.62	.47	1740	1	.24	47	2	.024	6.7	32	1.86	1.4	2	78
306	GA306	4793.350	1434.900		14	1	391	112	62	14	44	.75	.31	112	2	1.10	27	7	.012	3.2	32	.28	2.4	2	47
307	GA307	4793.430	1434.630		1	1	180	20	128	41	39	1.19	1.14	558	1	.58	79	2	.009	1.7	30	.49	2.2	2	77
308	GA308	4793.280	1434.180		12	1	120	15	73	23	82	.53	.93	1025	2	.09	32	14	.015	1.1	28	.43	2.2	2	46
309	GA309	4793.790	1434.840		1	6	317	23	49	83	69	1.07	.93	1485	2	1.35	42	2	.011	4.2	37	.54	1.8	2	90
310	GA310	4793.800	1434.270		1	1	148	20	92	25	55	.83	.41	83	2	.09	43	5	.010	.2	24	.59	2.2	2	58
311	GA311	4794.110	1434.440		1	1	185	16	113	37	53	1.14	.68	108	1	.17	66	2	.011	.9	45	.51	2.8	2	85
312	GA312	4794.360	1434.120		1	1	96	10	75	16	62	.43	.23	218	1	.05	29	4	.014	3.7	31	.49	2.4	2	42
313	GA313	4794.450	1434.850		1	1	130	29	73	24	59	.56	.41	1193	1	.17	40	12	.013	2.5	52	.58	2.0	2	57
314	GA314	4794.750	1434.120		15	1	191	19	71	16	70	.88	.43	727	1	.19	34	6	.015	2	49	.41	1.8	2	71
315	GA315	4795.000	1434.740		4	1	67	11	64	10	70	.20	.36	140	1	.03	25	6	.011	2.3	20	.39	2.2	2	29
316	GA316	4795.260	1434.800		3	1	120	3	82	23	39	.62	.96	5	3	.09	30	5	.011	1.0	32	.40	2.2	2	50
317	GA317	4795.350	1434.240		1	1	78	11	76	11	53	.25	.18	5	1	.04	33	8	.009	.8	21	.35	2.0	2	33
318	GA318	4795.810	1434.800		1	1	133	17	77	17	48	.58	.62	546	2	.44	49	7	.013	4.6	34	.29	2.0	2	47
319	GA319	4795.850	1434.430		1	1	70	44	51	25	108	.13	.13	1817	2	.01	14	13	.012	2.0	18	.52	1.6	2	26
320	GA320	4795.800	1434.070		1	1	126	39	90	24	82	.32	.27	2089	2	.10	32	14	.017	1.5	32	.55	1.6	2	41
321	GA321	4796.100	1434.860		1	1	77	67	216	48	67	.14	.61	3173	1	2.62	58	21	.015	8.8	48	1.88	.8	2	69
322	GA322	4796.260	1434.430		1	1	154	49	67	29	89	.35	.31	1646	1	.10	38	2	.016	3.9	38	1.16	1.8	2	49
323	GA323	4796.460	1434.660		1	1	65	77	75	78	132	.16	.29	2514	1	.05	32	2	.027	3.9	12	1.71	1.0	2	88
324	GA324	4796.620	1434.850		1	1	113	25	77	32	54	.36	.30	817	2	.15	39	14	.014	2	25	.30	2.0	2	44
325	GA325	4796.450	1434.190		21	1	182	19	111	32	40	1.35	1.05	50	1	.36	68	5	.012	1.2	54	.44	2.6	2	86
326	GA326	4797.160	1434.420		1	1	85	16	90	12	43	.24	.19	384	2	.04	28	6	.011	3.8	37	.40	1.8	2	24
327	GA327	4797.320	1434.360		1	1	206	36	149	95	10	1.85	1.60	796	3	.19	104	6	.007	6.0	11	.57	1.8	2	89
328	GA328	4797.560	1434.700		3	1	41	110	774	91	42	.12	2.79	2132	1	1.10	478	2	.023	6.7	55	.88	.2	2	96
329	GA329	4797.740	1434.480		1	1	73	48	247	32	53	.24	.46	1822	1	.33	86	7	.016	4.7	25	.89	1.6	2	47
330	GA330	4797.670	1434.120		1	1	141	113	283	55	68	.36	.59	4807	2	1.21	62	2	.021	5.0	123	1.35	1.2	2	65
331	GA331	4798.120	1434.590		1	1	115	99	271	75	97	.09	.34	6388	1	.35	106	2	.020	7.1	29	1.19	.4	2	82
332	GA332	4798.430	1434.750		1	1	64	97	235	68	89	.10	.45	5816	1	1.33	89	2	.021	3.9	44	1.55	.4	2	71
333	GA333	4798.650	1434.920		1	1	68	52	195	63	82	.16	1.50	1933	1	2.01	88	2	.024	13.1	118	1.35	.5	2	100
334	GA334	4798.340	1434.860		1	1	29	49	173	77	31	.02	1.40	851	1	2.03	62	2	.014	3.8	66	.79	.2	2	75
335	GA335	4799.350	1434.150		1	1	38	56	198	64	38	.03	1.16	1686	1	2.78	87	2	.030	9.9	120	.70	.4	2	55
336	GA336	4798.880	1434.070		1	1	51	76	608	84	59	.02	3.26	1434	2	1.66	340	2	.033	12.6	128	.68	.2	2	91
337	GA337	4800.170	1434.180		1	1	17	42	608	64	45	.04	5.17	1139	1	.90	237	2	.051	4.6	182	.68	.2	2	119
338	GA338	4800.340	1434.830		1	1	29	48	595	96	24	.03	3.37	943	1	1.58	247	2	.029	9.1	96	.79	.2	2	98
339	GA339	4794.540	1434.550		1	1	122	16	53	15	58	.56	.37	592	2	.24	26	2	.014	2	25	.32	2.0	2	47
340	GA340	4796.770	1434.100		1	1	177	9	89	18	76	.94	.37	5	2	.16	28	2	.013	.2	41	.50	2.4	2	56





Appendix 19

Distribution map of elements  
in Area A



