Part Ⅲ Conclusions and recommendations

Chapter 1 Conclusions

(1) Terupid West Sub-area

The laterite soil of the Telupid West shows similar vertical profile and chemical character to the laterite soil of the typical Ni laterite deposit elsewhere in the world. The typical laterite soil succession of the Telupid West consist of laterite soil, laterite soil with weathered peridotite fragments and saprolite.

A very wide range of Ni grade, ranging from less than 100 ppm to more than 2 %, was obtained from the laterite soil and saprolite of the Telupid West. Although vertical chemical variation exists at each site, it is considerably small compared with a large lateral variation. This in addition to shallow development of laterite soil especially around central hill may suggest the laterite soil of the Telupid West to be premature.

Although relatively high grade soil (more than Ni 0.8 %) occur along and around crest of the central hill, the thicknesses are restricted in 2 m to 3 m. While, thickness of the laterite soil reaches more than 5 m in flat area, but Ni grade in very poor. The limited lateral and vertical distribution of relatively high Ni, only along and around the crest of the central hill implies that ore reserve is not enough for further exploration and exploitation of Ni laterite of the Telupid West.

(2) Pinanduan Sub-area

The alteration and mineralization found in the area is not intense. It occurs only in restricted area surrounding intrusive bodies of gabbro where relatively intense alteration zone with strong serpentinization occur accompanied by weak pyrite dissemination, and clay minerals such as chlorite and montmorillonite ware found. No clear evidence of the mineralization and alteration that reflecting Cu, Ag and Ni anomalies that extracted during the Supra-regional survey was found.

The IP anomalies obtained by the survey, on the other hand, coincide very well with distribution of Cu anomalies of the Supra-regional survey. While, no clear indication of IP effect, corresponding to alteration and week pyrite dissemination found by geological survey was obtained.

Relatively intense IP anomaly obtained in the southwestern part of the area correspond to the location of sulfide mineralization with chalcopyrite found by the previous survey. This may implies an occurrence of considerable amount of sulfide underneath the surface. The most intensive anomalies were obtained over the area from southwestern part to northeastern (northern part of Line B north, Line D middle, Line E north, Line F south and Line G middle). No clear alteration and mineralization were found by geological survey over this area, however, these clear anomalies suggests an existence of possible sulfide veins or dissemination underneath the surface of the area.

The intense anomalies covering the distribution of geochemical anomalies suggest a further detailed survey to be conducted in the area to clarify IP anomaly source.

(3) S. Imbak Sub-are

1) S. Imbak Sub-area North

The main mineralization and alteration occur within approximately, 2 km × 2 km wide, zone of silicified/pyrite (arsenopyrite) dissemination in the central south part of the area where many intrusive bodies of diorite porphyry occur. Au and Ag bearing quartz-sulfides (pyrite, arsenopyrite) veins and lens of 10 cm to 25 cm wide occur, sporadically, in the silicified/pyrite dissemination zone. Assay results of them show Au ranging from 8 g/t to 72 g/t and Ag ranging from 30 g/t to 196 g/t. The mineral assemblages of them are pyrite, arsenopyrite, chalcopyrite and two samples show small grains of native gold surrounded by arsenopyrite.

The mineralization in the area is characterized by Au - Ag type related to intrusion of diorite porphyry. Considering from the geological environment, mineral assemblages of ore minerals and alteration minerals, this mineralization is not an epithermal type. However, type of silver minerals occurring in the area and relatively high Ag compared to Au suggest temperature of mineralization to be relatively low. One of the possibility is that this area is located at the outer margin of a porphyry copper type mineralization. The intrusion age of the diorite porphyry is contemporaneous to the intrusive rocks of Mamut mine, which is Au rich porphyry copper type mine.

The distribution of IP anomalies obtain by the survey correspond well with distribution of silicified/pyrite dissemination zone in the central south of the area and anomaly seems to extend further south. The strongest anomaly is located from south end of Line D to central south of Line F in the silicified/pyrite dissemination zone. The Au anomaly of rock geochemical survey in the southern part of the area correspond to the medium to strong chargeability anomaly with more than 20mV/V. The strong chargeability anomaly with 30mV/V at the central south of Line F correspond to the location where Cu and S anomalies overlap. Consequently, there is strong indication of an existence of sulfide in the area surrounding central south of Line F.

The potentiality of sulfide mineralization is high and further detail survey in the area is awaited.

2) S. Imbak Sub-area South (Gunong Kuli)

Numerous intrusive bodies of diorite porphyry were found along both slopes of the ridge that runs in the center of the area. Dating shows their age of intrusion to be early Pliocene. The silicified/pyrite dissemination zones occur in the sedimentary rock along the slopes of the ridge, closely associated with intrusion of diorite porphyry. The most intensive silicified/pyrite dissemination zone occur in the northwestern part of the area and the central part of the area. The one in the central part of the area shows a chalcopyrite dissemination in the diorite porphyry, in addition to pyrite dissemination of the sedimentary rocks. The polished section of this shows a small grain of native gold surrounded by chalcopyrite. The southern extension of the mineralization that occurs in the S. Imbak Sub-area was confirmed along the ridge of Gunong Kuli.

Geochemical survey shows distributions of overlapping Au, Cu, Hg, S anomalies and high value zones over the areas of silicified/pyrite dissemination zones northwestern and central parts of the area. These areas are also covered by high factor score zones of, respectively, Factor 2 and Factor 6. These area of high factor score have high potentiality for the mineralization.

Chapter 2 Recommendations for the future

(1) Telupid West Sub-area

Although relatively high grade soil occurs along and around crest of the central hill, the thicknesses are restricted in 2 m to 3 m. While, thickness of the laterite soil reaches more than 5 m in flat area, but Ni grade in very poor. The limited lateral and vertical distribution of relatively high Ni, only along and around the crest of the central hill implies that ore reserve is not enough for further exploration and exploitation of Ni laterite of the Telupid West.

(2) Pinanduan Sub-area

To the IP anomalies at the upper stream of S. Pinanduan, a detail geological survey (3km × 3km) including rock geochemical survey to clarify the IP anomaly source and IP geophysical survey to trace detail distribution of anomaly are recommended (Fig. Ⅲ-2-1).

(3) S. Imbak Sub-area North

Detailed survey including bellows in the silicified/pyrite dissemination zone in central south part of the area are recommended for evaluation of sulfide mineralization underneath the area(Fig. Ⅲ-2-2).

1) preparation of accurate topographic map over the area of silicified/pyrite dissemination

2) detail geological survey (4 km × 3km)

3) IP geophysical survey

4) drilling to IP and geochemical anomalies

(4) S. Imbak Sub-area South (Gunong Kuli)

Semi-detail geological survey and rock geochemical survey are recommended to the northern part of the area (7 km × 7 km) (Fig. Ⅲ-2-3).

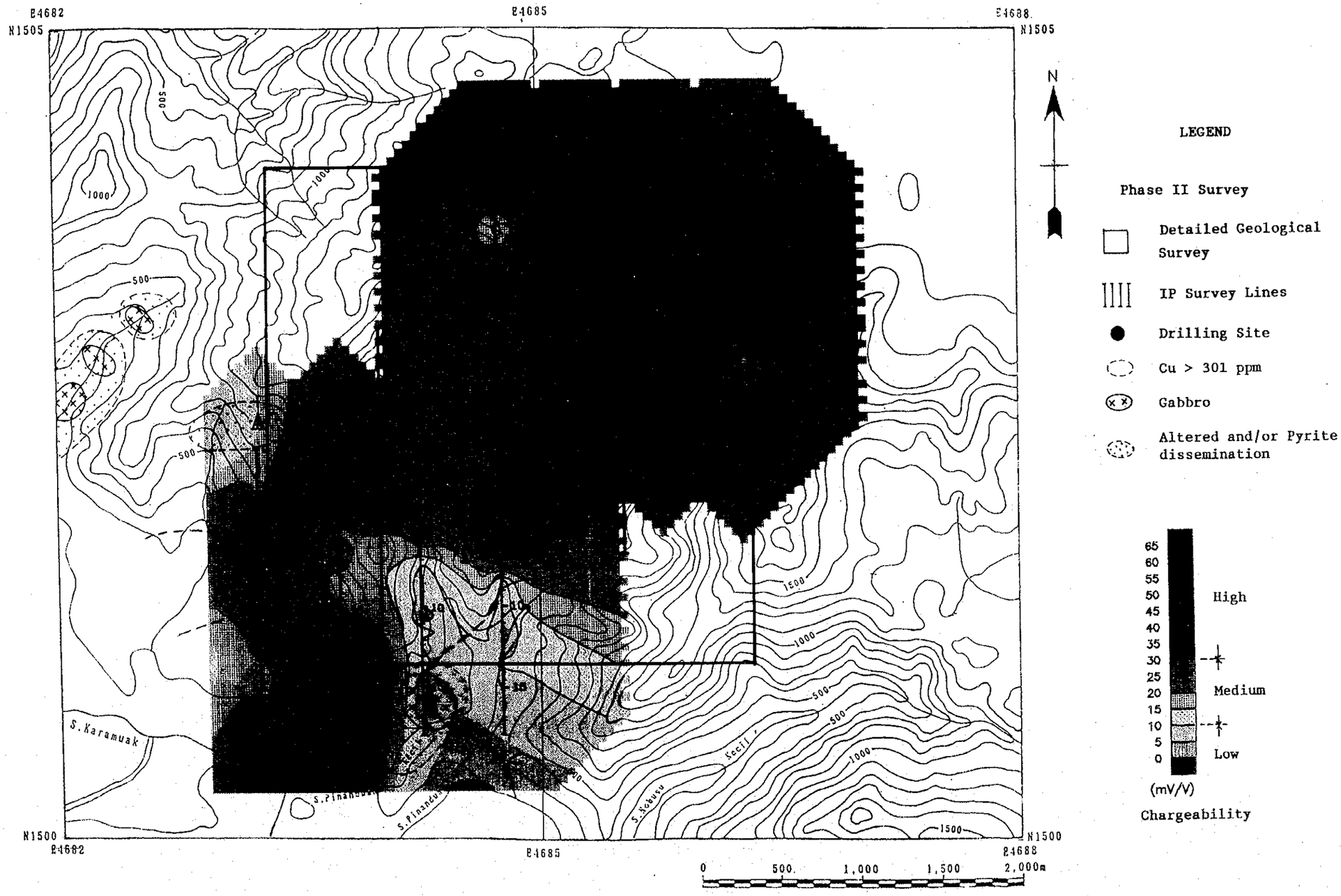


Fig. Ⅲ-2-1 Recommendation for future work in Pinanduan Sub-area

Fig. III-2-1 Recommendation for future work in Pinanduan Sub-area

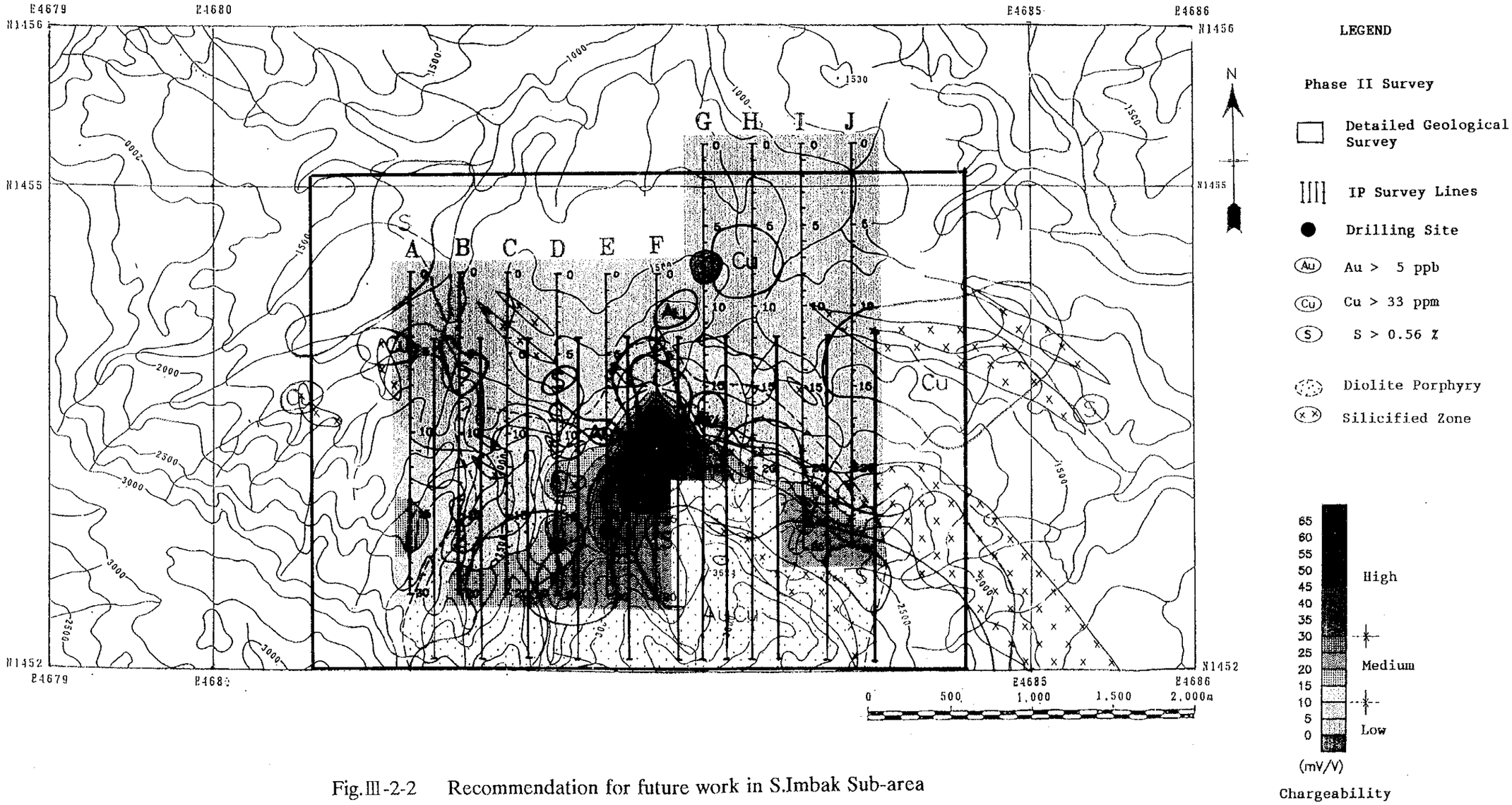
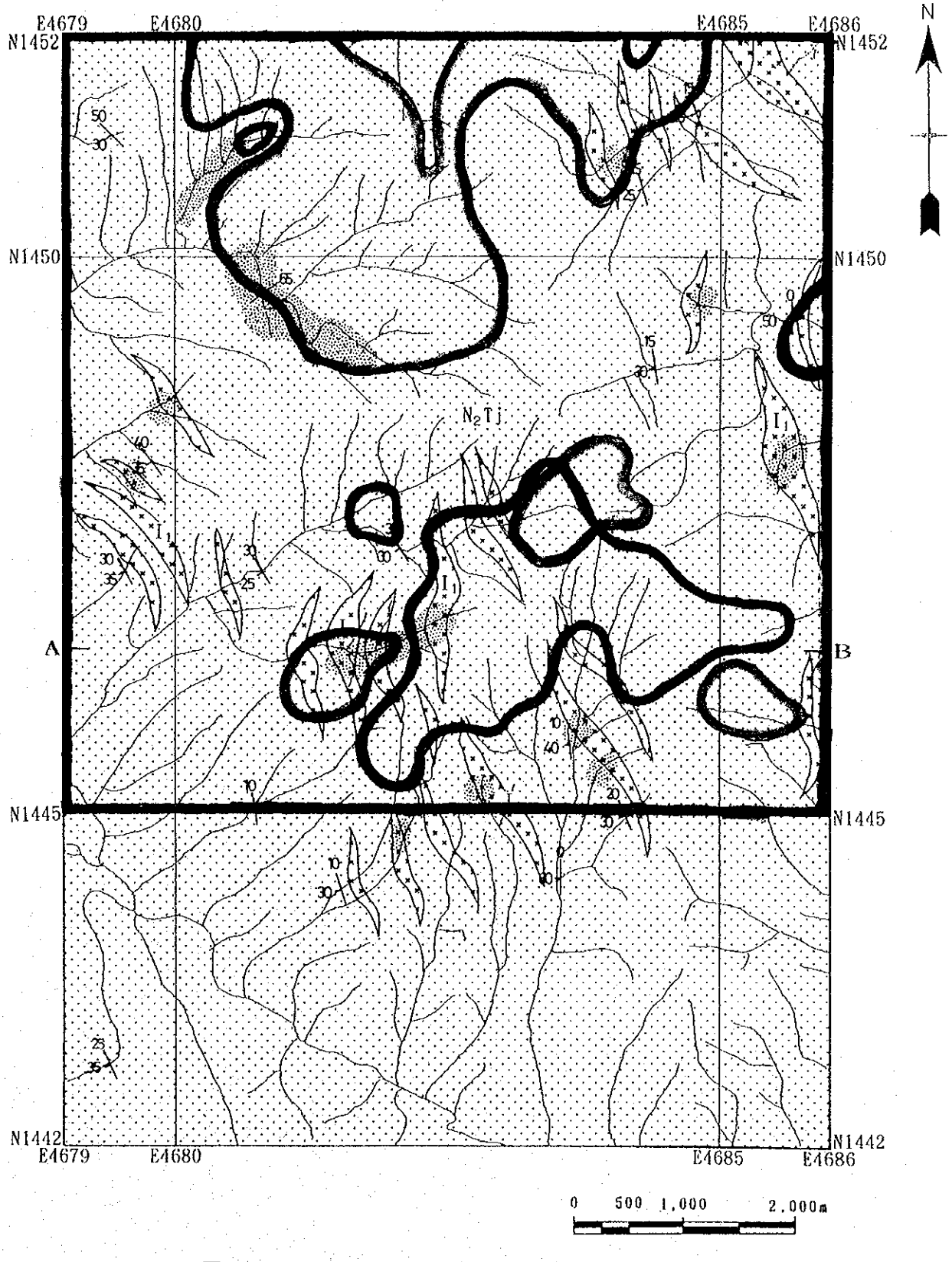


Fig.Ⅲ-2-2 Recommendation for future work in S.Imbak Sub-area



Zone of Factor 2 high factor scores

Zone of Factor 6 high factor scores

Area of recommendation for further work

Fig. III-2-3 Recommendation for future work in S. Imbak Sub-area (Gunong Kuli Sub-area)

References

Akiyama Y. (1984): A case history – exploration, evaluation and development of the Mamut porphyry copper deposit, Geol. Soc. Malaysia, Bull. 17, pp.217–225

Benard F., Muller C., Letouzey J., Rangin C., Tahir S. (1991): Evidence of multiphase deformation in the Rajang–Crocker Range (northern Borneo) from Landsat imagery interpretation: Geodynamic implications, Tectonophysics, 183, pp.321–339

Chung S. K. (1984): Annual Report 1982, Geological Survey of Malaysia, Ministry of Primary Industry.

Collenette P. (1965): Prospecting in Sabah by Borneo Mining Limited 1959 – 1963. Borneo Reg., Geological Survey of Malaysia Annual Report for 1964, pp.57–61

Heng E. H. (1985): Geological Map of Sabah, Third Edition, Geological Survey of Malaysia

JICA and MMAJ(1994): Report on the mineral exploration: Supra–regional survey in Central Sabah, Malaysia (PHASE Ⅳ)

Kurzl H. (1988): Exploratory data analysis: recent advances for the interpretation of geochemical data. Journal of Geochemical Exploration, vol. 30 pp. 309–322.

Hail N. S. (1968): The northwest Borneo geocyncline in its geotectonic setting. Geolo. Soc. Malaysia Bull. 1, p.59

Leong K. M. (1976): Mineral distribution map of Sabah, 1st edition. Geological Survey of Malaysia.

Newton–Smith J. (1967): Bidu Bidu Hill area, Sabah, East Malaysia, Exploration of Sheet 5–117–2 and part 5–117–1. Geological Survey of Malaysia.

Ragin C., Bellon H., Bernard F., Letouzey J., Muller C., Sanudin T. (1990): Neogene arc–continent collision in Sabah Borneo (Malaysia), Tectonophysics, 183, pp. 305–319

Steiger R., Jaeger E. (1977): Subcommision on geochronological convention on the use of decay constants in geo- and cosmo-chronology, Earth Planet. Sci. Lett., 36, pp. 359-362

Willson R. A. M. (1964): Annual Report of the Geological Survey, Borneo, Malaysia, Geological Survey of Malaysia.

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Geophysical survey

Appendix 1

Description and analytical results of hand auger soil samples

Auger No.: TW01
Coordinates: N= 4689.32, E= 1521.98
Vegitation: secondary forest
Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		dark gray sandy soil	↑ TW0101 ↓		4.52	10	2.69	81	71
1.0			↑ TW0102 ↓	1.0	5.51	14	3.23	86	67
2.0	DG		↑ TW0103 ↓	2.0	6.30	20	3.79	98	73
3.0			↑ TW0104 ↓	3.0	5.75	13	3.55	87	62
3.7		Boulders		3.7					Ave. 68
4.0									
5.0									
6.0									

Auger No.: TW02
Coordinates: N= 4689.32, E= 1521.77
Vegitation: secondary forest
Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0	RB	reddish brown lateritic soil with green ultramafic pebbles	↑ TW0201 ↓		1.65	624	35.75	5,044	14,969
1.0		boulders		1.0					Avo. 14,969
2.0									
3.0									
4.0									
5.0									
6.0									

Auger No.: TW03
Coordinates: N= 4689.32, E= 1521.62 Vegitation: secondary forest Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		reddish brown lateritic soil	↑ TW0301 ↓		2.97	668	52.97	8,770	9,019
1.0	RB		↑ TW0302 ↓	1.0	3.03	1,275	58.40	9,084	12,009
2.0			↑ TW0303 ↓	2.0	2.99	1,467	53.54	8,628	11,803
2.8		boulders		2.8					Ave. 10,944
3.0									
4.0									
5.0									
6.0									

Auger No.: TW04
Coordinates: N= 4689.31, E= 1521.37 Vegitation: secondary forest Slop: steep

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		reddish brown lateritic soil	↑ TW0401 ↓		2.53	642	50.79	6,225	12,744
1.0	RB		↑ TW0402 ↓	1.0	3.00	745	52.47	5,941	14,175
2.0			↑ TW0403 ↓	2.0	1.20	481	31.49	3,783	13,395
2.7		boulders		2.7					Ave. 13,438
3.0									
4.0									
5.0									
6.0									

Auger No.: TW05
Coordinates: N= 4689.31, E= 1521.16 Vegitation: plantation of oil palm Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		orange brown lateritic soil	↑ TW0501 ↓		9.34	43	9.83	513	496
1.0	OB			1.0					
1.1		brown lateritic soil with weathered ultramafic rock fragments	↑ TW0502 ↓		8.39	92	6.37	165	183
2.0	B			2.0					
2.5		greenish gray weathered ultramafic rock (saprolite)	↑ TW0503 ↓		7.58	22	4.78	105	170
3.0	GG			3.0					
			↑ TW0504 ↓		7.03	36	5.11	87	354
4.0									
4.1		bedrock		4.1					Ave. 301
5.0									
6.0									

Auger No.: TW06
Coordinates: N= 4689.31, E= 5015.21 Vegitation: plantation of oil palm Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0.05		dark brown soil with organic material(humic soil)	↑ TW0601 ↓	0.05	8.83	308	16.53	2,373	1,453
1.0	OB	orange brown lateritic soil with ultramafic pebbles		1.0					
1.4		reddish brown lateritic soil	↑ TW0602 ↓		9.78	134	15.16	1,187	1,073
2.0	RB			2.0					
2.4		reddish brown, strongly weathered, clayey ultramafic rock (saprolite)	↑ TW0603 ↓		10.54	52	12.96	318	506
3.0	RB			3.0					
			↑ TW0604 ↓		10.11	143	11.61	197	452
4.0				4.0					
4.1		brown, strongly weathered ultramafic rock (saprolite)	↑ TW0605 ↓		9.88	75	11.45	108	531
5.0	B								
5.1				5.1					Ave. 803
6.0									

Auger No.: TW07
Coordinates: N= 4689.11, E= 1521.99 Vegitation: grass Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		dark reddish brown lateritic soil with pebbles of yellowish ultramafic rock	↑ TW0701 ↓		1.91	823	35.43	4,604	10,576
1.0	RB		↑ TW0702 ↓	1.0	2.22	820	38.99	5,049	11,181
2.0			↑ TW0703 ↓	2.0	2.37	578	28.65	3,261	8,476
3.0		boulders		3.0					Ave. 10,077
4.0									
5.0									
6.0									

Auger No.: TW08
Coordinates: N= 4689.11, E= 1524.58 Vegitation: secondary forest Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		reddish brown lateritic soil	↑ TW0801 ↓		3.02	898	57.65	7,509	9,443
1.0	RB		↑ TW0802 ↓	1.0	2.46	1,196	56.88	7,737	10,936
2.0			↑ TW0803 ↓	2.0	2.03	1,339	55.69	7,059	12,141
2.9		reddish brown lateritic soil with fragments of weathered ultramafic rock	↑ TW0804 ↓	3.0	2.10	1,322	56.75	7,296	16,048
3.9	RB			3.9					Ave. 12,142
4.0		boulders							
5.0									
6.0									

Auger No.: TW09
Coordinates: N= 4689.11, E= 1521.38
Vegitation: secondary forest
Slop: steep

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		brown lateritic soil	↑						
			TW0901		2.55	831	52.69	6,911	8,303
1.0	B		↓	1.0					
			↑						
			TW0902		2.34	1,469	57.68	7,364	11,171
1.7			↓	1.7					
		boulders							Ave. 9,737
2.0									
3.0									
4.0									
5.0									
6.0									

Auger No.: TW10
Coordinates: N= 4689.11, E= 1521.18
Vegitation: secondary forest
Slop: steep

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		brown lateritic soil with pebbles of weathered ultramafic rock	↑						
			TW1001		2.38	880	35.33	8,462	8,305
1.0	B		↓	1.0					
			↑						
			TW1002		1.24	404	24.61	3,486	8,215
1.5			↓						
	B	brown weathered ultramafic rock (saprolite)							
1.8				1.8					Ave. 8,260
2.0		bed rock							
3.0									
4.0									
5.0									
6.0									

Auger No.: TW11
Coordinates: N= 4689.13, E= 1521.02 Vegitation: secondary forest Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0.1				0.1					
	RB	dark brown soil with organic material (humic soil) (saprolite)	TW1101		8.23	36	5.86	286	388
1.0		reddish brown lateritic soil		1.0					
1.2	RB	reddish brown lateritic soil with fragments of ultramafic rock							
1.6	RB	reddish brown strongly weathered ultramafic rock	TW1102		8.09	48	6.55	387	484
2.0									
2.1		bed rock		2.1					Ave. 436
3.0									
4.0									
5.0									
6.0									

Auger No.: TW12
Coordinates: N= 4689.15, E= 1520.81 Vegitation: secondary forest Slop: steep

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
		orange brown lateritic soil with pebble size fragments of strongly weathered ultramafic rock	TW1201		12.57	42	12.64	610	236
1.0	OB			1.0					
			TW1202		11.98	98	12.34	648	371
2.0				2.0					
2.2	DC	dark gray strongly weathered ultramafic rock (saprolite)	TW1203		9.71	48	8.56	299	138
2.8		bed rock		2.8					Ave. 265
3.0									
4.0									
5.0									
6.0									

Auger No.: TW13
Coordinates: N= 1689.11, E= 1520.57
Vegitation: plantation of oil palm
Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0.9	OB	orange brown lateritic soil	TW1301	1.0	11.60	45	12.82	404	349
1.8	OB	orange brown lateritic soil with strongly weathered ultramafic rock fragments	TW1302	2.0	13.41	52	13.35	294	396
2.6	RB	reddish brown strongly weathered ultramafic rock (saprolite)	TW1303	3.0	13.04	106	11.60	281	325
4.0	YB	yellowish brown strongly weathered ultramafic rock (saprolite)	TW1304	4.1	11.90	111	10.09	254	153
									Ave. 306

Auger No.: TW14
Coordinates: N= 4688.90, E= 1521.99
Vegitation: bush
Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
1.0	DB	dark brown lateritic soil with ultramafic rock pebbles	TW1401	1.0	0.98	314	17.14	3,531	3,672
			TW1402	2.0	0.92	335	17.13	2,931	3,695
2.0		boulders							Ave. 3,684

Auger No.: TW15
Coordinates: N= 4688.90, E= 1524.85 Vegitation: secondary forest Slop: steep

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		reddish brown lateritic soil with ultramafic rock pebbles	TW1501		1.53	412	28.97	3,361	3,635
1.0	RB		TW1502	1.0	1.25	360	20.09	2,630	3,682
1.8		greenish gray weathered ultramafic rock (saprolite)	TW1503	1.8	0.49	209	10.10	765	3,367
2.0	GG								
2.5		bed rock		2.5					Ave. 3,561
3.0									
4.0									
5.0									
6.0									

Auger No.: TW16
Coordinates: N= 4686.96, E= 1521.59 Vegitation: secondary forest Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		reddish brown lateritic soil	TW1601		3.41	341	57.80	8,895	8,949
1.0	RB		TW1602	1.0	3.34	266	53.50	7,963	8,397
1.6		orange brown lateritic soil	TW1603	2.0	3.20	557	52.14	8,628	8,782
2.0	OB		TW01604	3.0	2.18	2,132	58.14	7,045	13,879
2.6		orange brown strongly weathered, clayey ultramafic rock (saprolite)							
3.0	OB								
3.9		bed rock		3.9					Ave. 10,002
4.0									
5.0									
6.0									

Auger No.: TW17
Coordinates: N= 4688.91, E= 1521.37
Vegitation: secondary forest
Slop: steep

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		reddish brown lateritic soil	↑ TW1701 ↓		3.53	947	54.05	8,498	13,923
1.0	RB			1.0					
			↑ TW1702 ↓		3.52	956	53.93	8,284	14,829
1.8		reddish brown lateritic soil with weathered ultramafic rock fragments							
2.0	RB			2.0					
			↑ TW1703 ↓		2.99	863	48.00	8,284	12,754
2.9				2.9					Ave. 13,835
3.0		boulders							
4.0									
5.0									
6.0									

Auger No.: TW18
Coordinates: N= 4688.91, E= 1521.03
Vegitation: secondary forest
Slop: steep

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		orange brown lateritic soil	↑ TW1801 ↓		2.56	832	48.36	7.176	10,505
1.0	OB			1.0					
			↑ TW1802 ↓		1.72	773	42.88	4.509	10.357
1.8		boulders		1.8					Ave. 10.431
2.0									
3.0									
4.0									
5.0									
6.0									

Auger No.: TW19
Coordinates: N= 4688.91, E= 1520.78 Vegitation: secondary forest Slop: steep

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0	RB	reddish brown lateritic soil	↑						
			TW1901		2.99	902	53.41	8,870	12,606
1.0			↓						
1.2		boulders		1.2					Ave. 12,606
2.0									
3.0									
4.0									
5.0									
6.0									

Auger No.: TW20
Coordinates: N= 4688.91, E= 1520.57 Vegitation: secondary forest Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0	YB	yellowish brown strongly weathered, clayey ultramafic rock (saprolite)	↑						
			TW2001		9.22	76	9.03	566	466
1.0			↓	1.0					
			↑						
			TW2002		8.24	57	8.07	414	276
2.0			↓	2.0					
	B	brown strongly weathered ultramafic rock, texture preserved (saprolite)	↑						
			TW2003		8.24	46	6.60	457	281
3.0			↓	3.0					
			↑						
			TW2004		7.43	50	6.27	419	278
4.0			↓	4.0					
		bed rock							Ave. 325
5.0									
6.0									

Auger No.: TW21
Coordinates: N= 4688.91, E= 1520.37
Vegitation: plantation of oil palm
Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0.05	OB	dark gray soil with organic material (humic soil)	↑	0.05					
		orange brown lateritic soil	TW2101		10.08	29	12.24	494	223
1.0			↓	1.0					
1.2	OB	orange brown lateritic soil with reddish brown, weathered ultramafic pebbles	↑ TW2102 ↓		10.75	44	13.35	458	366
2.0	OB	orange brown lateritic soil	↑ TW2103	2.0	11.20	59	13.38	425	365
2.8			↓						
3.0	OB	orange brown lateritic soil with reddish brown, strongly weathered ultramafic pebbles	↑ TW2104 ↓	3.0	9.51	68	12.10	446	359
4.0				4.0					
4.1	RB	reddish brown weathered ultramafic rock (saprolite)	↑ TW2105 ↓		11.16	67	12.85	346	221
5.0				5.0					Ave. 307
6.0									

Auger No.: TW22
Coordinates: N= 4688.70, E= 1521.79
Vegitation: secondary forest
Slop: steep

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
		reddish brown lateritic soil	↑						
			TW2201		1.59	699	22.06	9,437	6,021
1.0	RB		↓	1.0					
			↑ TW2202 ↓		1.56	675	22.46	8,853	6,749
2.0			↑	2.0					
			TW2203		1.55	698	23.92	8,972	7,125
2.5		boulders	↓	2.5					Ave. 6,632
3.0									
4.0									
5.0									
6.0									

Auger No.: TW23
Coordinates: N= 4688.71, E= 1521.58 Vegitation: secondary forest Slop: steep

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		reddish brown lateritic soil	↑ TW2301 ↓		3.24	735	56.55	11,898	9,690
1.0	RB		↑ TW2302 ↓	1.0	2.61	592	46.31	10,579	8,676
2.0			↑ TW2303 ↓	2.0	2.83	853	53.65	10,790	10,349
2.5		boulders		2.5					Ave. 9,527
3.0									
4.0									
5.0									
6.0									

Auger No.: TW24
Coordinates: N= 4688.78, E= 1521.40 Vegitation: secondary forest Slop: steep

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		reddish brown lateritic soil	↑ TW2401 ↓		2.67	765	44.39	9,498	12,044
1.0	RB		↑ TW2402 ↓	1.0	2.89	806	46.75	9,659	12,250
1.9									
2.0	RB	reddish brown lateritic soil with orange brown fragments of weathered ultramafic rock	↑ TW2403 ↓	2.0	2.58	761	41.27	9,902	12,147
3.0			↑ TW2404 ↓	3.0	2.77	863	46.82	11,017	12,345
3.5		boulders		3.5					Ave. 12,197
4.0									
5.0									
6.0									

Auger No.: TW25
Coordinates: N= 4688.69, E= 1521.17
Vegitation: secondary forest
Slop: steep

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		brown lateritic soil	TW2501	1.0	2.05	573	34.33	8,367	11,432
1.0	B		TW2502	2.0	1.35	498	23.87	6,302	8,648
2.0			TW2503	3.0	1.37	511	24.47	6,042	8,880
2.9		brown lateritic soil with fragments of orange brown, weathered ultramafic rock							
3.0	B		TW2504	3.5	1.18	455	23.08	5,150	9,082
3.5		boulders							Ave. 9,511
4.0									
5.0									
6.0									

Auger No.: TW26
Coordinates: N= 4688.71, E= 1520.98
Vegitation: secondary forest
Slop: steep

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		reddish brown lateritic soil	TW2601	1.0	3.12	852	54.58	10,446	9,870
1.0	RB		TW2602	2.0	2.93	1,379	57.37	11,080	11,936
2.0			TW2603	3.1	1.86	689	34.20	7,865	14,481
2.5	RB	reddish brown lateritic soil with weathered ultramafic pebbles							
3.0									
3.1		boulders							Ave. 12,096
4.0									
5.0									
6.0									

Auger No.: TW27
Coordinates: N= 4688.70, E= 1520.77 Vegitation: secondary forest Slop: steep

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		reddish brown lateritic soil	↑						
			TW2701		3.13	645	49.84	9,486	8,252
1.0	RB		↓	1.0					
			↑						
			TW2702		2.82	1,020	49.56	10,924	9,902
1.8			↓	1.8					
2.0		boulders							Ave. 9,077
3.0									
4.0									
5.0									
6.0									

Auger No.: TW28
Coordinates: N= 4688.71, E= 1520.57 Vegitation: plantation of oil palm Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		brown lateritic soil	↑						
			TW2801		3.35	616	49.55	12,013	7,981
1.0	B		↓	1.0					
			↑						
			TW2802		3.39	730	49.88	12,328	8,969
1.8			↓	1.8					
2.0		boulders							Ave. 8,475
3.0									
4.0									
5.0									
6.0									

Auger No.: TW29
Coordinates: N= 4688.71, E= 1520.37 Vegitation: plantation of oil palm Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0	RB	reddish brown lateritic soil	TW2901	1.0	9.92	164	17.55	1,583	3,000
1.6		yellowish brown, strongly weathered, clayey ultramafic rock, texture preserved (saprolite)	TW2902	2.0	11.93	135	14.48	1,068	2,063
2.0	YB		TW2903	3.0	10.11	103	11.57	825	2,168
3.0			TW2904	4.0	10.73	125	10.93	1,267	1,903
4.0			TW2905	5.2	10.05	85	7.71	908	2,278
4.6	GG	greenish grey weathered clayey ultramafic rock (saprolite)							Ave. 2,282
5.0									
5.2									
6.0									

Auger No.: TW30
Coordinates: N= 4688.71, E= 1520.17 Vegitation: plantation of oil palm Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0.05	OB	dark gray soil with organic material (humic soil)	TW3001	0.05	10.63	90	17.38	2,529	1,630
1.0		orange brown lateritic soil	TW3002	1.0	10.72	38	15.51	2,161	1,298
2.0			TW3003	2.0	12.62	40	18.10	2,070	1,356
2.2	RB	reddish brown lateritic soil	TW3004	3.0	13.92	25	16.11	1,197	875
3.0			TW3005	4.0	14.18	112	13.95	667	534
4.0				5.0					Ave. 1,139
4.1	RB	reddish brown lateritic soil with weathered ultramafic pebbles							
5.0									
6.0									

Auger No.: TW31
Coordinates: N= 4688.57, E= 1521.88 Vegitation: secondary forest Slop: steep

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		reddish brown lateritic soil	↑ TW3101 ↓		3.42	976	51.71	10,992	11,062
1.0	RB		↑ TW3102 ↓	1.0	3.64	1,039	53.96	11,580	12,619
2.0			↑ TW3103 ↓	2.0	3.61	1,060	54.24	12,091	12,840
2.7		boulders		2.7					Ave. 12,174
3.0									
4.0									
5.0									
6.0									

Auger No.: TW32
Coordinates: N= 4688.50, E= 1521.58 Vegitation: secondary forest Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0.05		dark gray soil with organic material (humic soil)	↑ TW3201 ↓	0.05	2.77	1,196	43.22	11,219	7,032
1.0	B	brown lateritic soil	↑ TW3202 ↓	1.0	2.69	1,221	44.92	10,652	7,290
2.0			↑ TW3203 ↓	2.0	2.96	1,582	48.03	15,401	8,556
2.5		orange brown lateritic soil							
3.0	OB		↑ TW3204 ↓	3.0	2.79	1,053	46.24	15,354	8,064
4.0			↑ TW3205 ↓	4.0	1.81	619	46.61	12,362	7,492
4.2	OB	orange brown lateritic soil with reddish brown ultramafic rock fragments							
5.0				5.0					Ave. 7,687
6.0									

Auger No.: TW33
Coordinates: N= 4688.50, E= 1521.38 Vegitation: secondary forest Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0.05	B	dark gray soil with organic material (humic soil)	↑ TW3301 ↓	0.05	3.20	940	53.32	10,374	12,038
1.0		brown lateritic soil		1.0					
1.2		brown lateritic soil with weathered ultramafic rock rock fragments	↑ TW3302 ↓		3.13	852	47.98	11,779	11,625
2.0	B			2.0					
			↑ TW3303 ↓		3.35	676	38.61	9,351	9,729
3.0									
3.2		boulders		3.2					Ave. 11,131
4.0									
5.0									
6.0									

Auger No.: TW34
Coordinates: N= 4688.45, E= 5015.21 Vegitation: secondary forest Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0.05	B	dark gray soil with organic material (humic soil)	↑ TW3401 ↓	0.05	2.66	696	40.19	8,348	7,659
1.0		brown lateritic soil		1.0					
	B		↑ TW3402 ↓		2.37	760	43.03	8,998	8,853
2.0		brown lateritic soil with reddish brown bands		2.0					
	B		↑ TW3403 ↓		2.30	911	43.24	11,107	9,681
3.0				3.0					
	B		↑ TW3404 ↓		2.41	904	41.12	11,763	11,708
4.0		brown lateritic soil with weathered ultramafic rock fragments		4.0					
	B		↑ TW3405 ↓		2.35	663	39.96	9,344	12,366
5.0				5.0					Ave. 10,053
6.0									

Auger No.: TW35
Coordinates: N= 4688.51, E= 1520.97 Vegitation: plantation of oil palm Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0.05		dark gray soil with organic material (humic soil)	↑ TW3501 ↓	0.05	3.83	821	40.66	8,751	9,267
1.0	DB	dark brown lateritic soil	↑ TW3502 ↓	1.0	4.97	696	48.66	7,490	10,629
2.3	RB	reddish and yellowish brown lateritic soil	↑ TW3503 ↓	2.0	6.88	469	22.94	2,765	7,930
3.0	OB	orange brown lateritic soil	↑ TW3504 ↓	3.0	4.97	580	41.12	9,535	9,401
			↑ TW3505 ↓	4.0	4.71	556	41.35	9,781	9,875
5.0				5.0					Ave. 9,420
6.0									

Auger No.: TW36
Coordinates: N= 4688.48, E= 1520.86 Vegitation: secondary forest Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0.1		dark gray soil with organic material (humic soil)	↑ TW3601 ↓	0.1	3.03	865	45.73	7,660	8,938
1.0	RB	reddish brown lateritic soil	↑ TW3602 ↓	1.0	3.25	882	48.49	8,213	9,903
1.6	RB	reddish brown lateritic soil mixed with yellowish soil	↑ TW3603 ↓	2.0	6.42	352	20.38	2,246	6,735
2.6	YB	yellowish brown soil	↑ TW3604 ↓	3.0	7.16	113	8.84	834	2,568
3.5	LB	light brown soil mixed with redish brown soil	↑ TW3605 ↓	4.0	8.35	65	7.25	396	1,917
4.5	RB	reddish brown lateritic soil							
5.0				5.0					Ave. 6,012
6.0									

Auger No.: TW37
Coordinates: N= 4688.51, E= 5015.20
Vegitation: plantation of oil palm
Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		reddish brown lateritic soil	TW3701	0 - 1.0	3.50	367	55.11	8,376	8,752
1.0	RB		TW3702	1.0 - 2.0	3.04	1,222	56.93	8,531	11,396
2.0			TW3703	2.0 - 3.0	2.35	1,936	57.37	8,891	13,041
2.5		reddish brown lateritic soil with orange brown bands and reddish brown, weathered ultramafic rock fragments							
3.0	RB		TW3704	3.0 - 3.8	1.89	2,932	59.34	9,149	15,462
3.6	YG	yellowish gray weathered ultramafic rock (saprolite)							
3.8		bed rock							Ave. 12,163
4.0									
5.0									
6.0									

Auger No.: TW38
Coordinates: N= 4688.51, E= 1520.17
Vegitation: plantation of oil palm
Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		dark reddish brown lateritic soil	TW3601	0 - 1.0	4.53	424	45.79	8,449	7,634
1.0			TW3802	1.0 - 2.0	4.32	751	45.46	8,308	8,616
2.0	RB		TW3803	2.0 - 3.0	4.94	846	51.78	9,576	10,619
3.0			TW3804	3.0 - 4.0	5.32	553	53.52	10,921	10,679
4.0									
4.1	YB	yellowish brown lateritic soil with pebbles of ultramafic rocks	TW3805	4.0 - 4.6	5.27	546	54.40	12,440	10,637
4.6		boulders							Ave. 9,637
5.0									
6.0									

Auger No.: TW39
Coordinates: N= 4688.31, E= 1520.97

Vegitation: secondary forest

Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0.1		dark brown soil with organic material(humic soil)		0.1					
		brown soil	TW3901		9.48	143	14.59	1,600	977
1.0	B			1.0					
			TW3902		10.28	131	12.93	1,121	755
2.0		brown soil with bands of dark brown soil		2.0					
	B		TW3903		8.29	98	10.06	708	456
3.0				3.0					
			TW3904		8.24	124	10.26	923	580
4.0		brown soil with bands of white clayey soil		4.0					
	B		TW3905		9.14	95	10.47	727	480
5.0				5.0					Ave. 650
6.0									

Auger No.: TW40
Coordinates: N= 4688.29, E= 1520.83

Vegitation: bush

Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
		yellowish brown soil							
			TW4001		9.11	87	12.47	1,340	764
1.0	YB			1.0					
			TW4002		9.36	102	10.54	754	620
2.0				2.0					
2.4		dark gray soil	TW4003		8.89	110	10.23	1,349	880
3.0	DG			3.0					
			TW4004		8.38	99	7.46	2,187	1,076
4.0				4.0					Ave. 835
5.0									
6.0									

Auger No.: TW41
Coordinates: N= 4688.32, E= 1520.57 Vegitation: bush Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0.05		dark brown soil with organic material (humic soil)	↑	0.05					
		brown lateritic soil	TW4101		3.91	685	39.90	8,749	8,754
1.0			↓	1.0					
	B		↑						
			TW4102		4.48	705	41.99	7,971	8,797
2.0			↓	2.0					
			↑						
			TW4103		6.52	671	25.39	6,450	5,578
3.0			↓	3.0					
			↑						
			TW4104		4.82	1,049	36.83	10,360	8,683
4.0			↓						
4.1		boulders		4.1					Ave. 7,953
5.0									
6.0									

Auger No.: TW42
Coordinates: N= 4688.32, E= 1520.37 Vegitation: plantation of oil palm Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
		brown lateritic soil	↑						
			TW4201		5.82	639	51.95	11,889	9,577
1.0			↓	1.0					
	B		↑						
			TW4202		5.15	982	50.38	11,927	17,254
2.0			↓						
2.3		boulders		2.3					Ave. 13,416
3.0									
4.0									
5.0									
6.0									

Auger No.: TW43
Coordinates: N= 4688.32, E= 1520.17 Vegitation: plantation of oil palm Slop: steep

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		dark reddish brown lateritic soil	TW4301		3.52	277	45.23	10,044	7,276
1.0	RB		TW4302	1.0	4.47	849	57.65	13,313	10,245
2.0			TW4303	2.0	3.40	1,127	52.77	8,382	11,893
2.3	OB	orange brown strongly weathered ultramafic rock (saprolite)							
2.8		boulders		2.8					Ave. 9,805
3.0									
4.0									
5.0									
6.0									

Auger No.: TW44
Coordinates: N= 4688.07, E= 1520.79 Vegitation: bush Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0.05		dark gray soil with organic material (humic soil)		0.05					
1.0	B	brown soil	TW4401		8.98	97	10.62	937	579
2.0			TW4402	1.0	9.34	97	11.25	890	548
2.5		boulders	TW4403	2.0	8.83	103	10.78	1,374	674
3.0				2.5					Ave. 634
4.0									
5.0									
6.0									

Auger No.: TW45
Coordinates: N= 4988.08, E= 1520.65 Vegitation: bush Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0.1		dark brown soil with organic material (humic soil)		0.1					
	B	brown soil	TW4501		8.29	94	10.09	672	539
1.0									
1.2		boulders		1.2					Ave. 539
2.0									
3.0									
4.0									
5.0									
6.0									

Auger No.: TW46
Coordinates: N= 4688.07, E= 1520.44 Vegitation: bush Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0.1		dark gray soil with organic material (humic soil)		0.1					
		brown lateritic soil	TW4601		8.95	150	12.27	1.502	734
1.0	B			1.0					
			TW4602		9.54	123	11.91	973	598
2.0				2.0					
2.3		brown lateritic soil with dark brown ultramafic rock pebbles	TW4603		8.56	110	10.86	931	539
3.0	B			3.0					
			TW4604		9.07	100	10.93	833	574
4.0				4.0					Ave. 611
5.0									
6.0									

Auger No.: TW47
Coordinates: N= 4688.22, E= 1519.60　　Vegitation: plantaion of oil palm　　Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0.05		dark brown soil with organic material (humic soil)	TW4701	0.05	8.04	254	35.05	9,219	3,614
1.0	DB	dark brown lateritic soil	TW4702	1.0	9.10	486	33.78	10,123	3,598
2.0	DB	dark brown lateritic soil with weathered, reddish brown ultramafic pebbles	TW4703	2.0	10.57	254	12.01	786	422
2.2	OB	orange brown - yellowish brown strongly weathered ultramafic rock(saprolite)	TW4704	3.0	9.46	98	9.90	381	239
3.0									
3.2	B	brown, strongly weathered ultramafic rock (saprolite)							
4.0				4.1					Ave. 1,968
4.1									
5.0									
6.0									

Auger No.: TW48
Coordinates: N= 4688.23, E= 1519.40　　Vegitation: secondary forest　　Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0.05		dark brown soil with organic material (humic soil)	TW4801	0.05	7.82	563	39.90	9,030	4,646
1.0	OB	orange brown lateritic soil	TW4802	1.0	7.30	774	45.10	9,870	7,105
2.0			TW4803	2.0	6.16	762	42.22	9,877	7,537
3.0				3.0					
3.4	OB	orange brown lateritic soil with weathered yellowish, ultramafic rock pebbles	TW4804		7.86	595	36.37	6,745	6,434
3.6	OB	fine orange brown lateritic soil							
4.0				4.1					Ave. 6,431
4.1									
5.0									
6.0									

Auger No.: TW49
Coordinates: N= 4688.23, E= 1519.20
Vegitation: secondary forest
Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		orange brown lateritic soil	↑						
			TW4901		12.98	109	25.22	3,869	1,829
1.0			↓	1.0					
	OB		↑						
			TW4902		13.39	84	26.41	3,695	1,956
2.0			↓	2.0					
			↑						
			TW4903		11.97	56	19.08	2,473	1,342
3.0			↓	3.0					
3.3		reddish brown lateritic soil with rare, strongly weathered pebbles of ultramafic rock	↑						
	RB		TW4904		13.56	106	19.35	1,105	1,040
4.0			↓						
4.1				4.1					Ave. 1,542
5.0									
6.0									

Auger No.: TW50
Coordinates: N= 4688.23, E= 1518.99
Vegitation: bush
Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0.05		dark brown soil with organic material (humic soil)	↑	0.05					
			TW5001		7.98	348	50.19	10,092	4,523
1.0		brown lateritic soil	↓	1.0					
	B		↑						
			TW5002		7.03	770	43.36	8,302	4,335
2.0			↓	2.0					
			↑						
			TW5003		7.22	671	43.73	9,275	4,512
2.8		brown lateritic soil with yellowish green, weathered ultramafic rock pebbles	↓						
3.0		boulders		3.0					Ave. 4,457
4.0									
5.0									
6.0									

Auger No.: TWS1
Coordinates: N= 4688.32, E= 1518.83 Vegitation: secondary forest Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0.05	B	dark brown soil with organic material (humic soil)		0.05					
		brown lateritic soil	TWS101		5.90	220	43.31	9,972	5,366
1.0				1.0					
			TWS102		5.96	553	40.04	10,000	7,529
1.7	B	brown lateritic soil with yellowish green, weathered ultramafic rock pebbles							
2.0		boulders		2.0					Ave. 6,448
3.0									
4.0									
5.0									
6.0									

Auger No.: TWS2
Coordinates: N= 4688.03, E= 1519.78 Vegitation: plantatioin of oil palm Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
	RB	reddish brown lateritic soil							
			TWS201		5.60	796	37.98	6,326	5,574
1.0				1.0					
			TWS202		6.12	890	45.97	7,559	7,799
2.0				2.0					
2.2	RB	reddish brown lateritic soil with greenish gray weathered ultramafic rock pebbles	TWS203		3.89	706	41.34	5,039	8,224
3.0				3.0					
3.1	RB	reddish brown lateritic soil mixed with greenish brown lateritic soil	TWS204		2.00	615	34.66	3,713	9,514
3.4		boulders		3.4					Ave. 7,778
4.0									
5.0									
6.0									

Auger No.: TW53
Coordinates: N= 4688.02, E= 1519.58
Vegitation: plantation of oil palm
Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		reddish brown lateritic soil	TW5301	0 - 1.0	4.21	779	54.23	11,188	10,516
1.0	RB		TW5302	1.0 - 2.0	3.12	933	47.95	10,184	10,703
1.8		brown lateritic soil with black weathered ultramafic pebbles	TW5303	2.0 - 3.0	3.04	1,861	56.81	11,013	13,003
2.0	B		TW5304	3.0 - 4.0	1.82	1,092	49.22	11,168	15,828
3.0									Ave. 12,513
4.0									
5.0									
6.0									

Auger No.: TW54
Coordinates: N= 4688.01, E= 1519.14
Vegitation: secondary forest
Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0	B	brown - yellowish brown lateritic soil	TW5401	0 - 1.0	11.39	132	18.46	2,430	1,155
1.0		dark reddish brown lateritic soil	TW5402	1.0 - 2.0	14.42	23	13.64	711	311
2.0	RB		TW5403	2.0 - 3.0	14.44	30	14.45	736	341
3.0			TW5404	3.0 - 4.0	13.13	21	12.74	613	285
4.0			TW5405	4.0 - 5.0	12.38	35	11.34	450	281
4.9	B	brown lateritic soil with reddish brown weathered ultramafic rock pebbles							Ave. 475
5.0									
6.0									

Auger No.: TW55
Coordinates: N= 4688.02, E= 1518.98 Vegitation: secondary forest Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		orange brown lateritic soil	↑ TW5501 ↓		6.40	296	38.37	7,315	4,440
1.0	OB		↑ TW5502 ↓	1.0	7.38	491	43.76	8,003	6,022
2.0			↑	2.0					
2.3	D OB	orange brown lateritic soil with strongly weathered ultramafic rock fragments	TW5503 ↓		6.31	844	40.80	8,125	6,930
3.0									
3.2		bed rock		3.2					Ave. 5,797
4.0									
5.0									
6.0									

Auger No.: TW56
Coordinates: N= 4688.03, E= 1518.77 Vegitation: secondary forest Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		orange brown lateritic soil	↑ TW5601 ↓		6.25	341	50.26	9,950	5,665
1.0	OB		↑ TW5602 ↓	1.0	6.45	668	50.10	10,189	6,079
2.0			↑	2.0					
2.8			TW5603 ↓		6.58	1,246	43.39	9,885	7,844
3.0	RB	reddish brown lateritic soil with strongly weathered ultramafic rock fragments	↑	3.0					
3.2		yellowish brown weathered ultramafic rock (saprolite)	TW5604 ↓		3.75	767	29.44	8,346	18,334
4.0	YB		↑ TW5605 ↓	4.0	2.65	344	19.13	5,882	15,597
4.7		bed rock		4.7					Ave. 10,704
5.0									
6.0									

Auger No.: TW57
Coordinates: N= 4687.83, E= 1519.78
Vegitation: plantation of oil palm
Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0	B	brown - yellowish brown lateritic soil	TW5701	1.0	16.06	14	7.85	1,378	386
1.1	B	brown - reddish brown lateritic soil with greenish gray weathered ultramafic rock pebbles	TW5702	2.0	15.43	15	9.20	1,301	407
2.5	YB	yellowish brown - light brown lateritic soil with white clay spot	TW5704	3.0	15.58	40	6.06	1,335	621
	YB		TW5704	4.0	15.60	56	5.06	1,036	505
4.2	LB	light brown and pale green strongly weathered, clayey ultramafic rock (saprolite)	TW5705	5.0	15.69	69	4.82	954	466
5.0									Ave. 477
6.0									

Auger No.: TW58
Coordinates: N= 4687.83, E= 1519.58
Vegitation: plantation of oil palm
Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0	B	brown - yellowish brown lateritic soil	TW5801	1.0	14.71	104	18.06	2,427	1,765
1.2	B	brown - yellowish brown lateritic soil with reddish brown sandy soil	TW5802	2.0	15.28	70	12.04	1,104	464
2.5	YB	yellowish brown lateritic soil with reddish brown pebbles of ultramafic rock	TW5803	3.0	12.15	27	10.02	713	315
	YB		TW5804	3.8	12.77	38	11.03	950	327
3.8		boulders							Ave. 718
4.0									
5.0									
6.0									

Auger No.: TW59
Coordinates: N= 4687.83, E= 1519.39 Vegitation: plantation of oil palm Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0	RB	reddish brown lateritic soil with greenish gray weathered ultramafic rock pebbles	TW5901	0 - 1.0	4.40	1,225	50.34	9,567	11,198
1.0			TW5902	1.0 - 1.8	4.20	1,790	56.37	10,065	15,611
1.8		boulders		1.8 - 2.0					Ave. 13,405
2.0									
3.0									
4.0									
5.0									
6.0									

Auger No.: TW60
Coordinates: N= 4687.83, E= 1519.18 Vegitation: secondary forest Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0	B	brown lateritic soil with weathered ultramafic pebbles	TW6001	0 - 1.0	6.71	620	41.52	8,245	5,798
1.0			TW6002	1.0 - 2.0	7.93	199	31.76	6,081	3,090
2.0			TW6003	2.0 - 3.0	6.46	345	44.10	9,147	3,883
3.0		3.1 — water level							
3.2	G	grey - greyish brown clayey soil	TW6004	3.0 - 3.8	7.71	270	34.98	9,022	3,829
3.8		dark gray humic soil		3.8 - 4.0					
4.0									Ave. 4,150
5.0									
6.0									

Auger No.: TW61
Coordinates: N= 4687.83, E= 1518.98
Vegitation: secondary forest
Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0.05	B	dark gray soil with organic material (humic soil)	TW6101	0.05	3.74	1,042	53.14	9,614	9,448
0.9		brown lateritic soil							
1.0		orange brown lateritic soil	TW6102	1.0	5.21	718	48.75	8,767	6,923
2.0	OB		TW6103	2.0	4.91	674	46.35	9,108	6,308
3.0			TW6104	3.0	4.02	1,466	51.68	8,410	9,613
4.2		boulders		4.2					Ave. 8,073
5.0									
6.0									

Auger No.: TW62
Coordinates: N= 4687.83, E= 1518.77
Vegitation: secondary forest
Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
		orange brown lateritic soil	TW6201		6.38	616	49.06	10,370	4,936
1.0				1.0					
	OB		TW6202		6.67	1,066	44.70	10,042	5,526
2.0				2.0					
			TW6203		6.01	942	39.91	9,068	4,920
3.0				3.0					
			TW6204		6.01	870	40.37	9,374	6,895
3.6		boulders		3.6					Ave. 5,569
4.0									
5.0									
6.0									

Auger No.: TW63
Coordinates: N= 4687.65, E= 1519.57 Vegitation: plantation of oil palm Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		yellowish brown lateritic soil	TW6301	0	15.41	61	15.58	2,255	1,257
1.0	YB		TW6302	1.0	15.45	38	11.32	1,420	829
1.9		yellowish brown lateritic soil mixed with reddish brown soil	TW6303	2.0	13.82	62	9.12	1,085	869
2.0	YB		TW6304	3.0	13.49	471	15.64	1,567	1,135
3.0									
3.3	GG	dark greenish gray strongly weathered ultra-mafic rock		3.5					Ave. 1,023
3.5		bed rock							
4.0									
5.0									
6.0									

Auger No.: TW64
Coordinates: N= 4687.68, E= 1519.39 Vegitation: plantatin of oil palm Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		reddish brown lateritic soil	TW6401	0	4.17	583	57.10	13,021	7,908
1.0	RB		TW6402	1.0	3.80	1,299	59.64	13,736	9,424
1.6		brown - slightly reddish brown : lateritic soil with weathered ultramafic rock pebbles	TW6403	2.0	4.09	1,781	58.85	12,756	10,171
2.0	B			2.9					Ave. 9,168
2.9									
3.0		boulders							
4.0									
5.0									
6.0									

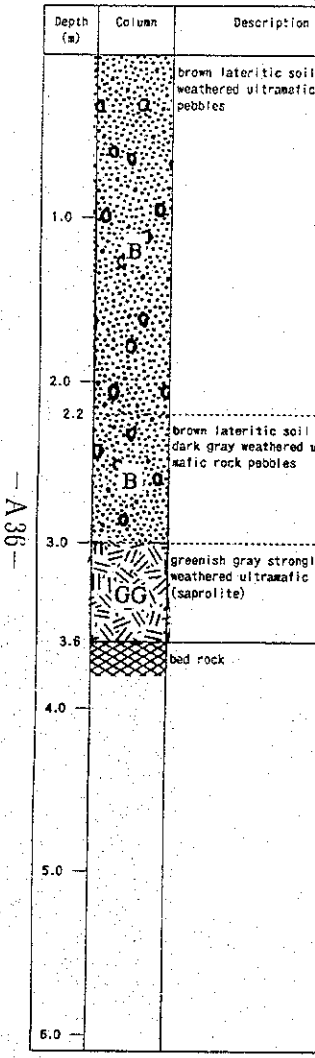
Auger No.: TW65
Coordinates: N= 4689.32, E= 1520.78
Vegitation: plantation of oil palm
Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0	B	brown lateritic soil with weathered ultramafic rock pebbles	TW6501		8.69	432	20.10	5,425	1,778
1.0			TW6502	1.0	8.97	215	10.81	1,603	1,569
1.4		reddish brown lateritic soil with weathered ultramafic rock pebbles							
2.0	RB		TW6503	2.0	8.25	46	5.82	468	422
3.0			TW6504	3.0	3.33	149	8.82	709	4,109
3.3	DB	dark brown lateritic soil with weathered pebbles							
3.8	DC	dark gray sandy soil with weathered pebbles							
4.0		boulders		4.0					Ave. 1,975
5.0									
6.0									

Auger No.: TW66
Coordinates: N= 4689.32, E= 1520.58
Vegitation: plantation of oil palm
Slop: flat

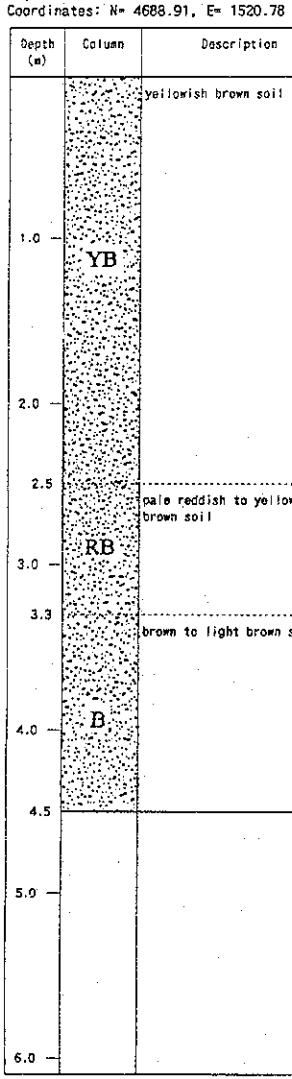
Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0	B	brown lateritic soil with black weathered ultramafic rock pebbles	TW6601		9.10	71	10.87	818	259
0.9									
1.0	RB	reddish brown lateritic soil	TW6602	1.0	8.36	49	10.56	491	157
1.8									
2.0	RB	reddish brown lateritic soil with light brown - yellowish brown soil	TW6603	2.0	6.90	9	6.65	90	55
2.9									
3.0	G	gray and light gray strongly weathered ultramafic rock	TW6604	2.9	8.66	7	4.16	109	64
4.0		bed rock		4.0					Ave. 134
5.0									
6.0									

Auger No.: TW67
Coordinates: N= 4689.12, E= 1520.39　　Vegitation: plantation of oil palm　　Slop: flat



Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
		brown lateritic soil with weathered ultramafic rock pebbles	TW6701		9.10	270	15.33	1,233	295
1.0				1.0					
			TW6702		9.56	255	16.33	1,312	438
2.0				2.0					
2.2		brown lateritic soil with dark gray weathered ultramafic rock pebbles	TW6703		4.24	166	10.75	1,146	994
3.0				3.0					
		greenish gray strongly weathered ultramafic rock (saprolite)	TW6704		4.63	88	9.09	827	577
3.6				3.6					
		bed rock							Ave. 576
4.0									
5.0									
6.0									

Auger No.: TW68
Coordinates: N= 4688.91, E= 1520.78　　Vegitation: plantation of oil palm　　Slop: flat



Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
		yellowish brown soil	TW6801		11.02	21	12.44	245	121
1.0				1.0					
			TW6802		11.64	27	12.27	236	121
2.0				2.0					
2.5		pale reddish to yellowish brown soil	TW6803		12.71	67	12.66	283	158
3.0				3.0					
3.3		brown to light brown soil	TW6804		10.99	52	10.77	305	174
4.0				4.0					
			TW6805		9.73	41	9.33	222	148
4.5				4.5					
									Ave. 144
5.0									
6.0									

Auger No.: TW69
Coordinates: N= 4688.71, E= 1520.00 Vegitation: plantation of oil palm Slop: moderate

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		light brown soil	TW6901	1.0	11.75	15	13.06	532	134
1.0	LB		TW6902	2.0	12.31	15	12.91	454	141
1.9		light brown soil with rare weathered ultramafic pebbles	TW6903	3.0	12.43	13	13.85	470	145
2.0	LB								
3.0			TW6904	3.9	14.08	22	14.48	458	140
3.2	YB	yellowish brown soil with weathered ultramafic pebbles							
3.9									Ave. 140
4.0		boulders							
5.0									
6.0									

Auger No.: TW70
Coordinates: N= 4688.52, E= 1520.00 Vegitation: plantation of oil palm Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		brown to slightly reddish brown lateritic soil	TW7001	1.0	12.32	62	26.76	3,817	2,219
1.0	B		TW7002	2.0	13.29	65	27.56	3,639	2,298
2.0			TW7003	3.0	11.92	72	28.30	4,095	2,518
3.0			TW7004	4.0	12.29	81	30.86	4,057	2,941
4.0			TW7005	4.5	12.20	89	33.81	4,418	3,316
4.5									Ave. 2,658
5.0									
6.0									

Auger No.: TW71
Coordinates: N= 4688.32, E= 1520.00 Vegitation: plantation of oil palm Slop: steep

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		dark reddish brown lateritic soil	TW7101		3.85	522	52.96	9,857	9,662
1.0	RB		TW7102	1.0	3.05	833	48.96	9,089	10,671
2.0		dark brown lateritic soil with weathered ultramafic rock pebbles	TW7103	2.0	3.09	939	55.28	11,225	11,868
3.0	DB		TW7104	3.0	2.95	1,088	57.42	12,336	15,161
4.0			TW7105	4.0	3.35	1,231	58.23	12,848	13,471
5.0			TW7106	5.0	3.96	1,468	51.84	12,449	15,795
5.8		boulders		5.8					Ave. 12,775
6.0									

Auger No.: TW72
Coordinates: N= 4688.23, E= 1519.79 Vegitation: plantation of oil palm Slop: flat

Depth (m)	Column	Description	Sample No.	Depth (m)	Analytical Results Al(%)	Co(ppm)	Fe(%)	Cr(ppm)	Ni(ppm)
0		brown lateritic soil	TW7201		1.04	915	46.92	7,080	10,838
1.0	B		TW7202	1.0	10.72	301	33.41	7,927	3,163
2.0			TW7203	2.0	12.92	24	14.14	2,116	576
2.3	RB	slightly reddish, brown lateritic soil							
2.8		reddish to purplish gray, strongly weathered ultramafic rock (saprolite)	TW7204	2.8	10.74	48	12.56	423	307
3.0	RB								
4.0			TW7205	4.0	11.58	21	13.03	330	313
4.5		bed rock		4.5					Ave. 3,039
5.0									
6.0									

Appendix 2

List of rock geochemical samples in S. Imbak Sub-area

Area: Sungai Imbak

Ser. No.	Sample No.	Coordinates N	Coordinates E	1/50,000 Topo. Sheet	Rock Name	Geol. Unit	Alteration/Mineralization	Description
1	SM001	4679.30	1455.78	Sungai Imbak	Mudstone	N2Tj	-	dark gray
2	SM002	4679.73	1455.70	Sungai Imbak	Mudstone	N2Tj	-	dark gray
3	SM003	4679.98	1455.54	Sungai Imbak	Mudstone	N2Tj	-	dark gray
4	SM004	4679.39	1455.56	Sungai Imbak	Sandstone	N2Tj	-	weathered
5	SM005	4680.02	1455.33	Sungai Imbak	Sandstone	N2Tj	-	dark gray
6	SM006	4680.22	1455.60	Sungai Imbak	Mudstone	N2Tj	slightly silicified	dark gray
7	SM007	4680.36	1455.43	Sungai Imbak	Mudstone	N2Tj	weak Py-diss., silicified	dark gray
8	SM008	4680.81	1455.51	Sungai Imbak	Mudstone	N2Tj	-	dark gray
9	SM009	4680.87	1455.16	Sungai Imbak	Mudstone	N2Tj	-	gray
10	SM010	4680.56	1455.04	Sungai Imbak	Sandstone	N2Tj	-	gray, fine grained
11	SM011	4681.30	1455.28	Sungai Imbak	Mudstone	N2Tj	-	dark gray
12	SM012	4681.71	1455.39	Sungai Imbak	Mudstone	N2Tj	-	gray, joint
13	SM013	4682.37	1454.21	Sungai Imbak	Mudstone	N2Tj	-	dark gray
14	SM014	4681.38	1455.11	Sungai Imbak	Mudstone	N2Tj	-	gray
15	SM015	4681.75	1455.26	Sungai Imbak	Sandstone	N2Tj	-	gray
16	SM016	4682.49	1455.55	Sungai Imbak	Mudstone	N2Tj	-	dark gray
17	SM017	4682.26	1455.35	Sungai Imbak	Mudstone	N2Tj	-	dark gray
18	SM018	4682.15	1455.07	Sungai Imbak	Mudstone	N2Tj	-	dark gray
19	SM019	4682.72	1455.60	Sungai Imbak	Mudstone	N2Tj	-	dark gray
20	SM020	4682.64	1455.11	Sungai Imbak	Mudstone	N2Tj	-	dark gray

Area: Sungai Imbak

Ser. No.	Sample No.	Coordinates N	Coordinates E	1/50,000 Topo. Sheet	Rock Name	Geol. Unit	Alteration/Mineralization	Description
21	SM021	4682.92	1455.08	Sungai Imbak	Mudstone	N2Tj	-	dark gray
22	SM022	4683.06	1455.69	Sungai Imbak	Mudstone	N2Tj	-	dark gray
23	SM023	4683.00	1455.49	Sungai Imbak	Mudstone	N2Tj	-	dark gray
24	SM024	4683.40	1455.32	Sungai Imbak	Sandstone	N2Tj	-	gray
25	SM025	4683.17	1455.04	Sungai Imbak	Mudstone	N2Tj	-	dark gray
26	SM026	4683.87	1455.12	Sungai Imbak	Sandstone	N2Tj	Qtz veinlet, wd.0.1-0.5mm	gray
27	SM027	4684.11	1455.46	Sungai Imbak	Mudstone	N2Tj	-	dark gray
28	SM028	4684.43	1455.60	Sungai Imbak	Mudstone	N2Tj	-	dark gray
29	SM029	4684.99	1455.88	Sungai Imbak	Mudstone	N2Tj	rusty surface	dark gray
30	SM030	4684.75	1455.53	Sungai Imbak	Mudstone	N2Tj	-	dark gray
31	SM031	4684.80	1455.24	Sungai Imbak	Mudstone	N2Tj	-	dark gray
32	SM032	4685.17	1455.49	Sungai Imbak	Mudstone	N2Tj	-	dark gray
33	SM033	4685.27	1455.03	Sungai Imbak	Mudstone	N2Tj	-	dark gray
34	SM034	4685.29	1455.37	Sungai Imbak	Mudstone	N2Tj	-	dark gray
35	SM035	4685.51	1455.72	Sungai Imbak	Mudstone	N2Tj	-	dark gray
36	SM036	4685.79	1455.78	Sungai Imbak	Mudstone	N2Tj	-	dark gray
37	SM037	4679.85	1454.59	Sungai Imbak	Sandstone	N2Tj	-	gray, fine grained
38	SM038	4679.73	1454.32	Sungai Imbak	Sandstone	N2Tj	-	gray, fine grained
39	SM039	4679.71	1454.19	Sungai Imbak	Mudstone	N2Tj	-	gray
40	SM040	4680.07	1454.46	Sungai Imbak	Sandstone	N2Tj	-	gray, fine grained

Area: Sungai Imbak

Ser. No.	Sample No.	Coordinates N	Coordinates E	1/50,000 Topo. Sheet	Rock Name	Geol. Unit	Alteration/Mineralization	Description
41	SM041	4680.43	1454.53	Sungai Imbak	Mudstone	N2Tj	-	gray
42	SM042	4680.69	1454.65	Sungai Imbak	Mudstone	N2Tj	-	gray
43	SM043	4680.91	1454.77	Sungai Imbak	Mudstone	N2Tj	-	dark gray
44	SM044	4680.79	1454.73	Sungai Imbak	Sandstone	N2Tj	-	gray, fine grained
45	SM045	4680.57	1454.48	Sungai Imbak	Sandstone	N2Tj	-	gray, fine grained
46	SM046	4680.35	1454.25	Sungai Imbak	Mudstone	N2Tj	-	dark gray
47	SM047	4680.11	1454.04	Sungai Imbak	Sandstone	N2Tj	-	gray, fine grained
48	SM048	4680.63	1454.06	Sungai Imbak	Mudstone	N2Tj	-	gray
49	SM049	4680.85	1454.10	Sungai Imbak	Mudstone	N2Tj	-	gray
50	SM050	4681.08	1454.77	Sungai Imbak	Mudstone	N2Tj	-	dark gray
51	SM051	4681.19	1454.73	Sungai Imbak	Mudstone	N2Tj	-	gray
52	SM052	4680.99	1454.17	Sungai Imbak	Mudstone	N2Tj	-	gray
53	SM053	4681.23	1454.32	Sungai Imbak	Mudstone	N2Tj	-	gray
54	SM054	4681.50	1454.62	Sungai Imbak	Mudstone	N2Tj	-	gray
55	SM055	4681.67	1455.03	Sungai Imbak	Mudstone	N2Tj	-	gray
56	SM056	4679.99	1453.72	Sungai Imbak	Sandstone	N2Tj	weak Py-diss.	gray, massive
57	SM057	4681.48	1454.23	Sungai Imbak	Sandstone	N2Tj	-	gray
58	SM058	4681.37	1454.03	Sungai Imbak	Mudstone	N2Tj	-	gray
59	SM059	4681.78	1454.03	Sungai Imbak	Diorite Porphyry	I1	argillized	gray, massive
60	SM060	4681.78	1454.24	Sungai Imbak	Diorite Porphyry	I1	argillized	gray, massive

Area: Sungai Imbak

Ser. No.	Sample No.	Coordinates N	Coordinates E	1/50,000 Topo. Sheet	Rock Name	Geol. Unit	Alteration/Mineralization	Description
61	SM061	4682.10	1454.92	Sungai Imbak	Diorite Porphyry	I1	argillized	white
62	SM062	4682.07	1454.54	Sungai Imbak	Mudstone	N2Tj	-	dark gray
63	SM063	4682.06	1454.11	Sungai Imbak	Sandstone	N2Tj	silicified	white - light gray
64	SM064	4682.38	1453.88	Sungai Imbak	Mudstone	N2Tj	-	dark gray
65	SM065	4682.41	1453.48	Sungai Imbak	Mudstone	N2Tj	silicified	dark gray
66	SM066	4682.62	1454.92	Sungai Imbak	Mudstone	N2Tj	-	dark gray
67	SM067	4682.76	1454.59	Sungai Imbak	Mudstone	N2Tj	-	dark gray
68	SM068	4682.65	1454.37	Sungai Imbak	Mudstone	N2Tj	-	dark gray
69	SM069	4682.76	1454.23	Sungai Imbak	Mudstone	N2Tj	-	dark gray
70	SM070	4682.42	1454.07	Sungai Imbak	Sandstone	N2Tj	-	light gray
71	SM071	4683.13	1454.88	Sungai Imbak	Mudstone	N2Tj	-	gray
72	SM072	4683.24	1454.66	Sungai Imbak	Mudstone	N2Tj	-	dark gray
73	SM073	4683.12	1454.08	Sungai Imbak	Mudstone	N2Tj	-	dark gray
74	SM074	4683.34	1454.22	Sungai Imbak	Mudstone	N2Tj	-	dark gray
75	SM075	4683.39	1454.87	Sungai Imbak	Mudstone	N2Tj	-	dark gray
76	SM076	4683.51	1454.53	Sungai Imbak	Mudstone	N2Tj	-	dark gray
77	SM077	4683.45	1453.99	Sungai Imbak	Mudstone	N2Tj	slightly rusty surface	dark gray, cataclastic
78	SM078	4683.74	1454.68	Sungai Imbak	Mudstone	N2Tj	-	dark gray
79	SM079	4683.92	1454.91	Sungai Imbak	Sandstone	N2Tj	slightly silicified	gray, joint
80	SM080	4683.86	1454.37	Sungai Imbak	Mudstone	N2Tj	-	dark gray

Area: Sungai Imbak

Ser. No.	Sample No.	Coordinates N	Coordinates E	1/50,000 Topo. Sheet	Rock Name	Geol. Unit	Alteration/Mineralization	Description
81	SM081	4683.99	1454.62	Sungai Imbak	Mudstone	N2Tj	-	dark gray
82	SM082	4684.21	1454.12	Sungai Imbak	Diorite Porphyry	I1	-	gray, massive
83	SM083	4684.48	1454.81	Sungai Imbak	Mudstone	N2Tj	-	dark gray
84	SM084	4684.57	1454.45	Sungai Imbak	Mudstone	N2Tj	-	dark gray
85	SM085	4684.83	1454.20	Sungai Imbak	Diorite Porphyry	I1	-	gray, massive
86	SM086	4685.18	1454.45	Sungai Imbak	Mudstone	N2Tj	-	dark gray, cataclastic
87	SM087	4685.33	1454.93	Sungai Imbak	Mudstone	N2Tj	-	dark gray
88	SM088	4685.46	1454.70	Sungai Imbak	Mudstone	N2Tj	-	dark gray
89	SM089	4685.96	1454.47	Sungai Imbak	Sandstone	N2Tj	-	gray
90	SM090	4685.83	1454.35	Sungai Imbak	Sandstone	N2Tj	-	gray
91	SM091	4679.13	1453.62	Sungai Imbak	Mudstone	N2Tj	-	gray
92	SM092	4679.33	1453.84	Sungai Imbak	Sandstone	N2Tj	-	gray, fine grained
93	SM093	4679.07	1453.50	Sungai Imbak	Sandstone	N2Tj	-	gray, fine grained
94	SM094	4679.78	1453.94	Sungai Imbak	Sandstone	N2Tj	-	gray, fine grained
95	SM095	4679.56	1453.63	Sungai Imbak	Sandstone	N2Tj	-	gray
96	SM096	4679.48	1453.45	Sungai Imbak	Sandstone	N2Tj	-	gray
97	SM097	4679.35	1453.35	Sungai Imbak	Sandstone	N2Tj	-	gray, fine grained
98	SM098	4679.74	1453.63	Sungai Imbak	Sandstone	N2Tj	-	gray
99	SM099	4679.87	1453.24	Sungai Imbak	Sandstone	N2Tj	-	gray, fine grained
100	SM100	4679.72	1453.11	Sungai Imbak	Sandstone	N2Tj	-	gray, fine grained

Area: Sungai Imbak

Ser. No.	Sample No.	Coordinates N	Coordinates E	1/50,000 Topo. Sheet	Rock Name	Geol. Unit	Alteration/Mineralization	Description
101	SM101	4680.17	1453.88	Sungai Imbak	Sandstone	N2Tj	-	light gray, fine grained
102	SM102	4680.15	1453.49	Sungai Imbak	Sandstone	N2Tj	-	gray, fine rained
103	SM103	4680.47	1453.65	Sungai Imbak	Diorite Porphyry	I1	-	gray, massive
104	SM104	4680.73	1453.79	Sungai Imbak	Mudstone	N2Tj	-	gray
105	SM105	4681.02	1453.94	Sungai Imbak	Diorite Porphyry	I1	-	gray, massive
106	SM106	4680.44	1453.40	Sungai Imbak	Sandstone	N2Tj	-	gray, fine grained
107	SM107	4680.77	1453.47	Sungai Imbak	Sandstone	N2Tj	-	dark gray, fine grained
108	SM108	4680.26	1453.17	Sungai Imbak	Mudstone	N2Tj	-	gray
109	SM109	4680.58	1453.02	Sungai Imbak	Sandstone	N2Tj	rusty surface	gray, fine grained
110	SM110	4680.81	1452.82	Sungai Imbak	Mudstone	N2Tj	-	dark gray
111	SM111	4681.02	1453.77	Sungai Imbak	Mudstone	N2Tj	-	black
112	SM112	4681.64	1453.40	Sungai Imbak	Sandstone	N2Tj	silicified	light gray - white
113	SM113	4681.44	1453.86	Sungai Imbak	Mudstone	N2Tj	-	gray
114	SM114	4681.23	1453.02	Sungai Imbak	Sandstone	N2Tj	-	gray, fine grained
115	SM115	4681.44	1453.24	Sungai Imbak	Mudstone	N2Tj	-	dark gray
116	SM116	4681.66	1453.87	Sungai Imbak	Mudstone	N2Tj	-	gray
117	SM117	4681.66	1453.66	Sungai Imbak	Mudstone	N2Tj	-	dark gray, cataclastic
118	SM118	4681.60	1453.17	Sungai Imbak	Mudstone	N2Tj	-	dark gray, massive
119	SM119	4681.78	1453.64	Sungai Imbak	Mudstone	N2Tj	-	ark gray, cataclastic
120	SM120	4681.78	1453.18	Sungai Imbak	Sandstone	N2Tj	-	light brown, massive

Area: Sungai Imbak

Ser. No.	Sample No.	Coordinates N	Coordinates E	1/50,000 Topo. Sheet	Rock Name	Geol. Unit	Alteration/Mineralization	Description
121	SM121	4682.11	1453.37	Sungai Imbak	Mudstone	N2Tj	-	dark gray
122	SM122	4682.08	1453.90	Sungai Imbak	Mudstone	N2Tj	-	dark gray
123	SM123	4682.49	1453.63	Sungai Imbak	Mudstone	N2Tj	weak Py-diss.	dark gray
124	SM124	4682.47	1452.59	Sungai Imbak	Mudstone	N2Tj	argillized	white
125	SM125	4682.55	1453.89	Sungai Imbak	Mudstone	N2Tj	weak Py-diss.	dark gray, cataclastic
126	SM126	4682.54	1453.38	Sungai Imbak	Mudstone	N2Tj	weak Py-diss.	dark gray, cataclastic
127	SM127	4682.33	1453.11	Sungai Imbak	Mudstone	N2Tj	weak Py-diss.	dark gray, cataclastic
128	SM128	4682.68	1453.92	Sungai Imbak	Mudstone	N2Tj	-	dark gray, cataclastic
129	SM129	4682.67	1453.70	Sungai Imbak	Mudstone	N2Tj	weak Py-diss.	dark gray, cataclastic
130	SM130	4682.67	1453.33	Sungai Imbak	Mudstone	N2Tj	weak Py-diss.	dark gray, cataclastic
131	SM131	4682.99	1453.67	Sungai Imbak	Mudstone	N2Tj	-	dark gray, cataclastic
132	SM132	4683.31	1453.77	Sungai Imbak	Mudstone	N2Tj	weak Py-diss.	dark gray
133	SM133	4683.27	1453.43	Sungai Imbak	Mudstone	N2Tj	weak Py-diss.	dark gray
134	SM134	4683.25	1453.21	Sungai Imbak	Diorite Porphyry	I1	weak Py-diss.	gray, Pl., Hbl. phenocryst
135	SM135	4683.61	1453.63	Sungai Imbak	Mudstone	N2Tj	-	dark gray
136	SM136	4683.59	1453.37	Sungai Imbak	Mudstone	N2Tj	-	dark gray
137	SM137	4683.56	1453.03	Sungai Imbak	Diorite Porphyry	I1	-	gray
138	SM138	4683.75	1453.62	Sungai Imbak	Mudstone	N2Tj	-	dark gray, cataclastic
139	SM139	4683.85	1453.40	Sungai Imbak	Mudstone	N2Tj	-	dark gray
140	SM140	4683.69	1453.02	Sungai Imbak	Diorite Porphyry	I1	weak Py-diss. or spot, silicified	gray, Pl., Hbl. phenocryst

Area: Sungai Imbak

Ser. No.	Sample No.	Coordinates N	Coordinates E	1/50,000 Topo. Sheet	Rock Name	Geol. Unit	Alteration/Mineralization	Description
141	SM141	4684.06	1453.90	Sungai Imbak	Diorite Porphyry	I1	-	gray
142	SM142	4683.99	1453.65	Sungai Imbak	Mudstone	N2Tj	-	dark gray
143	SM143	4684.36	1453.88	Sungai Imbak	Diorite Porphyry	I1	chloritized	gray
144	SM144	4684.53	1453.92	Sungai Imbak	Diorite Porphyry	I1	-	gray
145	SM145	4684.79	1453.87	Sungai Imbak	Diorite Porphyry	I1	-	gray
146	SM146	4684.71	1453.67	Sungai Imbak	Mudstone	N2Tj	-	dark gray
147	SM147	4684.60	1453.46	Sungai Imbak	Mudstone	N2Tj	-	dark gray
148	SM148	4684.34	1453.37	Sungai Imbak	Mudstone	N2Tj	-	dark gray
149	SM149	4681.77	1452.85	Sungai Imbak	Sandstone	N2Tj	Qtz. veinlet, wd.0.1-0.5mm	white - light brown, massive
150	SM150	4685.52	1453.95	Sungai Imbak	Mudstone	N2Tj	-	dark gray, cataclastic
151	SM151	4685.08	1453.90	Sungai Imbak	Mudstone	N2Tj	-	dark gray, fine grained
152	SM152	4685.29	1453.67	Sungai Imbak	Sandstone	N2Tj	-	dark gray, fine grained
153	SM153	4685.33	1453.40	Sungai Imbak	Mudstone	N2Tj	-	dark gray
154	SM154	4685.38	1453.05	Sungai Imbak	Mudstone	N2Tj	-	dark gray, cataclastic
155	SM155	4685.86	1453.31	Sungai Imbak	Mudstone	N2Tj	-	dark gray
156	SM156	4680.57	1452.82	Sungai Imbak	Mudstone	N2Tj	-	dark gray
157	SM157	4680.48	1452.69	Sungai Imbak	Sandstone	N2Tj	-	gray, fine grained
158	SM158	4680.94	1452.61	Sungai Imbak	Sandstone	N2Tj	-	gray, fine grained
159	SM159	4680.89	1452.43	Sungai Imbak	Sandstone	N2Tj	-	gray, fine grained
160	SM160	4681.03	1452.82	Sungai Imbak	Mudstone	N2Tj	silicified	dark gray

Area: Sungai Imbak

Ser. No.	Sample No.	Coordinates N	Coordinates E	1/50,000 Topo. Sheet	Rock Name	Geol. Unit	Alteration/Mineralization	Description
161	SM161	4681.11	1452.47	Sungai Imbak	Sandstone	I1	-	gray, fine grained
162	SM162	4681.08	1452.18	Sungai Imbak	Mudstone	N2Tj	-	dark gray
163	SM163	4681.46	1452.74	Sungai Imbak	Sandstone	N2Tj	weakly silicified	gray, massive
164	SM164	4681.28	1452.03	Sungai Imbak	Mudstone	N2Tj	Py-diss.	dark gray, massive
165	SM165	4681.53	1452.91	Sungai Imbak	Sandstone	N2Tj	weakly silicified	gray
166	SM166	4681.51	1452.58	Sungai Imbak	Diorite Porphyry	I1	argillized, Py-diss.	gray
167	SM167	4681.54	1452.06	Sungai Imbak	Mudstone	N2Tj	Py-diss.	dark gray
168	SM168	4681.78	1452.63	Sungai Imbak	Sandstone	N2Tj	silicified	white - light brown, massive
169	SM169	4682.11	1452.39	Sungai Imbak	Sandstone	N2Tj	silicified, weak Py-diss.	gray
170	SM170	4682.35	1452.79	Sungai Imbak	Diorite Porphyry	I1	argillized	light gray
171	SM171	4682.33	1452.64	Sungai Imbak	Sandstone	N2Tj	-	light gray
172	SM172	4682.37	1452.50	Sungai Imbak	Sandstone	N2Tj	silicified	light gray
173	SM173	4682.19	1452.95	Sungai Imbak	Sandstone	N2Tj	silicified	white - light gray
174	SM174	4682.58	1452.66	Sungai Imbak	Mudstone	N2Tj	silicified, weak Py-diss.	dark gray
175	SM176	4682.72	1452.41	Sungai Imbak	Sandstone	N2Tj	silicified, weak Py-diss.	gray
176	SM177	4682.92	1452.13	Sungai Imbak	Sandstone	N2Tj	silicified, Py-diss.	gray, massive
177	SM178	4683.26	1452.94	Sungai Imbak	Mudstone	N2Tj	weak Py-diss.	dark gray
178	SM179	4683.49	1452.55	Sungai Imbak	Diorite Porphyry	I1	weak Py-diss.	gray, massive
179	SM180	4683.63	1452.87	Sungai Imbak	Mudstone	N2Tj	silicified, argillized, Py-diss.	dark gray

Area: Sungai Imbak

Ser. No.	Sample No.	Coordinates N	Coordinates E	1/50,000 Topo. Sheet	Rock Name	Geol. Unit	Alteration/Mineralization	Description
180	SM181	4683.72	1452.71	Sungai Imbak	Sandstone	N2Tj	silicified, weak Py-diss.	gray
181	SM182	4682.98	1453.92	Sungai Imbak	Mudstone	N2Tj	-	gray, slightly cataclastic
182	SM183	4682.12	1453.59	Sungai Imbak	Mudstone	N2Tj	-	dark gray, cataclastic
183	SM184	4682.09	1452.26	Sungai Imbak	Sandstone	N2Tj	silicified, Py-diss.	gray, massive
184	SM185	4682.07	1452.11	Sungai Imbak	Sandstone	N2Tj	Py. veinlet, 1-2mm	gray, massive
185	SM186	4681.54	1452.32	Sungai Imbak	Sandstone	N2Tj	weakly silicified	gray, massive
186	SM187	4682.98	1453.41	Sungai Imbak	Mudstone	N2Tj	-	gray
187	SM188	4682.99	1453.24	Sungai Imbak	Sandstone	N2Tj	-	gray - light gray
188	SM189	4681.22	1454.16	Sungai Imbak	Mudstone	N2Tj	-	dark gray
189	SM190	4681.99	1452.24	Sungai Imbak	Mudstone	N2Tj	silicified, argillized	gray
190	SM191	4685.65	1453.24	Sungai Imbak	Mudstone	N2Tj	-	dark gray, cataclastic
191	SM192	4680.37	1454.76	Sungai Imbak	Sandstone	N2Tj	-	gray, fine grained
192	SM193	4681.17	1452.76	Sungai Imbak	Mudstone	N2Tj	silicified	dark gray
193	SM194	4680.42	1453.94	Sungai Imbak	Sandstone	N2Tj	-	gray, fine grained
194	SM195	4680.60	1453.20	Sungai Imbak	Sandstone	N2Tj	-	gray, fine grained
195	SM196	4679.55	1453.96	Sungai Imbak	Sandstone	N2Tj	-	gray, fine grained
196	SM197	4681.38	1452.55	Sungai Imbak	Mudstone	N2Tj	-	dark gray
197	SM198	4682.70	1455.82	Sungai Imbak	Mudstone	N2Tj	-	dark gray
198	SM199	4680.92	1453.32	Sungai Imbak	Mudstone	N2Tj	-	dark gray
199	SM200	4684.23	1454.47	Sungai Imbak	Mudstone	N2Tj	-	dark gray

Area: Sungai Imbak

Ser. No.	Sample No.	Coordinates N	Coordinates E	1/50,000 Topo. Sheet	Rock Name	Geol. Unit	Alteration/Mineralization	Description
200	SM201	4682.09	1453.13	Sungai Imbak	Sandstone	N2Tj	silicified, weak Py-diss.	dark gray
201	SM202	4682.08	1452.82	Sungai Imbak	Sandstone	N2Tj	silicified, weak Py-diss.	gray

Appendix 3

Analytical results of rock geochemical samples in S. Imbak Sub-area

List of Geochemical Analysis(1)

Ser. No.	Sample No.	Location(km) X-coord	Location(km) Y-coord	Ag ppm	As ppm	Au ppb	Ca %	Cu ppm	Hg ppb	K %	Mg %	Na %	Pb ppm	Rb ppm	S %	Sb ppm	Sr ppm	Zn ppm
1	SM001	4679.297	1455.780	.57	11	1>	.12	15	10>	.63	.72	1.23	14	52	.117	4.5	82	98
2	SM002	4679.726	1455.695	.62	1>	1>	.33	11	10>	.64	.55	1.02	13	55	.098	2.6	66	59
3	SM003	4679.983	1455.541	.50	7	1>	.08	12	10>	.72	.52	1.15	10	56	.252	2.3	68	56
4	SM004	4679.392	1455.560	.53	13	1>	.01>	10	35	.67	.25	.06	18	60	.020	3.1	34	39
5	SM005	4680.025	1455.326	.72	33	1>	.05	23	15	.99	.55	1.13	23	88	.041	4.7	82	50
6	SM006	4680.216	1455.598	.68	2	1>	.18	14	22	.73	.60	1.01	22	64	.218	.2>	67	55
7	SM007	4680.361	1455.433	.55	9	1>	.16	13	12	.69	.55	.97	14	59	.184	5.9	65	51
8	SM008	4680.811	1455.515	.56	18	1>	1.34	18	37	.77	.97	.99	27	69	.557	4.4	85	72
9	SM009	4680.870	1455.162	.43	9	1>	.18	29	31	1.17	1.21	1.04	32	109	.553	6.0	87	95
10	SM010	4680.559	1455.037	.48	6	1>	.03	12	10>	.54	.33	.94	8	44	.040	1.5	56	41
11	SM011	4681.296	1455.276	.50	2	1>	.29	24	26	1.18	1.24	1.09	15	108	.347	2.2	85	86
12	SM012	4681.713	1455.388	.40	1>	1>	.06	14	10>	.63	.53	1.06	11	55	.052	5.8	55	58
13	SM013	4682.374	1454.209	.37	9	1>	.06	30	33	1.21	.82	1.21	25	114	.332	5.1	62	102
14	SM014	4681.381	1455.107	.32	19	1>	.09	32	37	1.23	1.12	1.01	29	121	.827	7.4	82	99
15	SM015	4681.748	1455.262	.57	5	1>	.19	13	10>	.66	.57	.98	13	61	.379	5.8	54	60
16	SM016	4682.489	1455.549	.45	9	1	.05	29	24	1.06	.93	1.12	31	99	.401	2.3	77	113
17	SM017	4682.263	1455.349	.44	13	1>	.02	31	25	1.10	.79	1.05	25	101	.473	4.0	78	146
18	SM018	4682.146	1455.069	.29	16	1>	.05	35	43	1.40	1.34	.86	33	138	1.106	2.3	77	122
19	SM019	4682.723	1455.596	.32	21	1>	.26	25	40	1.42	1.48	.85	30	138	.420	11.1	84	110
20	SM020	4682.636	1455.113	.48	2	1>	.09	34	62	1.40	.96	1.01	34	146	.583	3.4	79	116
21	SM021	4682.923	1455.082	.64	130	1>	.01	16	10>	1.53	.25	.23	20	187	.055	6.8	23	18
22	SM022	4683.063	1455.691	.43	19	1>	.31	24	33	1.23	1.48	.75	23	127	.158	7.3	86	116
23	SM023	4682.998	1455.487	.33	6	1>	.05	12	16	.44	.57	.73	13	42	.083	5.0	46	61
24	SM024	4683.403	1455.324	.40	12	1>	.85	9	10>	.24	.49	.53	10	20	.163	2.7	36	43
25	SM025	4683.169	1455.040	.24	4	1	.02	26	23	1.26	1.47	.77	32	124	1.638	3.2	73	143
26	SM026	4683.867	1455.116	.43	32	3	.75	13	53	.49	.55	.75	18	44	.376	4.6	56	69
27	SM027	4684.108	1455.460	.28	2	1>	.31	28	24	1.32	1.46	.79	25	118	.163	5.8	80	117
28	SM028	4684.433	1455.598	.32	6	1>	.20	25	34	1.26	1.36	.83	21	123	.126	5.7	79	107
29	SM029	4684.991	1455.880	.34	11	1>	.17	23	34	1.28	1.23	.75	24	128	.278	1.5	79	101
30	SM030	4684.751	1455.531	.30	10	1>	.16	27	30	1.36	1.35	.73	21	141	.296	6.1	78	120
31	SM031	4684.803	1455.241	.43	19	1>	.08	27	35	1.25	1.13	.84	23	135	.318	6.0	74	115
32	SM032	4685.172	1455.494	.51	1>	1	.28	19	338	1.17	.95	.77	20	121	.144	4.3	127	79
33	SM033	4685.273	1455.030	.33	8	1>	.05	25	33	.76	.89	.76	31	81	.306	5.4	81	97
34	SM034	4685.290	1455.368	.27	29	1>	.31	23	99	1.16	1.24	.63	27	134	.207	3.7	95	85
35	SM035	4685.512	1455.722	.27	9	1>	.28	36	24	.97	1.15	.66	41	98	.089	5.7	122	136
36	SM036	4685.788	1455.779	.22	23	1>	.18	14	22	1.01	.90	.34	33	104	.019	1.4	113	76
37	SM037	4679.852	1454.589	.36	3	1>	.17	23	24	.59	1.03	.98	22	57	.327	3.7	86	85
38	SM038	4679.730	1454.322	.46	2	1>	.07	11	11	.34	.48	.85	13	30	.065	5.4	59	48
39	SM039	4679.708	1454.189	.31	20	1>	.16	22	17	.51	1.10	.99	19	50	.246	3.6	88	82
40	SM040	4680.075	1454.465	.41	9	1>	.25	12	20	.39	.62	.97	12	37	.065	3.5	67	53
41	SM041	4680.426	1454.534	.46	12	1>	.07	36	61	1.05	1.03	.88	22	120	.934	5.1	85	111
42	SM042	4680.692	1454.654	.40	20	1>	.06	29	120	1.05	.86	.86	28	120	.595	2.2	90	174
43	SM043	4680.914	1454.766	.28	10	1>	.18	24	28	.49	.98	.95	23	50	.616	4.4	88	84
44	SM044	4680.793	1454.726	.50	1>	1>	.23	15	10	.66	.85	.85	15	73	.197	3.0	71	63
45	SM045	4680.574	1454.480	.46	9	1>	.13	11	10>	.40	.59	.85	13	39	.045	7.1	65	48
46	SM046	4680.353	1454.252	.48	19	1>	.15	30	51	.74	1.30	.67	28	81	.589	8.5	91	110
47	SM047	4680.113	1454.036	.40	8	1>	.20	18	11	.44	.91	.91	15	43	.214	1.8	80	69
48	SM048	4680.627	1454.062	.26	23	1>	.20	29	255	.94	1.17	.73	24	118	1.108	3.0	118	106
49	SM049	4680.846	1454.097	.35	22	1>	.20	33	228	.80	1.32	.70	29	95	.832	4.9	99	101
50	SM050	4681.082	1454.766	.27	14	1>	.20	30	46	.59	1.05	.91	32	66	.922	1.2	87	93

List of Geochemical Analysis(2)

Ser. No.	Sample No.	Location (km) X-coord	Location (km) Y-coord	Ag ppm	As ppm	Au ppb	Ca %	Cu ppm	Hg ppb	K %	Mg %	Na %	Pb ppm	Rb ppm	S %	Sb ppm	Sr ppm	Zn ppm
51	SM051	4681.191	1454.725	.51	5	1>	.27	25	23	.89	1.18	.95	17	105	.566	6.4	83	90
52	SM052	4680.992	1454.169	.52	20	1>	.14	25	97	1.15	.59	.87	28	143	.740	4.1	106	114
53	SM053	4681.230	1454.324	.49	14	1>	.20	26	46	1.11	.89	.81	27	130	.660	2.9	111	87
54	SM054	4681.502	1454.616	.37	7	1>	.22	20	31	.94	1.07	.87	21	108	.444	2.0	74	81
55	SM055	4681.669	1455.031	.39	6	1>	.24	23	24	1.13	1.04	.88	16	131	.524	5.3	96	85
56	SM056	4679.987	1453.724	.47	14	1>	.08	10	10>	.52	.33	.81	11	52	.081	3.4	68	54
57	SM057	4681.479	1454.233	.43	6	1>	.69	10	10>	.37	.76	.41	14	41	.138	4.3	68	53
58	SM058	4681.368	1454.032	.41	24	1>	.16	30	156	1.12	.99	.15	22	135	.635	6.3	97	85
59	SM059	4681.776	1454.030	.45	4	1>	2.26	10	42	.76	.31	2.01	26	54	.030	3.8	293	55
60	SM060	4681.777	1454.242	.52	9	1>	.25	1>	16	1.09	.19	1.35	30	111	.012	.6	175	59
61	SM061	4682.103	1454.921	.38	1	1>	.74	2	10>	.32	.30	4.20	26	14	.042	1.9	60	114
62	SM062	4682.069	1454.538	.48	17	1>	.03	40	40	1.05	.72	.73	30	126	.303	.2>	77	120
63	SM063	4682.065	1454.110	.43	9	1	.01>	4	10>	.06	.01>	.02	3	2	.012	3.4	4	17
64	SM064	4682.377	1453.882	.48	20	1>	.08	28	24	1.06	.71	.93	21	115	.507	.5	58	141
65	SM065	4682.411	1453.484	.35	127	15	.01>	9	10>	.76	.23	.12	16	130	.010	11.7	31	11
66	SM066	4682.620	1454.924	.21	14	1>	.29	26	10>	.88	1.03	.84	23	97	.560	1.4	82	94
67	SM067	4682.759	1454.586	.47	154	1	.01>	13	10>	.29	.04	.04	9	43	.013	4.0	5	11
68	SM068	4682.650	1454.375	.56	10	1>	.01>	3	10>	.11	.03	.03	11	6	.009	4.4	8	7
69	SM069	4682.755	1454.228	16.53	68	47	.01>	33	46	.47	.09	.07	15	68	.202	16.7	12	11
70	SM070	4682.418	1454.071	.82	132	7	.02	10	14	.38	.54	.23	86	38	.012	12.5	19	10
71	SM071	4683.133	1454.877	.74	20	1>	.16	24	21	1.18	1.03	.74	25	95	.180	3.7	68	98
72	SM072	4683.238	1454.662	1.27	135	21	.01	139	47	.43	.47	.04	16	48	3.895	11.8	8	34
73	SM073	4683.118	1454.081	.48	18	1>	.94	17	18	1.53	1.22	.83	20	108	.461	4.0	68	81
74	SM074	4683.337	1454.216	.35	21	1>	.08	24	10>	1.42	1.30	.68	24	117	.028	.2	69	100
75	SM075	4683.387	1454.868	.53	4	1	.01>	3	10>	.36	.03	.02	12	38	.015	1.8	8	6
76	SM076	4683.506	1454.525	.43	12	1>	.10	24	37	1.24	.68	.65	23	110	.112	.2>	70	55
77	SM077	4683.449	1453.994	.28	12	1>	.10	21	13	.83	1.01	.66	20	73	.022	.2>	50	64
78	SM078	4683.740	1454.683	.39	17	1>	.26	20	50	1.39	1.24	.61	33	107	.262	.5	66	75
79	SM079	4683.921	1454.909	.38	12	1>	.07	5	18	.21	.23	.53	13	15	.266	1.8	24	24
80	SM080	4683.856	1454.365	.36	21	1	.16	23	22	1.71	1.21	.68	26	110	.015	.2>	72	88
81	SM081	4683.991	1454.619	.46	16	1>	.36	18	50	1.24	1.14	.58	21	112	.303	3.5	65	99
82	SM082	4684.209	1454.125	.32	1>	1>	4.53	81	10>	.73	2.35	2.01	24	51	.054	7.9	507	68
83	SM083	4684.478	1454.812	.45	4	1>	.25	25	33	.68	1.48	.71	21	53	.240	.7	74	101
84	SM084	4684.571	1454.453	.45	13	1>	.18	25	10>	1.35	1.36	.76	26	108	.210	3.3	73	106
85	SM085	4684.827	1454.198	.39	2	1>	4.12	81	10>	.75	2.36	2.35	25	52	.046	8.7	558	88
86	SM086	4685.181	1454.454	.37	18	2	.08	25	54	1.45	.97	.83	27	128	.187	3.1	64	116
87	SM087	4685.331	1454.927	.42	15	1>	.08	30	24	1.60	1.12	.71	27	150	.406	.2	80	117
88	SM088	4685.460	1454.702	.47	6	1>	.18	21	633	1.90	1.01	.46	25	133	.189	1.2	79	90
89	SM089	4685.961	1454.471	.48	5	1>	.49	11	44	.79	.72	1.93	6	49	.034	4.0	72	38
90	SM090	4685.826	1454.346	.43	1>	1>	.13	13	11	.68	1.14	1.38	13	42	.012	2.8	56	60
91	SM091	4679.128	1453.624	.52	5	1>	.15	22	30	.62	.76	.66	16	44	.356	.2	68	51
92	SM092	4679.330	1453.840	.48	1>	1>	.07	10	10>	.49	.29	.58	10	36	.042	.8	62	36
93	SM093	4679.065	1453.496	.76	4	1>	.25	17	10>	.59	.99	.88	21	43	.416	.2>	78	61
94	SM094	4679.782	1453.942	.47	8	1>	.07	16	10>	.92	.55	1.12	17	63	.152	.2>	78	58
95	SM095	4679.565	1453.633	.66	15	1>	.12	18	10>	.74	.63	.92	17	56	.372	2.1	91	63
96	SM096	4679.477	1453.452	.49	4	1>	.15	18	29	.76	.77	.85	17	62	.182	.8	79	63
97	SM097	4679.354	1453.354	.39	16	1>	.10	20	51	1.03	.72	.81	14	88	.376	.2	74	67
98	SM098	4679.735	1453.635	.44	1>	1>	.08	15	10>	.48	.53	.70	13	34	.209	.6	80	51
99	SM099	4679.872	1453.241	.44	6	1>	.09	11	10>	.68	.41	.66	12	48	.086	.2	63	41
100	SM100	4679.719	1453.108	.48	18	1>	.19	19	12	.99	.92	1.02	19	76	.272	.2>	88	71

List of Geochemical Analysis(3)

Ser. No.	Sample No.	Location(km) X-coord	Y-coord	Ag ppm	As ppm	Au ppb	Ca %	Cu ppm	Hg ppb	K %	Mg %	Na %	Pb ppm	Rb ppm	S %	Sb ppm	Sr ppm	Zn ppm
101	SM101	4680.170	1453.880	.32	2	1>	.01>	7	94	.43	.08	.42	6	32	.018	.2>	78	26
102	SM102	4680.149	1453.495	.50	8	26	.01>	8	41	.43	.11	.11	8	34	.021	2.3	43	30
103	SM103	4680.473	1453.647	.56	1>	4	5.58	86	94	1.61	2.51	1.50	16	143	.088	4.9	525	81
104	SM104	4680.732	1453.795	.50	11	2	.16	15	10>	.84	.52	.67	10	71	.221	1.9	86	53
105	SM105	4681.019	1453.940	.75	7	1>	4.29	70	82	1.77	2.13	2.03	22	121	.062	7.9	476	86
106	SM106	4680.437	1453.398	.51	9	1>	.13	12	10>	.77	.46	1.02	6	52	.171	1.8	77	47
107	SM107	4680.769	1453.470	.43	8	1>	.09	15	10>	1.20	.44	1.03	16	90	.128	2.1	97	73
108	SM108	4680.263	1453.169	.46	1>	1>	.13	21	20	1.45	.72	1.20	16	106	.323	4.0	89	62
109	SM109	4680.583	1453.017	.62	4	1>	.05	8	10>	.45	.21	.52	10	38	.072	.2	41	36
110	SM110	4680.806	1452.825	.47	17	1>	.05	16	10>	1.15	.36	.50	14	110	.160	19.3	46	60
111	SM111	4681.016	1453.769	.43	17	1>	.24	19	71	1.06	.96	.42	7	102	.233	1.6	112	58
112	SM112	4681.644	1453.399	.31	33	1>	.68	2	10>	.59	.27	3.62	28	30	.025	3.4	138	127
113	SM113	4681.444	1453.858	.51	3	1>	.29	25	99	1.40	.97	.72	24	119	.950	2.9	107	67
114	SM114	4681.229	1453.020	.46	13	1>	.06	8	10>	.70	.43	.68	15	70	.070	7.3	33	39
115	SM115	4681.442	1453.235	1.41	23	5	.06	27	10>	1.88	.50	.65	25	217	1.083	17.4	39	93
116	SM116	4681.655	1453.875	.34	10	1>	.27	28	37	1.83	1.06	.98	20	161	.631	3.4	110	74
117	SM117	4681.660	1453.655	.43	3	1>	.35	16	10>	.86	1.05	.74	11	69	.421	3.4	75	53
118	SM118	4681.595	1453.167	.56	19	1>	.08	22	16	1.64	.76	1.08	19	149	.342	10.3	57	76
119	SM119	4681.785	1453.640	.34	3	1>	.29	27	10>	1.61	.98	.99	20	147	.481	2.3	86	73
120	SM120	4681.780	1453.184	.52	12	1>	.02	9	24	.84	.24	.82	11	71	.015	1.1	41	32
121	SM121	4682.107	1453.372	.35	17	1>	.05	21	10>	1.40	.60	.67	10	132	.456	2.9	40	59
122	SM122	4682.077	1453.898	.31	9	1>	.06	29	41	1.44	.80	.81	39	131	1.665	.2>	70	98
123	SM123	4682.489	1453.635	.23	29	1>	.34	29	10>	1.34	.92	2.63	19	131	.023	.2>	117	593
124	SM124	4682.465	1452.592	.44	52	6	.01>	19	10>	2.23	.39	.17	36	201	.042	.2>	45	44
125	SM125	4682.553	1453.891	.44	1>	1>	2.51	254	10>	.66	2.46	.49	27	44	3.011	5.5	78	119
126	SM126	4682.539	1453.380	.45	12	1	.14	56	10>	2.12	1.18	.88	21	200	1.523	4.8	74	107
127	SM127	4682.330	1453.106	1.23	16	1	.01	103	10>	.37	1.12	.03	156	37	2.423	.7	5	41
128	SM128	4682.676	1453.921	.30	10	1>	.11	30	34	1.58	1.10	.83	17	152	.488	4.0	75	109
129	SM129	4682.668	1453.700	.31	14	1>	.07	92	49	.10	1.85	.09	13	9	6.502	.9	11	78
130	SM130	4682.671	1453.332	1.19	209	2	.54	374	150	1.23	1.52	.40	27	117	11.154	2.7	50	1001
131	SM131	4682.994	1453.668	.41	15	41	.07	13	21	1.01	.55	.67	10	68	.278	1.6	46	50
132	SM132	4683.308	1453.770	.28	9	1>	.05	8	10>	.98	.50	.58	7	37	.030	.5	36	59
133	SM133	4683.267	1453.431	.32	13	1>	.35	124	10	.17	1.79	.19	14	12	.618	1.8	36	140
134	SM134	4683.248	1453.209	.40	12	2	2.51	74	10	1.61	.84	2.15	28	36	.038	7.3	441	84
135	SM135	4683.605	1453.631	.35	18	1>	.01>	33	41	1.15	.77	.57	22	134	.052	.2>	41	48
136	SM136	4683.589	1453.366	.39	5	1>	.10	23	22	1.16	.82	.71	28	125	.139	3.5	50	89
137	SM137	4683.556	1453.031	.50	6	3	2.85	47	92	1.34	1.34	1.61	24	164	.037	6.2	449	85
138	SM138	4683.751	1453.618	.44	9	1>	.04	26	75	1.34	.72	.25	23	121	.013	.2>	40	57
139	SM139	4683.846	1453.401	.46	15	1>	.10	16	34	.79	.71	.71	15	92	.309	.2>	54	64
140	SM140	4683.693	1453.018	.56	33	1>	.46	35	15	1.11	.80	1.24	171	55	.117	3.6	203	258
141	SM141	4684.061	1453.904	.23	1>	1>	4.79	118	10>	3.78	2.26	3.00	22	150	.048	3.1	570	54
142	SM142	4683.987	1453.652	.30	1>	1>	.07	24	28	1.62	.55	.48	17	37	.014	3.0	37	77
143	SM143	4684.356	1453.875	.32	1>	1>	4.45	61	22	2.75	2.20	2.76	15	85	.047	5.5	530	55
144	SM144	4684.535	1453.925	.34	1>	1>	4.62	171	31	2.83	1.77	2.65	18	35	.050	2.6	514	76
145	SM145	4684.788	1453.871	.33	1>	1>	4.34	62	19	2.09	1.68	2.04	22	36	.043	9.6	466	54
146	SM146	4684.709	1453.667	.46	1>	1>	.10	32	19	1.25	.76	.50	19	27	.067	1.4	33	72
147	SM147	4684.601	1453.461	.28	6	1>	.01>	30	32	1.16	.60	.42	23	47	.045	.2>	25	75
148	SM148	4684.342	1453.369	.31	12	1>	.01	34	22	1.74	.61	.47	36	43	.015	.2	34	86
149	SM149	4681.774	1452.849	.44	263	27	.01>	21	42	1.28	.15	.08	369	94	.014	8.5	10	19
150	SM150	4685.518	1453.954	.45	11	1>	.24	33	70	1.96	1.10	.79	17	81	.189	1.9	73	91

List of Geochemical Analysis(4)

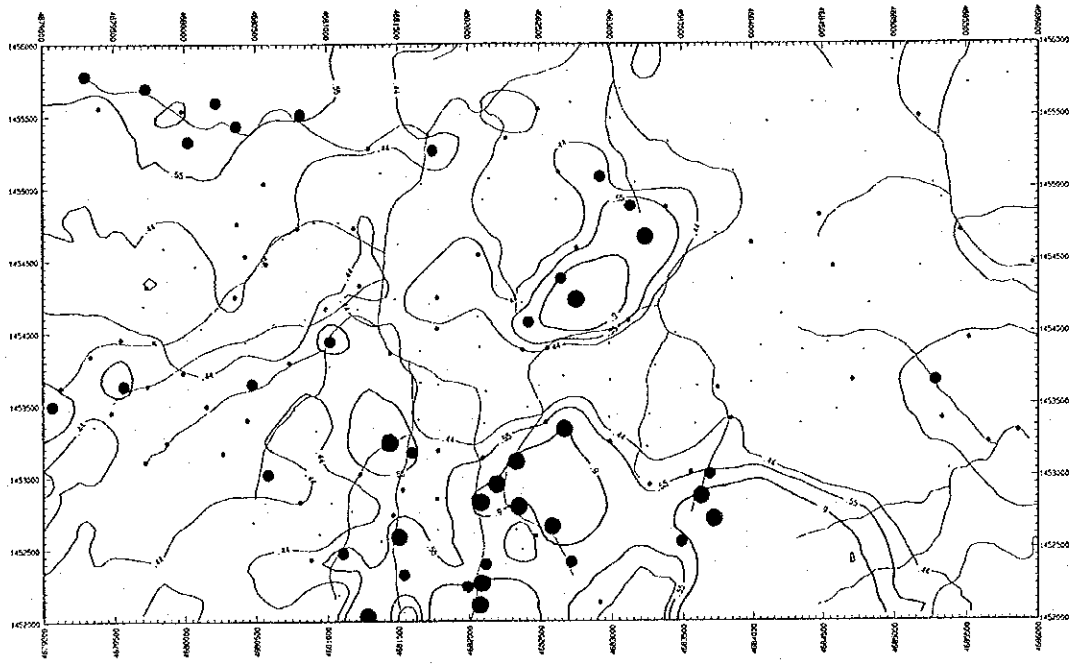
Ser. No.	Sample No.	Location(km) X-coord	Location(km) Y-coord	Ag ppm	As ppm	Au ppb	Ca %	Cu ppm	Hg ppb	K %	Mg %	Na %	Pb ppm	Rb ppm	S %	Sb ppm	Sr ppm	Zn ppm
151	SM151	4685.084	1453.902	.40	16	2	.07	28	37	2.62	1.23	.74	18	146	.124	.3	67	104
152	SM152	4685.286	1453.665	.55	23	1	.29	9	130	.45	.27	.52	36	34	2.290	.7	30	39
153	SM153	4685.331	1453.403	.48	18	1	.28	27	29	3.19	1.60	.95	31	160	.302	4.9	89	111
154	SM154	4685.379	1453.050	.40	1>	1	.22	25	26	2.70	1.41	.93	22	191	.184	.2>	79	110
155	SM155	4685.859	1453.313	.45	2	1>	.30	25	39	2.61	1.41	.79	20	207	.120	.2>	112	92
156	SM156	4680.565	1452.821	.37	1>	1>	.19	21	30	1.82	1.03	1.28	24	143	.336	.4	94	73
157	SM157	4680.477	1452.687	.41	1>	1>	.11	15	19	1.14	.61	.96	14	95	.204	.2>	71	52
158	SM158	4680.943	1452.605	.27	1>	1>	.03	8	10>	.56	.37	.82	10	39	.041	.2>	37	41
159	SM159	4680.885	1452.429	.53	1>	1>	.04	13	16	1.07	.56	1.15	13	77	.083	.2>	64	57
160	SM160	4681.027	1452.824	.34	21	1	.12	24	16	1.94	1.02	1.22	20	111	.206	1.1	63	79
161	SM161	4681.108	1452.469	.69	184	3	.01>	10	10	1.18	.16	.05	127	110	.180	1.8	29	35
162	SM162	4681.075	1452.182	.35	2	1>	.07	33	38	2.59	1.23	1.01	17	194	.826	.2>	54	104
163	SM163	4681.463	1452.737	.45	1>	1>	.07	11	10>	.97	.53	1.25	12	57	.192	1.2	53	41
164	SM164	4681.283	1452.035	1.02	98	22	.14	10	61	.73	.25	.10	12	54	1.354	6.2	58	93
165	SM165	4681.532	1452.913	.45	1>	3	1.16	10	16	1.25	.67	1.03	11	79	.363	6.7	112	47
166	SM166	4681.505	1452.583	1.09	563	19	.02	85	2289	4.21	.17	.23	19	319	5.582	.2>	188	15
167	SM167	4681.539	1452.064	.37	41	6	.08	10	13	2.30	.96	1.35	23	163	1.843	2.7	64	60
168	SM168	4681.776	1452.635	.35	263	16	.01>	20	23	1.25	.09	.06	40	123	.034	5.9	12	29
169	SM169	4682.114	1452.394	.64	30	1>	.01>	98	10	2.18	.23	.33	18	165	.616	.2>	31	28
170	SM170	4682.346	1452.794	.95	88	1>	.05	52	10>	3.51	.28	2.00	87	228	.376	.9	68	399
171	SM171	4682.328	1452.635	.39	111	6	.01>	15	10>	1.46	.18	.10	152	119	.022	9.6	18	17
172	SM172	4682.373	1452.502	.40	87	1>	.01>	14	10	1.63	.16	.07	11	141	.015	.7	31	11
173	SM173	4682.191	1452.948	1.00	10	14	.01>	11	17	.11	.01>	.02	15	9	.018	7.4	14	4
174	SM174	4682.584	1452.657	2.95	13675	4910	.01>	505	210	1.33	.18	.03	22	148	3.944	59.9	48	61
175	SM176	4682.716	1452.410	.61	166	49	.04	51	10>	1.21	.30	.63	3	90	.512	.2>	28	93
176	SM177	4682.916	1452.130	.45	14	169	.01	35	10>	1.51	.38	.17	4	122	.391	.2>	16	24
177	SM178	4683.265	1452.944	.45	37	2	.04	33	10>	1.50	.71	1.06	10	107	.246	.2>	50	76
178	SM179	4683.486	1452.548	.61	21	3	1.89	75	10>	2.77	2.09	2.09	15	132	.030	4.4	350	167
179	SM180	4683.631	1452.865	1.04	459	262	.06	28	24	3.24	.50	.14	2250	208	.406	1.7	24	2950
180	SM181	4683.723	1452.706	12.61	1337	167	.01	76	77	1.04	.15	.09	5846	107	.973	2.1	10	819
181	SM182	4682.984	1453.923	.31	12	1	.05	17	10>	2.04	.85	1.54	22	122	.138	.2>	59	80
182	SM183	4682.118	1453.593	.32	10	8	.29	22	28	2.21	1.08	1.04	15	136	.484	1.2	48	80
183	SM184	4682.088	1452.262	.96	21	5	.02	71	13	1.95	.26	.09	31	159	.758	.2>	20	43
184	SM185	4682.074	1452.114	17.37	9773	6920	.01>	57	816	2.88	.27	.09	51	249	1.892	17.2	26	195
185	SM186	4681.540	1452.321	.67	27	4	.01	8	12	.71	.25	.72	22	48	.078	.2>	23	37
186	SM187	4682.983	1453.411	.30	16	12	.01>	23	24	2.13	.73	.77	4	140	.017	.2>	51	73
187	SM188	4682.989	1453.243	.53	20	1>	.01>	15	12	1.43	.16	.08	9	95	.018	.2>	10	35
188	SM189	4681.220	1454.163	.38	2	1	.57	26	161	2.18	1.17	.16	12	115	.228	.2	74	58
189	SM190	4681.988	1452.239	.56	657	18	.01>	21	96	2.53	.16	.13	427	191	.020	5.7	18	29
190	SM191	4685.648	1453.235	.53	8	3	.05	30	58	1.66	.59	1.31	28	75	.361	1.2	59	65
191	SM192	4680.367	1454.758	.54	1>	2	2.64	16	30	1.36	1.42	1.10	16	73	.129	4.6	76	53
192	SM193	4681.172	1452.763	.41	18	1>	.08	35	31	3.57	1.13	1.14	20	104	.411	1.4	47	109
193	SM194	4680.424	1453.937	.43	10	1>	.23	14	21	1.06	.45	1.08	14	32	.841	2.6	86	47
194	SM195	4680.604	1453.196	.41	32	1>	.01>	16	57	1.20	.17	.06	6	49	.029	28.2	56	43
195	SM196	4679.546	1453.958	.53	1>	1>	2.04	12	10>	.78	.92	.87	12	36	.295	8.3	69	29
196	SM197	4681.378	1452.555	.37	16	1>	.03	17	21	1.81	.53	1.01	8	72	.141	1.6	40	49
197	SM198	4682.701	1455.815	.30	1>	1>	.33	29	28	3.29	1.36	.92	13	99	.261	.2>	72	82
198	SM199	4680.923	1453.321	.36	2	3	.12	19	50	2.07	.75	.39	15	88	.266	2.7	71	55
199	SM200	4684.228	1454.470	.30	1>	1>	.18	25	82	3.09	1.34	.80	18	90	.089	.2>	58	82
200	SM201	4682.094	1453.132	.48	14	1>	.59	9	10	.45	.69	.80	14	48	.087	6.7	74	80

List of Geochemical Analysis(5)

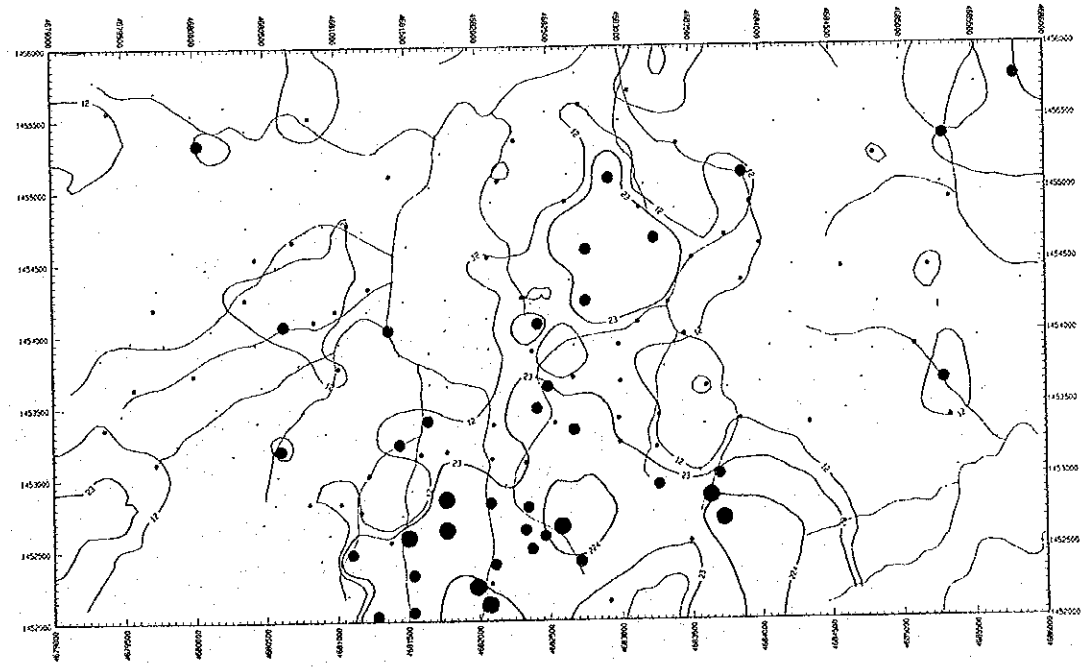
Ser. No.	Sample No.	Location(km) X-coord	Location(km) Y-coord	Ag ppm	As ppm	Au ppb	Ca %	Cu ppm	Hg ppb	K %	Mg %	Na %	Pb ppm	Rb ppm	S %	Sb ppm	Sr ppm	Zn ppm
201	SM202	4682.083	1452.823	1.34	100	35	.01>	40	34	1.18	.27	.05	336	153	.671	.2>	40	124

Appendix 4

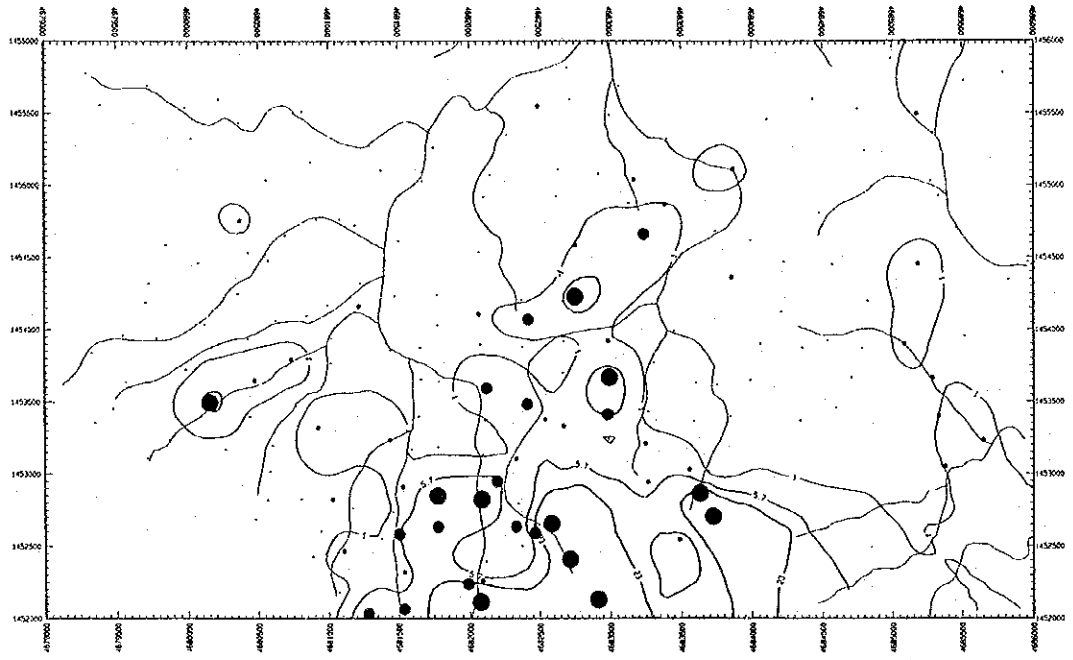
Distribution map of elements in S. Imbak Sub-area

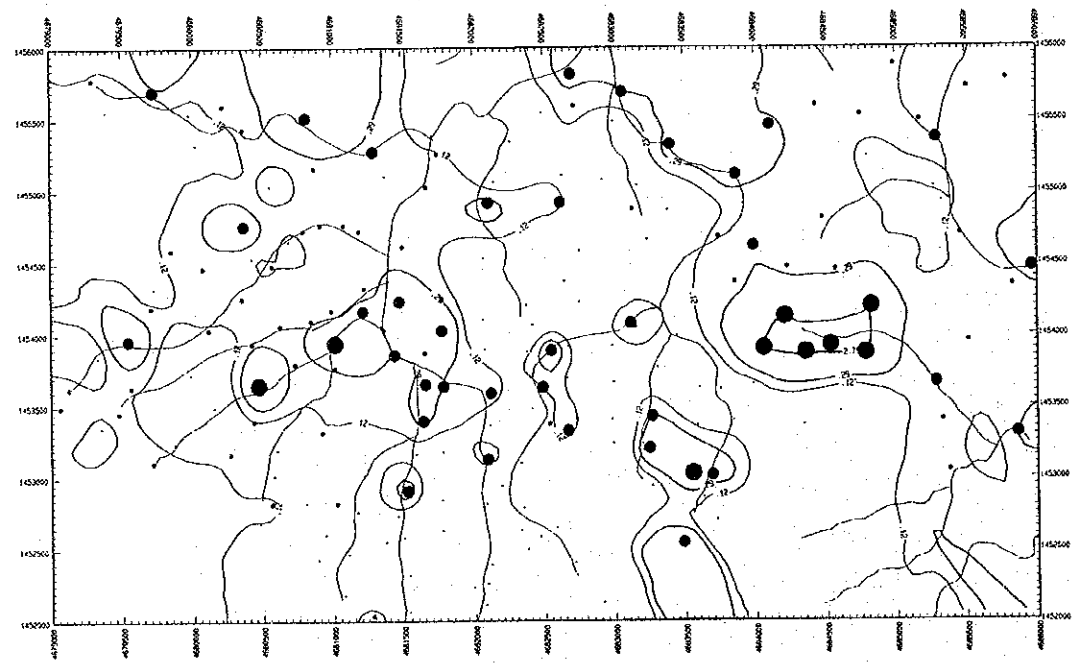


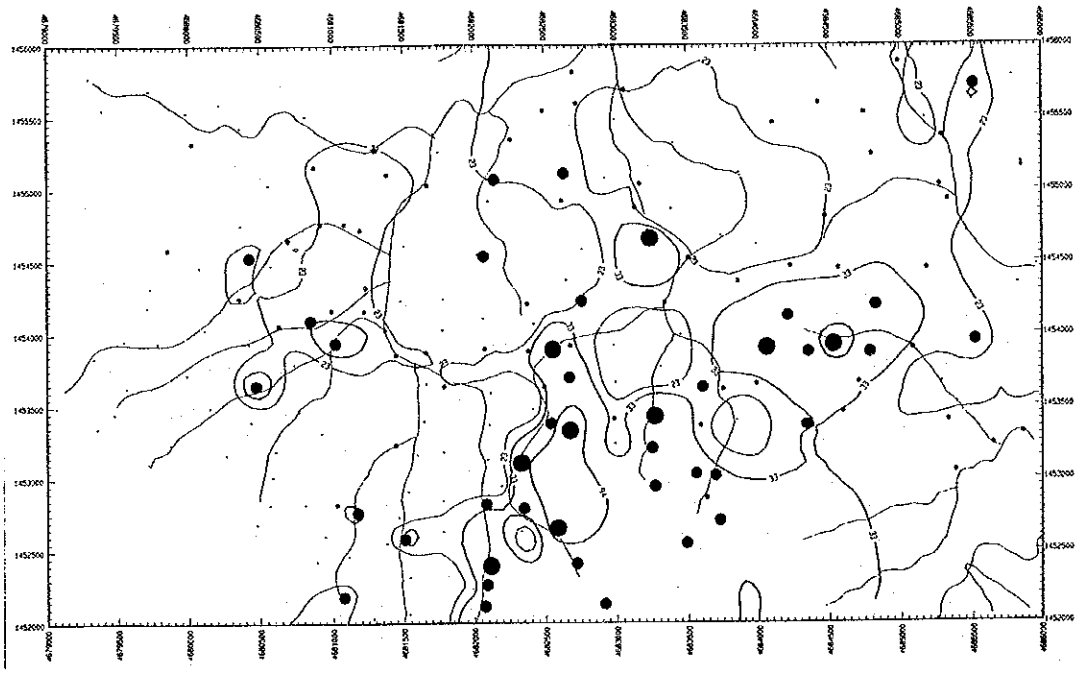
Ag

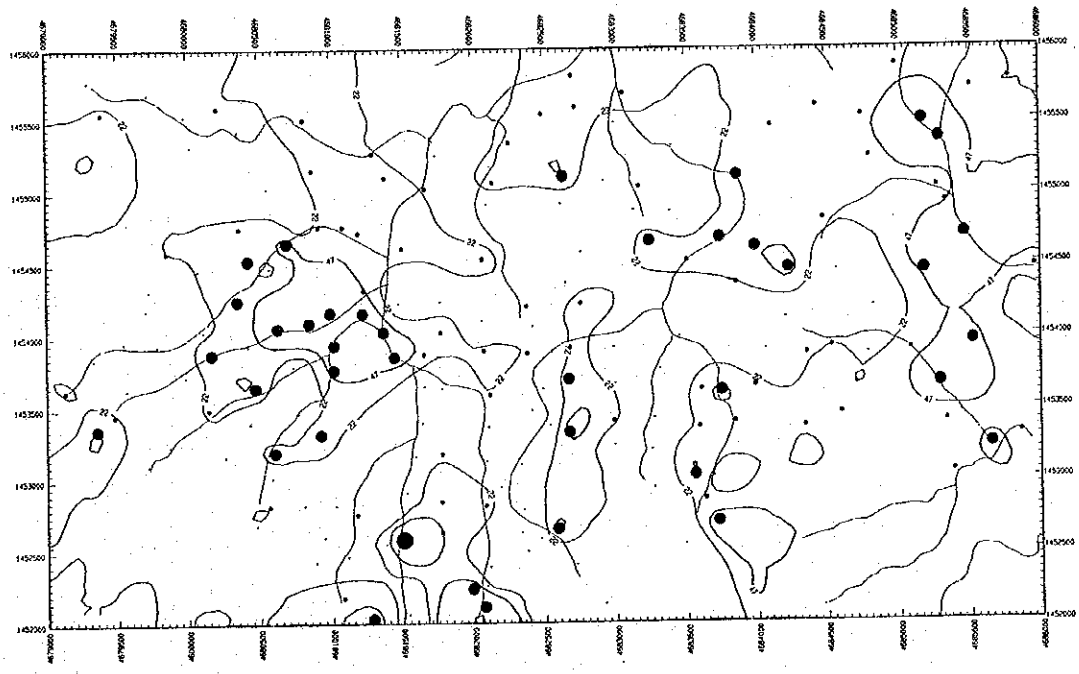


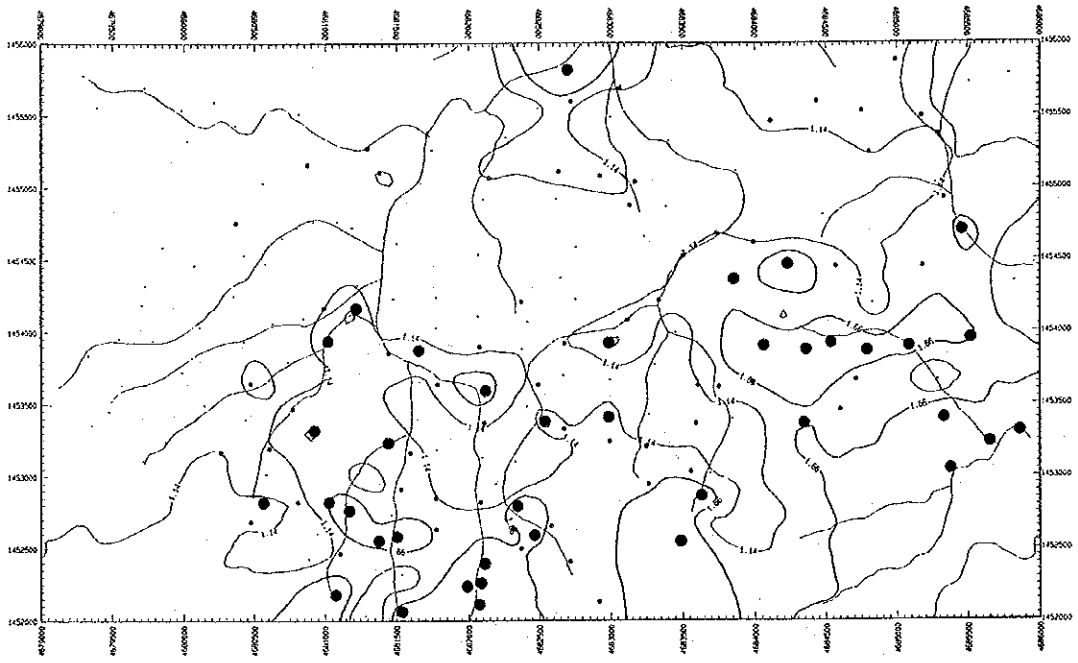
As

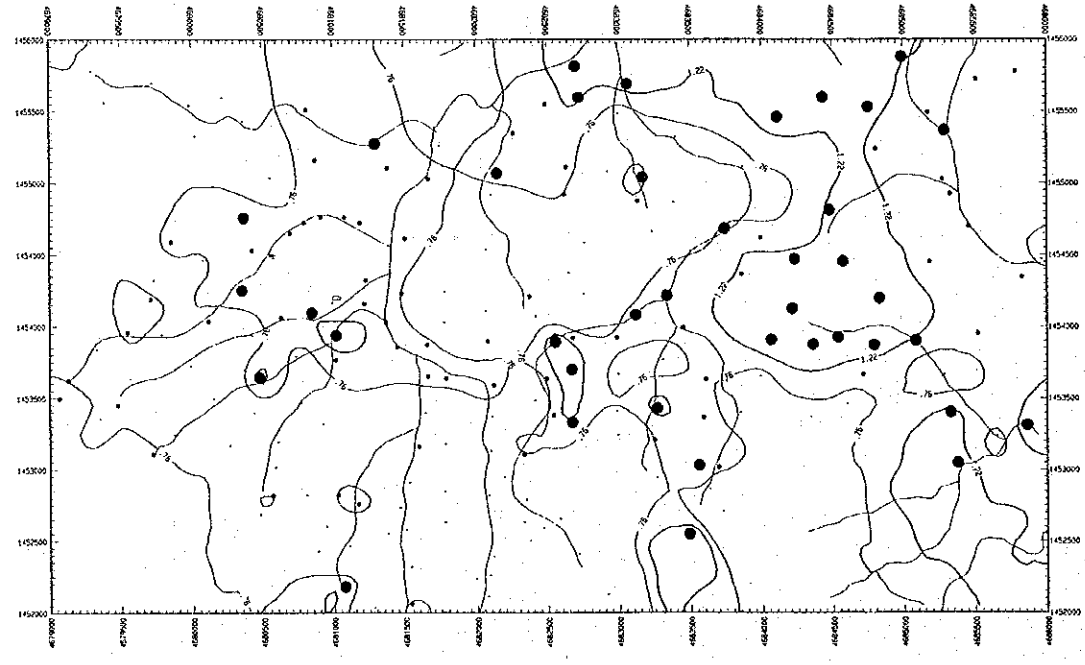

Au
23.000
5.700
1.000

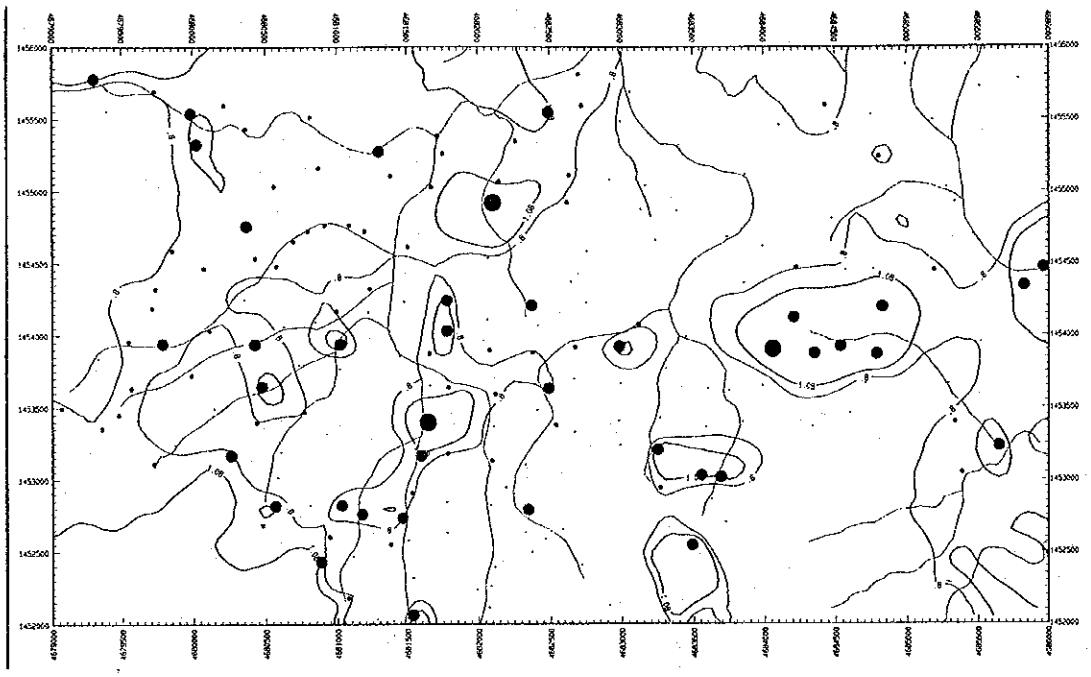

Ca
2.795
.290
.120

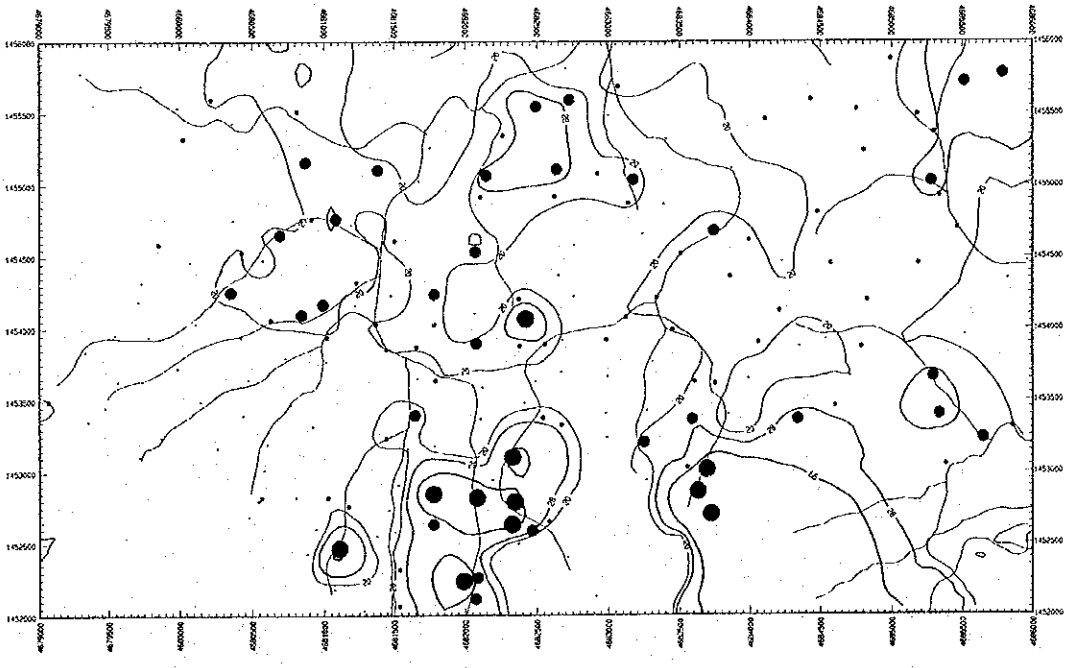

Cu
94.000
33.000
23.000

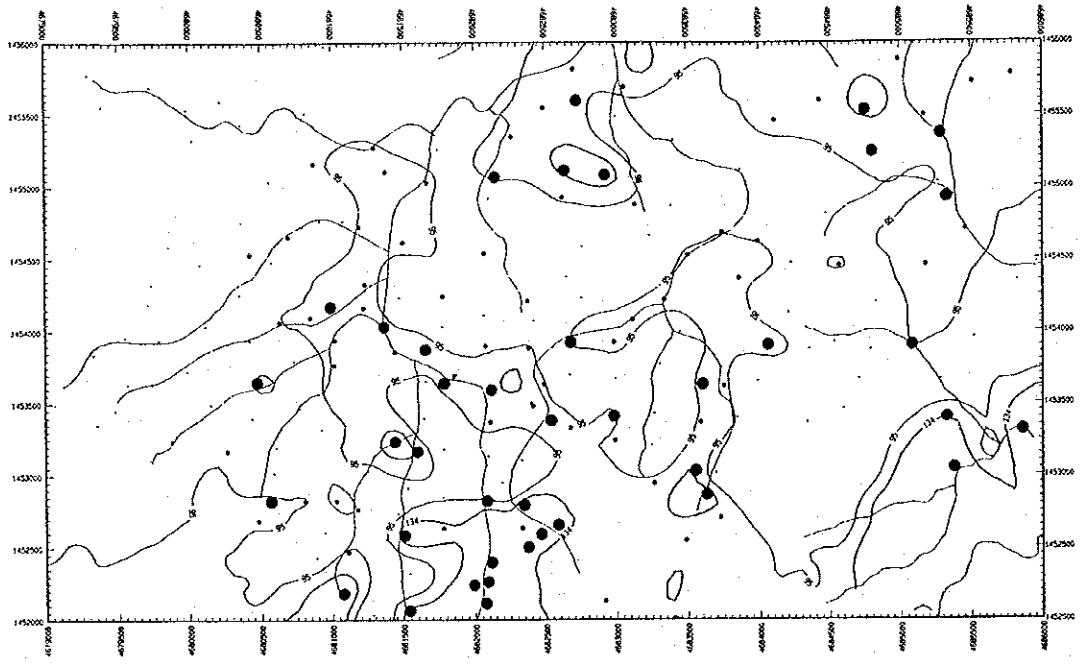

Hg
850.000
47.000
22.000

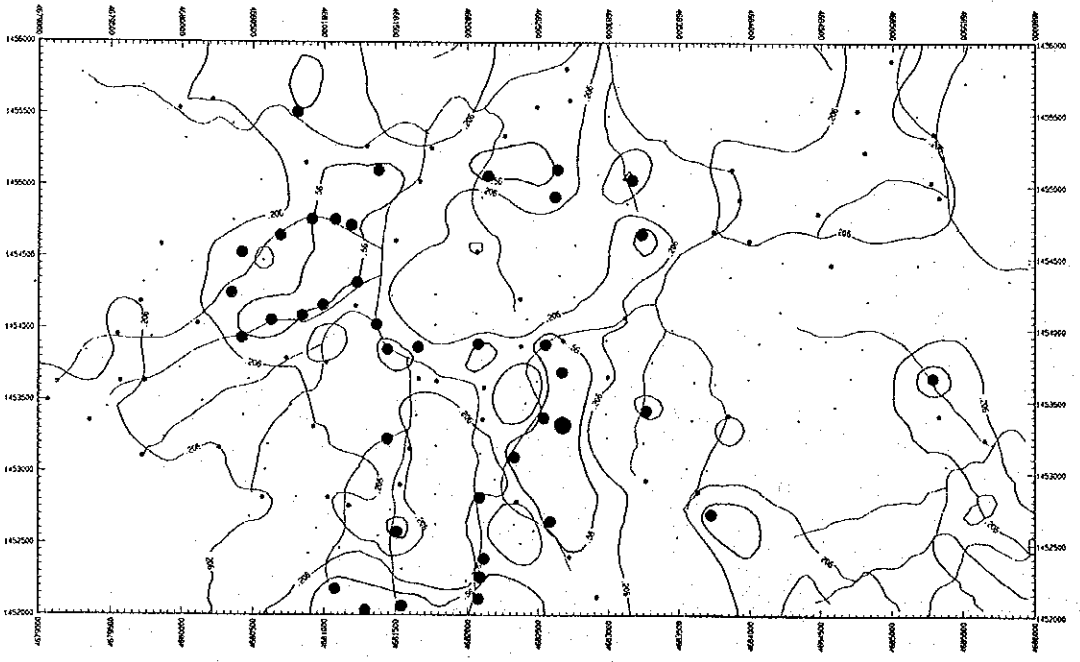

K
1.650
1.140

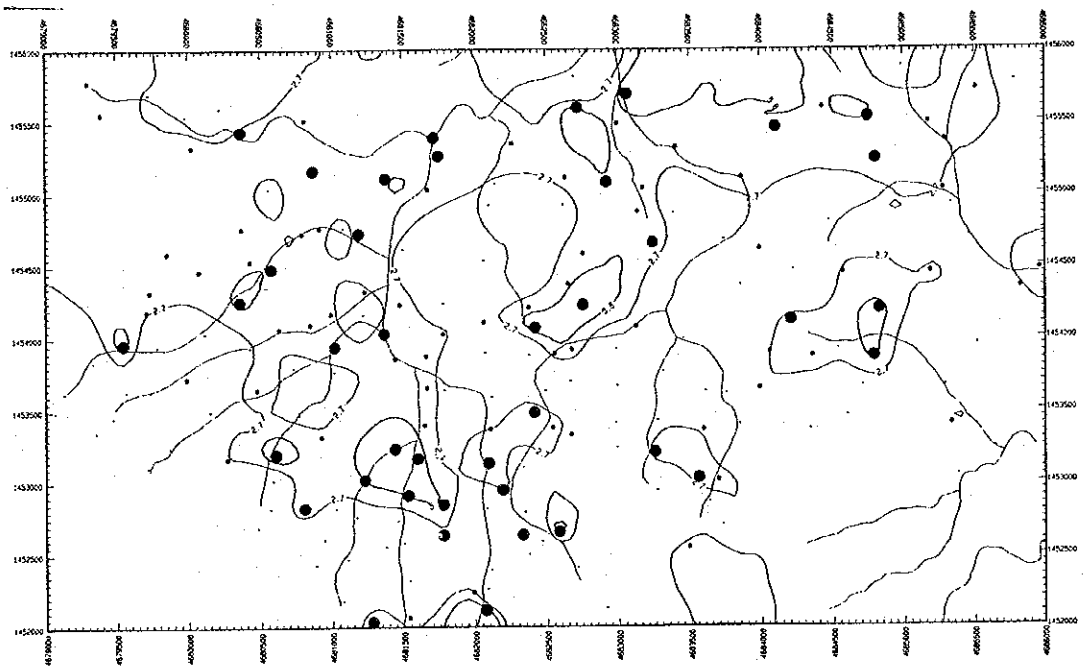

Mg
1.220
.760

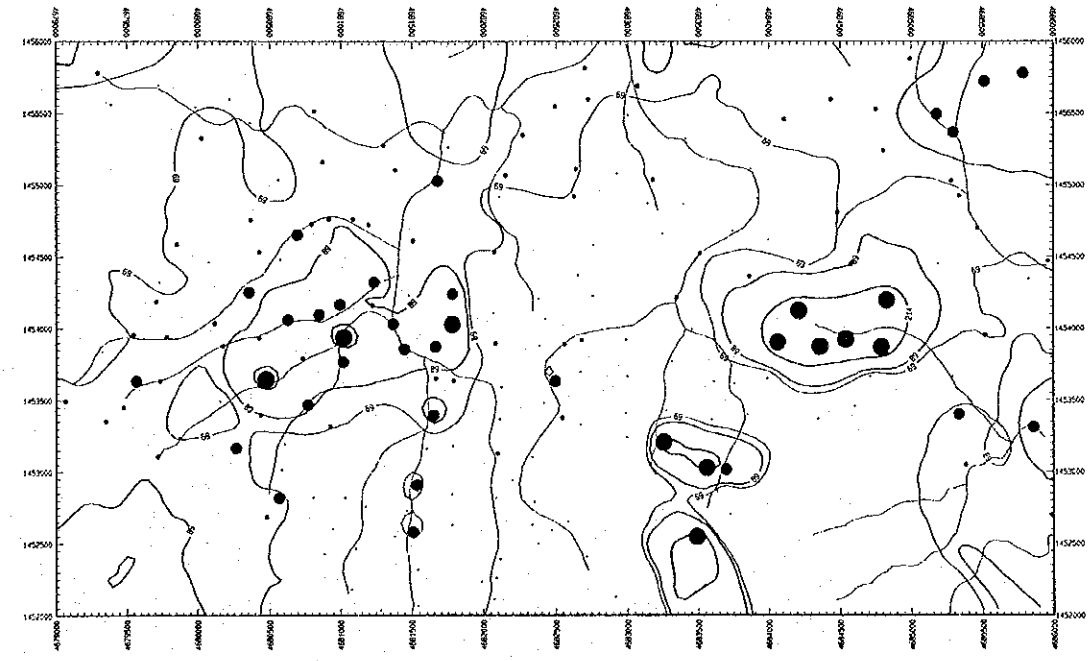

Na
2,900
1,080
600

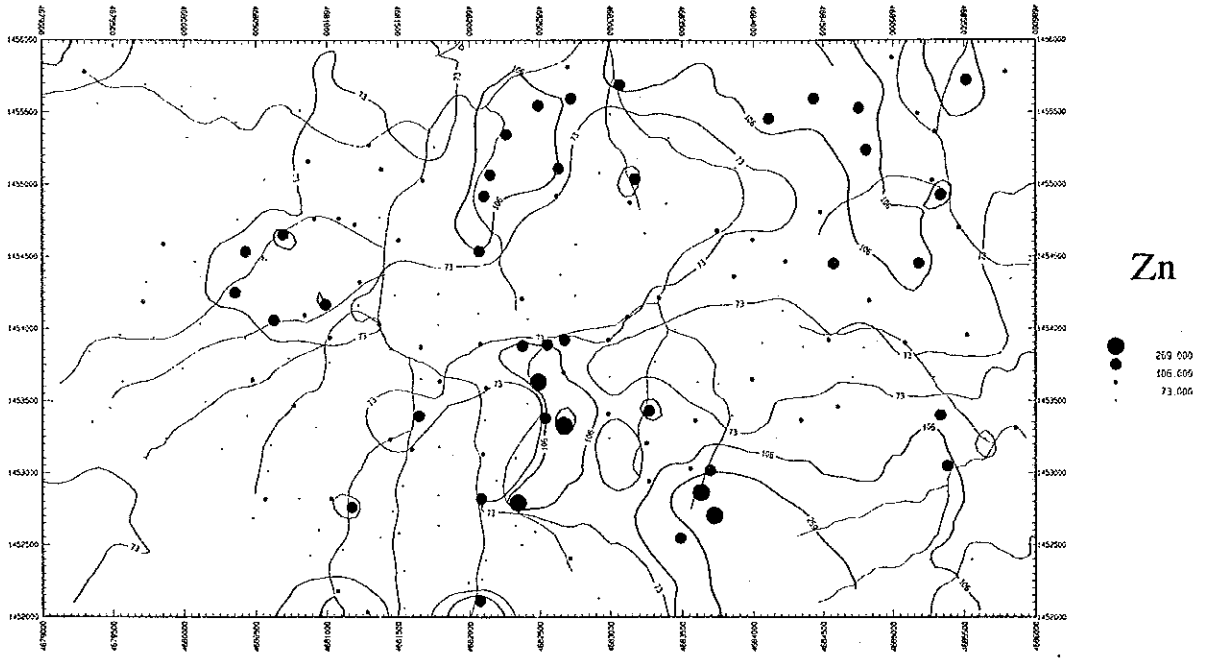

Pb
65,000
28,000
20,000


Rb
134.000
95.000


S
9.698
.560
.206


Sb
5.800
2.700


Sr
214.000
89.000
65.000


Zn
259.000
106.009
73.000

Appendix 5

List of soil geochemical samples in S. Imbak Sub-area (Gunong Kuli)

Area: Gunong Kuli

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	H. *4	Vegitation
1	GK001	4679.18	1451.57	Gunong Kuli	-	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
2	GK002	4679.61	1451.69	Gunong Kuli	-	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
3	GK003	4679.24	1451.14	Gunong Kuli	Sandstone	N_2Tj	20	Br.	F	C	S	W	Primary Forest
4	GK004	4679.72	1451.45	Gunong Kuli	-	N_2Tj	20	Yl.Br.	F	C	S	W	Primary Forest
5	GK005	4679.74	1451.09	Gunong Kuli	-	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
6	GK006	4680.48	1451.38	Gunong Kuli	Sandstone	N_2Tj	30	Yl.Br.	F	S	S	W	Primary Forest
7	GK007	4680.70	1451.14	Gunong Kuli	Sandstone	N_2Tj	30	Lt.Br.	F	S	M	W	Primary Forest
8	GK008	4684.30	1451.90	Gunong Kuli	-	N_2Tj	20	Yl.Br.	F	C	S	W	Primary Forest
9	GK009	4684.56	1451.67	Gunong Kuli	-	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
10	GK010	4684.05	1451.41	Gunong Kuli	Diorite Porphyry	I_1	20	Yl.Br.	M	C	S	W	Primary Forest
11	GK011	4684.51	1451.41	Gunong Kuli	-	N_2Tj	20	Br.	F	C	S	W	Primary Forest
12	GK012	4684.42	1451.12	Gunong Kuli	Diorite Porphyry	I_1	20	Yl.Br.	R	C	S	W	Primary Forest
13	GK013	4684.86	1451.31	Gunong Kuli	Mudstone	N_2Tj	15	Yl.Br.	M	C	S	W	Primary Forest
14	GK014	4685.34	1451.89	Gunong Kuli	-	I_1	20	Yl.Br.	R	C	S	W	Primary Forest
15	GK015	4685.76	1451.88	Gunong Kuli	-	N_2Tj	20	Br.	R	C	S	W	Primary Forest
16	GK016	4685.50	1451.55	Gunong Kuli	-	I_1	20	Br.	R	C	S	W	Primary Forest
17	GK017	4685.13	1451.48	Gunong Kuli	Sandstone	N_2Tj	20	Br.	R	C	S	W	Primary Forest
18	GK018	4685.74	1451.34	Gunong Kuli	-	I_1	20	Br.	R	C	S	W	Primary Forest
19	GK019	4679.29	1450.62	Gunong Kuli	-	N_2Tj	20	Br.	R	C	S	W	Primary Forest
20	GK020	4679.14	1450.14	Gunong Kuli	-	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest

*1 Gravel: many (M), few (F), rare or none (R). *2 Grain size: sandy (S), clayey (C). *3 Topography: steep (S), medium (M), flat (F).
*4 Humidity: dry (D), wet (W).

Area: Gunong Kuli

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	H. *4	Vegitatin
21	GK021	4679.81	1450.73	Gunong Kuli	-	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
22	GK022	4679.85	1450.47	Gunong Kuli	-	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
23	GK023	4679.73	1450.15	Gunong Kuli	Sandstone	N_2Tj	20	Yl.Br.	M	C	S	W	Primary Forest
24	GK024	4680.25	1450.64	Gunong Kuli	Sandstone	N_2Tj	25	Dk.Br.	M	S	M	W	Primary Forest
25	GK025	4680.61	1450.90	Gunong Kuli	Sandstone	N_2Tj	30	Br.	M	S	M	W	Primary Forest
26	GK026	4680.45	1450.45	Gunong Kuli	Sandstone	N_2Tj	25	Br.	F	S	M	W	Primary Forest
27	GK027	4680.83	1450.66	Gunong Kuli	Sandstone	N_2Tj	25	Br.	F	S	M	W	Primary Forest
28	GK028	4680.38	1450.11	Gunong Kuli	Sandstone	N_2Tj	25	Yl.Br.	F	S	M	W	Primary Forest
29	GK029	4680.70	1450.21	Gunong Kuli	Sandstone	N_2Tj	25	Yl.Br.	M	C	M	W	Primary Forest
30	GK030	4683.60	1450.93	Gunong Kuli	Sandstone	N_2Tj	30	Br.	M	C	S	W	Primary Forest
31	GK031	4683.85	1450.78	Gunong Kuli	Sandstone	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
32	GK032	4683.63	1450.54	Gunong Kuli	Sandstone	N_2Tj	20	Rd.Br.	M	C	S	W	Primary Forest
33	GK033	4683.91	1450.38	Gunong Kuli	Sandstone	N_2Tj	20	Yl.Br.	M	C	S	W	Primary Forest
34	GK034	4683.70	1450.16	Gunong Kuli	Sandstone	N_2Tj	20	Yl.Br.	F	C	S	W	Primary Forest
35	GK035	4684.74	1450.94	Gunong Kuli	Mudstone	N_2Tj	30	Yl.Br.	R	C	S	W	Primary Forest
36	GK036	4684.48	1450.74	Gunong Kuli	Mudstone	N_2Tj	20	Yl.Br.	F	C	S	W	Primary Forest
37	GK037	4684.26	1450.51	Gunong Kuli	Mudstone	N_2Tj	20	Br.	M	C	S	W	Primary Forest
38	GK038	4684.90	1450.70	Gunong Kuli	Diorite Porphyry	I_1	20	Yl.Br.	R	C	S	W	Primary Forest
39	GK039	4684.69	1450.05	Gunong Kuli	Sandstone	N_2Tj	15	Br.	R	C	S	W	Primary Forest
40	GK040	4685.42	1450.58	Gunong Kuli	Mudstone	N_2Tj	15	Yl.Br.	R	C	S	W	Primary Forest

*1 Gravel: many (M), few (F), rare or none (R). *2 Grain size: sandy (S), clayey (C). *3 Topography: steep (S), medium (M), flat (F).
*4 Humidity: dry (D), wet (W).

Area: Gunong Kuli

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	H. *4	Vegitation
41	GK041	4685.64	1450.82	Gunong Kuli	Diorite Porphyry	I_1	20	Br.	R	C	S	W	Primary Forest
42	GK042	4682.14	1449.72	Gunong Kuli	Sandstone	N_2Tj	25	Br.	M	S	M	W	Primary Forest
43	GK043	4685.36	1450.29	Gunong Kuli	Mudstone	N_2Tj	15	Yi.Br.	R	C	S	W	Primary Forest
44	GK044	4685.43	1449.93	Gunong Kuli	Mudstone	N_2Tj	20	Br.	R	C	S	W	Primary Forest
45	GK045	4679.42	1449.63	Gunong Kuli	-	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
46	GK046	4679.81	1449.81	Gunong Kuli	Sandstone	N_2Tj	25	Br.	M	S	S	W	Primary Forest
47	GK047	4679.31	1449.38	Gunong Kuli	Sandstone	N_2Tj	30	Yl.Br.	R	C	S	W	Primary Forest
48	GK048	4679.84	1449.34	Gunong Kuli	Mudstone	N_2Tj	20	Br.	F	C	S	W	Primary Forest
49	GK049	4679.71	1449.11	Gunong Kuli	-	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
50	GK050	4680.22	1449.73	Gunong Kuli	Sandstone	N_2Tj	25	Br.	M	S	S	W	Primary Forest
51	GK051	4680.54	1449.68	Gunong Kuli	Sandstone	N_2Tj	25	Dk.Br.	M	S	S	W	Primary Forest
52	GK052	4680.53	1449.38	Gunong Kuli	Sandstone	N_2Tj	25	Br.	M	S	S	W	Primary Forest
53	GK053	4680.25	1449.26	Gunong Kuli	Mudstone	N_2Tj	20	Br.	M	C	S	W	Primary Forest
54	GK054	4680.81	1449.15	Gunong Kuli	Mudstone	N_2Tj	20	Br.	F	C	S	W	Primary Forest
55	GK055	4681.17	1449.89	Gunong Kuli	Sandstone	N_2Tj	25	Br.	M	C	S	W	Primary Forest
56	GK056	4681.21	1449.36	Gunong Kuli	Sandstone	N_2Tj	30	Br.	F	S	S	W	Primary Forest
57	GK057	4681.61	1449.41	Gunong Kuli	Sandstone	N_2Tj	30	Br.	M	S	S	W	Primary Forest
58	GK058	4681.85	1449.18	Gunong Kuli	Sandstone	N_2Tj	30	Br.	M	S	S	W	Primary Forest
59	GK059	4683.88	1449.62	Gunong Kuli	Sandstone	N_2Tj	25	Yl.Br.	R	C	S	W	Primary Forest
60	GK060	4684.18	1449.81	Gunong Kuli	Sandstone	N_2Tj	30	Yl.Br.	F	C	S	W	Primary Forest

*1 Gravel: many (M), few (F), rare or none (R). *2 Grain size: sandy (S), clayey (C). *3 Topography: steep (S), medium (M), flat (F).
*4 Humidity: dry (D), wet (W).

Area:Gunong Kuli

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	H. *4	Vegitation
61	GK061	4684.42	1449.50	Gunong Kuli	Sandstone	N_2Tj	40	Yl.Br.	R	C	S	W	Primary Forest
62	GK062	4684.80	1449.66	Gunong Kuli	Mudstone	N_2Tj	20	Br.	R	C	S	W	Primary Forest
63	GK063	4684.72	1449.34	Gunong Kuli	Sandstone	N_2Tj	25	Rd.Br.	F	C	S	W	Primary Forest
64	GK064	4684.43	1449.06	Gunong Kuli	Sandstone	N_2Tj	20	Yl.Br.	F	C	S	W	Primary Forest
65	GK065	4684.80	1449.10	Gunong Kuli	Sandstone	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
66	GK066	4685.29	1449.65	Gunong Kuli	Mudstone	N_2Tj	20	Dk.Br.	F	C	S	W	Primary Forest
67	GK067	4685.52	1449.55	Gunong Kuli	Mudstone	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
68	GK068	4685.92	1449.52	Gunong Kuli	Mudstone	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
69	GK069	4685.26	1449.24	Gunong Kuli	Mudstone	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
70	GK070	4685.75	1449.28	Gunong Kuli	Mudstone	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
71	GK071	4679.45	1448.74	Gunong Kuli	Mudstone	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
72	GK072	4679.83	1448.72	Gunong Kuli	Mudstone	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
73	GK073	4679.16	1448.34	Gunong Kuli	Sandstone	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
74	GK074	4679.58	1448.26	Gunong Kuli	-	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
75	GK075	4679.92	1448.20	Gunong Kuli	Mudstone	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
76	GK076	4680.22	1448.87	Gunong Kuli	Sandstone	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
77	GK077	4685.25	1450.93	Gunong Kuli	Diorite Porphyry	I_1	25	Yl.Br.	F	C	S	W	Primary Forest
78	GK078	4680.17	1448.35	Gunong Kuli	-	N_2Tj	20	Br.	R	C	S	W	Primary Forest
79	GK079	4680.49	1448.43	Gunong Kuli	Mudstone	N_2Tj	20	Br.	F	C	S	W	Primary Forest
80	GK080	4680.56	1448.70	Gunong Kuli	Mudstone	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest

*1 Gravel: many (M), few (F), rare or none (R). *2 Grain size: sandy (S), clayey (C). *3 Topography: steep (S), medium (M), flat (F).
*4 Humidity: dry (D), wet (W).

Area:Gunong Kuli

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	H. *4	Vegitation
81	GK081	4680.92	1448.85	Gunong Kuli	-	N_2Tj	20	Br.	F	C	S	W	Primary Forest
82	GK082	4680.91	1448.17	Gunong Kuli	-	N_2Tj	10	Yl.Br.	F	C	S	W	Primary Forest
83	GK083	4681.39	1448.69	Gunong Kuli	-	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
84	GK084	4681.97	1448.70	Gunong Kuli	-	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
85	GK085	4681.76	1448.43	Gunong Kuli	-	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
86	GK086	4684.31	1448.41	Gunong Kuli	Mudstone	N_2Tj	20	Br.	F	C	S	W	Primary Forest
87	GK087	4684.64	1448.59	Gunong Kuli	Mudstone	N_2Tj	20	Yl.Br.	F	C	S	W	Primary Forest
88	GK088	4684.93	1448.69	Gunong Kuli	-	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
89	GK089	4684.76	1448.26	Gunong Kuli	Mudstone	N_2Tj	20	Yl.Br.	M	C	S	W	Primary Forest
90	GK090	4685.29	1448.86	Gunong Kuli	Mudstone	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
91	GK091	4685.23	1448.43	Gunong Kuli	-	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
92	GK092	4685.84	1448.46	Gunong Kuli	Diorite Porphyry	I_1	20	Yl.Br.	R	C	S	W	Primary Forest
93	GK093	4685.41	1448.14	Gunong Kuli	Diorite Porphyry	I_1	20	Br.	R	C	S	W	Primary Forest
94	GK094	4685.64	1448.12	Gunong Kuli	Diorite Porphyry	I_1	20	Br.	R	C	S	W	Primary Forest
95	GK095	4679.29	1447.87	Gunong Kuli	Mudstone	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
96	GK096	4679.10	1447.57	Gunong Kuli	-	N_2Tj	20	Br.	R	C	S	W	Primary Forest
97	GK097	4679.75	1447.62	Gunong Kuli	Diorite Porphyry	I_1	25	Yl.Br.	R	C	S	W	Primary Forest
98	GK098	4679.59	1447.22	Gunong Kuli	Mudstone	N_2Tj	30	Yl.Br.	M	S	S	W	Primary Forest
99	GK099	4680.40	1447.71	Gunong Kuli	-	N_2Tj	20	Br.	R	C	S	W	Primary Forest
100	GK100	4680.68	1447.93	Gunong Kuli	-	N_2Tj	20	Br.	F	C	S	W	Primary Forest

*1 Gravel: many (M), few (F), rare or none (R). *2 Grain size: sandy (S), clayey (C). *3 Topography: steep (S), medium (M), flat (F).
*4 Humidity: dry (D), wet (W).

Area: Gunong Kuli

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	H. *4	Vegitation
101	GK101	4680.46	1447.15	Gunong Kuli	Diorite Porphyry	I_1	20	Br.	F	C	S	W	Primary Forest
102	GK102	4680.92	1447.43	Gunong Kuli	Mudstone	N_2Tj	20	Yl.Br.	M	C	S	W	Primary Forest
103	GK103	4680.84	1447.16	Gunong Kuli	Mudstone	N_2Tj	15	Br.	F	C	S	W	Primary Forest
104	GK104	4681.42	1447.80	Gunong Kuli	Sandstone	N_2Tj	30	Br.	F	C	S	W	Primary Forest
105	GK105	4681.21	1447.51	Gunong Kuli	Mudstone	N_2Tj	20	Br.	F	C	M	W	Primary Forest
106	GK106	4681.69	1447.82	Gunong Kuli	Sandstone	N_2Tj	30	Br.	M	S	S	W	Primary Forest
107	GK107	4681.66	1447.50	Gunong Kuli	Mudstone	N_2Tj	20	Br.	F	S	F	W	Primary Forest
108	GK108	4682.06	1447.44	Gunong Kuli	Sandstone	N_2Tj	25	Br.	M	C	S	W	Primary Forest
109	GK109	4682.36	1447.54	Gunong Kuli	Diorite Porphyry	I_1	20	Br.	M	C	S	W	Primary Forest
110	GK110	4682.89	1447.88	Gunong Kuli	Diorite Porphyry	I_1	15	Yl.Br.	F	C	S	W	Primary Forest
111	GK111	4682.72	1447.57	Gunong Kuli	Diorite Porphyry	I_1	20	Br.	F	C	S	W	Primary Forest
112	GK112	4683.13	1447.63	Gunong Kuli	Mudstone	N_2Tj	15	Dk.Br.	F	C	S	W	Primary Forest
113	GK113	4685.31	1447.61	Gunong Kuli	Sandstone	N_2Tj	25	Br.	R	C	S	W	Primary Forest
114	GK114	4685.83	1447.71	Gunong Kuli	Sandstone	N_2Tj	25	Br.	R	C	F	W	Primary Forest
115	GK115	4685.55	1447.34	Gunong Kuli	-	N_2Tj	20	Br.	F	S	F	W	Primary Forest
116	GK116	4685.78	1447.18	Gunong Kuli	Sandstone	N_2Tj	25	Yl.Br.	R	C	S	W	Primary Forest
117	GK117	4679.32	1446.91	Gunong Kuli	Mudstone	N_2Tj	20	Br.	R	C	S	W	Primary Forest
118	GK118	4679.52	1446.57	Gunong Kuli	Mudstone	N_2Tj	25	Br.	R	S	F	W	Primary Forest
119	GK119	4679.88	1446.81	Gunong Kuli	Sandstone	N_2Tj	25	Yl.Br.	R	C	F	W	Primary Forest
120	GK120	4679.27	1446.14	Gunong Kuli	Mudstone	N_2Tj	25	Br.	R	C	F	W	Primary Forest

*1 Gravel: many (M), few (F), rare or none (R). *2 Grain size: sandy (S), clayey (C). *3 Topography: steep (S), medium (M), flat (F).
*4 Humidity: dry (D), wet (W).

Area: Gunong Kuli

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	H. *4	Vegitatin
121	GK121	4679.82	1446.26	Gunong Kuli	Mudstone	N_2Tj	25	Yl.Br.	R	C	F	W	Primary Forest
122	GK122	4680.25	1446.77	Gunong Kuli	Mudstone	N_2Tj	25	Yl.Br.	R	C	F	W	Primary Forest
123	GK123	4680.84	1446.95	Gunong Kuli	Mudstone	N_2Tj	20	Br.	R	C	S	W	Primary Forest
124	GK124	4680.70	1446.48	Gunong Kuli	Mudstone	N_2Tj	20	Br.	R	C	S	W	Primary Forest
125	GK125	4680.23	1446.25	Gunong Kuli	Mudstone	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
126	GK126	4680.68	1446.24	Gunong Kuli	Mudstone	N_2Tj	20	Br.	R	C	S	W	Primary Forest
127	GK127	4681.27	1446.71	Gunong Kuli	Mudstone	N_2Tj	20	Br.	R	C	F	W	Primary Forest
128	GK128	4681.68	1446.80	Gunong Kuli	Diorite Porphyry	I_1	20	Br.	R	C	S	W	Primary Forest
129	GK129	4681.25	1446.45	Gunong Kuli	Mudstone	N_2Tj	25	Yl.Br.	R	C	S	W	Primary Forest
130	GK130	4681.86	1446.49	Gunong Kuli	Diorite Porphyry	I_1	20	Br.	R	C	S	W	Primary Forest
131	GK131	4681.50	1446.09	Gunong Kuli	Diorite Porphyry	I_1	20	Br.	R	C	S	W	Primary Forest
132	GK132	4682.01	1446.73	Gunong Kuli	Mudstone	N_2Tj	25	Br.	F	C	S	W	Primary Forest
133	GK133	4682.50	1446.87	Gunong Kuli	Diorite Porphyry	I_1	20	Br.	R	C	S	W	Primary Forest
134	GK134	4682.27	1446.39	Gunong Kuli	Mudstone	N_2Tj	20	Br.	R	C	S	W	Primary Forest
135	GK135	4682.78	1446.42	Gunong Kuli	Mudstone	N_2Tj	20	Br.	R	C	S	W	Primary Forest
136	GK136	4682.67	1446.69	Gunong Kuli	Diorite Porphyry	I_1	20	Br.	R	C	S	W	Primary Forest
137	GK137	4683.64	1446.79	Gunong Kuli	Sandstone	N_2Tj	20	Br.	F	C	S	W	Primary Forest
138	GK138	4683.33	1446.32	Gunong Kuli	-	N_2Tj	20	Br.	R	C	S	W	Primary Forest
139	GK139	4683.75	1446.36	Gunong Kuli	Sandstone	N_2Tj	30	Br.Wh.	M	C	S	W	Primary Forest
140	GK140	4684.13	1446.28	Gunong Kuli	Diorite Porphyry	I_1	25	Yl.Br.	R	C	S	W	Primary Forest

*1 Gravel: many (M), few (F), rare or none (R). *2 Grain size: sandy (S), clayey (C). *3 Topography: steep (S), medium (M), flat (F).
*4 Humidity: dry (D), wet (W).

Area: Gunong Kuli

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	H. *4	Vegitation
141	GK141	4685.60	1446.63	Gunong Kuli	Mudstone	N_2Tj	25	Br.	R	C	S	W	Primary Forest
142	GK142	4685.84	1446.73	Gunong Kuli	Mudstone	N_2Tj	20	Dk.Br.	R	C	S	W	Primary Forest
143	GK143	4685.79	1446.44	Gunong Kuli	Mudstone	N_2Tj	20	Br.	F	C	S	W	Primary Forest
144	GK144	4685.61	1446.21	Gunong Kuli	Mudstone	N_2Tj	20	Br.	F	C	S	W	Primary Forest
145	GK145	4679.19	1445.74	Gunong Kuli	Mudstone	N_2Tj	20	Br.	R	C	F	W	Primary Forest
146	GK146	4679.86	1445.81	Gunong Kuli	Mudstone	N_2Tj	30	Br.	R	C	S	W	Primary Forest
147	GK147	4679.50	1445.62	Gunong Kuli	Mudstone	N_2Tj	30	Yl.Br.	R	C	F	W	Primary Forest
148	GK148	4679.28	1445.21	Gunong Kuli	Mudstone	N_2Tj	20	Yl.Br.	F	C	F	W	Primary Forest
149	GK149	4679.88	1445.29	Gunong Kuli	Mudstone	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
150	GK150	4680.16	1445.80	Gunong Kuli	-	N_2Tj	30	Yl.Br.	R	C	S	W	Primary Forest
151	GK151	4680.66	1445.98	Gunong Kuli	Mudstone	N_2Tj	20	Br.	R	C	S	W	Primary Forest
152	GK152	4680.49	1445.59	Gunong Kuli	Mudstone	N_2Tj	25	Br.	R	C	F	W	Primary Forest
153	GK153	4680.21	1445.13	Gunong Kuli	Mudstone	N_2Tj	20	Br.	R	C	F	W	Primary Forest
154	GK154	4680.70	1445.33	Gunong Kuli	Mudstone	N_2Tj	25	Yl.Br.	R	C	S	W	Primary Forest
155	GK155	4681.25	1445.43	Gunong Kuli	-	N_2Tj	20	Yl.Br.	F	C	S	W	Primary Forest
156	GK156	4681.58	1445.74	Gunong Kuli	-	N_2Tj	20	Yl.Br.	F	C	S	W	Primary Forest
157	GK157	4681.90	1445.95	Gunong Kuli	-	N_2Tj	30	Yl.Br.	F	C	F	W	Primary Forest
158	GK158	4681.90	1445.61	Gunong Kuli	Mudstone	N_2Tj	30	Yl.Br.	F	C	S	W	Primary Forest
159	GK159	4681.71	1445.34	Gunong Kuli	-	N_2Tj	30	Br.	R	C	S	W	Primary Forest
160	GK160	4682.27	1445.96	Gunong Kuli	Diorite Porphyry	I_1	20	Yl.Br.	F	C	S	W	Primary Forest

*1 Gravel: many (M), few (F), rare or none (R). *2 Grain size: sandy (S), clayey (C). *3 Topography: steep (S), medium (M), flat (F).
*4 Humidity: dry (D), wet (W).

Area: Gunong Kuli

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	H. *4	Vegitation
161	GK161	4682.66	1445.96	Gunong Kuli	-	N_2Tj	20	Br.	R	C	S	W	Primary Forest
162	GK162	4682.54	1445.65	Gunong Kuli	-	N_2Tj	15	Yl.Br.	F	C	S	W	Primary Forest
163	GK163	4682.74	1445.16	Gunong Kuli	-	N_2Tj	15	Yl.Br.	M	C	S	D	Primary Forest
164	GK164	4682.83	1445.49	Gunong Kuli	-	N_2Tj	20	Br.	R	C	S	W	Primary Forest
165	GK165	4683.35	1445.86	Gunong Kuli	Mudstone	N_2Tj	20	Br.	R	C	S	W	Primary Forest
166	GK166	4683.69	1445.79	Gunong Kuli	Sandstone	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
167	GK167	4682.94	1445.20	Gunong Kuli	Diorite Porphyry	I_1	20	Br.	F	C	S	W	Primary Forest
168	GK168	4683.40	1445.34	Gunong Kuli	Sandstone	N_2Tj	30	Yl.Br.	R	C	S	W	Primary Forest
169	GK169	4683.76	1445.38	Gunong Kuli	Diorite Porphyry	I_1	20	Yl.Br.	R	C	F	W	Primary Forest
170	GK170	4684.09	1445.82	Gunong Kuli	Mudstone	N_2Tj	30	Yl.Br.	R	C	S	W	Primary Forest
171	GK171	4684.53	1445.70	Gunong Kuli	Sandstone	N_2Tj	40	Wh.Br.	M	S	S	W	Primary Forest
172	GK172	4684.09	1445.48	Gunong Kuli	Sandstone	N_2Tj	30	Dk.Br.	R	C	S	W	Primary Forest
173	GK173	4684.51	1445.20	Gunong Kuli	Sandstone	N_2Tj	40	Wh.Br.	R	S	S	W	Primary Forest
174	GK174	4685.33	1445.93	Gunong Kuli	Mudstone	N_2Tj	20	Br.	M	C	S	W	Primary Forest
175	GK175	4685.89	1445.88	Gunong Kuli	Mudstone	N_2Tj	20	Br.	R	C	S	W	Primary Forest
176	GK176	4685.35	1445.62	Gunong Kuli	Mudstone	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
177	GK177	4685.19	1445.21	Gunong Kuli	Mudstone	N_2Tj	25	Yl.Br.	R	C	S	W	Primary Forest
178	GK178	4685.57	1445.35	Gunong Kuli	Mudstone	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
179	GK179	4679.27	1444.83	Gunong Kuli	Sandstone	N_2Tj	20	Yl.Br.	R	C	F	W	Primary Forest
180	GK180	4679.58	1444.72	Gunong Kuli	Mudstone	N_2Tj	20	Br.	R	C	F	W	Primary Forest

*1 Gravel: many (M), few (F), rare or none (R). *2 Grain size: sandy (S), clayey (C). *3 Topography: steep (S), medium (M), flat (F).
*4 Humidity: dry (D), wet (W).

Area: Gunong Kuli

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	H. *4	Vegitation
181	GK181	4679.90	1444.90	Gunong Kuli	Mudstone	N_2Tj	20	Br.	R	C	F	W	Primary Forest
182	GK182	4679.20	1444.32	Gunong Kuli	-	N_2Tj	20	Yl.Br.	R	C	F	W	Primary Forest
183	GK183	4679.54	1444.26	Gunong Kuli	Sandstone	N_2Tj	25	Yl.Br.	R	C	F	W	Primary Forest
184	GK184	4679.86	1444.29	Gunong Kuli	Sandstone	N_2Tj	20	Br.	R	C	S	W	Primary Forest
185	GK185	4680.15	1444.68	Gunong Kuli	Sandstone	N_2Tj	20	Br.	R	C	F	W	Primary Forest
186	GK186	4680.64	1444.91	Gunong Kuli	Mudstone	N_2Tj	20	Br.	R	C	S	W	Primary Forest
187	GK187	4680.46	1444.33	Gunong Kuli	-	N_2Tj	30	Br.	F	C	F	W	Primary Forest
188	GK188	4680.81	1444.44	Gunong Kuli	Mudstone	N_2Tj	40	Br.	R	C	F	W	Primary Forest
189	GK189	4680.31	1444.06	Gunong Kuli	Mudstone	N_2Tj	20	Yl.Br.	F	C	F	W	Primary Forest
190	GK190	4681.23	1444.80	Gunong Kuli	Mudstone	N_2Tj	30	Br.	R	C	S	W	Primary Forest
191	GK191	4681.80	1444.97	Gunong Kuli	Mudstone	N_2Tj	30	Yl.Br.	R	C	S	W	Primary Forest
192	GK192	4681.56	1444.56	Gunong Kuli	Mudstone	N_2Tj	30	Yl.Br.	R	C	S	W	Primary Forest
193	GK193	4681.29	1444.13	Gunong Kuli	Mudstone	N_2Tj	20	Yl.Br.	R	C	S	W	Primary Forest
194	GK194	4681.85	1444.23	Gunong Kuli	-	N_2Tj	15	Yl.Br.	F	S	S	D	Primary Forest
195	GK195	4682.19	1444.38	Gunong Kuli	-	N_2Tj	15	Yl.Br.	F	C	S	W	Primary Forest
196	GK196	4682.55	1444.71	Gunong Kuli	Mudstone	N_2Tj	20	Br.	M	C	S	W	Primary Forest
197	GK197	4682.46	1444.21	Gunong Kuli	Mudstone	N_2Tj	20	Dk.Br.	M	C	S	W	Primary Forest
198	GK198	4682.85	1444.15	Gunong Kuli	Mudstone	N_2Tj	20	Br.	R	C	S	W	Primary Forest
199	GK199	4683.14	1444.17	Gunong Kuli	Mudstone	N_2Tj	20	Br.	F	C	S	W	Primary Forest
200	GK200	4683.40	1444.44	Gunong Kuli	Sandstone	N_2Tj	20	Br.	R	C	S	W	Primary Forest

*1 Gravel: many (M), few (F), rare or none (R). *2 Grain size: sandy (S), clayey (C). *3 Topography: steep (S), medium (M), flat (F).
*4 Humidity: dry (D), wet (W).