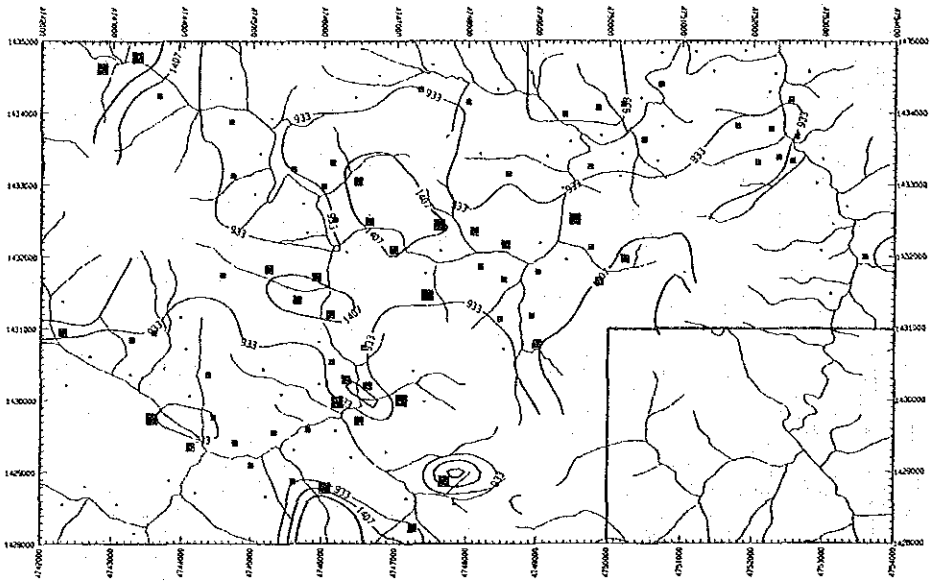
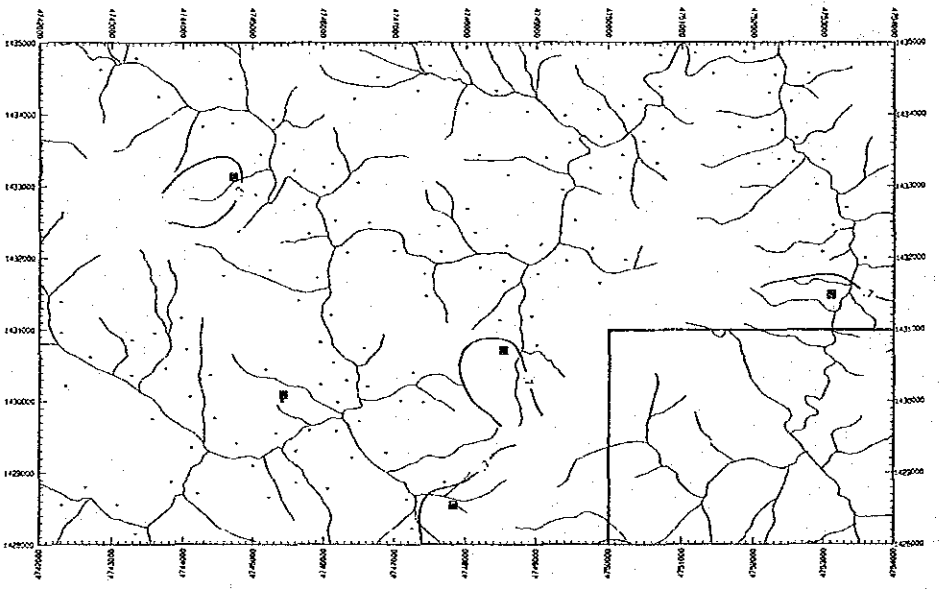
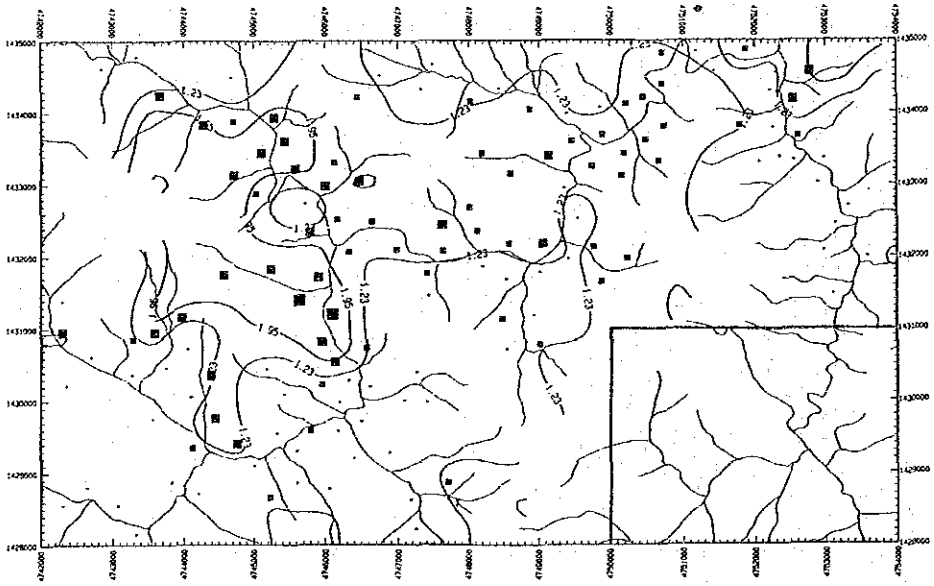
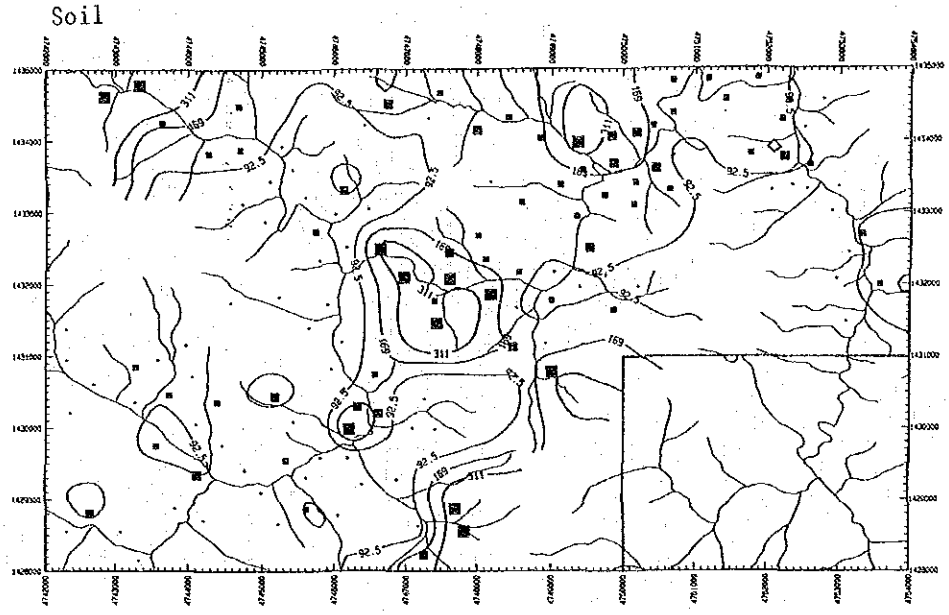
Soil





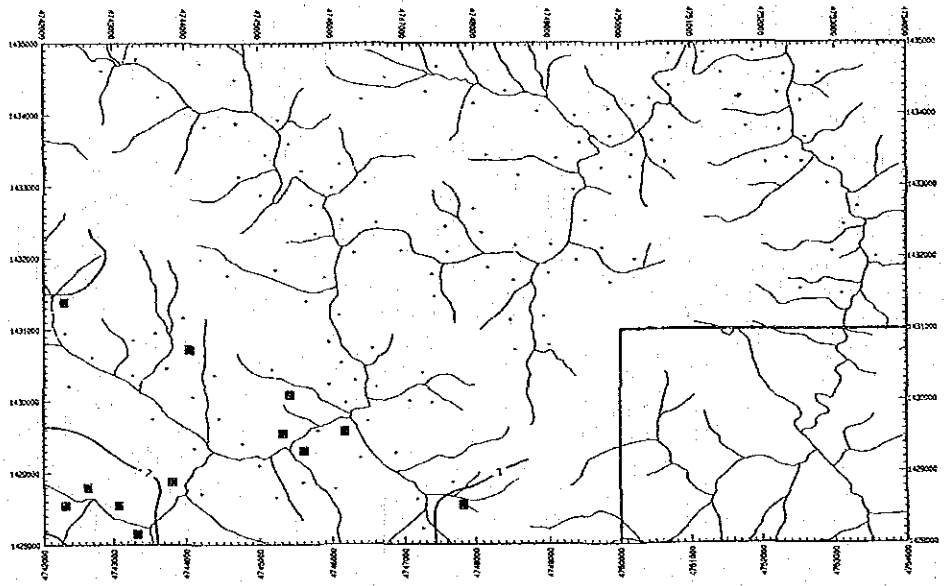


Soil



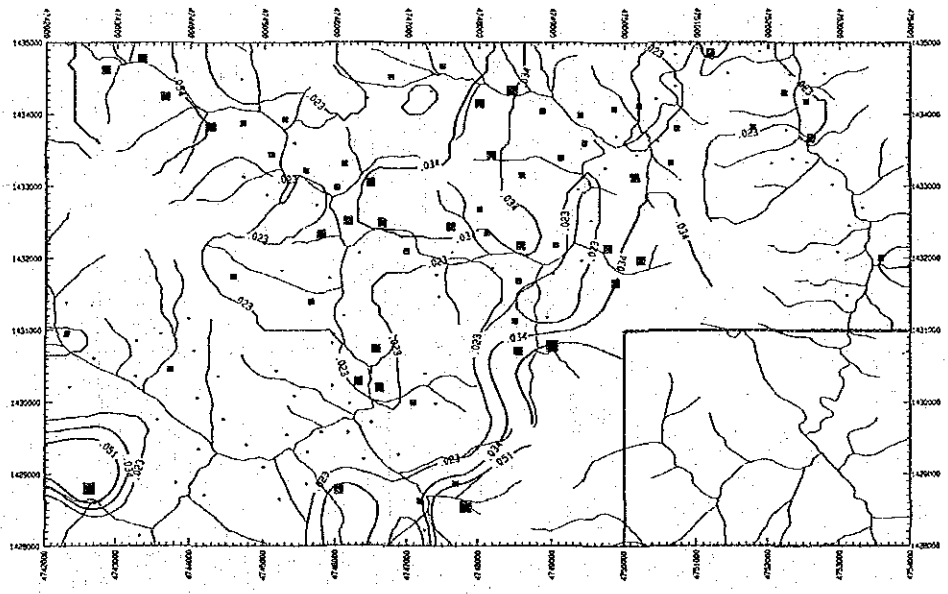
Ni

311.000
169.000
92.500



Pb

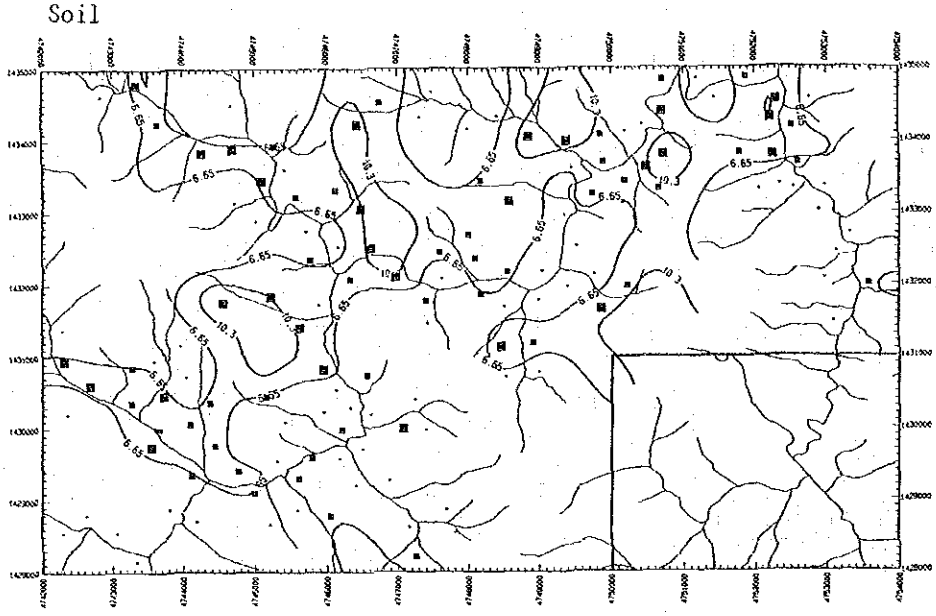
7.000

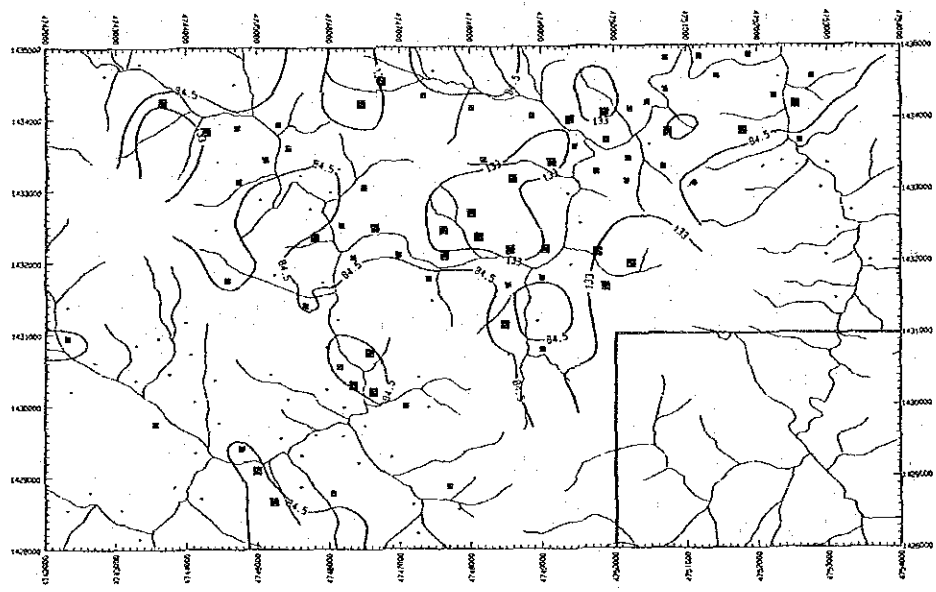


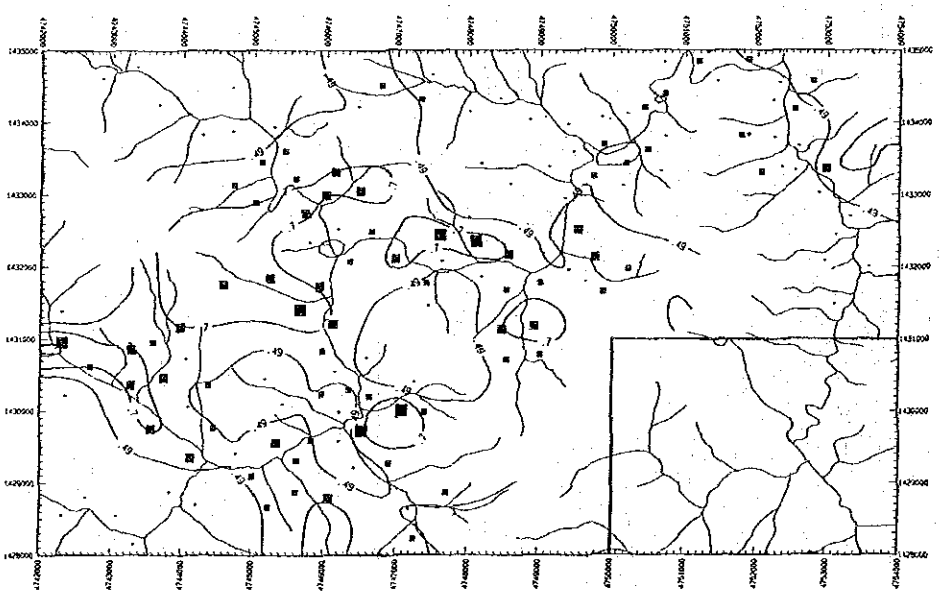
S

.051
.034
.023

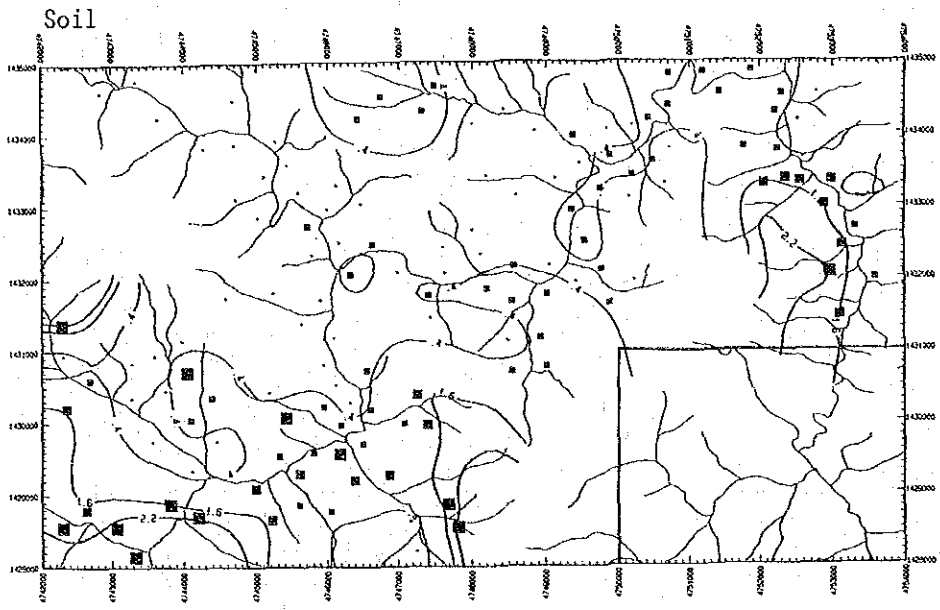
Soil





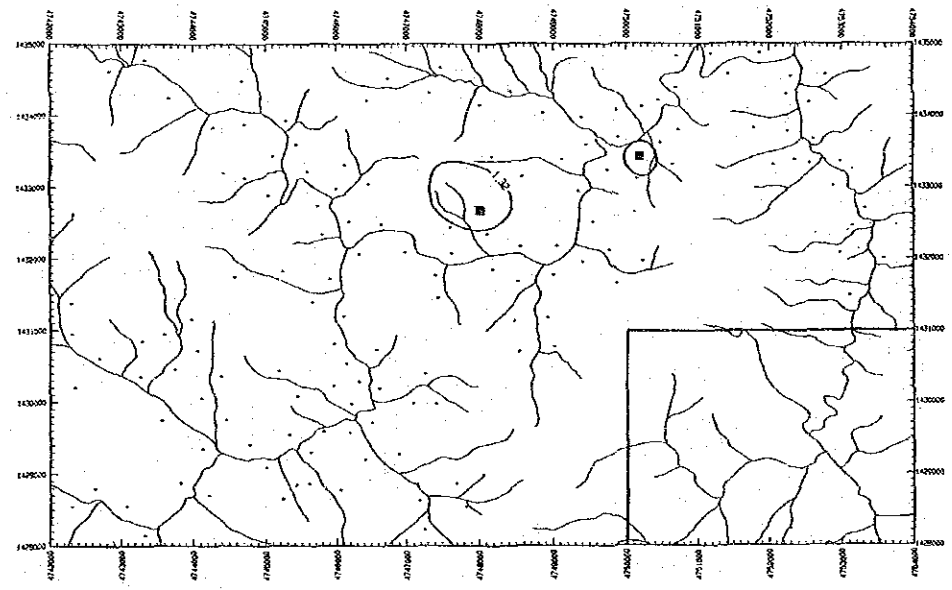


Soil



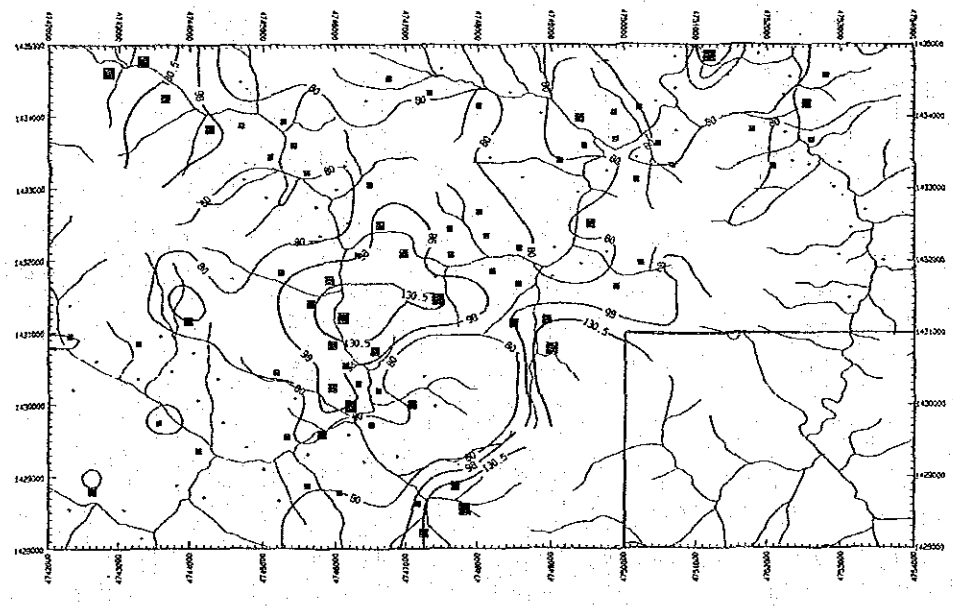
U

2.200
1.600
.400



W

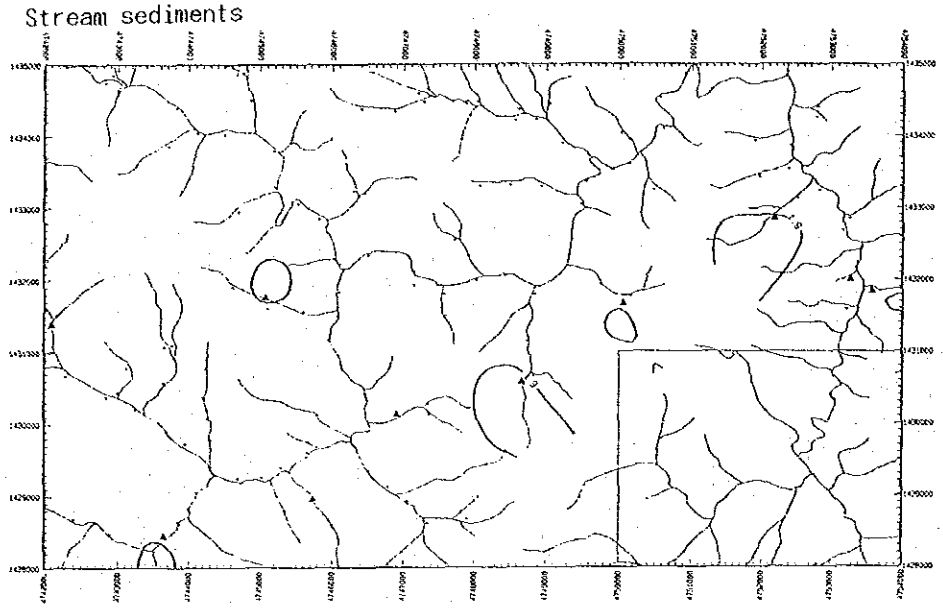
1.320



Zn

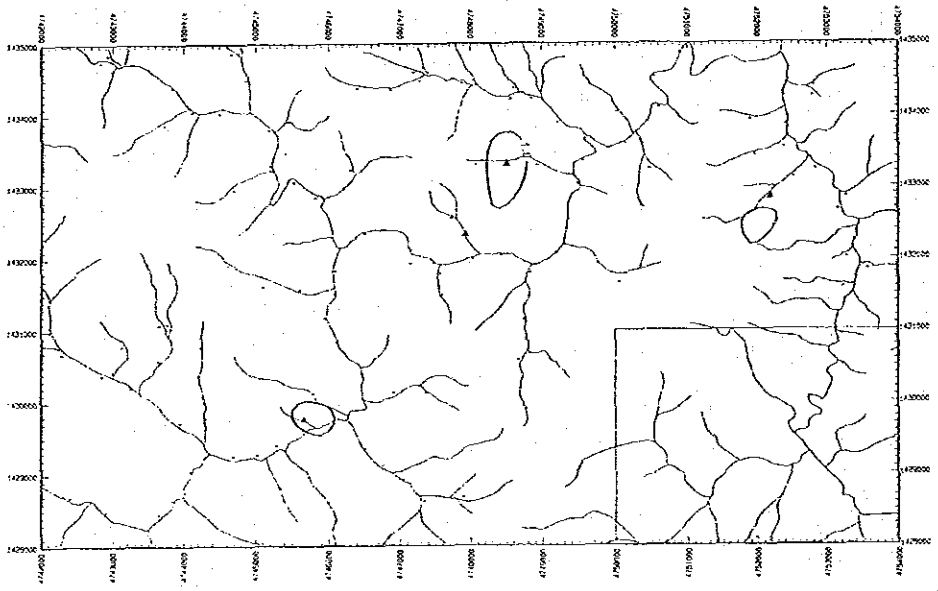
130.500
98.000
80.000

Stream sediments



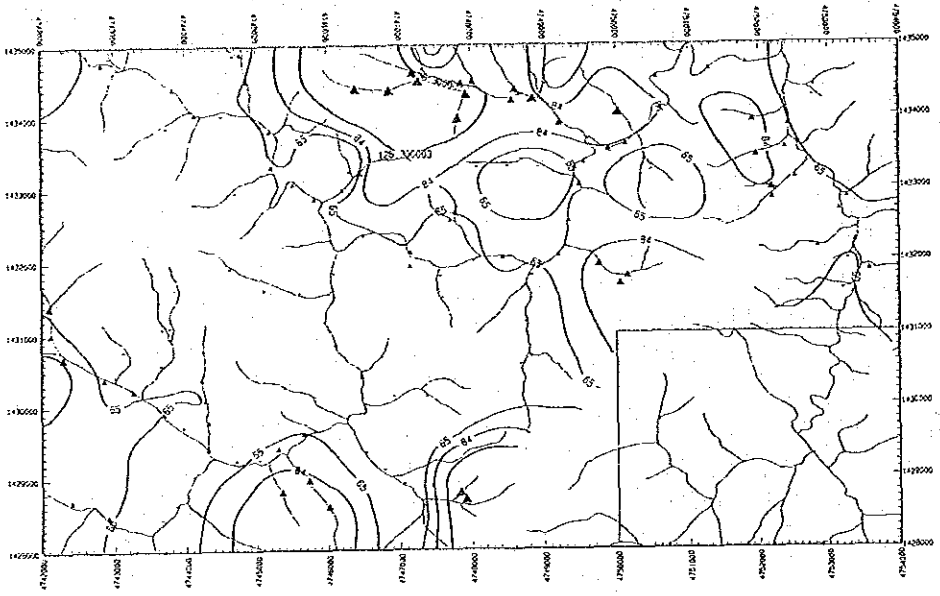
As

1.900



Au

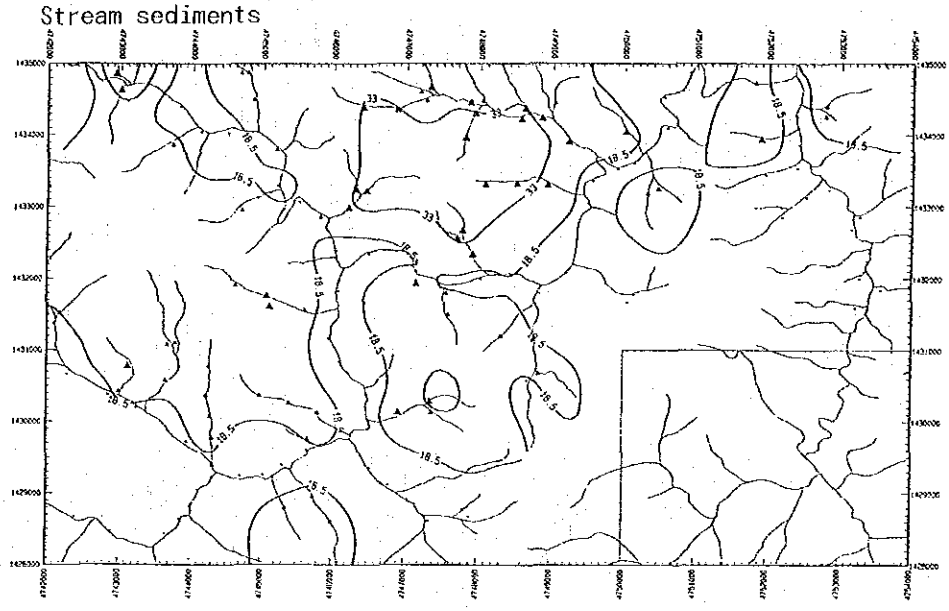
1.500



Ba

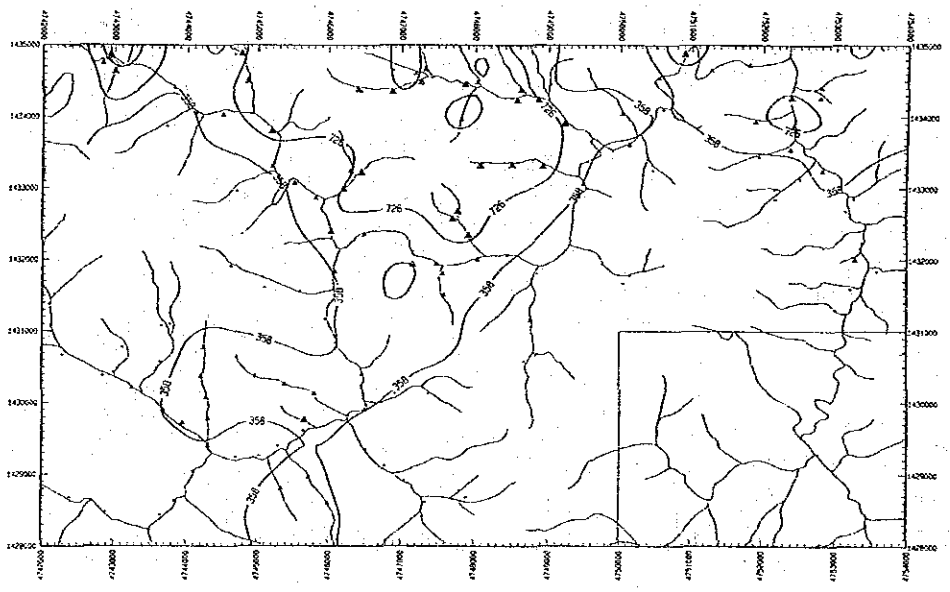
125.300
84.000
65.000

Stream sediments



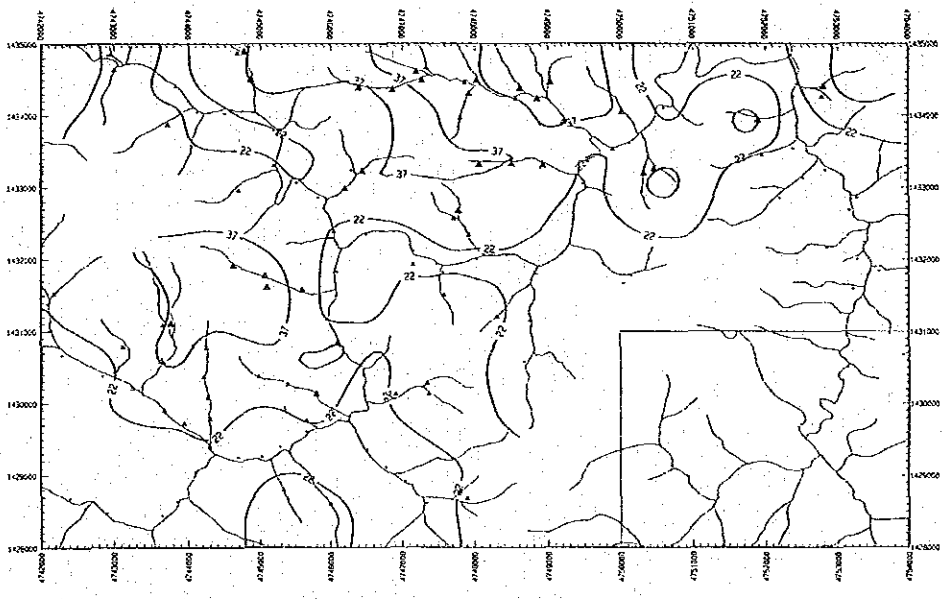
Co

33.000
18.500



Cr

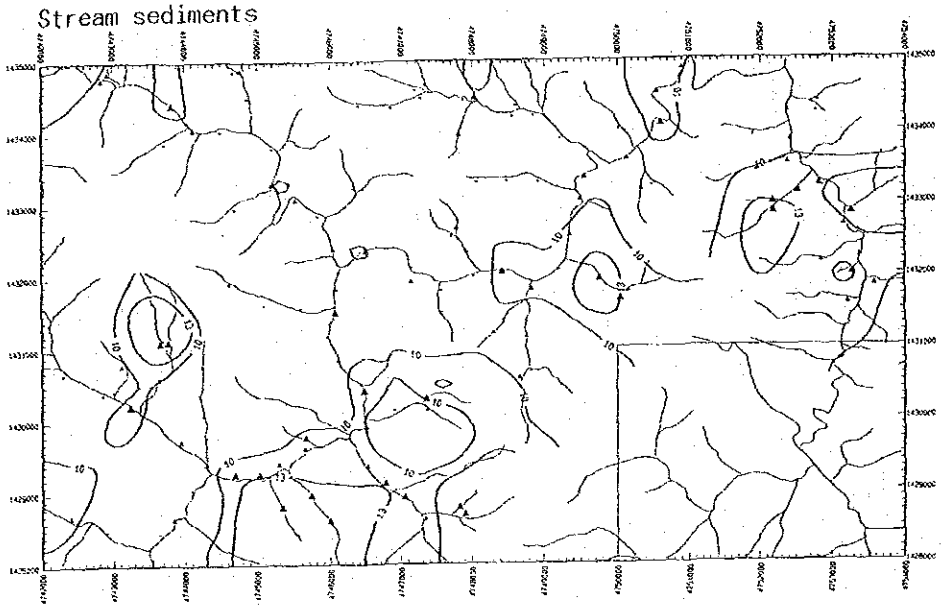
2258.000
726.000
356.000



Cu

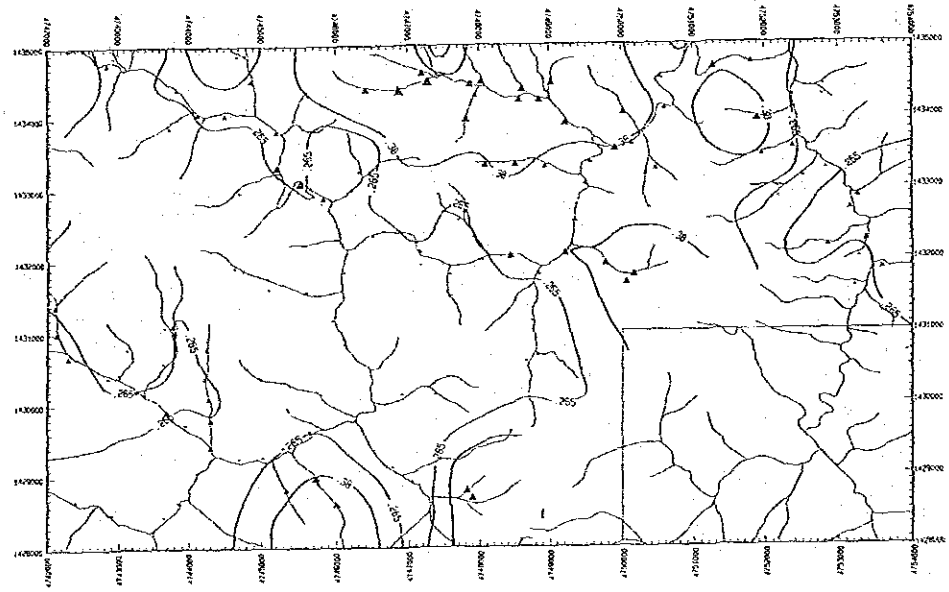
37.000
22.000

Stream sediments



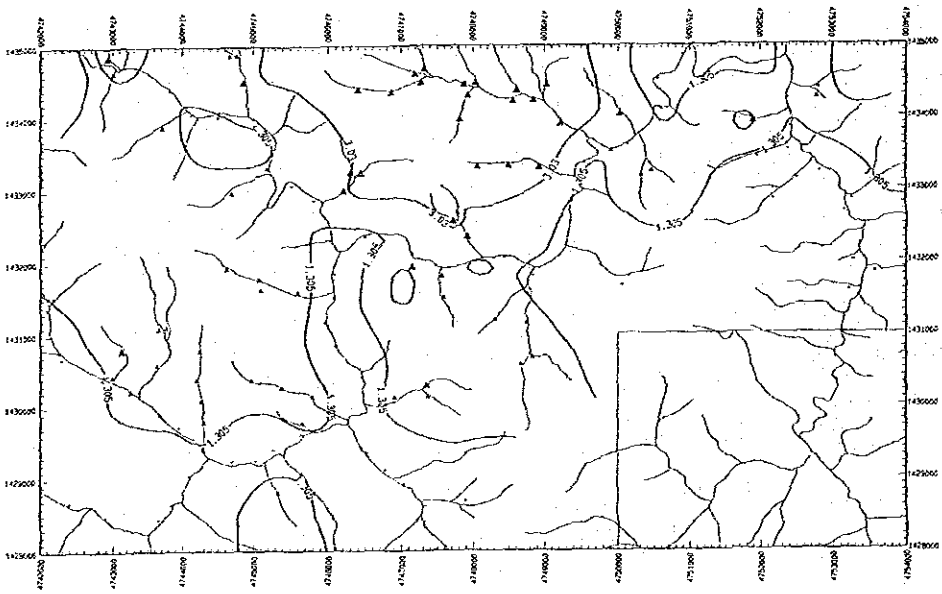
Hg

13.000
10.000



K

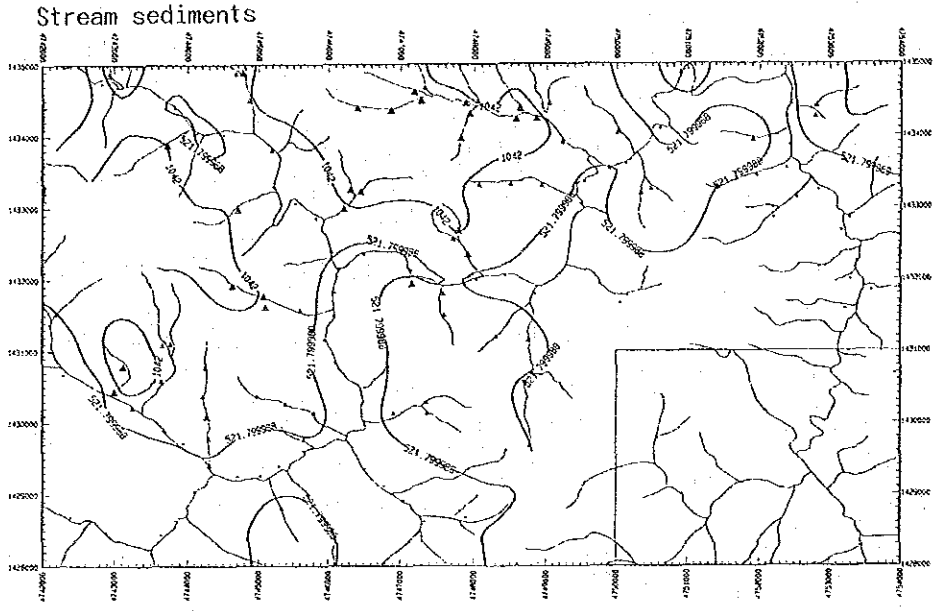
.753
.390
.285



Mg

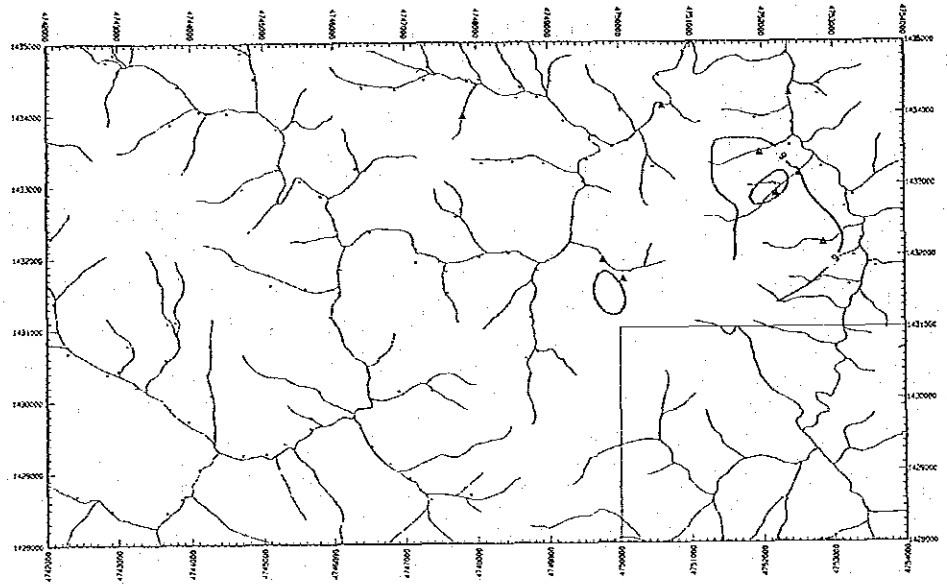
3.030
1.305

Stream sediments



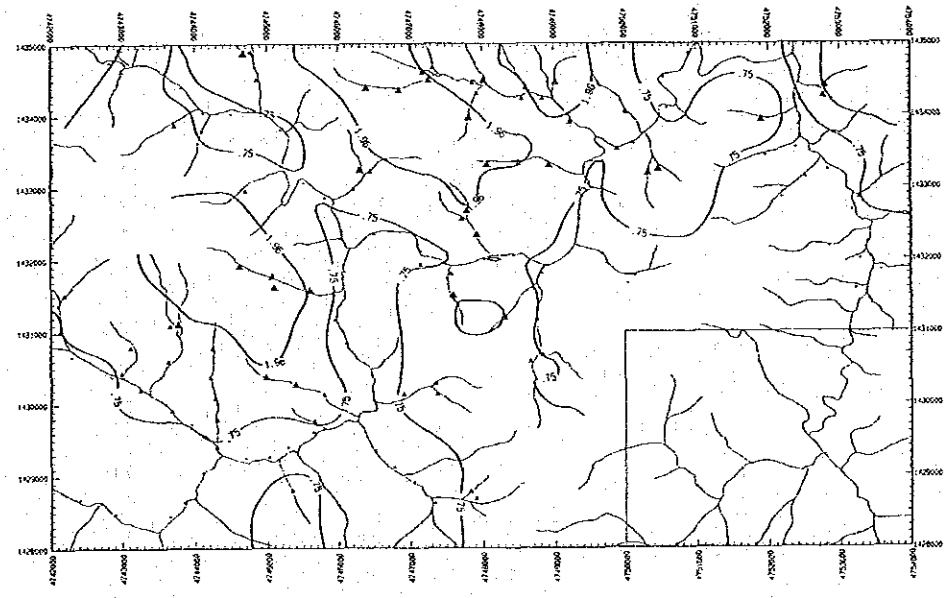
Mn

1042.000
521.800



Mo

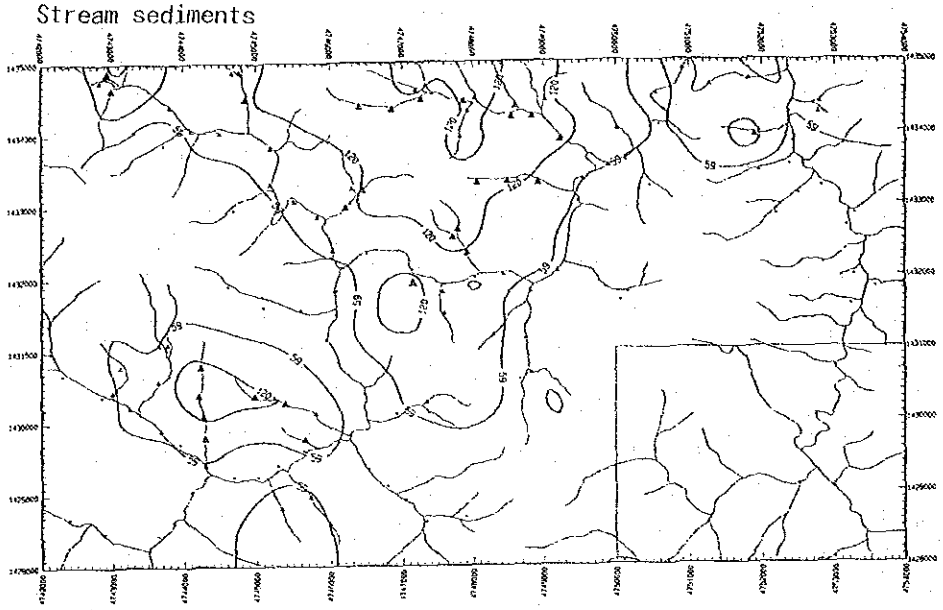
.900



Na

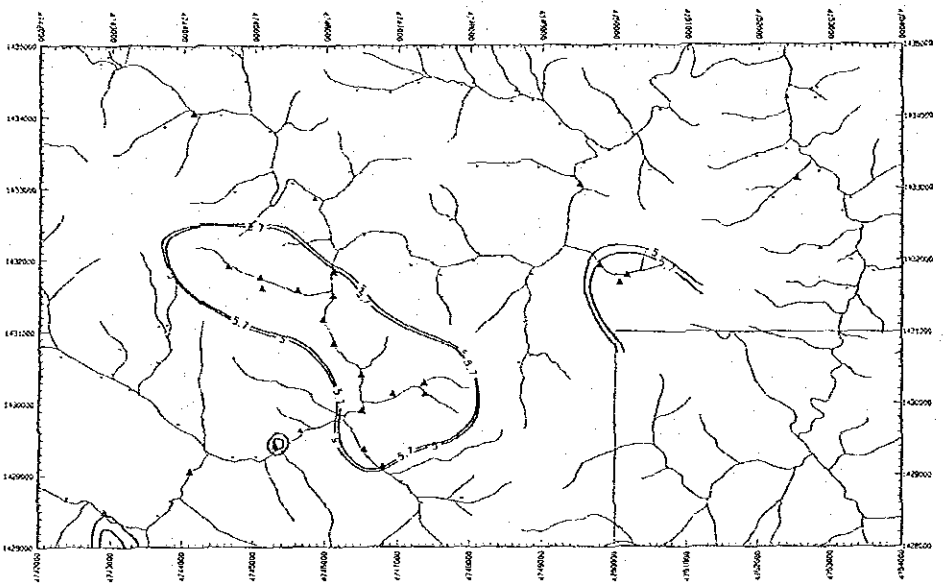
1.960
.750

Stream sediments



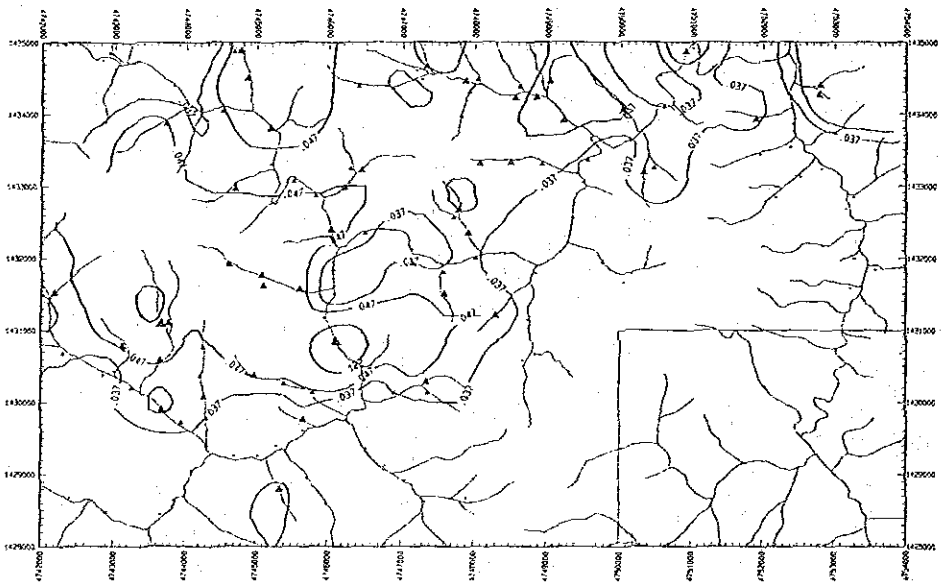
Ni

551.000
120.000
59.000



Pb

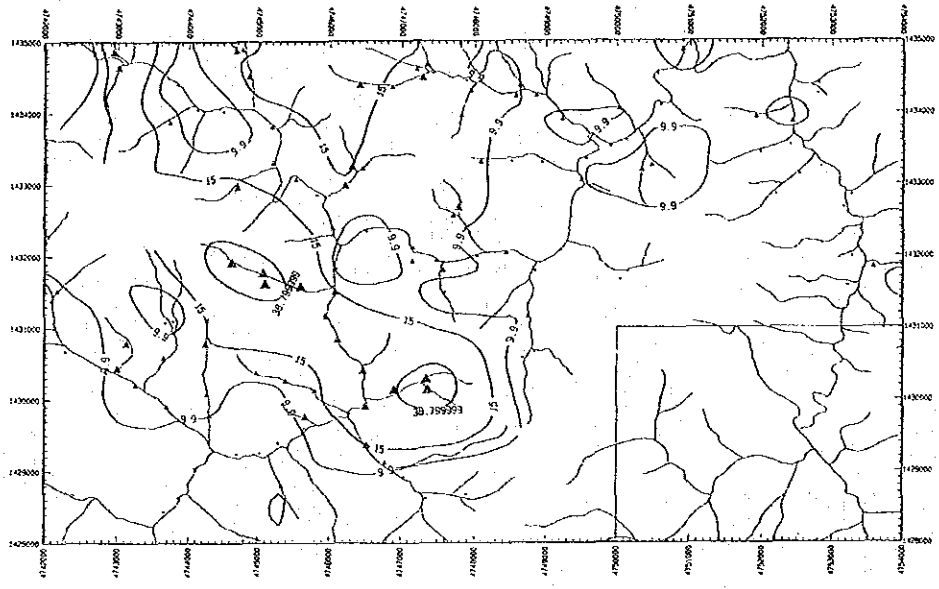
5.700
5.000



S

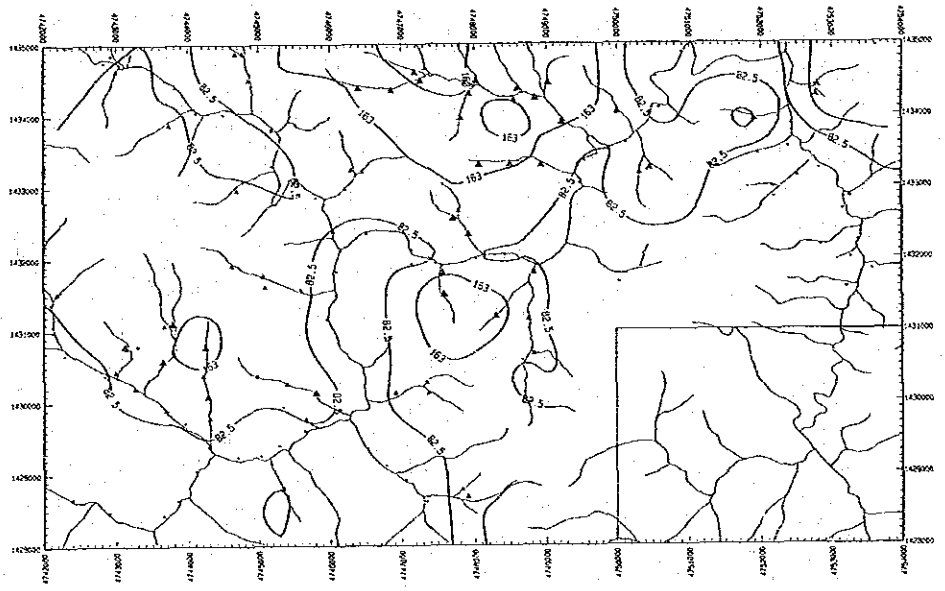
122
047
.037

Stream sediments



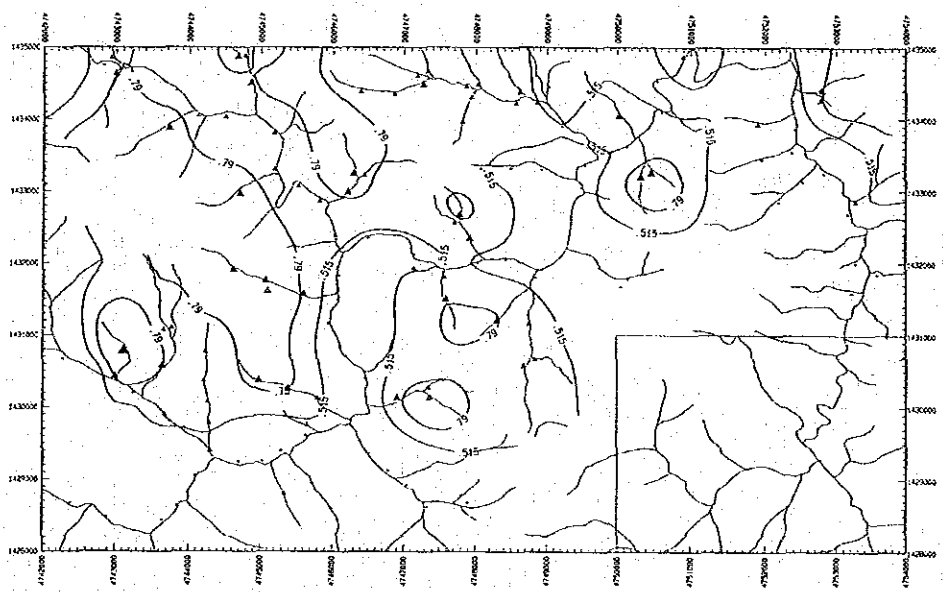
Sb

39.800
15.000
9.900



Sr

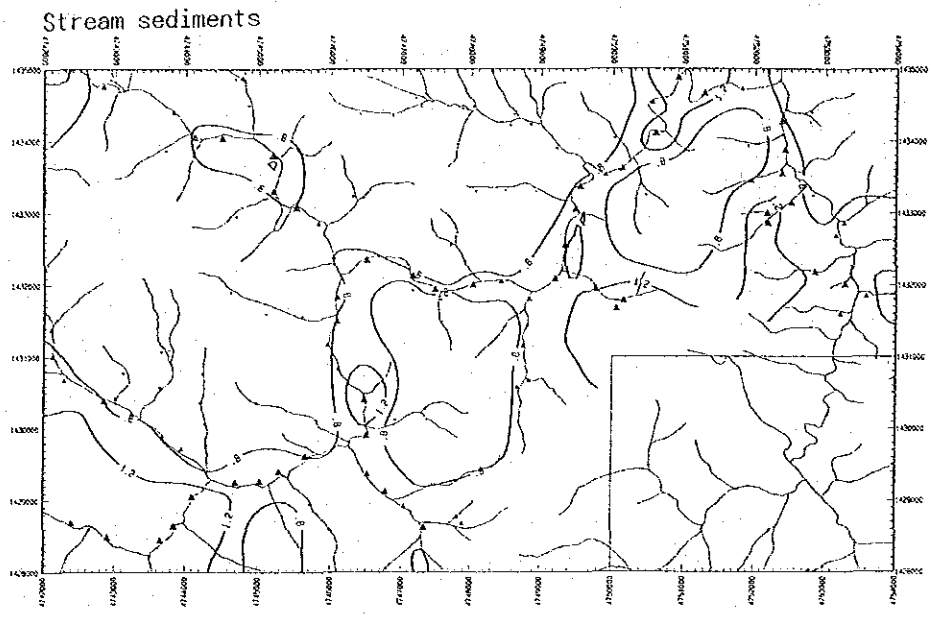
163.000
82.500



Ti

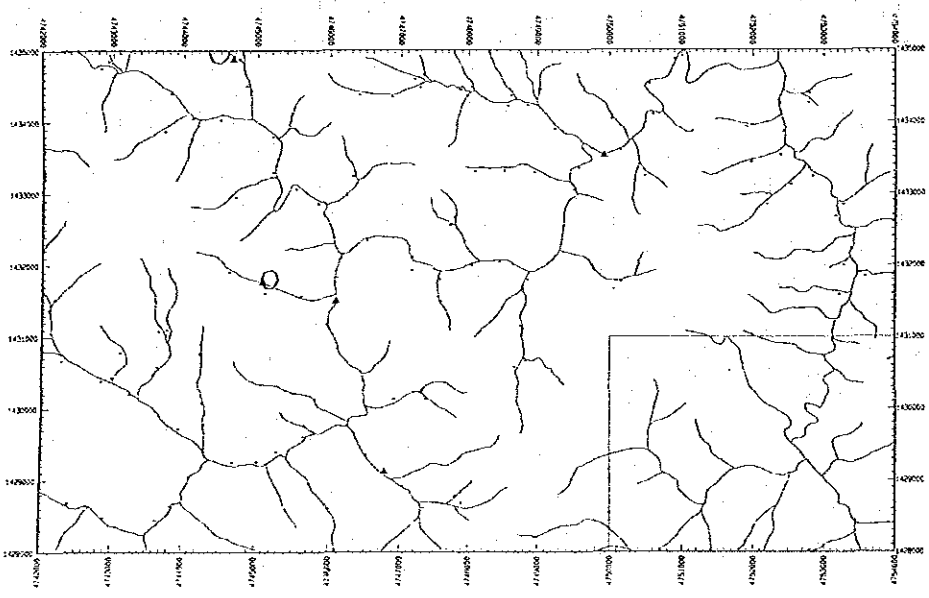
2.729
.790
.515

Stream sediments



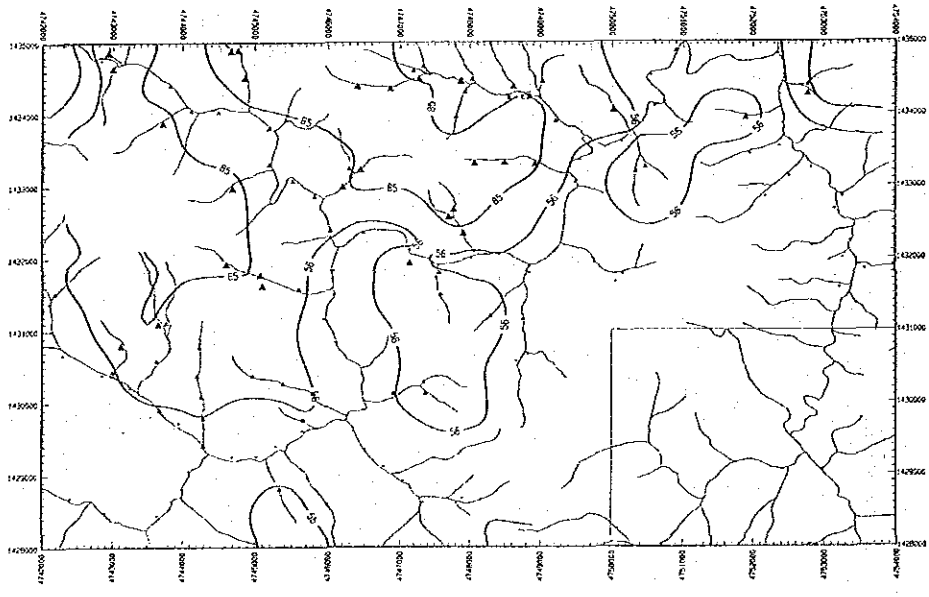
U

1.200
.800



W

3.100



Zn

85.000
56.000

Appendix 30

List of soil geochemical samples
in Area D

Area: Sungai Tingkayu Area (Area D)

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	GD001	1427.43	4770.20	S. Ulu Bole	amphi. schist	As	30	Gn.G.	R	C	M	W	Secondary forest
2	GD002	1427.14	4770.57	S. Ulu Bole	amphi. schist	As	25	Gn.G.	R	C	F	W	Secondary forest
3	GD003	1427.91	4770.78	S. Ulu Bole	amphi. schist	As	25	B.	R	C	M	W	Secondary forest
4	GD004	1427.48	4771.02	S. Ulu Bole	amphi. schist	As	30	B.	R	C	M	W	Secondary forest
5	GD005	1427.71	4771.19	S. Ulu Bole	—	As	25	D.B.	R	C	F	W	Secondary forest
6	GD006	1427.75	4771.75	S. Ulu Bole	amphi. schist	As	25	B.	R	C	F	W	Secondary forest
7	GD007	1427.47	4771.56	S. Ulu Bole	amphi. schist	As	30	B.G.	F	C	M	W	Secondary forest
8	GD008	1427.03	4771.30	S. Ulu Bole	—	As	30	D.B.	R	C	F	W	Secondary forest
9	GD009	1427.40	4772.16	S. Ulu Bole	—	As	30	B.G.	F	C	M	W	Secondary forest
10	GD010	1427.85	4772.50	S. Ulu Bole	amphi. schist	As	30	B.	F	C	M	W	Secondary forest
11	GD011	1427.72	4772.85	S. Ulu Bole	—	Di	25	D.B.	F	C	M	W	Secondary forest
12	GD012	1427.20	4772.55	S. Ulu Bole	—	As	25	D.B.	F	C	M	W	Secondary forest
13	GD013	1427.29	4773.16	S. Ulu Bole	—	As	25	D.B.	F	C	M	W	Secondary forest
14	GD014	1427.84	4773.82	S. Ulu Bole	—	Di	25	B.	R	C	M	W	Secondary forest
15	GD015	1427.46	4773.78	S. Ulu Bole	—	Q_2	25	D.B.	R	C	F	W	Cocoa plantation
16	GD016	1427.02	4773.70	S. Ulu Bole	—	Q_2	30	D.B.	R	C	F	W	Cocoa plantation
17	GD017	1427.64	4774.22	S. Ulu Bole	—	Di	25	B.	R	C	S	W	Cocoa plantation
18	GD018	1427.27	4774.39	S. Ulu Bole	—	Q_2	30	D.B.	R	C	F	W	Cocoa plantation
19	GD019	1427.58	4774.88	S. Ulu Bole	—	Di	30	D.G.	R	C	M	W	Cocoa plantation
20	GD020	1427.03	4774.88	S. Ulu Bole	—	Q_2	30	B.	R	C	F	W	Cocoa plantation
21	GD021	1426.71	4765.30	S. Ulu Bole	—	As	25	Y.B.	F	C	M	W	Primary forest
22	GD022	1426.85	4765.86	S. Ulu Bole	—	As	30	B.	F	C	S	W	Primary forest
23	GD023	1426.37	4765.09	S. Ulu Bole	—	As	25	B.	F	C	S	W	Primary forest
24	GD024	1426.47	4765.63	S. Ulu Bole	—	As	25	B.	F	C	S	W	Primary forest
25	GD025	1426.53	4766.16	S. Ulu Bole	—	As	25	B.	F	C	S	W	Primary forest
26	GD026	1426.84	4766.57	S. Ulu Bole	amphi. schist	As	25	Y.B.	M	C	F	W	Secondary forest
27	GD027	1426.11	4766.27	S. Ulu Bole	—	As	25	Y.B.	F	C	S	W	Primary forest
28	GD028	1426.26	4766.92	S. Ulu Bole	—	As	30	Y.B.	F	C	F	W	Secondary forest
29	GD029	1426.65	4767.04	S. Ulu Bole	—	As	30	B.	R	C	M	W	Secondary forest
30	GD030	1426.08	4767.25	S. Ulu Bole	—	As	30	R.B.	R	C	M	W	Secondary forest

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

Area: Sungai Tingkayu Area (Area D)

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
31	GD031	1426.42	4767.48	S. Ulu Bole	amphi. schist	As	25	B.	R	C	M	W	Secondary forest
32	GD032	1426.75	4767.78	S. Ulu Bole	—	As	35	Y.B.	R	C	F	W	Secondary forest
33	GD033	1426.43	4768.07	S. Ulu Bole	—	As	30	Y.B.	R	C	F	W	Secondary forest
34	GD034	1426.70	4768.42	S. Ulu Bole	—	As	30	B.	F	C	M	W	Secondary forest
35	GD035	1426.07	4768.34	S. Ulu Bole	—	As	30	B.	F	C	M	W	Secondary forest
36	GD036	1426.09	4768.76	S. Ulu Bole	schist	As	25	L.B.	F	C	F	W	Secondary forest
37	GD037	1426.51	4769.11	S. Ulu Bole	amphi. schist	As	25	B.	R	C	M	W	Secondary forest
38	GD038	1426.08	4769.17	S. Ulu Bole	amphi. schist	As	25	Y.B.	F	C	M	W	Secondary forest
39	GD039	1426.88	4769.50	S. Ulu Bole	amphi. schist	As	25	B.G.	F	C	M	W	Secondary forest
40	GD040	1426.46	4769.88	S. Ulu Bole	amphi. schist	As	25	Gn.G.	F	C	F	W	Secondary forest
41	GD041	1426.85	4770.12	S. Ulu Bole	—	As	30	B.	R	C	M	W	Secondary forest
42	GD042	1426.05	4770.15	S. Ulu Bole	—	As	25	B.G.	R	C	M	W	Secondary forest
43	GD043	1426.42	4770.58	S. Ulu Bole	—	As	30	L.B.	R	C	F	W	Secondary forest
44	GD044	1426.87	4770.90	S. Ulu Bole	amphi. schist	As	30	D.B.	R	C	M	W	Secondary forest
45	GD045	1426.28	4771.12	S. Ulu Bole	—	As	30	D.B.	R	C	M	W	Secondary forest
46	GD046	1426.59	4771.37	S. Ulu Bole	—	As	30	L.B.	R	C	M	W	Secondary forest
47	GD047	1426.89	4771.74	S. Ulu Bole	amphi. schist	As	25	Y.B.	R	C	F	W	Secondary forest
48	GD048	1426.38	4771.89	S. Ulu Bole	amphi. schist	As	30	D.B.	F	C	M	W	Secondary forest
49	GD049	1426.92	4772.37	S. Ulu Bole	—	As	30	L.B.	R	C	S	W	Secondary forest
50	GD050	1426.21	4772.33	S. Ulu Bole	—	As	30	D.B.	R	C	M	W	Secondary forest
51	GD051	1426.85	4772.73	S. Ulu Bole	schist	As	25	B.G.	R	C	M	W	Secondary forest
52	GD052	1426.50	4772.82	S. Ulu Bole	schist	As	25	B.	F	C	F	W	Secondary forest
53	GD053	1426.76	4773.26	S. Ulu Bole	schist	As	25	B.	F	C	M	W	Secondary forest
54	GD054	1426.38	4773.25	S. Ulu Bole	schist	As	25	L.B.	F	C	M	W	Secondary forest
55	GD055	1426.57	4773.72	S. Ulu Bole	schist	As	30	L.B.	R	C	M	W	Secondary forest
56	GD056	1426.18	4773.63	S. Ulu Bole	—	As	25	L.B.	F	C	M	W	Secondary forest
57	GD057	1426.82	4774.17	S. Ulu Bole	—	As	25	D.B.	M	S	M	W	Secondary forest
58	GD058	1426.14	4774.16	S. Ulu Bole	—	Csba	25	D.B.	F	C	M	W	Secondary forest
59	GD059	1426.32	4774.53	S. Ulu Bole	tuff breccia	Csba	25	D.B.	F	C	M	W	Secondary forest
60	GD060	1426.69	4774.93	S. Ulu Bole	—	Gs	30	D.G.	R	C	F	W	Secondary forest

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

Area: Sungai Tingkayu Area (Area D)

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	GD061	1425.56	4765.33	S. Ulu Bole	—	As	25	B.	F	C	S	W	Primary forest
62	GD062	1425.16	4765.32	S. Ulu Bole	—	As	30	B.	F	C	S	W	Primary forest
63	GD063	1425.64	4765.82	S. Ulu Bole	—	As	30	Y.B.	F	C	M	W	Primary forest
64	GD064	1425.19	4765.72	S. Ulu Bole	—	As	25	B.	F	C	S	W	Primary forest
65	GD065	1425.58	4766.20	S. Ulu Bole	—	As	30	Y.B.	F	C	S	W	Primary forest
66	GD066	1425.17	4766.12	S. Ulu Bole	—	As	25	B.	F	C	S	W	Primary forest
67	GD067	1425.46	4766.75	S. Ulu Bole	—	As	30	G.B.	F	C	S	W	Cocoa plantation
68	GD068	1425.03	4766.86	S. Ulu Bole	—	As	25	G.B.	M	C	S	W	Cocoa plantation
69	GD069	1425.27	4767.17	S. Ulu Bole	—	As	30	B.	R	C	S	W	Cocoa plantation
70	GD070	1425.93	4767.74	S. Ulu Bole	—	As	25	Y.B.	R	C	F	W	Secondary forest
71	GD071	1425.15	4767.57	S. Ulu Bole	amphi. schist	As	30	B.	R	C	S	W	Cocoa plantation
72	GD072	1425.05	4767.90	S. Ulu Bole	—	As	25	Y.B.	F	C	S	W	Secondary forest
73	GD073	1425.65	4768.12	S. Ulu Bole	—	As	30	L.B.	R	C	M	W	Secondary forest
74	GD074	1425.68	4768.87	S. Ulu Bole	—	As	30	Y.B.	F	C	S	W	Secondary forest
75	GD075	1425.10	4768.43	S. Ulu Bole	amphi. schist	As	25	Y.B.	F	C	M	W	Secondary forest
76	GD076	1425.30	4768.94	S. Ulu Bole	—	As	30	Y.B.	F	C	M	W	Secondary forest
77	GD077	1425.61	4769.24	S. Ulu Bole	amphi. schist	As	25	Y.B.	R	C	M	W	Secondary forest
78	GD078	1425.00	4769.19	S. Ulu Bole	—	As	30	Y.B.	F	C	M	W	Secondary forest
79	GD079	1425.75	4769.79	S. Ulu Bole	amphi. schist	As	30	Y.B.	F	C	S	W	Secondary forest
80	GD080	1425.32	4769.87	S. Ulu Bole	—	As	30	Y.B.	F	C	S	W	Secondary forest
81	GD081	1425.52	4770.40	S. Ulu Bole	—	As	35	R.B.	R	C	F	W	Secondary forest
82	GD082	1425.03	4770.20	S. Ulu Bole	schist	As	25	B.	R	C	M	W	Secondary forest
83	GD083	1425.83	4770.86	S. Ulu Bole	—	As	25	B.	R	C	M	W	Secondary forest
84	GD084	1425.12	4770.81	S. Ulu Bole	—	As	30	Y.B.	F	C	M	W	Secondary forest
85	GD085	1425.28	4771.29	S. Ulu Bole	—	As	35	L.B.	R	C	M	W	Secondary forest
86	GD086	1425.90	4771.45	S. Ulu Bole	—	As	30	D.B.	R	C	M	W	Secondary forest
87	GD087	1425.62	4771.82	S. Ulu Bole	—	As	30	D.B.	R	C	M	W	Secondary forest
88	GD088	1425.02	4771.68	S. Ulu Bole	—	As	30	B.	R	C	S	W	Cocoa plantation
89	GD089	1425.72	4772.25	S. Ulu Bole	—	As	25	B.G.	F	C	S	W	Secondary forest
90	GD090	1425.27	4772.09	S. Ulu Bole	—	As	30	B.	F	C	S	W	Cocoa plantation

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

Area: Sungai Tingkayu Area (Area D)

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
91	GD091	1425.18	4772.57	S. Ulu Bole	—	P_4Km	30	L.B.	R	C	S	W	Cocoa plantation
92	GD092	1425.75	4772.88	S. Ulu Bole	—	As	30	B.	R	C	M	W	Cocoa plantation
93	GD093	1425.02	4773.25	S. Ulu Bole	—	Gs	30	L.B.	R	C	M	W	Secondary forest
94	GD094	1425.62	4773.40	S. Ulu Bole	—	Csba	30	D.B.	F	C	S	W	Secondary forest
95	GD095	1425.86	4773.86	S. Ulu Bole	—	Csch	30	Y.B.	F	C	S	W	Secondary forest
96	GD096	1425.30	4773.82	S. Ulu Bole	—	Gs	30	D.B.	R	C	F	W	Secondary forest
97	GD097	1425.65	4774.21	S. Ulu Bole	—	Csba	30	D.B.	R	C	F	W	Secondary forest
98	GD098	1425.13	4774.16	S. Ulu Bole	—	Q_2	30	D.B.	R	C	F	W	Secondary forest
99	GD099	1425.88	4774.77	S. Ulu Bole	—	Q_2	30	B.	R	C	F	W	Secondary forest
100	GD100	1425.40	4774.64	S. Ulu Bole	—	Q_2	25	L.B.	R	C	F	W	Secondary forest
101	GD101	1424.46	4765.15	S. Ulu Bole	—	As	30	B.	R	C	S	W	Primary forest
102	GD102	1424.88	4765.88	S. Ulu Bole	—	As	30	B.	F	C	S	W	Primary forest
103	GD103	1424.18	4765.43	S. Tingkayu	—	As	25	B.	F	C	S	W	Primary forest
104	GD104	1424.32	4765.80	S. Ulu Bole	—	As	30	B.	F	C	S	W	Primary forest
105	GD105	1424.67	4766.20	S. Ulu Bole	—	As	30	B.	F	C	S	W	Primary forest
106	GD106	1424.24	4766.25	S. Ulu Bole	—	As	30	B.	F	C	S	W	Primary forest
107	GD107	1424.68	4766.80	S. Ulu Bole	—	As	30	B.	R	C	M	W	Secondary forest
108	GD108	1424.10	4766.89	S. Tingkayu	—	As	25	B.	R	C	M	W	Cocoa plantation
109	GD109	1424.79	4767.28	S. Ulu Bole	—	As	30	B.	F	C	M	W	Cocoa plantation
110	GD110	1424.38	4767.16	S. Ulu Bole	—	As	30	B.	R	C	M	W	Cocoa plantation
111	GD111	1424.08	4767.09	S. Tingkayu	—	As	30	B.	R	C	M	W	Cocoa plantation
112	GD112	1424.67	4767.97	S. Ulu Bole	amphi. schist	As	25	Y.B.	F	C	S	W	Cocoa plantation
113	GD113	1424.80	4768.29	S. Ulu Bole	amphi. schist	As	30	Y.B.	F	C	S	W	Cocoa plantation
114	GD114	1424.26	4768.39	S. Ulu Bole	—	As	30	B.	F	C	S	W	Cocoa plantation
115	GD115	1424.58	4768.87	S. Ulu Bole	—	As	30	Y.B.	F	C	S	W	Primary forest
116	GD116	1424.10	4768.88	S. Tingkayu	—	As	25	B.	R	C	M	W	Secondary forest
117	GD117	1424.62	4769.30	S. Ulu Bole	—	As	30	Y.B.	F	C	S	W	Secondary forest
118	GD118	1424.07	4769.29	S. Tingkayu	—	As	30	B.	R	C	M	W	Secondary forest
119	GD119	1424.83	4769.80	S. Ulu Bole	—	As	30	B.	R	C	M	W	Secondary forest
120	GD120	1424.25	4769.79	S. Ulu Bole	—	As	30	B.	R	C	M	W	Secondary forest

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

Area: Sungai Tingkayu Area (Area D)

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
121	GD121	1424.47	4770.26	S. Ulu Bole	—	As	20	B.	R	C	M	W	Secondary forest
122	GD122	1424.04	4770.25	S. Tingkayu	—	P_4Km	30	L.B.	R	C	F	W	Secondary forest
123	GD123	1424.85	4770.77	S. Ulu Bole	—	As	30	B.	R	C	M	W	Secondary forest
124	GD124	1424.49	4770.95	S. Ulu Bole	—	P_4Km	30	L.B.	R	C	F	W	Cocoa plantation
125	GD125	1424.73	4771.33	S. Ulu Bole	—	Pr	30	L.B.	R	C	M	W	Cocoa plantation
126	GD126	1424.27	4771.23	S. Ulu Bole	—	P_4Km	30	L.B.	R	C	F	W	Cocoa plantation
127	GD127	1424.57	4771.80	S. Ulu Bole	—	P_4Km	30	B.	R	C	M	W	Cocoa plantation
128	GD128	1424.12	4771.67	S. Tingkayu	—	P_4Km	30	D.R.B.	R	C	F	W	Cocoa plantation
129	GD129	1424.76	4772.11	S. Ulu Bole	—	P_4Km	25	L.B.	M	C	S	W	Secondary forest
130	GD130	1424.17	4772.20	S. Tingkayu	sandstone	P_4Km	30	B.	F	C	M	W	Cocoa plantation
131	GD131	1424.75	4772.67	S. Ulu Bole	—	P_4Km	30	D.B.	M	C	M	W	Cocoa plantation
132	GD132	1424.06	4772.79	S. Tingkayu	—	P_4Km	30	B.	R	C	M	W	Cocoa plantation
133	GD133	1424.42	4773.12	S. Ulu Bole	—	Gs	30	L.B.	R	C	M	W	Cocoa plantation
134	GD134	1424.08	4773.37	S. Tingkayu	—	Gs	30	D.B.	M	C	S	W	Secondary forest
135	GD135	1424.64	4773.89	S. Ulu Bole	—	Q_2	30	R.B.	R	C	M	W	Secondary forest
136	GD136	1424.25	4773.84	S. Ulu Bole	peridotite	Pr	30	D.B.	F	C	M	W	Secondary forest
137	GD137	1424.79	4774.16	S. Ulu Bole	—	Q_2	30	L.B.	R	C	F	W	Secondary forest
138	GD138	1424.41	4774.28	S. Ulu Bole	peridotite	Pr	25	D.B.	M	C	M	W	Secondary forest
139	GD139	1424.83	4774.80	S. Ulu Bole	peridotite	Pr	30	D.B.	M	C	S	W	Secondary forest
140	GD140	1424.27	4774.85	S. Ulu Bole	peridotite	Pr	20	D.B.	F	C	S	W	Secondary forest
141	GD141	1423.53	4765.12	S. Tingkayu	—	As	25	B.	F	C	S	W	Secondary forest
142	GD142	1423.05	4765.18	S. Tingkayu	—	As	35	B.	R	C	M	W	Secondary forest
143	GD143	1423.78	4765.59	S. Tingkayu	—	As	30	B.	F	C	S	W	Secondary forest
144	GD144	1423.22	4765.68	S. Tingkayu	—	As	25	B.	F	C	S	W	Secondary forest
145	GD145	1423.32	4766.12	S. Tingkayu	—	As	25	B.	F	C	S	W	Secondary forest
146	GD146	1423.72	4766.19	S. Tingkayu	—	As	25	B.	F	C	S	W	Secondary forest
147	GD147	1423.07	4766.57	S. Tingkayu	—	As	30	Y.B.	R	C	M	W	Secondary forest
148	GD148	1423.76	4766.75	S. Tingkayu	—	As	30	D.B.	R	C	F	W	Cocoa plantation
149	GD149	1423.74	4767.28	S. Tingkayu	—	Q_2	30	B.	R	C	M	W	Cocoa plantation
150	GD150	1423.24	4767.08	S. Tingkayu	—	As	30	B.	R	C	F	W	Secondary forest

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

Area: Sungai Tingkayu Area (Area D)

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
151	GD151	1423.36	4767.53	S. Tingkayu	—	Q_2	25	B.	R	C	S	W	Cocoa plantation
152	GD152	1423.60	4767.90	S. Tingkayu	—	As	20	B.	R	C	M	W	Cocoa plantation
153	GD153	1423.88	4768.27	S. Tingkayu	—	As	25	B.	F	C	M	W	Cocoa plantation
154	GD154	1423.36	4768.12	S. Tingkayu	—	Q_2	30	B.	R	C	M	W	Cocoa plantation
155	GD155	1423.65	4768.66	S. Tingkayu	—	P_4Km	30	B.	R	C	M	W	Cocoa plantation
156	GD156	1423.15	4768.77	S. Tingkayu	—	P_4Km	30	Y.B.	R	C	M	W	Secondary forest
157	GD157	1423.62	4769.03	S. Tingkayu	—	P_4Km	30	B.	R	C	M	W	Secondary forest
158	GD158	1423.16	4769.37	S. Tingkayu	—	P_4Km	30	B.	R	C	M	W	Secondary forest
159	GD159	1423.85	4769.76	S. Tingkayu	—	P_4Km	30	B.	F	C	M	W	Secondary forest
160	GD160	1423.31	4769.79	S. Tingkayu	—	Q_2	25	B.	R	C	M	W	Secondary forest
161	GD161	1423.05	4770.15	S. Tingkayu	—	Q_2	30	B.	R	C	M	W	Secondary forest
162	GD162	1423.53	4770.29	S. Tingkayu	—	P_4Km	20	B.	R	C	M	W	Secondary forest
163	GD163	1423.89	4770.82	S. Tingkayu	—	P_4Km	30	B.	R	C	M	W	Secondary forest
164	GD164	1423.42	4770.77	S. Tingkayu	—	P_4Km	25	Y.B.	R	C	M	D	Secondary forest
165	GD165	1423.04	4770.73	S. Tingkayu	—	P_4Km	30	L.B.	F	S	M	W	Secondary forest
166	GD166	1423.78	4771.36	S. Tingkayu	—	P_4Km	30	B.	R	C	M	W	Secondary forest
167	GD167	1423.32	4771.25	S. Tingkayu	—	P_4Km	30	Y.B.	R	C	M	D	Secondary forest
168	GD168	1423.35	4771.75	S. Tingkayu	—	Gs	30	L.B.	R	C	M	W	Secondary forest
169	GD169	1423.73	4771.90	S. Tingkayu	—	P_4Km	20	B.	R	C	M	W	Secondary forest
170	GD170	1423.73	4772.40	S. Tingkayu	—	P_4Km	25	B.	F	C	M	W	Cocoa plantation
171	GD171	1423.41	4772.20	S. Tingkayu	—	Gs	30	L.B.	F	C	S	W	Secondary forest
172	GD172	1423.02	4772.60	S. Tingkayu	peridotite	Pr	30	D.B.	F	C	S	W	Secondary forest
173	GD173	1423.43	4772.79	S. Tingkayu	—	P_4Km	30	B.	R	C	M	W	Cocoa plantation
174	GD174	1423.71	4773.13	S. Tingkayu	sandstone	P_4Km	30	Y.B.	F	C	M	W	Cocoa plantation
175	GD175	1423.01	4773.26	S. Tingkayu	—	P_4Km	30	B.	R	C	S	W	Secondary forest
176	GD176	1423.65	4773.68	S. Tingkayu	peridotite	Pr	30	B.	F	C	S	W	Secondary forest
177	GD177	1423.16	4773.74	S. Tingkayu	—	P_4Km	25	B.	F	C	M	W	Secondary forest
178	GD178	1423.91	4774.05	S. Tingkayu	—	Pr	30	D.B.	F	C	S	W	Secondary forest
179	GD179	1423.43	4774.39	S. Tingkayu	—	P_4Km	30	B.	F	C	S	W	Cocoa plantation
180	GD180	1423.85	4774.88	S. Tingkayu	—	P_4Km	30	Y.B.	F	C	M	W	Secondary forest

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

Ser. No.	Sample No.	Coordinates N	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	GD181	1423.16	4774.80	S. Tingkayu	sandstone	P_4Km	20	L.B.	F	S	M	D	Secondary forest
182	GD182	1422.90	4765.59	S. Tingkayu	—	As	35	B.	F	C	M	W	Secondary forest
183	GD183	1422.55	4765.47	S. Tingkayu	—	Pr	30	B.	R	C	M	W	Secondary forest
184	GD184	1422.11	4765.32	S. Tingkayu	tfc. sandstone	P_4Km	35	B.	F	C	M	W	Secondary forest
185	GD185	1422.24	4765.87	S. Tingkayu	tfc. sandstone	P_4Km	30	B.	F	C	M	W	Secondary forest
186	GD186	1422.80	4766.24	S. Tingkayu	—	Pr	30	B.	F	C	M	W	Primary forest
187	GD187	1422.13	4766.43	S. Tingkayu	—	P_4Km	30	B.	F	C	M	W	Primary forest
188	GD188	1422.58	4766.84	S. Tingkayu	—	P_4Km	30	Y.B.	R	C	M	W	Secondary forest
189	GD189	1422.11	4766.88	S. Tingkayu	—	P_4Km	30	Y.B.	R	C	M	W	Secondary forest
190	GD190	1422.88	4767.08	S. Tingkayu	—	P_4Km	30	Y.B.	R	C	M	W	Secondary forest
191	GD191	1422.52	4767.40	S. Tingkayu	—	P_4Km	30	B.	R	C	M	W	Secondary forest
192	GD192	1422.07	4767.62	S. Tingkayu	—	P_4Km	30	Y.B.	R	C	M	W	Secondary forest
193	GD193	1422.89	4767.76	S. Tingkayu	—	Q_2	30	B.	R	C	M	W	Secondary forest
194	GD194	1422.59	4768.23	S. Tingkayu	—	Q_2	30	B.	R	C	F	W	Secondary forest
195	GD195	1422.05	4768.14	S. Tingkayu	—	Q_2	30	Y.B.	R	C	M	W	Secondary forest
196	GD196	1422.80	4768.75	S. Tingkayu	—	Q_2	30	Y.B.	R	C	F	W	Secondary forest
197	GD197	1422.16	4768.70	S. Tingkayu	—	P_4Km	30	Y.B.	R	C	F	W	Secondary forest
198	GD198	1422.75	4769.15	S. Tingkayu	—	Q_2	30	Y.B.	R	C	F	W	Secondary forest
199	GD199	1422.07	4769.19	S. Tingkayu	—	P_4Km	30	Y.B.	R	C	M	D	Artificial fore.
200	GD200	1422.74	4769.84	S. Tingkayu	—	Q_2	30	B.	R	C	M	W	Secondary forest
201	GD201	1422.08	4769.80	S. Tingkayu	—	P_4Km	30	D.B.	R	C	F	W	Artificial fore.
202	GD202	1422.26	4770.17	S. Tingkayu	—	Pr	30	B.	R	C	M	W	Secondary forest
203	GD203	1422.70	4770.44	S. Tingkayu	—	Gs	30	B.	F	C	S	W	Secondary forest
204	GD204	1422.23	4770.66	S. Tingkayu	peridotite	Pr	30	R.B.	R	C	M	W	Secondary forest
205	GD205	1422.63	4770.92	S. Tingkayu	peridotite	Pr	30	B.	M	C	M	W	Secondary forest
206	GD206	1422.42	4771.29	S. Tingkayu	peridotite	Pr	20	D.B.	M	C	F	W	Secondary forest
207	GD207	1422.83	4771.42	S. Tingkayu	peridotite	Pr	25	R.B.	R	C	M	W	Secondary forest
208	GD208	1422.12	4771.58	S. Tingkayu	peridotite	Pr	25	L.B.	R	C	S	W	Secondary forest
209	GD209	1422.65	4771.69	S. Tingkayu	peridotite	Pr	30	D.B.	R	C	S	W	Secondary forest
210	GD210	1423.08	4772.14	S. Tingkayu	peridotite	Pr	30	B.	R	C	S	W	Secondary forest

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

Area: Sungai Tingkayu Area (Area D)

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
211	GD211	1422.42	4772.17	S. Tingkayu	—	P_4Km	30	L.B.	R	C	S	W	Secondary forest
212	GD212	1422.05	4772.52	S. Tingkayu	—	P_4Km	30	Y.B.	F	S	S	D	Cocoa plantation
213	GD213	1422.77	4772.85	S. Tingkayu	—	P_4Km	30	D.B.	F	C	S	W	Secondary forest
214	GD214	1422.46	4773.12	S. Tingkayu	—	P_4Km	30	Y.B.	R	S	S	D	Cocoa plantation
215	GD215	1422.49	4773.62	S. Tingkayu	—	Gs	30	Y.B.	R	S	S	D	Cocoa plantation
216	GD216	1422.05	4773.75	S. Tingkayu	—	Gs	30	D.B.	F	C	S	W	Cocoa plantation
217	GD217	1422.91	4773.91	S. Tingkayu	—	P_4Km	25	L.B.	M	C	M	W	Secondary forest
218	GD218	1422.22	4774.11	S. Tingkayu	—	Gb	30	L.B.	M	C	S	W	Cocoa plantation
219	GD219	1422.83	4774.37	S. Tingkayu	—	Gs	30	D.B.	M	C	S	W	Cocoa plantation
220	GD220	1422.48	4774.74	S. Tingkayu	vol. breccia	Csba	30	D.B.	M	C	S	W	Cocoa plantation
221	GD221	1422.10	4774.86	S. Tingkayu	—	Csba	30	L.B.	F	C	S	W	Cocoa plantation

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

Appendix 31

Analytical results of soil
geochemical samples in Area D

List of Geochemical Analysis(1)

Ser. No.	Sample No.	Location (km) X-coord	Location (km) Y-coord	As ppm	Au ppb	Ba ppm	Co ppm	Cr ppm	Cu ppm	Hg ppb	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	Pb ppm	S %	Sb ppm	Sr ppm	Ti %	U ppm	W ppm	Zn ppm
1	GD001	4770.200	1427.430	1>	1>	17	40	196	31	10>	.01	3.25	466	1>	.72	78	2>	.034	10.8	51	.42	.2>	2>	70
2	GD002	4770.570	1427.140	1>	1>	13	41	188	76	14	.02	3.10	816	1>	1.22	62	2>	.043	9.0	101	.66	.2>	2>	72
3	GD003	4770.780	1427.910	1>	1>	10	42	447	67	11	.02	3.48	608	1>	.70	163	2>	.037	5.8	53	.31	.2>	2>	58
4	GD004	4771.020	1427.480	1>	1>	22	31	72	86	13	.01	1.67	709	1>	1.05	41	2>	.033	10.0	100	.87	.2>	2>	55
5	GD005	4771.190	1427.710	1>	1>	7	38	157	56	42	.01	2.70	577	1>	1.27	59	2>	.044	9.2	84	.58	.2>	2>	51
6	GD006	4771.750	1427.750	1>	1>	23	67	252	136	56	.01	2.07	2342	1>	1.09	87	2>	.034	16.2	62	1.30	.2>	2>	92
7	GD007	4771.560	1427.470	1>	1>	9	34	197	18	10>	.01	1.62	392	1>	1.52	214	2>	.027	7.3	76	.43	.2>	2>	30
8	GD008	4771.300	1427.030	1>	1>	19	42	279	24	42	.06	3.42	625	1>	2.68	113	2>	.045	5.4	140	.44	.2>	2>	61
9	GD009	4772.160	1427.400	1>	1>	43	34	166	11	18	.04	1.66	824	1>	1.07	45	2>	.027	11.7	119	.28	.2	2>	60
10	GD010	4772.500	1427.850	1>	1>	78	31	53	46	57	.09	1.20	925	1>	1.05	22	2>	.024	8.5	196	.66	.8	2>	71
11	GD011	4772.850	1427.720	1>	1>	57	29	183	22	21	.05	1.80	882	1>	.99	61	2>	.019	10.8	125	.33	.2	2>	64
12	GD012	4772.550	1427.200	1>	1>	23	22	126	16	20	.04	1.72	538	1>	1.20	55	2>	.033	14.1	125	.46	.2	2>	34
13	GD013	4773.160	1427.290	1>	1>	78	19	68	39	31	.20	1.13	905	1>	.87	28	2>	.018	9.2	166	.48	.8	2>	70
14	GD014	4773.820	1427.840	1>	1>	114	37	135	60	60	.21	1.04	1350	1>	1.45	36	2>	.033	8.7	201	.68	.2	2>	89
15	GD015	4773.780	1427.460	1>	1>	67	34	80	33	33	.01	.55	1585	1>	.96	27	2>	.022	4.8	142	.65	1.0	2>	57
16	GD016	4773.700	1427.020	1>	1>	51	49	127	24	47	.01>	.86	1864	1>	.62	42	4	.030	8.9	95	.65	.2	2>	50
17	GD017	4774.220	1427.640	1>	1>	67	37	102	51	56	.09	.80	1337	1>	1.20	35	2>	.022	6.8	136	.84	1.0	2>	72
18	GD018	4774.390	1427.270	1>	1>	160	35	76	47	63	.21	.82	1581	1>	1.82	31	2>	.041	8.6	265	.65	.8	2>	61
19	GD019	4774.880	1427.580	1>	1>	48	37	218	13	43	.04	2.24	1388	1>	1.53	63	2>	.037	14.7	150	.30	.2	2>	72
20	GD020	4774.880	1427.030	1>	1	27	41	94	123	19	.04	1.94	1363	1>	2.33	41	2>	.027	7.7	113	.68	.2	2>	72
21	GD021	4765.300	1426.710	1>	2	13	45	65	94	46	.01>	1.25	784	1>	3.37	34	2>	.016	8.1	69	.87	.2	2>	100
22	GD022	4765.860	1426.850	1>	1>	12	30	97	102	65	.01>	.73	103	1>	.67	50	2>	.016	4.5	22	.78	.2>	2>	97
23	GD023	4765.090	1426.370	1>	1	16	26	82	61	60	.01	.62	61	1>	3.11	31	2>	.015	5.3	52	.86	.2	2>	79
24	GD024	4765.630	1426.470	1>	7	34	41	220	117	64	.01	.98	882	1	1.31	94	2>	.018	.7	52	.75	.2	2>	163
25	GD025	4766.160	1426.530	1>	1>	16	29	101	106	51	.01>	1.75	1348	2	3.57	41	3	.014	6.3	67	.72	.2	3	190
26	GD026	4766.570	1426.840	1>	1>	16	36	80	104	59	.02	1.35	1184	1>	2.99	37	2>	.024	13.3	133	.90	.2>	2>	68
27	GD027	4766.270	1426.110	1>	1	39	39	165	134	28	.23	2.38	894	1>	1.84	70	2>	.041	7.3	130	.42	.2>	2>	112
28	GD028	4766.920	1426.260	1>	2	11	25	154	111	98	.01>	.74	5>	1>	.92	47	2>	.016	7.0	18	.62	.2	2>	105
29	GD029	4767.040	1426.650	1>	1>	5	29	52	37	78	.01>	.36	199	1>	2.75	20	2>	.015	3.3	33	.74	.2	2>	84
30	GD030	4767.250	1426.080	1>	1>	17	21	97	189	51	.04	.29	5>	1>	.13	53	2>	.026	1.7	2	.56	.2	2>	98
31	GD031	4767.480	1426.420	1>	1>	19	56	354	112	35	.12	1.94	817	1>	1.32	118	2>	.043	7.7	138	.42	.2>	2>	101
32	GD032	4767.780	1426.750	1>	1>	8	24	134	179	76	.01>	.40	5>	1>	.31	53	2>	.017	4.6	5	.94	.2>	2>	99
33	GD033	4768.070	1426.430	1>	1>	27	28	131	103	24	.02	1.41	489	1>	1.41	68	2>	.020	8.5	81	.45	.2	2>	84
34	GD034	4768.420	1426.700	1>	1>	21	29	46	58	33	.02	1.36	783	1>	2.68	34	2>	.021	10.7	137	.65	.2	2>	70
35	GD035	4768.340	1426.070	1>	1>	38	45	80	85	22	.19	2.76	1612	1>	2.61	47	2>	.026	6.0	98	.68	.2	2>	103
36	GD036	4768.760	1426.090	1>	1>	21	47	514	66	22	.03	2.95	502	1>	2.29	674	2>	.018	11.6	59	.65	.2	2>	93
37	GD037	4769.110	1426.510	1>	1>	8	28	65	52	40	.01>	2.14	800	1>	2.67	29	2>	.030	8.9	100	.69	.2	2>	67
38	GD038	4769.170	1426.080	1>	1>	20	55	383	65	74	.01>	2.19	1107	1>	2.32	198	2>	.028	11.2	103	.65	.2	2>	76
39	GD039	4769.500	1426.880	1>	1>	9	30	114	52	16	.02	3.12	669	1>	2.63	53	2>	.032	9.0	124	.63	.2	2>	59
40	GD040	4769.880	1426.460	1>	1	26	41	94	97	33	.08	2.85	1187	1>	2.78	43	2>	.041	10.2	137	.67	.2>	2>	80
41	GD041	4770.120	1426.850	1>	1>	14	43	148	38	34	.01	2.24	948	1	1.73	63	2>	.037	10.3	123	.77	.2>	2>	61
42	GD042	4770.150	1426.050	1>	1>	28	42	98	54	45	.08	3.18	1216	1>	2.91	54	2>	.039	10.2	143	.59	.2>	2>	87
43	GD043	4770.580	1426.420	1>	16	37	23	42	60	37	.15	1.86	1006	1>	1.77	43	2>	.035	.2>	146	.39	.2>	2>	95
44	GD044	4770.900	1426.870	1>	1>	8	32	116	24	10>	.01	2.19	718	1>	1.54	41	2>	.050	8.9	157	.79	.2>	2>	45
45	GD045	4771.120	1426.280	1>	1>	27	54	277	74	46	.05	2.00	1612	1>	3.12	119	2>	.028	10.3	117	.88	.2	2>	65
46	GD046	4771.370	1426.590	1>	1>	38	99	193	92	56	.02	.91	1405	1>	1.49	182	2>	.018	6.4	51	1.21	.2>	2>	70
47	GD047	4771.740	1426.890	1>	1>	28	44	633	20	10>	.08	3.66	500	1>	1.49	246	2>	.036	9.8	107	.46	.2>	2>	72
48	GD048	4771.890	1426.380	1>	1	16	33	43	43	26	.01>	1.27	1215	1>	2.16	24	2>	.033	6.6	112	1.00	.2>	2>	57
49	GD049	4772.370	1426.920	1>	1>	13	51	180	32	32	.01>	1.64	682	1>	2.26	87	2>	.029	5.9	98	.69	.2>	2>	52
50	GD050	4772.330	1426.210	1>	1>	21	42	95	59	23	.05	2.58	1357	1>	3.17	48	2>	.029	8.4	126	.76	.2>	2>	84

List of Geochemical Analysis(2)

Ser. No.	Sample No.	Location (km) X-coord	Location (km) Y-coord	As ppm	Au ppb	Ba ppm	Co ppm	Cr ppm	Cu ppm	Hg ppb	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	Pb ppm	S %	Sb ppm	Sr ppm	Ti %	U ppm	W ppm	Zn ppm
51	GD051	4772.730	1426.850	1>	21	11	58	91	57	47	.01>	2.28	901	1>	1.43	54	2>	.043	13.1	134	.73	.2	2>	54
52	GD052	4772.820	1426.500	1>	1>	18	50	36	27	75	.01>	1.27	626	1>	1.59	20	2>	.037	15.1	180	1.13	.2>	2>	36
53	GD053	4773.260	1426.760	1>	1>	8	43	42	30	46	.01>	2.01	670	1>	.99	28	2>	.050	5.7	299	.79	.4	2>	45
54	GD054	4773.250	1426.380	1>	1>	13	39	73	28	71	.02	2.55	756	1>	2.22	38	2>	.044	12.0	138	.65	.2>	2>	62
55	GD055	4773.720	1426.570	1>	1>	7	30	74	89	28	.01>	1.59	1414	1>	2.71	29	2>	.023	7.9	104	.75	.2	2>	112
56	GD056	4773.630	1426.180	1>	1	48	54	125	121	15	.09	2.33	1584	1>	2.66	110	2>	.014	10.8	58	.80	.4	2>	172
57	GD057	4774.170	1426.820	1>	47	44	41	26	89	16	.07	2.38	1439	1>	3.69	25	2>	.031	14.4	116	.84	.2	2>	118
58	GD058	4774.160	1426.140	1>	1>	96	30	61	39	127	.41	.36	2605	1	.03	25	2>	.022	3.7	45	.43	1.6	2>	43
59	GD059	4774.530	1426.320	1>	2	90	44	224	83	30	.45	1.83	2122	1>	1.47	120	2>	.031	14.2	72	.74	.6	2>	100
60	GD060	4774.930	1426.690	1>	10	40	202	4920	170	81	.01>	5.47	3679	1>	.08	805	2>	.083	12.8	15	.11	.2>	2>	93
61	GD061	4765.330	1425.560	1>	1>	29	43	262	57	102	.04	1.63	1702	1>	2.46	69	2>	.065	3.4	202	.91	.2	2>	76
62	GD062	4765.320	1425.160	1>	1>	34	55	339	78	103	.07	1.98	1304	1>	2.25	92	2>	.064	9.9	172	.94	.2>	2>	87
63	GD063	4765.820	1425.640	1>	1>	35	40	290	106	61	.02	1.07	1390	1>	1.14	100	2>	.033	6.0	67	.47	.2	2>	82
64	GD064	4765.720	1425.190	1>	1>	22	39	264	53	102	.04	1.69	1342	1>	2.37	70	2>	.068	7.6	208	.79	.2>	2>	77
65	GD065	4766.200	1425.580	1>	1>	16	38	151	40	73	.02	1.97	685	1>	2.38	49	2>	.058	2.0	118	.42	.2	2>	82
66	GD066	4766.120	1425.170	1>	1>	29	52	318	109	41	.10	2.20	1316	1>	1.93	126	2>	.051	8.8	161	1.04	.2>	2>	106
67	GD067	4766.750	1425.460	1>	1>	10	65	621	550	69	.01	7.86	1682	1>	1.25	686	2>	.039	7.7	69	.60	.2	2>	329
68	GD068	4766.860	1425.030	5	2	43	40	444	67	100	.15	2.47	884	1>	1.90	168	2>	.050	13.9	224	.90	.4	2>	83
69	GD069	4767.170	1425.270	1>	1>	17	73	451	121	57	.01	2.81	1939	1>	2.15	275	2>	.038	11.6	76	1.05	.2>	2>	116
70	GD070	4767.740	1425.930	1>	2	9	48	215	106	87	.01>	.33	89	1>	.10	84	2>	.015	1.4	4	.66	.2	2>	83
71	GD071	4767.570	1425.150	1>	1>	76	19	123	51	85	.28	.27	934	1>	.02	54	2>	.022	4.3	11	.45	.6	2>	39
72	GD072	4767.900	1425.050	1>	3	7	39	124	73	98	.01>	3.26	904	1>	2.47	51	2>	.017	14.9	52	.72	.2	2>	187
73	GD073	4768.120	1425.650	2	1>	9	48	369	119	97	.01>	1.15	128	1>	.48	144	2>	.020	6.6	28	.51	.4	2>	87
74	GD074	4768.870	1425.680	1>	22	688	52	222	191	81	.04	.62	1301	2	1.08	91	2>	.018	4.2	32	.88	.2>	2>	489
75	GD075	4768.430	1425.100	1>	1>	13	52	461	36	100	.01>	2.83	1145	1>	1.94	146	2>	.040	11.7	260	.38	.2	2>	64
76	GD076	4768.940	1425.300	1>	1	12	67	72	79	104	.01>	.33	1166	1>	.49	28	2>	.021	10.5	34	1.01	.2	2>	92
77	GD077	4769.240	1425.610	1>	4	7	45	140	73	66	.01>	.39	728	1>	2.78	35	2>	.019	5.3	43	.62	.2>	2>	60
78	GD078	4769.190	1425.000	1>	2	392	84	1344	72	84	.02	4.76	570	1>	.26	387	2>	.021	15.9	18	.44	.2>	2>	106
79	GD079	4769.790	1425.750	1>	1>	23	47	322	113	63	.05	2.08	1244	1>	.92	127	2>	.035	5.1	55	.40	.2>	2>	90
80	GD080	4769.870	1425.320	1>	1>	20	61	186	90	100	.01>	.44	2033	1>	.98	60	2>	.027	4.3	23	.45	.2	2>	63
81	GD081	4770.400	1425.520	1>	10	35	49	104	183	42	.10	.56	5>	1>	.44	42	2>	.011	6.5	6	.48	.2>	2>	76
82	GD082	4770.200	1425.030	1>	3	856	19	234	104	73	.09	.27	5>	1	.28	68	2>	.015	10.1	16	.90	.2	2>	80
83	GD083	4770.860	1425.830	1>	3	521	32	76	50	25	.12	1.92	833	1>	4.06	44	2>	.017	6.6	116	.59	.2>	2>	76
84	GD084	4770.810	1425.120	1>	1	566	18	244	69	85	.05	.21	5>	1>	.18	80	2>	.016	1.8	10	.80	.4	2>	61
85	GD085	4771.290	1425.280	1>	1>	422	42	44	42	68	.07	.97	1338	1>	3.98	22	2>	.028	16.7	114	1.06	.2>	2>	66
86	GD086	4771.450	1425.900	1>	1>	551	51	71	80	59	.12	1.67	1547	1>	2.77	44	2>	.025	12.4	120	.76	.2>	2>	94
87	GD087	4771.820	1425.620	1>	1>	451	47	96	32	119	.05	1.24	1625	1>	1.52	47	2>	.045	12.3	139	.75	.2>	2>	42
88	GD088	4771.680	1425.020	1>	1	412	46	216	107	52	.20	1.56	1358	1>	2.89	78	2>	.040	9.7	127	.72	.2>	2>	81
89	GD089	4772.250	1425.720	1>	1>	597	34	204	69	58	.15	3.08	917	1>	3.92	69	2>	.042	19.6	146	.55	.2>	2>	82
90	GD090	4772.090	1425.270	1>	4	671	42	150	96	62	.40	1.35	1062	1>	1.36	89	2>	.023	11.9	75	.79	.4	2>	86
91	GD091	4772.570	1425.180	7	8	443	45	50	59	46	.09	1.37	1332	1>	2.86	27	2>	.024	5.7	77	.76	.2	2>	113
92	GD092	4772.880	1425.750	1>	1>	434	39	284	72	55	.15	2.27	1360	1>	2.02	90	2>	.050	8.4	215	.38	.2	2>	93
93	GD093	4773.250	1425.020	1>	1>	142	15	92	16	69	.45	.35	487	1>	.09	26	2>	.021	2.6	24	.53	2.4	2>	35
94	GD094	4773.400	1425.620	1>	1>	579	39	84	73	33	.16	2.84	1121	1>	2.28	52	2>	.046	10.2	175	.66	.2	2>	108
95	GD095	4773.860	1425.860	5	1>	382	20	86	36	25	1.21	1.38	458	1>	.94	50	11	.013	7.4	42	.44	2.2	2>	77
96	GD096	4773.820	1425.300	1>	1>	162	9	89	18	81	.63	.35	230	1>	.04	23	10	.019	5.4	41	.48	2.2	2>	42
97	GD097	4774.210	1425.650	7	1>	122	27	153	25	48	.49	1.27	842	1>	.14	171	5	.023	6.1	52	.44	2.0	2>	50
98	GD098	4774.160	1425.130	1>	4	91	22	159	18	71	.15	.48	1626	1>	.76	47	2>	.030	2.4	46	.35	1.2	2>	32
99	GD099	4774.770	1425.880	1>	1>	119	59	127	47	50	.44	.50	2415	1>	.80	94	2>	.014	4.8	34	.74	1.8	2>	71
100	GD100	4774.640	1425.400	1>	1>	41	6	115	10	79	.06	.11	105	1>	.02	27	6	.017	3.6	14	.36	1.6	2>	20

List of Geochemical Analysis(3)

Ser. No.	Sample No.	Location (km) X-coord	Location (km) Y-coord	As ppm	Au ppb	Ba ppm	Co ppm	Cr ppm	Cu ppm	Hg ppb	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	Pb ppm	S %	Sb ppm	Sr ppm	Ti %	U ppm	W ppm	Zn ppm
101	GD101	4765.150	1424.460	1>	1>	503	46	262	96	71	.20	2.48	930	1>	2.20	113	2>	.053	12.8	181	.87	.2>	2>	94
102	GD102	4765.880	1424.880	1>	1>	617	65	378	86	86	.15	2.21	1529	1>	2.14	181	2>	.047	7.5	175	1.14	.2	2>	108
103	GD103	4765.430	1424.180	1>	1>	270	41	223	56	97	.22	1.84	935	1>	2.22	84	2>	.067	10.0	183	.89	.2>	2>	86
104	GD104	4765.800	1424.320	5	1>	520	61	424	79	81	.12	1.15	1484	1>	1.87	158	2>	.047	11.1	161	1.05	.4	2>	92
105	GD105	4766.200	1424.670	1>	21	274	53	240	55	61	.18	2.52	1174	1>	2.28	162	2>	.049	11.3	200	.94	.2	2>	89
106	GD106	4766.250	1424.240	1>	1>	356	77	292	87	87	.11	1.33	1968	1>	1.72	150	2>	.044	8.6	130	1.02	.2	2>	93
107	GD107	4766.800	1424.680	1>	1>	344	67	255	129	81	.05	.69	1330	1>	.48	119	2>	.032	10.5	71	1.17	.2	2>	100
108	GD108	4766.890	1424.100	1>	1>	316	69	244	89	74	.03	.71	1836	1>	1.80	79	2>	.045	7.0	153	1.06	.2	2>	69
109	GD109	4767.280	1424.790	1>	1>	537	35	268	121	139	.50	.36	3091	1>	.18	102	2>	.046	2.0	61	.90	.8	2>	67
110	GD110	4767.160	1424.380	1>	1>	454	132	331	97	120	.05	.46	3451	1>	.86	112	2>	.049	7.1	44	1.59	.2	2>	75
111	GD111	4767.090	1424.080	1>	1>	55	57	343	69	37	.04	3.37	1476	1>	2.18	236	2>	.045	13.1	194	1.02	.2	2>	90
112	GD112	4767.970	1424.670	1>	1>	18	39	102	75	70	.01	1.80	1344	1>	2.15	72	2>	.050	6.9	143	.58	.2>	2>	82
113	GD113	4768.290	1424.800	1	1>	373	38	173	33	52	.04	1.99	828	1>	2.32	65	2>	.052	10.2	94	.52	.2	2>	85
114	GD114	4768.390	1424.260	1>	1>	19	49	204	82	50	.06	2.71	1011	1>	1.95	73	2>	.052	8.8	145	.78	.2	2>	83
115	GD115	4768.870	1424.580	1>	1>	9	41	90	75	80	.01>	.38	234	1>	1.41	58	2>	.022	8.1	21	1.28	.2	2>	91
116	GD116	4768.880	1424.100	1>	1>	28	83	299	102	75	.01>	.71	2382	1>	1.81	97	2>	.043	15.8	126	1.02	.2	2>	76
117	GD117	4769.300	1424.620	1>	20	292	58	166	83	77	.03	.51	978	1>	.66	70	2>	.029	11.6	55	.83	.2	2>	83
118	GD118	4769.290	1424.070	1>	5	84	86	224	66	108	.01>	.54	1122	1>	1.19	117	2>	.018	7.3	33	.73	.2	2>	71
119	GD119	4769.800	1424.830	1>	1	274	20	281	107	95	.01	.24	5>	1>	.11	94	2>	.025	1.8	8	.74	.2	2>	66
120	GD120	4769.790	1424.250	1>	1>	137	49	199	98	103	.01>	.22	722	1>	.06	79	2>	.026	6.6	3	.82	.2	2>	74
121	GD121	4770.260	1424.470	1>	1>	534	49	288	62	88	.04	.27	984	1>	.13	103	2>	.025	9.3	10	.93	.4	2>	44
122	GD122	4770.250	1424.040	1>	1>	5	21	169	170	58	.01>	.25	242	1>	.16	64	2>	.014	.3	3	.80	.2>	2>	76
123	GD123	4770.770	1424.850	1>	1>	15	107	908	95	96	.01>	4.00	1429	1>	.49	345	2>	.032	11.6	47	.28	.2	2>	70
124	GD124	4770.950	1424.490	9	7	1020	87	2092	107	135	.11	.37	420	1>	.24	400	2>	.045	17.0	17	1.25	.4	2>	101
125	GD125	4771.330	1424.730	1>	3	9	26	31	71	85	.01>	.24	5>	1	.82	23	2>	.017	5.7	10	1.36	.4	2>	76
126	GD126	4771.230	1424.270	1>	1>	20	36	120	99	100	.02	.42	5>	1>	.34	46	2>	.017	3.5	7	.65	.4	2>	79
127	GD127	4771.800	1424.570	1>	1>	613	67	179	77	86	.07	.60	2196	1>	.64	50	2>	.021	4.2	39	.67	.2	2>	63
128	GD128	4771.670	1424.120	1>	1>	671	32	370	62	70	1.29	1.07	188	1>	.14	172	2>	.018	11.2	81	1.61	2.4	2>	122
129	GD129	4772.110	1424.760	1>	1>	51	5	49	7	118	3.01	.21	1106	6	1.99	20	2>	.019	.6	11	.54	3.8	2>	192
130	GD130	4772.200	1424.170	2	1>	427	34	207	41	80	.95	1.14	1686	1>	.37	107	2>	.022	8.7	40	.87	2.0	2>	83
131	GD131	4772.670	1424.750	1>	1>	419	55	205	70	60	.61	1.37	1765	1>	.93	133	2>	.019	19.8	52	1.85	1.6	2>	103
132	GD132	4772.790	1424.060	11	1>	402	12	75	20	57	.62	.37	5>	1>	.10	31	2>	.017	8.4	40	.45	2.4	2>	47
133	GD133	4773.120	1424.420	16	1>	173	7	153	11	52	.40	.28	5>	1>	.04	50	2>	.012	1.2	24	.43	2.6	2>	34
134	GD134	4773.370	1424.080	18	2	16	236	5445	37	148	.01>	11.58	2378	1>	.01	3972	2>	.019	11.9	2	.04	.2>	2>	161
135	GD135	4773.890	1424.640	12	1>	420	8	75	20	45	.91	.42	5>	1>	.09	24	2	.013	6.6	50	.37	2.6	2>	50
136	GD136	4773.840	1424.250	1>	4	31	381	7857	38	149	.01>	10.17	3620	1>	.01	4256	2>	.013	19.7	1	.05	.2>	2>	186
137	GD137	4774.160	1424.790	1>	1>	36	18	96	8	90	.04	.09	596	1>	.01	25	2>	.013	4.0	14	.32	1.8	2>	21
138	GD138	4774.280	1424.410	16	1>	28	239	3813	31	97	.02	11.59	2545	1>	.03	3271	2>	.018	14.4	4	.07	.2	2>	152
139	GD139	4774.800	1424.830	14	14	31	207	3041	27	125	.01>	11.11	2147	1>	.01	3528	2>	.016	3.2	4	.03	.6	2>	139
140	GD140	4774.850	1424.270	44	1>	32	190	5031	41	122	.01>	9.53	1803	1>	.01	4025	2>	.015	10.7	2	.04	.2	2>	147
141	GD141	4765.120	1423.530	1>	1>	24	40	281	53	93	.10	1.77	1495	1>	1.96	94	2>	.054	3.5	189	.77	.2>	2>	75
142	GD142	4765.180	1423.050	1>	1	78	40	309	54	48	.11	.86	626	1>	.37	157	2>	.012	5.2	28	.83	1.2	2>	76
143	GD143	4765.590	1423.780	1>	1>	535	47	247	60	57	.08	2.55	750	1>	2.38	73	2>	.053	11.1	181	.91	.2	2>	79
144	GD144	4765.680	1423.220	1>	1>	21	46	284	67	61	.03	2.32	1128	1>	2.12	101	2>	.052	8.8	189	.70	.2>	2>	70
145	GD145	4766.120	1423.320	1>	1>	11	44	307	56	108	.01>	3.07	971	1>	2.00	80	2>	.063	7.7	142	.73	.2	2>	72
146	GD146	4766.190	1423.720	1>	1>	20	55	349	94	42	.01	3.06	1265	1>	1.70	131	2>	.047	9.8	153	.75	.2	2>	81
147	GD147	4766.570	1423.070	7	1>	572	14	306	57	116	.06	.19	378	1>	.14	67	2>	.034	8.1	10	.92	.6	2>	43
148	GD148	4766.750	1423.760	1>	1>	35	50	339	86	76	.16	1.75	1701	1>	2.07	113	2>	.053	10.2	180	.87	.2	2>	89
149	GD149	4767.280	1423.740	1>	2	481	31	405	86	139	.04	.23	5>	1>	.21	89	2>	.024	6.3	17	.70	.4	2>	64
150	GD150	4767.080	1423.240	1>	1>	580	77	344	84	130	.06	.22	1592	1>	.14	103	2>	.028	12.9	9	1.08	.2	2>	78

List of Geochemical Analysis(4)

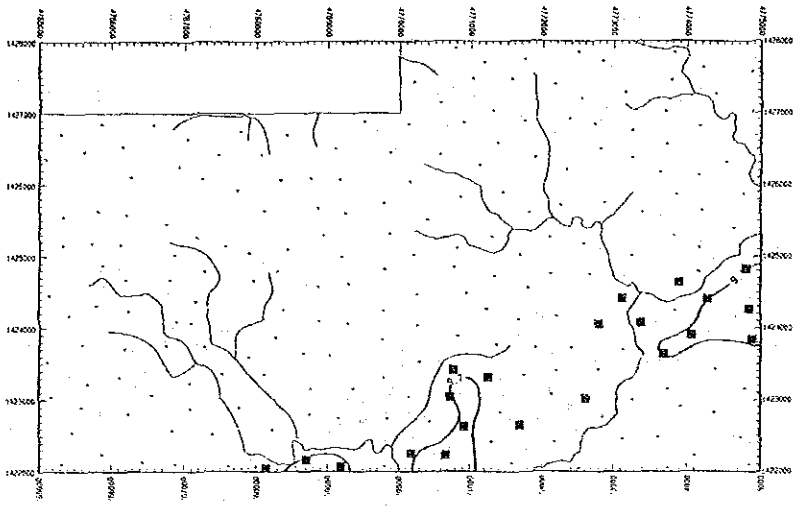
Ser. No.	Sample No.	Location (km) X-coord	Location (km) Y-coord	As ppm	Au ppb	Ba ppm	Co ppm	Cr ppm	Cu ppm	Hg ppb	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	Pb ppm	S %	Sb ppm	Sr ppm	Ti %	U ppm	W ppm	Zn ppm
151	GD151	4767.530	1423.360	1>	7	6	28	368	90	103	.01>	.14	283	1>	.08	78	2>	.029	2.7	2	.66	.2	2>	49
152	GD152	4767.900	1423.600	8	1	13	58	462	111	118	.01>	.28	1238	1>	.16	135	2>	.031	6.1	6	.88	.4	2>	63
153	GD153	4768.270	1423.880	1>	1>	40	80	281	85	85	.03	.91	2988	1>	1.25	99	2>	.048	10.4	82	1.31	.2	2>	83
154	GD154	4768.120	1423.360	1>	34	13	94	391	113	110	.01>	.25	1680	1>	.08	117	2>	.032	3.6	2	.95	.4	2>	66
155	GD155	4768.660	1423.650	1>	1>	19	69	288	84	68	.01>	.80	1724	1>	1.27	81	2>	.032	9.3	61	1.30	.2	2>	74
156	GD156	4768.770	1423.150	1>	1	7	115	311	67	99	.01>	.26	1336	1>	.06	89	2>	.021	.4	3	.99	.4	2>	65
157	GD157	4769.030	1423.620	1>	2	16	80	231	37	113	.01>	.18	2588	1>	.43	64	2>	.019	9.0	22	.99	.4	2>	35
158	GD158	4769.370	1423.160	1>	1>	18	62	278	93	71	.03	1.90	1347	1>	1.47	108	2>	.034	11.6	70	.51	.2>	2>	65
159	GD159	4769.760	1423.850	2	1>	9	42	245	48	74	.01>	.35	805	1>	.18	72	2>	.019	6.3	13	1.40	.2	2>	42
160	GD160	4769.790	1423.310	1>	1	8	87	273	64	67	.01>	.31	1518	1>	.12	77	2>	.021	8.7	6	1.04	.4	2>	53
161	GD161	4770.150	1423.050	4	1>	65	19	139	22	46	.37	.38	253	1>	.04	52	2>	.014	7.0	8	.32	2.2	2>	37
162	GD162	4770.290	1423.530	4	1>	59	32	125	27	34	.27	.37	469	1>	.04	43	3	.015	6.8	9	.47	1.4	2>	38
163	GD163	4770.820	1423.890	1>	1>	78	76	361	77	62	.01	1.18	2686	1>	.87	130	2>	.017	7.9	50	1.54	.4	2>	84
164	GD164	4770.770	1423.420	11	1>	106	8	241	13	45	.64	.34	5>	1>	.03	71	5	.015	7.2	38	.34	2.6	2>	41
165	GD165	4770.730	1423.040	12	1>	92	8	83	16	61	.50	.35	5>	1>	.03	29	5	.018	.5	25	.33	2.2	2>	41
166	GD166	4771.360	1423.780	2	1	24	36	183	61	62	.01	.44	554	1>	.17	59	2>	.016	7.1	12	.94	.6	2>	76
167	GD167	4771.250	1423.320	14	1>	97	6	57	13	39	.66	.31	5>	1>	.03	16	2>	.014	2.0	33	.28	2.4	2>	32
168	GD168	4771.750	1423.350	1>	1>	78	4	69	12	73	.42	.29	5>	1>	.02	16	2	.015	3.7	27	.30	2.6	2>	31
169	GD169	4771.900	1423.730	8	1>	118	8	58	28	28	.91	.44	5>	1>	.05	30	2>	.013	.2>	31	.34	2.2	2>	53
170	GD170	4772.400	1423.730	1>	1	36	49	340	65	51	.01>	1.28	1751	1>	2.31	178	2>	.021	8.3	85	.51	.2	2>	53
171	GD171	4772.200	1423.410	1>	1	23	48	455	33	29	.01	3.57	851	2	1.42	100	2>	.042	10.0	111	.19	.2>	2>	63
172	GD172	4772.600	1423.020	12	1>	27	384	4826	23	111	.01>	5.24	4850	1>	.07	2739	2>	.014	19.0	6	.06	.2>	2>	137
173	GD173	4772.790	1423.430	1>	1>	120	29	84	26	48	.52	.59	2335	2	.23	44	9	.016	1.4	39	.56	2.4	2>	55
174	GD174	4773.130	1423.710	1>	1>	73	7	35	8	42	.34	.23	210	1	.04	12	2>	.014	2.7	25	.24	2.2	2>	27
175	GD175	4773.260	1423.010	2	1>	35	30	665	8	52	.05	.36	103	1>	.01	279	5	.012	2.5	9	.20	1.8	2>	26
176	GD176	4773.680	1423.650	39	1>	9	222	4453	29	122	.01>	11.48	2243	1>	.03	4083	2>	.013	11.5	1>	.04	.2>	2>	158
177	GD177	4773.740	1423.160	1>	1>	61	36	334	18	47	.11	.35	367	1>	.16	175	2	.014	2.4	17	.43	1.4	2>	44
178	GD178	4774.050	1423.910	38	1>	19	198	5423	39	116	.01>	12.39	1956	1>	.02	4145	2>	.015	10.0	3	.04	.2>	2>	169
179	GD179	4774.390	1423.430	1>	1>	118	5	44	10	62	.52	.27	5>	1>	.06	15	7	.013	3.6	26	.27	2.4	2>	40
180	GD180	4774.880	1423.850	14	2	96	30	203	24	47	.43	.62	408	1>	.13	91	8	.011	8.7	17	1.20	3.0	2>	54
181	GD181	4774.800	1423.160	1>	1>	138	3	56	12	33	.70	.39	5>	1>	.08	12	8	.009	3.8	34	.35	2.8	2>	42
182	GD182	4765.590	1422.900	1>	1>	63	77	486	74	44	.03	2.83	1888	1>	1.00	192	2>	.038	14.3	68	.87	.2	2>	94
183	GD183	4765.470	1422.550	1>	4	11	22	325	57	55	.01>	.43	92	1>	.17	68	2>	.012	10.2	5	.69	.4	2>	45
184	GD184	4765.320	1422.110	1>	1>	24	54	296	52	49	.02	2.95	1195	1>	1.66	81	2>	.034	3.0	115	.25	.2	2>	65
185	GD185	4765.870	1422.240	7	1>	24	48	250	44	60	.01>	1.29	894	1	1.06	59	2>	.020	4.0	65	.30	.4	2>	49
186	GD186	4766.240	1422.800	1>	1>	18	62	340	70	82	.01>	2.36	1536	1>	1.93	83	2>	.045	12.7	156	.86	.2>	2>	72
187	GD187	4766.430	1422.130	1>	1>	19	47	313	33	40	.01>	.34	1564	1>	.73	59	2>	.019	9.4	36	.58	.2	2>	43
188	GD188	4766.840	1422.580	1>	1>	11	9	249	42	53	.02	.14	5>	1	.07	45	2>	.019	5.8	2	.74	.4	2>	39
189	GD189	4766.880	1422.110	1>	3	11	1>	112	8	77	.01>	.04	5>	1>	.01	14	2>	.014	2.6	7	.30	1.6	2>	12
190	GD190	4767.080	1422.880	1>	2	28	110	402	83	71	.01	.39	4195	2	.59	126	2>	.023	12.2	26	1.31	.2	2>	74
191	GD191	4767.400	1422.520	1>	4	13	67	278	65	85	.01>	.23	1004	1>	.10	67	2>	.024	5.8	8	.84	.6	2>	55
192	GD192	4767.620	1422.070	1	1>	16	4	191	17	81	.01>	.06	5>	1>	.03	34	2>	.017	4.8	7	.50	1.0	2>	21
193	GD193	4767.760	1422.890	1>	1>	80	100	328	105	92	.01>	.26	4739	2	.06	87	2>	.017	4.1	4	1.08	.4	2>	94
194	GD194	4768.230	1422.590	1>	1>	21	40	196	51	55	.01>	.14	1584	1	.04	50	2>	.017	2.8	6	.69	1.0	2>	51
195	GD195	4768.140	1422.050	11	1>	179	22	89	81	58	1.47	.89	259	4	.16	94	2>	.015	3.8	49	.43	2.8	2>	111
196	GD196	4768.750	1422.800	1>	1>	45	162	1461	60	102	.01>	5.13	4471	1>	.45	757	2>	.027	24.2	24	1.09	.6	2>	123
197	GD197	4768.700	1422.160	14	1>	123	3	69	21	54	.67	.38	5>	2	.08	19	8	.013	2.1	43	.44	2.8	2>	51
198	GD198	4769.150	1422.750	1>	1>	36	54	321	70	67	.01	1.82	1946	1>	2.04	126	2>	.042	10.8	150	.81	.2	2>	97
199	GD199	4769.190	1422.070	28	1>	912	14	89	23	44	1.21	.68	5>	3	.26	38	3	.016	3.5	71	.50	2.8	2>	89
200	GD200	4769.840	1422.740	1>	1>	27	78	242	60	116	.01>	.30	5215	1>	.07	83	2>	.028	10.8	3	1.13	.4	2>	63

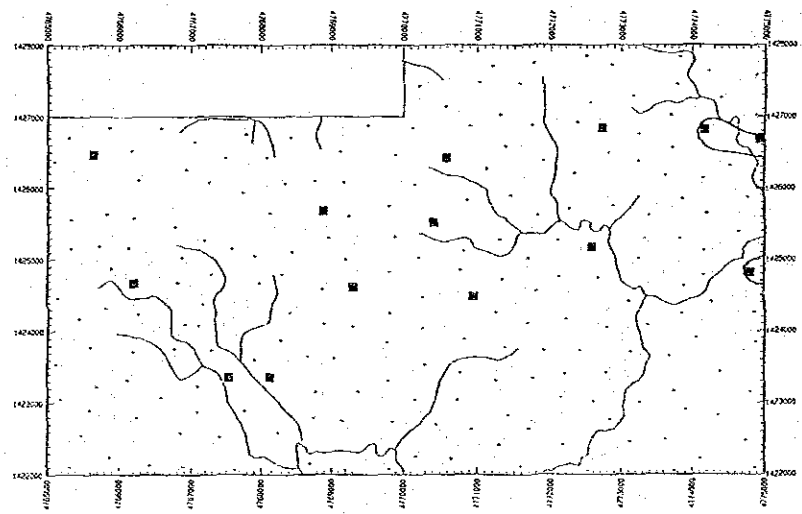
List of Geochemical Analysis(5)

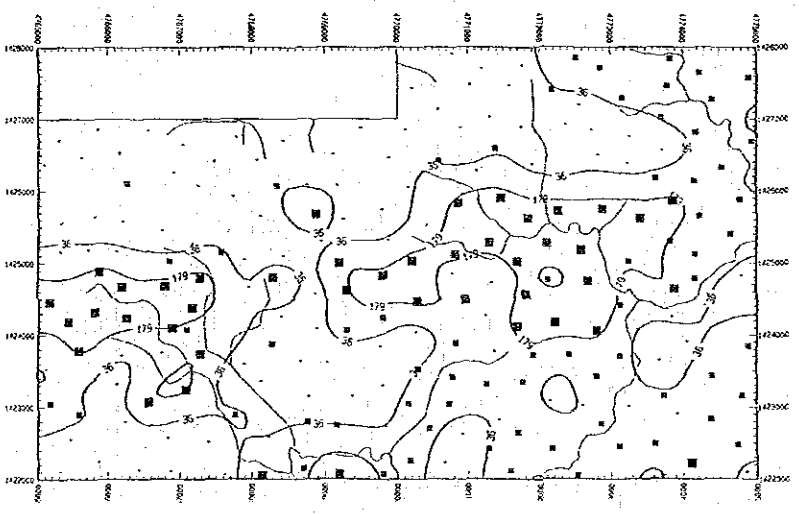
Ser. No.	Sample No.	Location(km) X-coord	Location(km) Y-coord	As ppm	Au ppb	Ba ppm	Co ppm	Cr ppm	Cu ppm	Hg ppb	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	Pb ppm	S %	Sb ppm	Sr ppm	Ti %	U ppm	W ppm	Zn ppm
201	GD201	4769.800	1422.080	1>	1>	166	107	659	48	64	.77	.97	4276	1>	.06	140	2>	.021	30.2	32	4.76	1.8	2>	171
202	GD202	4770.170	1422.260	16	1>	119	14	143	28	25	.84	.56	5>	1	.07	86	7	.012	.2>	32	.43	2.8	2>	62
203	GD203	4770.440	1422.700	1>	1>	90	6	63	14	33	.47	.39	5>	1>	.04	22	7	.010	3.1	33	.34	2.6	2>	41
204	GD204	4770.660	1422.230	27	4	7	297	8303	75	194	.01>	.23	1411	1>	.08	5711	2>	.040	44.0	2	.14	.6	2>	211
205	GD205	4770.920	1422.630	24	1>	6	225	2653	23	66	.01>	8.53	2331	1>	.01>	3889	2>	.008	8.6	1>	.01	.2	2>	119
206	GD206	4771.290	1422.420	2	1>	39	367	6588	33	146	.01>	7.77	4512	1>	.02	4623	2>	.018	24.6	5	.07	.2	2>	180
207	GD207	4771.420	1422.830	8	3	34	312	8419	77	228	.01	.16	2294	1>	.10	3986	2>	.052	47.5	5	.15	.8	2>	184
208	GD208	4771.580	1422.120	6	1>	128	13	78	13	32	.66	.40	5>	2	.07	49	2>	.012	2.8	37	.35	2.4	2>	44
209	GD209	4771.690	1422.650	14	1>	168	115	1587	36	73	.44	3.08	2624	1>	.41	1343	5	.016	13.6	23	.64	1.8	2>	108
210	GD210	4772.140	1423.080	1>	1>	21	54	403	71	42	.01>	3.58	1070	1>	.98	149	2>	.040	8.0	98	.32	.2>	2>	69
211	GD211	4772.170	1422.420	2	1>	100	5	49	8	32	.47	.28	5>	1>	.04	11	2>	.009	2.2	29	.28	2.2	2>	30
212	GD212	4772.520	1422.050	1>	1>	89	1>	43	9	26	.39	.28	5>	1	.03	15	4	.011	.9	23	.27	2.4	2>	35
213	GD213	4772.850	1422.770	1>	1>	75	76	370	65	32	.52	3.36	1326	1>	.20	423	2>	.015	16.2	12	2.10	.8	2>	134
214	GD214	4773.120	1422.460	9	1>	70	2	63	11	31	.21	.21	5>	1>	.02	15	2>	.009	4.9	20	.43	2.2	2>	30
215	GD215	4773.620	1422.490	4	1>	96	4	45	12	43	.38	.27	5>	1	.03	12	2>	.010	4.2	23	.28	2.4	2>	37
216	GD216	4773.750	1422.050	1>	1>	19	62	270	91	34	.19	2.86	1520	1>	1.37	106	2>	.029	9.5	81	.97	.2>	2>	110
217	GD217	4773.910	1422.910	1>	1>	21	25	237	114	10>	.01	2.35	420	1>	.67	84	2>	.012	8.2	41	.67	.2>	2>	129
218	GD218	4774.110	1422.220	1>	1>	186	32	88	41	69	.24	1.87	1740	1>	1.19	37	2>	.027	15.4	132	1.48	.6	2>	105
219	GD219	4774.370	1422.830	1>	1>	71	40	168	92	49	.26	1.99	1431	1>	1.02	79	2>	.020	13.1	61	.78	.6	2>	98
220	GD220	4774.740	1422.480	2	1>	66	38	274	84	31	.10	2.21	1399	1>	1.34	104	2>	.020	12.7	60	.89	.2	2>	133
221	GD221	4774.860	1422.100	1>	1>	26	14	21	4	64	.01	.56	466	1>	3.07	8	2>	.013	6.7	100	.65	.2	2>	35

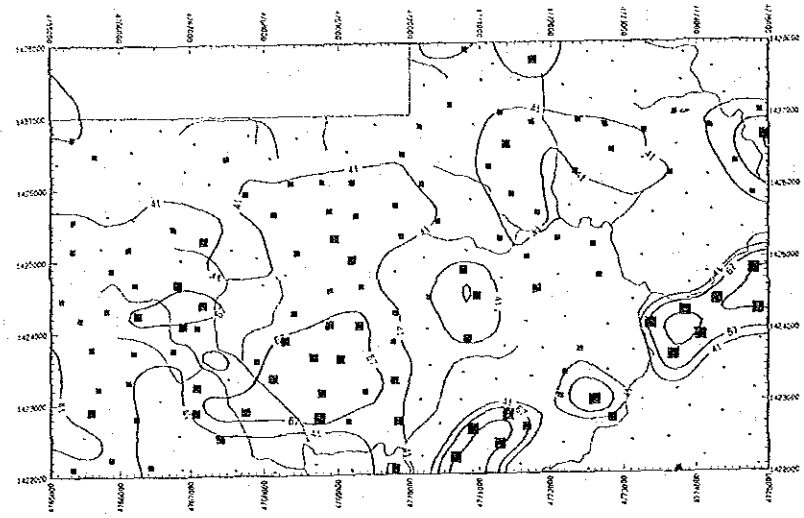
Appendix 32

Distribution map of elements in Area D


As
9.700

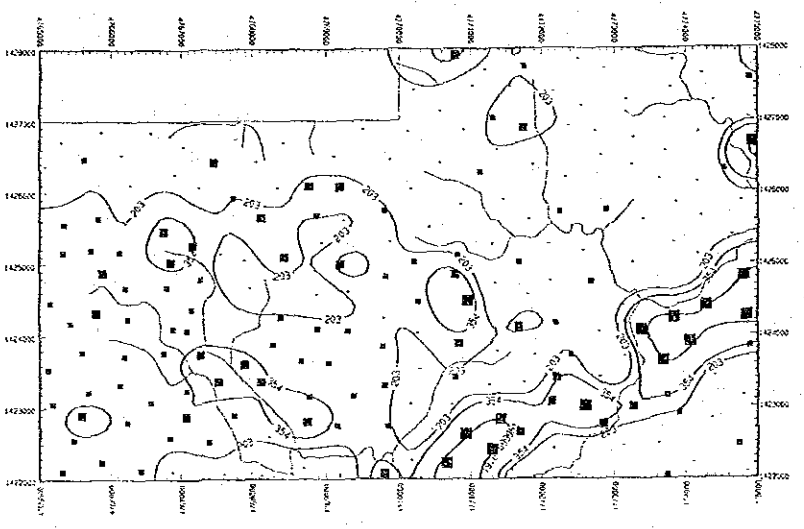

Au
5.400


Ba
179.000
35.000



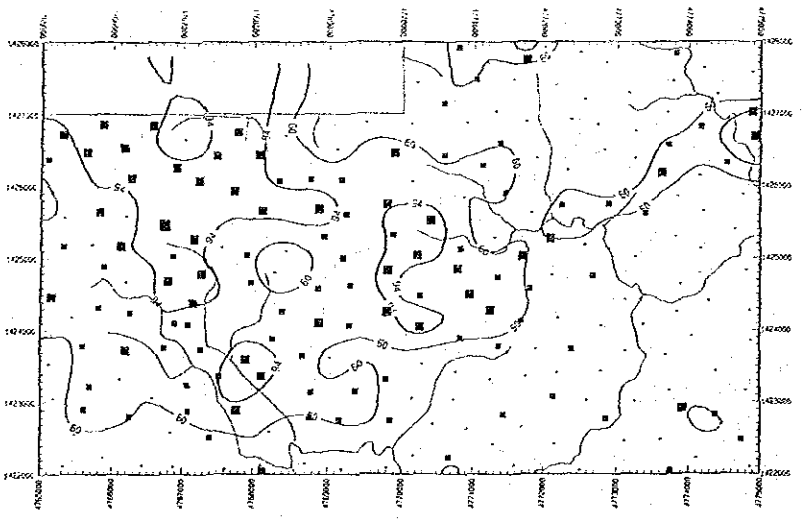
Co

150.000
67.000
41.000



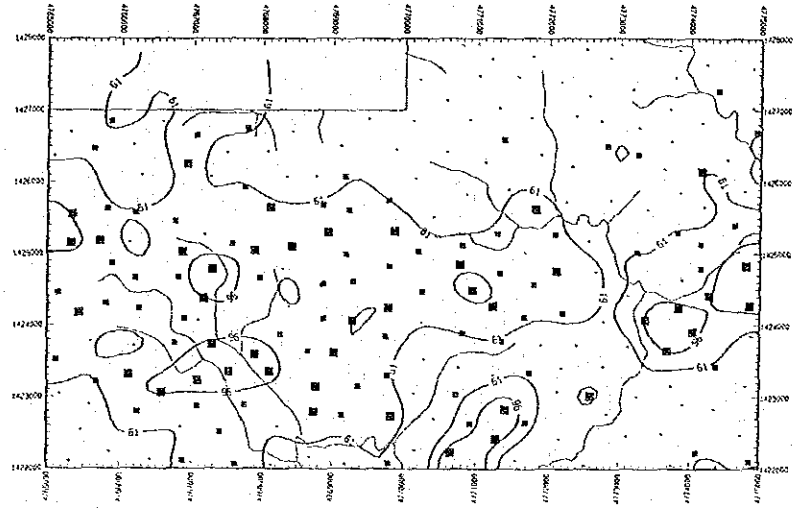
Cr

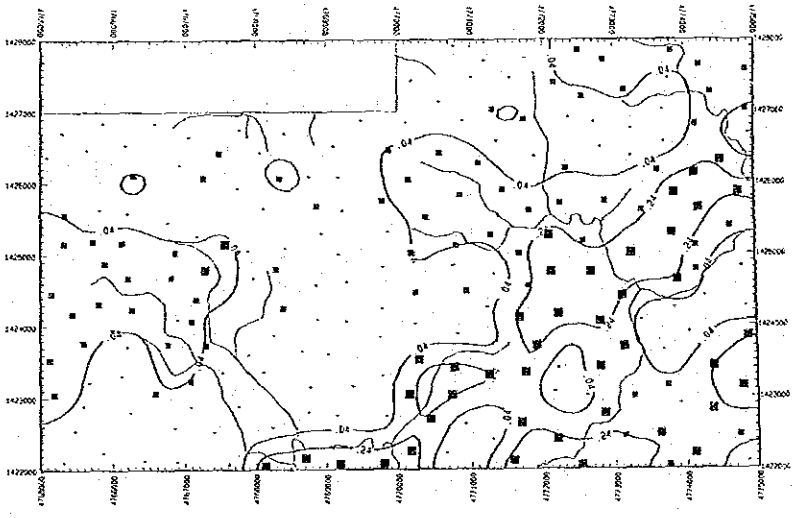
1378.000
354.000
203.000

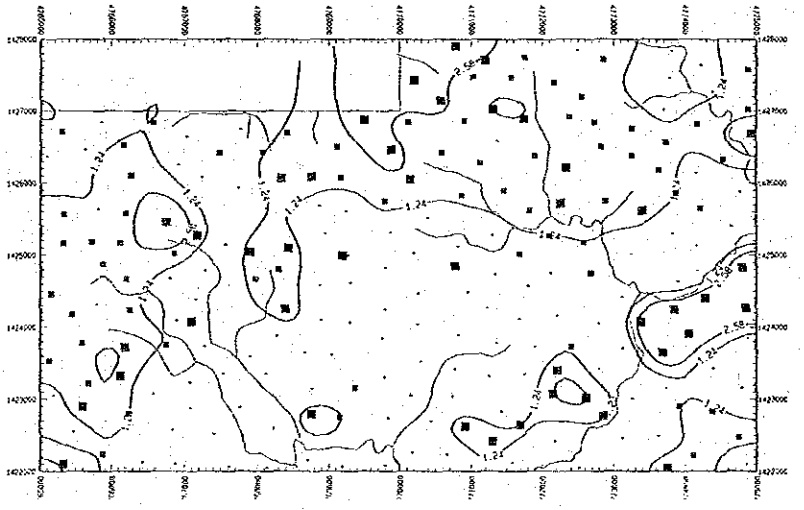


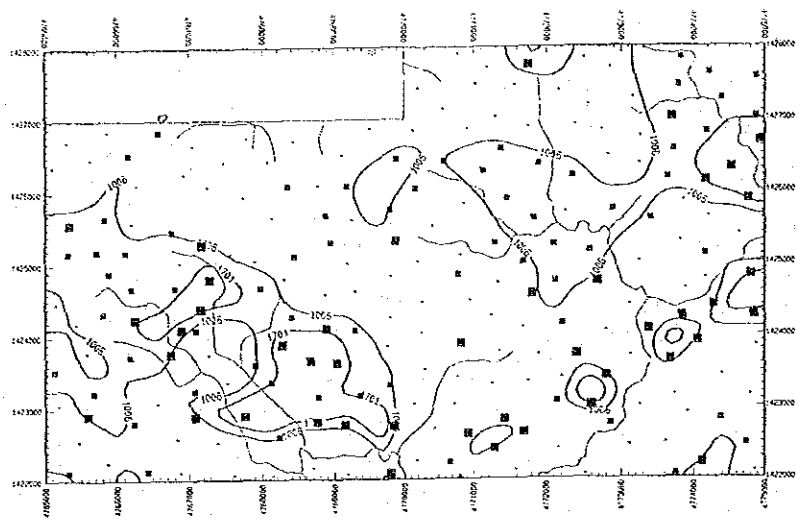
Cu

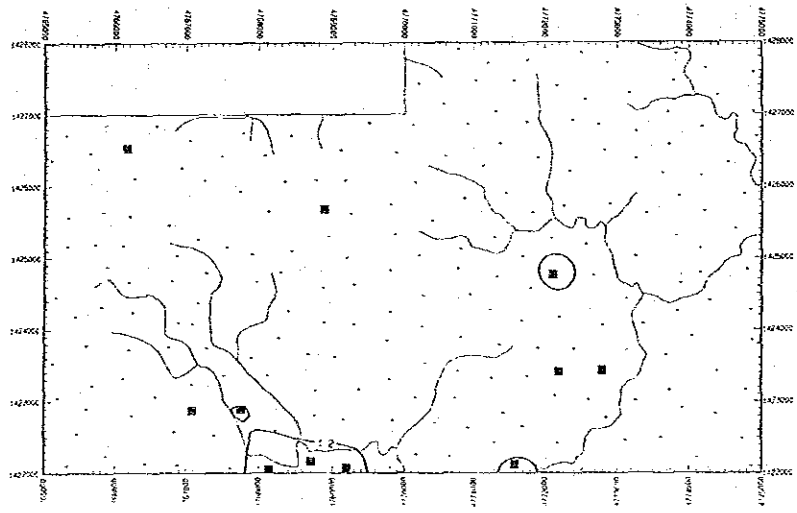
378.500
94.000
60.000

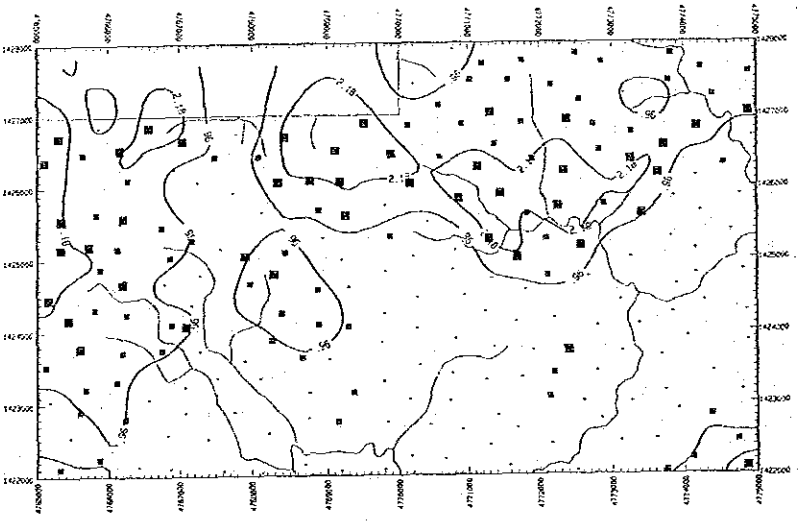

Hg
95.000
61.000

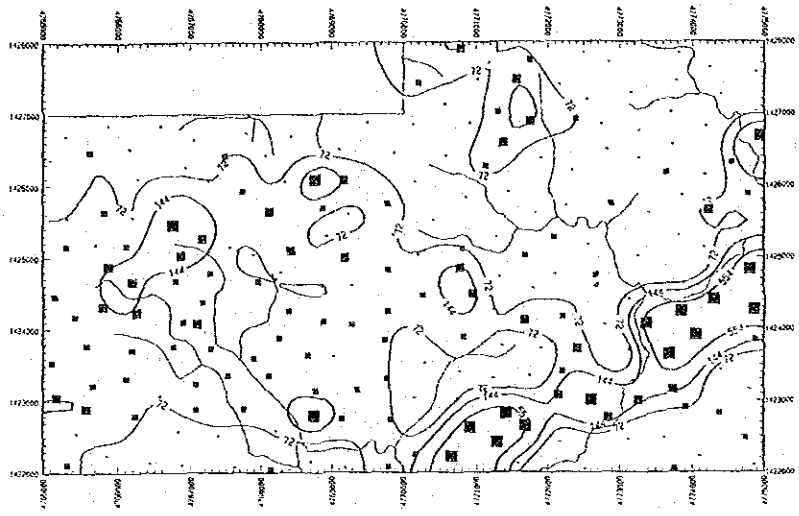

K
.240
.040


Mg
2.580
1.240


Mn
1701.000
1005.009

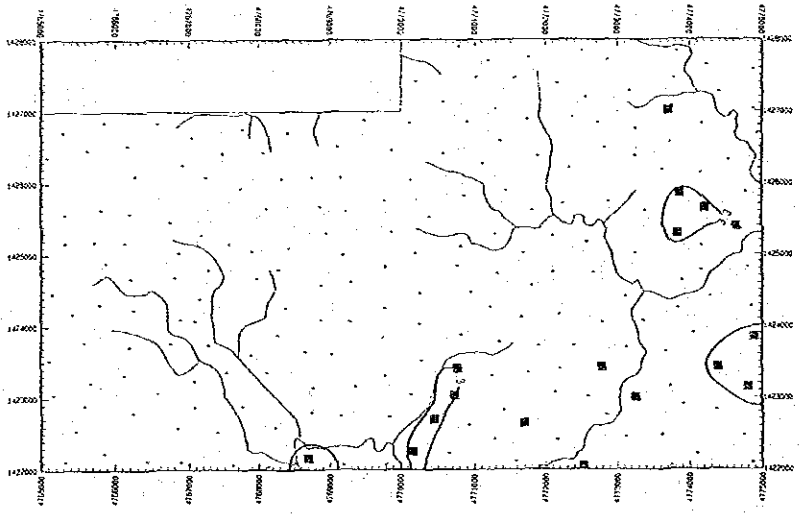

Mo
1.200


Na
2.160
950



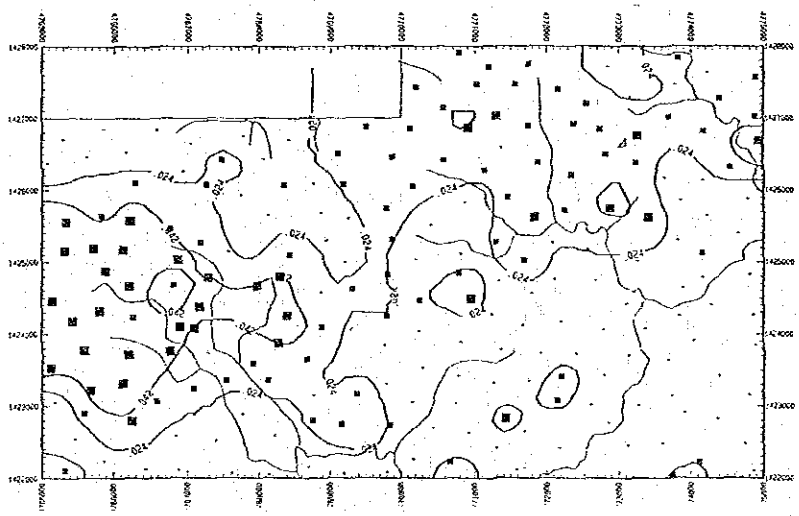
Ni

554.000
144.000
72.000



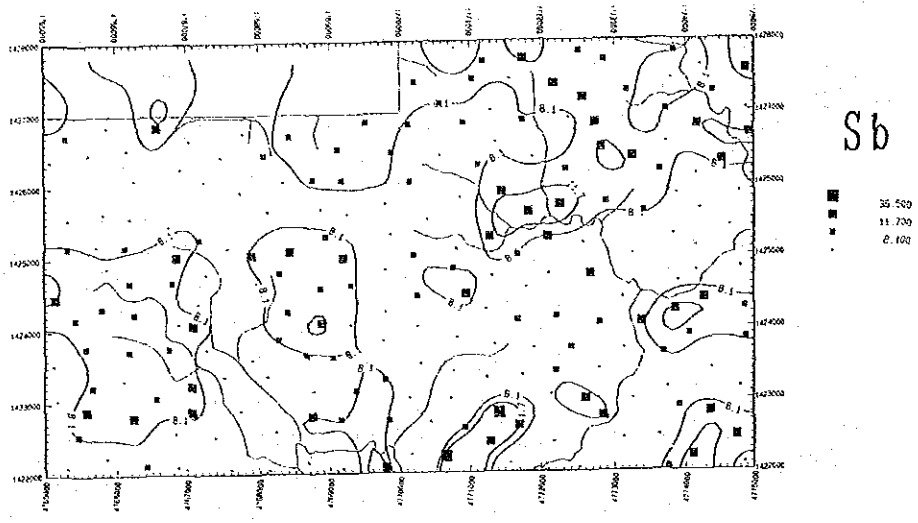
Pb

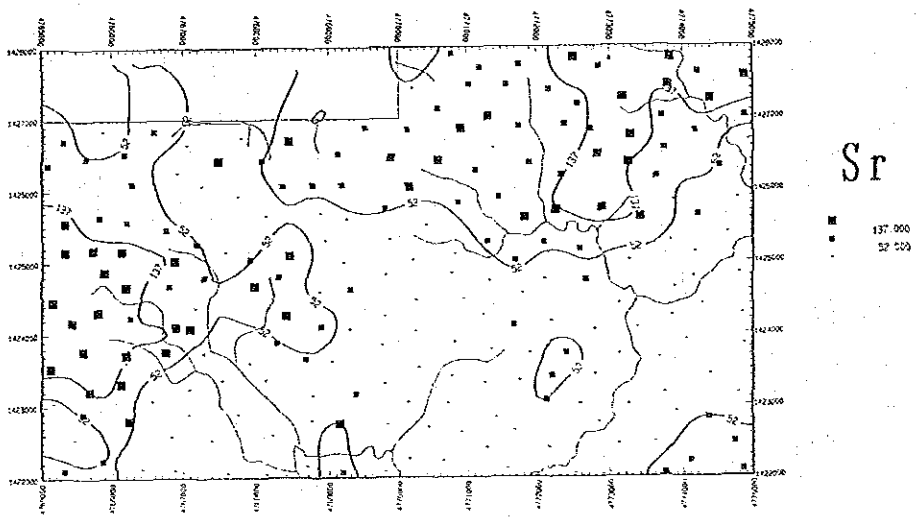
3.300

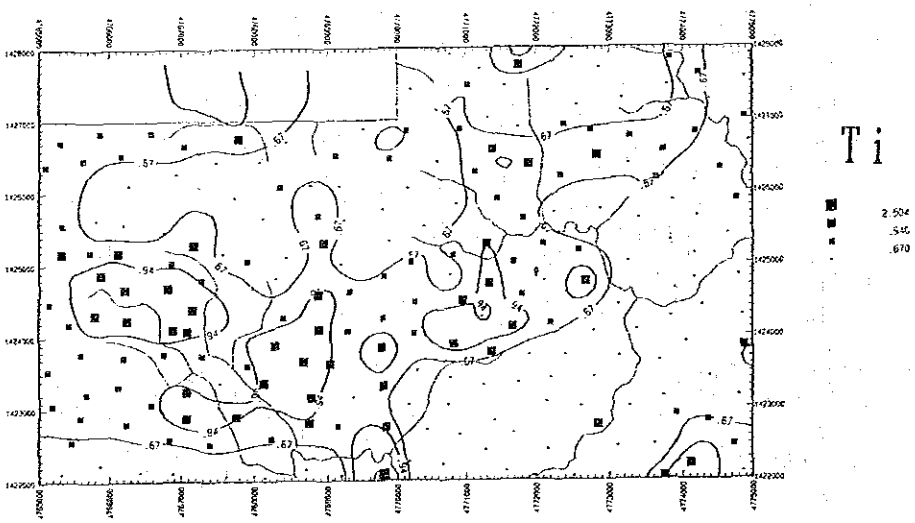


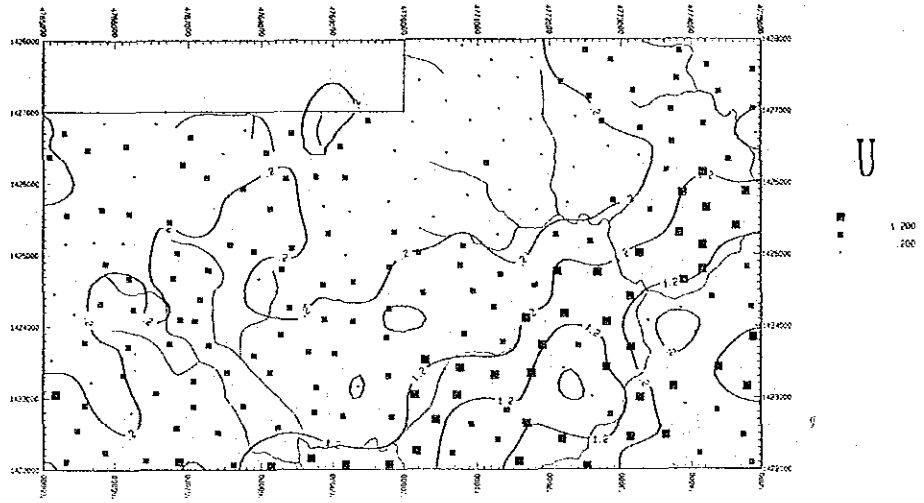
S

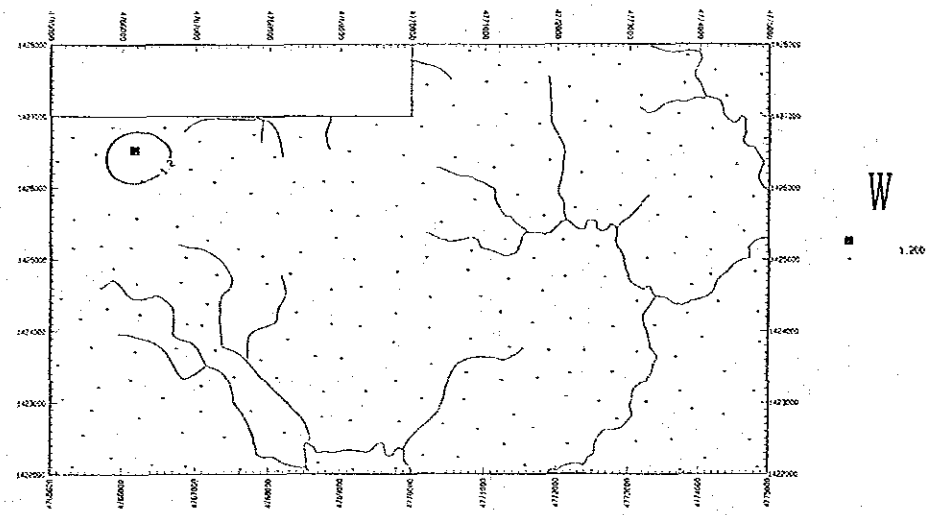
042
024

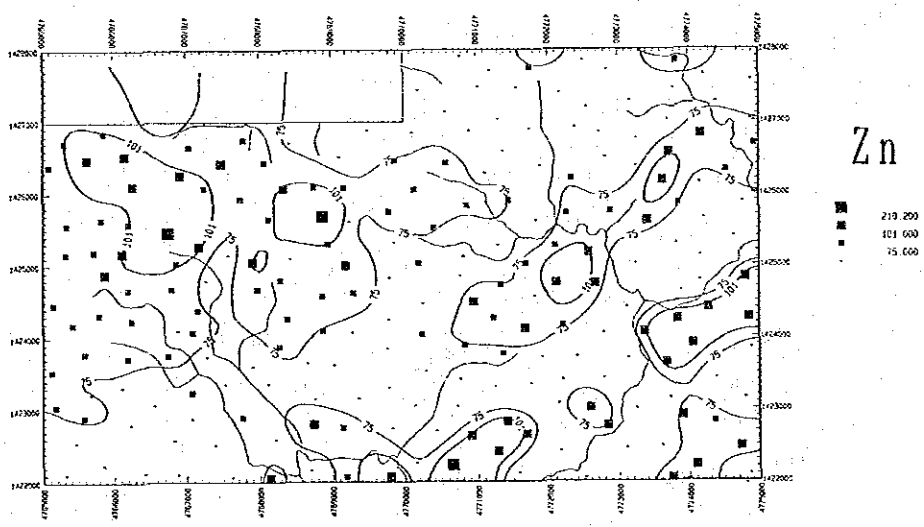

Sb
35.500
11.700
8.100


Sr
137.000
92.500


Ti
2.504
.545
.670


U
1.200
.200


W
1.200


Zn
219.200
101.600
75.000

Appendix 33

List of soil geochemical samples
in Area E

Area: S. Kalumpang Area (Area E)

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	PE001	1403.58	4774.51	S. Tingkayu	—	P_4Km	40	R.B.	R	C	M	W	Secondary forest
2	PE002	1403.13	4774.64	S. Tingkayu	and. boulder	P_4Km	40	R.B.	R	C	F	W	Secondary forest
3	PE003	1403.62	4775.09	S. Tingkayu	—	P_4Km	40	R.Y.	R	C	F	W	Secondary forest
4	PE004	1403.80	4775.45	S. Tingkayu	—	P_4Km	40	R.B.	R	C	F	W	Secondary forest
5	PE005	1403.21	4775.56	S. Tingkayu	—	P_4Km	40	Y.B.	R	C	F	W	Secondary forest
6	PE006	1403.48	4775.87	S. Tingkayu	—	P_4Km	40	L.B.	R	C	M	W	Secondary forest
7	PE007	1403.75	4776.32	S. Tingkayu	—	P_4Km	40	Y.	R	C	M	W	Secondary forest
8	PE008	1403.71	4776.91	S. Tingkayu	—	P_4Km	40	Y.R.	R	C	F	W	Secondary forest
9	PE009	1403.23	4776.20	S. Tingkayu	—	P_4Km	40	L.B.	R	C	F	W	Secondary forest
10	PE010	1403.42	4776.85	S. Tingkayu	—	P_4Km	40	Y.R.	R	C	F	W	Secondary forest
11	PE011	1403.29	4777.19	S. Tingkayu	—	P_4Km	40	R.Y.	R	C	F	W	Secondary forest
12	PE012	1402.73	4774.70	S. Tingkayu	and. boulder	P_4Km	40	L.B.	R	C	M	W	Secondary forest
13	PE013	1402.81	4775.37	S. Tingkayu	and. boulder	P_4Km	40	Y.B.	R	C	F	W	Secondary forest
14	PE014	1402.49	4775.54	S. Tingkayu	—	P_4Km	30	Y.B.	F	C	F	W	Secondary forest
15	PE015	1402.33	4775.19	S. Tingkayu	and. boulder	P_4Km	40	D.B.	R	S	F	W	Secondary forest
16	PE016	1402.09	4775.79	S. Tingkayu	—	P_4Km	40	Y.B.	F	C	F	W	Secondary forest
17	PE017	1402.88	4776.30	S. Tingkayu	—	P_4Km	40	Y.	R	C	M	W	Secondary forest
18	PE018	1402.67	4776.59	S. Tingkayu	—	P_4Km	40	R.Y.	R	C	M	W	Secondary forest
19	PE019	1402.28	4776.25	S. Tingkayu	—	An_1	40	D.B.	F	C	M	W	Secondary forest
20	PE020	1402.29	4776.82	S. Tingkayu	—	An_1	40	D.B.	F	C	S	W	Secondary forest
21	PE021	1402.90	4777.27	S. Tingkayu	—	P_4Km	40	R.Y.	R	C	M	W	Secondary forest
22	PE022	1402.32	4777.23	S. Tingkayu	—	An_1	40	Y.B.	R	C	S	W	Secondary forest
23	PE023	1402.28	4777.59	S. Tingkayu	—	An_1	40	Y.B.	R	C	S	W	Secondary forest
24	PE024	1401.81	4775.33	S. Tingkayu	and. boulder	P_4Km	40	R.Y.	F	C	F	W	Secondary forest
25	PE025	1401.88	4775.63	S. Tingkayu	—	An_1	40	Y.B.	R	C	M	W	Secondary forest
26	PE026	1401.33	4775.50	S. Tingkayu	and. boulder	An_1	40	Y.	R	C	F	W	Secondary forest
27	PE027	1401.86	4776.16	S. Tingkayu	andesite	An_1	40	Y.B.	R	C	M	D	Secondary forest
28	PE028	1401.74	4776.51	S. Tingkayu	andesite	An_1	40	D.B.	R	C	F	W	Secondary forest
29	PE029	1401.16	4776.12	S. Tingkayu	—	An_1	40	Y.B.	R	C	M	W	Secondary forest
30	PE030	1401.51	4776.83	S. Tingkayu	and. w/pyrite	An_1	40	D.B.	M	S	S	W	Secondary forest

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

Area: S. Kalumpang Area (Area E)

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
31	PE031	1401.78	4777.20	S. Tingkayu	alt. andesite	An1	40	Y.B.	R	C	M	D	Secondary forest
32	PE032	1401.45	4777.33	S. Tingkayu	agglomerate	An1	40	Y.B.	F	C	M	W	Secondary forest
33	PE033	1401.80	4777.82	S. Tingkayu	—	An1	40	Y.B.	R	C	M	W	Secondary forest
34	PE034	1401.12	4777.38	S. Tingkayu	—	An1	30	Y.B.	F	C	M	W	Secondary forest
35	PE035	1401.56	4778.06	S. Tingkayu	—	An1	40	Y.B.	R	C	M	W	Secondary forest
36	PE036	1401.20	4778.26	S. Tingkayu	—	An1	40	Y.B.	R	C	M	W	Secondary forest
37	PE037	1400.87	4775.68	S. Tingkayu	and. boulder	An1	40	Y.B.	R	C	F	W	Secondary forest
38	PE038	1400.56	4776.10	S. Tingkayu	alt. andesite	An1	40	D.B.	R	C	M	W	Secondary forest
39	PE039	1400.47	4776.47	S. Tingkayu	agglomerate	An1	40	Y.B.	F	C	M	W	Secondary forest
40	PE040	1400.71	4776.84	S. Tingkayu	sili. andesite	An1	40	D.B.	F	C	S	W	Secondary forest
41	PE041	1400.16	4776.15	S. Tingkayu	and. boulder	An1	40	Y.B.	R	C	M	W	Secondary forest
42	PE042	1400.60	4777.29	S. Tingkayu	—	An1	40	Y.B.	R	C	M	W	Secondary forest
43	PE043	1400.64	4777.68	S. Tingkayu	—	An1	40	Y.B.	F	S	M	D	Secondary forest
44	PE044	1400.17	4777.39	S. Tingkayu	—	An1	30	Y.B.	R	C	M	W	Secondary forest
45	PE045	1400.18	4777.81	S. Tingkayu	andesite	An1	30	Y.B.	F	C	S	W	Secondary forest
46	PE046	1400.72	4778.38	S. Tingkayu	—	An1	40	D.B.	R	C	M	W	Secondary forest
47	PE047	1400.32	4778.24	S. Tingkayu	—	An1	30	Y.B.	R	C	M	W	Secondary forest
48	PE048	1400.16	4778.56	S. Tingkayu	—	An1	40	Y.B.	R	C	M	W	Secondary forest
49	PE049	1399.87	4776.55	S. Tingkayu	agglomerate	An1	40	Y.B.	F	C	S	W	Secondary forest
50	PE050	1399.52	4776.33	S. Tingkayu	alt. andesite	An1	40	R.B.	R	C	M	W	Secondary forest
51	PE051	1399.59	4776.76	S. Tingkayu	sili. andesite	An1	40	D.B.	F	C	S	W	Secondary forest
52	PE052	1399.39	4777.19	S. Tingkayu	sili. andesite	An1	40	Y.B.	F	C	M	W	Secondary forest
53	PE053	1399.12	4777.32	S. Tingkayu	agglomerate	An1	40	Y.B.	F	C	M	W	Secondary forest
54	PE054	1399.71	4777.89	S. Tingkayu	—	An1	40	Y.B.	R	C	M	W	Secondary forest
55	PE055	1399.36	4777.83	S. Tingkayu	—	An1	40	Y.B.	R	C	M	W	Secondary forest
56	PE056	1399.81	4778.24	S. Tingkayu	and. w/pyrite	An1	40	Y.B.	R	C	M	W	Secondary forest
57	PE057	1399.83	4778.69	S. Tingkayu	—	An1	40	Y.B.	R	C	M	W	Secondary forest
58	PE058	1399.26	4778.31	S. Tingkayu	andesite	An1	40	Y.B.	R	C	M	W	Secondary forest
59	PE059	1399.41	4778.78	S. Tingkayu	andesite	An1	40	Y.B.	R	C	M	W	Secondary forest
60	PE060	1399.39	4779.05	S. Tingkayu	—	An1	30	R.B.	F	C	M	W	Secondary forest

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

Area: S. Kalumpang Area (Area E)

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	PE061	1398.68	4776.82	S. Tingkayu	sili. andesite	An_1	40	R.Y.	F	C	M	W	Secondary forest
62	PE062	1398.26	4777.15	S. Tingkayu	sili. andesite	An_1	40	R.Y.	R	C	M	W	Secondary forest
63	PE063	1398.70	4777.30	S. Tingkayu	agglomerate	An_1	40	R.B.	F	C	M	W	Secondary forest
64	PE064	1398.88	4777.89	S. Tingkayu	and. boulder	An_1	30	Y.B.	R	C	M	W	Secondary forest
65	PE065	1398.25	4777.58	S. Tingkayu	—	An_1	40	Y.	R	C	M	W	Secondary forest
66	PE066	1398.40	4778.11	S. Tingkayu	—	An_1	40	Y.B.	R	C	F	W	Secondary forest
67	PE067	1398.73	4778.25	S. Tingkayu	andesite	An_1	40	Y.B.	R	C	M	W	Secondary forest
68	PE068	1398.16	4778.45	S. Tingkayu	—	An_1	40	Y.B.	M	C	M	W	Secondary forest
69	PE069	1398.48	4778.84	S. Tingkayu	—	An_1	30	Y.B.	R	C	M	W	Secondary forest
70	PE070	1398.46	4779.15	S. Tingkayu	—	An_1	40	Y.B.	R	C	M	W	Secondary forest
71	PE071	1398.82	4779.26	S. Tingkayu	—	An_1	30	Y.B.	R	C	M	W	Secondary forest
72	PE072	1398.23	4779.57	S. Tingkayu	—	An_1	40	R.B.	R	C	M	W	Secondary forest

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

Appendix 34

Analytical results of soil
geochemical samples in Area E

List of Geochemical Analysis(1)

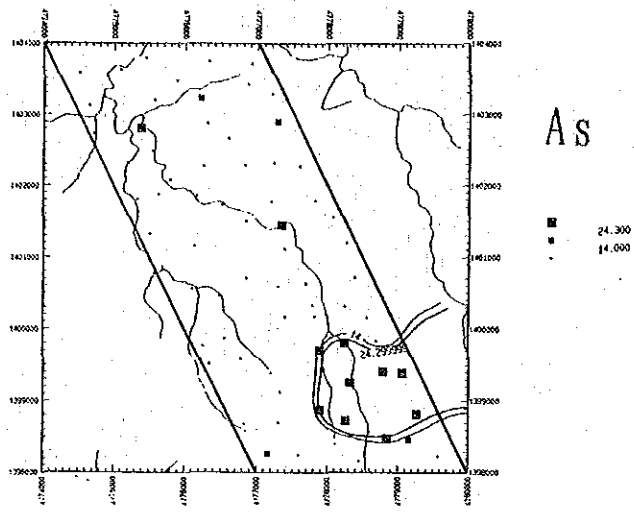
Ser. No.	Sample No.	Location (km) X-coord	Location (km) Y-coord	As ppm	Au ppb	Ba ppm	Co ppm	Cr ppm	Cu ppm	Hg ppb	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	Pb ppm	S %	Sb ppm	Sr ppm	Ti %	U ppm	W ppm	Zn ppm
1	PE001	4774.510	1403.580	1>	1>	108	26	19	20	96	.22	.26	2489	1>	.07	7	8	.011	4.4	6	.64	1.0	2>	44
2	PE002	4774.640	1403.130	1>	1>	202	22	84	29	25	.48	.69	900	1>	.33	48	2	.014	2.5	54	.52	1.2	2>	62
3	PE003	4775.090	1403.620	2	1>	47	7	73	35	152	.08	.22	5>	1>	.13	22	7	.020	.8	8	1.07	1.8	2>	49
4	PE004	4775.450	1403.800	1>	1>	124	58	28	87	85	.07	.65	901	1>	.16	20	2>	.014	4.7	12	.71	.6	2>	84
5	PE005	4775.560	1403.210	1>	1>	91	43	16	117	50	.06	.77	750	1>	.16	10	2>	.013	5.6	14	.56	.4	2>	79
6	PE006	4775.870	1403.480	1>	1>	101	47	40	86	46	.04	.53	106	1>	.14	23	2>	.011	.2>	12	.55	.6	2>	79
7	PE007	4776.320	1403.750	1>	1>	84	2	68	27	82	.40	.19	5>	1>	.06	17	5	.012	.6	32	.44	1.8	2>	41
8	PE008	4776.910	1403.710	4	1>	83	6	90	18	46	.43	.38	5>	1>	.05	28	8	.007	1.2	23	.48	1.8	2>	47
9	PE009	4776.200	1403.230	23	1>	38	6	48	13	77	.04	.11	5>	1>	.03	17	6	.010	.3	15	.71	2.2	2>	31
10	PE010	4776.850	1403.420	1>	2	104	28	67	35	33	.41	.42	861	1>	.14	37	4	.010	6.2	27	.47	1.6	2>	69
11	PE011	4777.190	1403.290	5	1>	81	2	89	20	68	.40	.31	5>	1>	.04	31	2>	.010	2.0	19	.41	1.6	2>	35
12	PE012	4774.700	1402.730	5	1>	78	23	43	61	154	.06	.24	94	3	.14	19	2>	.023	.2>	9	.91	1.4	2>	80
13	PE013	4775.370	1402.810	57	1>	159	24	79	36	87	.52	.86	706	2	.27	36	24	.026	10.1	41	.79	1.8	2>	76
14	PE014	4775.540	1402.490	10	1>	89	7	95	21	77	.38	.35	5>	1>	.04	28	15	.016	7.1	27	.64	2.2	2>	45
15	PE015	4775.190	1402.330	1>	1>	233	29	67	45	46	.43	.69	1011	1>	.29	36	2>	.029	5.3	67	.97	1.6	2>	81
16	PE016	4775.790	1402.090	1>	1>	137	20	111	32	56	1.04	.96	342	1>	.30	71	4	.012	5.2	38	.48	1.8	2>	74
17	PE017	4776.300	1402.880	2	1>	77	5	110	21	41	.39	.33	5>	1>	.06	28	2>	.013	9.8	21	.46	1.8	2>	44
18	PE018	4776.590	1402.670	1>	1>	85	3	100	29	55	.55	.44	5>	1>	.07	35	2>	.012	1.4	22	.51	1.8	2>	54
19	PE019	4776.250	1402.280	1>	1>	228	28	32	42	30	.68	.67	830	2	.48	15	2>	.016	10.1	87	.45	1.4	2>	64
20	PE020	4776.820	1402.290	1>	1>	337	29	27	35	110	.99	.64	2106	1>	.52	15	3	.026	6.4	78	.52	1.6	2>	76
21	PE021	4777.270	1402.900	15	1>	95	5	89	23	62	.60	.44	5>	1>	.09	31	45	.013	12.6	27	.47	2.0	2>	45
22	PE022	4777.230	1402.320	1>	1>	113	11	49	39	41	.08	.07	5>	1>	.17	16	2>	.029	.2>	10	.95	2.4	2>	59
23	PE023	4777.590	1402.280	6	1>	87	12	37	35	86	.06	.20	5>	3	.18	18	5	.016	2.1	7	.49	2.0	4	51
24	PE024	4775.330	1401.810	1>	1>	108	10	71	31	55	.43	.49	549	1>	.18	29	6	.020	7.0	58	.67	1.6	2>	60
25	PE025	4775.630	1401.880	13	181	60	40	61	43	56	.13	.53	500	3	.17	26	2>	.021	6.3	17	.77	2.0	2>	77
26	PE026	4775.500	1401.330	1>	1>	83	17	67	25	74	.17	.30	11	2	.09	24	8	.015	5.0	18	1.14	2.2	2>	54
27	PE027	4776.160	1401.860	1>	1	370	32	64	42	29	.62	1.13	1116	3	.44	30	4	.037	11.8	169	.47	1.6	2>	81
28	PE028	4776.510	1401.740	13	1>	324	42	51	38	95	.24	.30	753	1>	.20	22	6	.021	9.5	60	.90	2.2	2>	73
29	PE029	4776.120	1401.160	1>	2	276	27	51	40	43	.71	.87	1583	1>	.57	16	2	.016	3.7	92	.52	1.6	2>	60
30	PE030	4776.830	1401.510	2	1>	284	21	45	36	46	.67	.77	328	1>	.59	17	4	.032	7.5	130	.58	1.8	2>	66
31	PE031	4777.200	1401.780	2	1>	65	52	36	42	12	.05	.08	121	2	.22	15	2>	.015	2.4	11	.60	2.6	2>	55
32	PE032	4777.330	1401.450	27	2	122	23	35	63	105	.03	.30	5>	1	.18	17	2>	.033	2.3	13	.84	1.8	2>	55
33	PE033	4777.820	1401.800	4	2	74	13	56	76	71	.02	.14	5>	2	.21	24	2>	.034	.4	18	.97	2.4	2>	51
34	PE034	4777.380	1401.120	1>	4	120	17	26	93	60	.10	.27	5>	1	.25	18	2>	.025	1.0	19	.73	1.8	2>	69
35	PE035	4778.060	1401.560	1>	1>	127	14	47	56	53	.02	.19	5>	1>	.23	17	5	.027	1.7	10	.80	1.6	2>	67
36	PE036	4778.260	1401.200	7	1>	90	8	37	39	65	.03	.23	5>	2	.24	11	4	.029	.2	23	.67	2.2	2>	53
37	PE037	4775.680	1400.870	1>	1>	185	35	80	53	51	.38	.70	629	1>	.23	43	2>	.025	5.0	39	.77	1.8	2>	79
38	PE038	4776.100	1400.560	1>	1>	174	44	44	44	79	.15	.80	1680	.2	.16	19	2>	.014	10.2	14	.84	1.8	2>	78
39	PE039	4776.470	1400.470	2	1>	230	39	59	38	99	.13	.67	503	2	.14	23	13	.034	10.6	68	.86	1.4	2>	79
40	PE040	4776.840	1400.710	1>	1>	307	22	34	34	67	.57	1.27	2585	1>	.59	12	2>	.030	9.4	130	.50	1.6	2>	59
41	PE041	4776.150	1400.160	6	1>	98	11	92	21	55	.32	.42	5>	1>	.10	35	3	.012	5.2	26	.49	1.8	2>	58
42	PE042	4777.290	1400.600	1>	26	118	12	29	51	71	.24	.46	5>	3	.21	11	2>	.011	1.9	11	.56	2.6	2>	49
43	PE043	4777.680	1400.640	1>	1>	272	23	25	50	55	.53	.66	2917	1>	.54	12	9	.016	5.2	82	.51	2.4	2>	51
44	PE044	4777.390	1400.170	1>	1>	60	12	39	84	154	.01	.18	5>	4	.25	20	10	.029	6.7	8	.78	3.8	2>	52
45	PE045	4777.810	1400.180	1>	1>	186	26	28	45	66	.25	.32	5>	1	.27	14	2>	.017	.2>	8	.53	3.0	2>	64
46	PE046	4778.380	1400.720	1>	1	76	7	51	46	176	.05	.05	5>	1>	.20	12	2>	.044	1.9	23	.73	2.4	2>	53
47	PE047	4778.240	1400.320	1>	1	57	6	129	48	149	.01	.31	5>	3	.17	19	2>	.026	.4	21	.84	2.2	2>	50
48	PE048	4778.560	1400.160	12	1>	29	10	26	33	62	.04	.38	5>	1>	.14	7	5	.012	5.1	9	.60	1.8	2>	50
49	PE049	4776.550	1399.870	1>	1>	159	40	46	37	43	.20	1.08	2345	1	.16	15	8	.014	6.4	51	.72	1.4	2>	72
50	PE050	4776.330	1399.520	1>	1>	258	37	42	64	53	.15	.73	1230	1	.16	16	4	.029	5.8	59	.73	1.4	2>	68

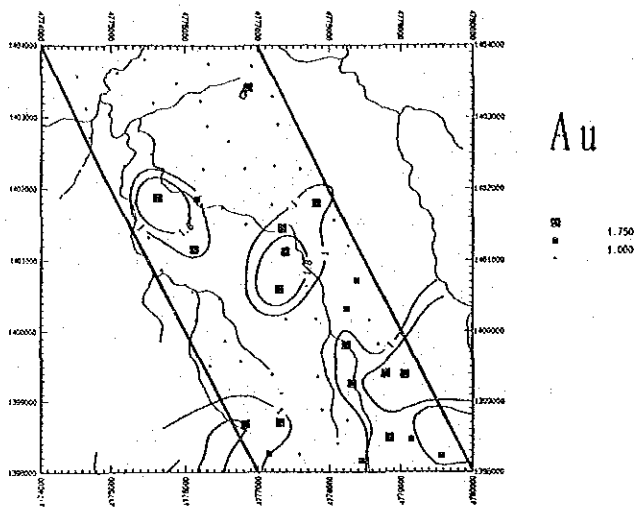
List of Geochemical Analysis(2)

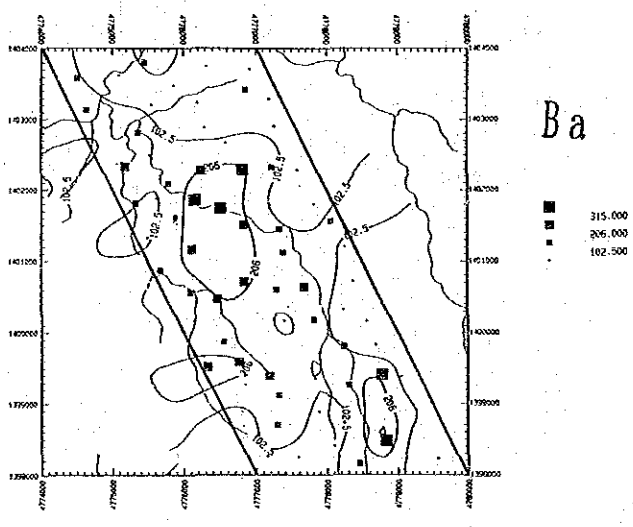
Ser. No.	Sample No.	Location (km) X-coord	Location (km) Y-coord	As ppm	Au ppb	Ba ppm	Co ppm	Cr ppm	Cu ppm	Hg ppb	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	Pb ppm	S %	Sb ppm	Sr ppm	Ti %	U ppm	W ppm	Zn ppm
51	PE051	4776.760	1399.590	1	1>	250	27	51	56	78	.37	.80	632	3	.24	21	2>	.067	8.6	60	.71	1.8	2>	73
52	PE052	4777.190	1399.390	1>	1>	206	36	29	57	46	.39	.97	215	1>	.31	15	2>	.033	8.0	78	.61	1.8	2>	71
53	PE053	4777.320	1399.120	1>	1>	131	27	42	67	47	.21	.72	6	1	.21	19	2>	.061	7.2	47	.85	1.8	2>	66
54	PE054	4777.890	1399.710	41	1>	87	8	35	51	150	.04	.23	5>	3	.20	11	12	.028	3.5	27	.93	3.2	2>	51
55	PE055	4777.830	1399.360	6	1>	90	11	44	57	105	.07	.38	5>	1>	.20	15	12	.022	7.3	22	1.06	2.8	2>	56
56	PE056	4778.240	1399.810	98	2	130	23	34	57	205	.04	.63	182	1	.15	16	24	.034	5.5	12	.92	2.2	2>	69
57	PE057	4778.690	1399.830	2	1>	55	14	50	28	134	.02	.66	5>	1>	.12	7	2>	.028	5.9	8	.73	1.2	2>	50
58	PE058	4778.310	1399.260	1568	2	139	17	44	61	194	.06	.53	33	3	.16	15	243	.052	7.1	25	1.15	2.6	2>	65
59	PE059	4778.780	1399.410	6682	3	406	1>	74	40	199	.14	.24	5>	12	.11	10	1253	.428	16.0	299	2.90	5.2	21	32
60	PE060	4779.050	1399.390	526	34	54	3	60	73	129	.01	.03	5>	11	.12	6	130	.050	14.3	60	2.40	3.4	3	37
61	PE061	4776.820	1398.680	1>	2	71	12	31	52	122	.03	.48	5>	1>	.10	12	2>	.024	4.4	4	.95	1.2	2>	61
62	PE062	4777.150	1398.260	15	1	98	5	28	53	105	.03	.10	5>	2	.15	12	5	.044	4.6	5	.73	2.4	2>	56
63	PE063	4777.300	1398.700	1>	2	158	39	38	79	131	.02	.56	1939	1>	.11	15	6	.026	5.6	7	.92	1.4	2>	79
64	PE064	4777.890	1398.880	32	1>	98	8	38	52	123	.04	.37	5>	2	.12	14	11	.022	10.6	11	.94	2.4	2>	63
65	PE065	4777.580	1398.250	1>	1>	78	2	30	48	147	.03	.10	5>	1	.12	10	5	.031	4.6	3	.88	2.4	2>	51
66	PE066	4778.110	1398.400	1>	1>	88	10	61	45	162	.04	.07	5>	1	.13	12	2>	.024	.2>	12	1.02	2.2	2>	50
67	PE067	4778.250	1398.730	512	1>	50	26	44	62	100	.07	.55	5>	1	.13	23	60	.017	10.2	8	.76	1.8	2>	63
68	PE068	4778.450	1398.160	1	1	115	12	35	57	137	.12	.37	5>	1>	.17	14	2>	.104	.7	33	.69	2.4	2>	57
69	PE069	4778.840	1398.480	41	2	1274	3	39	49	254	.11	.08	5>	3	.38	12	4	.070	6.4	54	1.06	2.4	2>	58
70	PE070	4779.150	1398.460	14	1	46	4	34	49	193	.01>	.08	5>	1>	.12	12	2>	.044	5.8	28	.80	2.0	2>	35
71	PE071	4779.260	1398.820	31	1>	101	16	31	46	96	.01>	.16	35	1>	.12	11	3	.044	.2>	47	.59	1.8	2>	52
72	PE072	4779.570	1398.230	1>	1	80	17	48	59	162	.01	.17	336	1>	.14	17	2>	.033	4.2	13	.94	1.2	2>	69

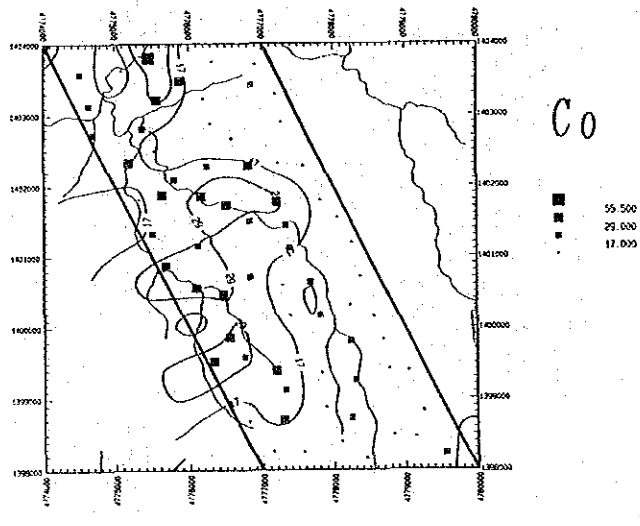
Appendix 35

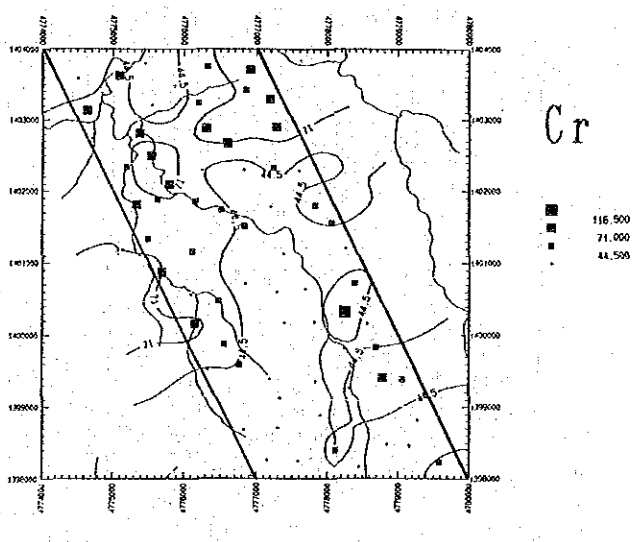
Distribution map of elements
in Area E

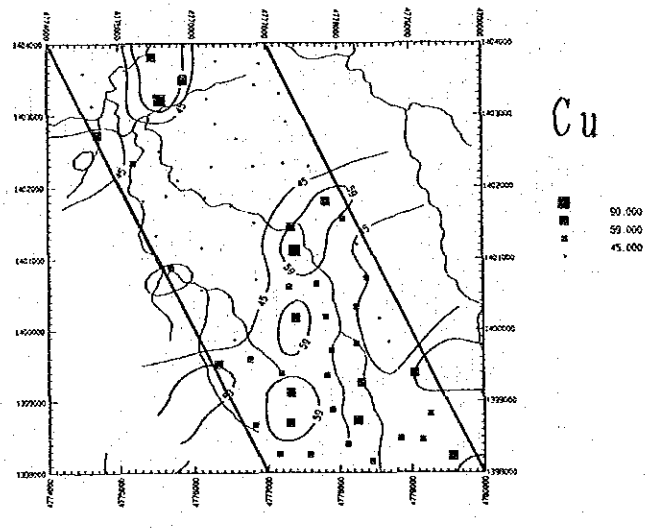

As
24.300
14.000

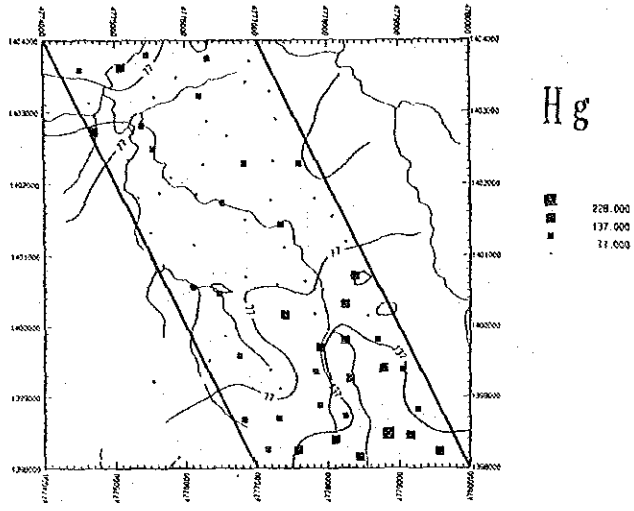

Au
1.750
1.000


Ba
315.000
206.000
102.500

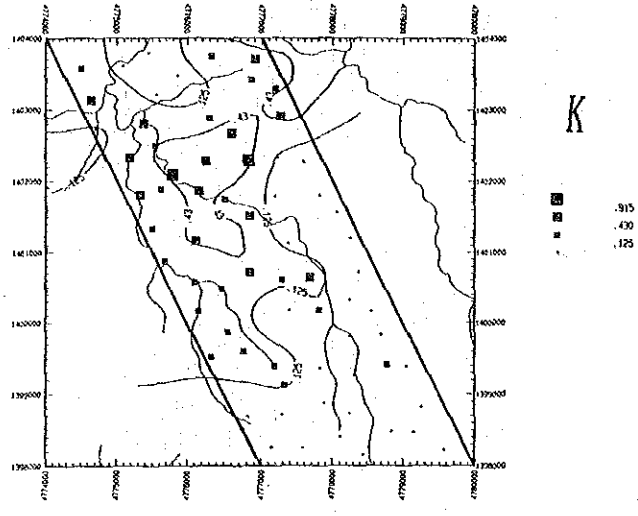

Co
55.500
29.000
17.000


Cr
116.500
71.000
44.500

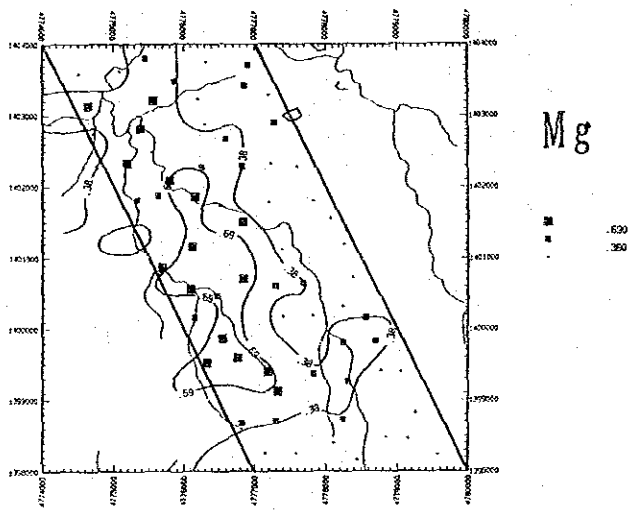

Cu
90.000
59.000
45.000



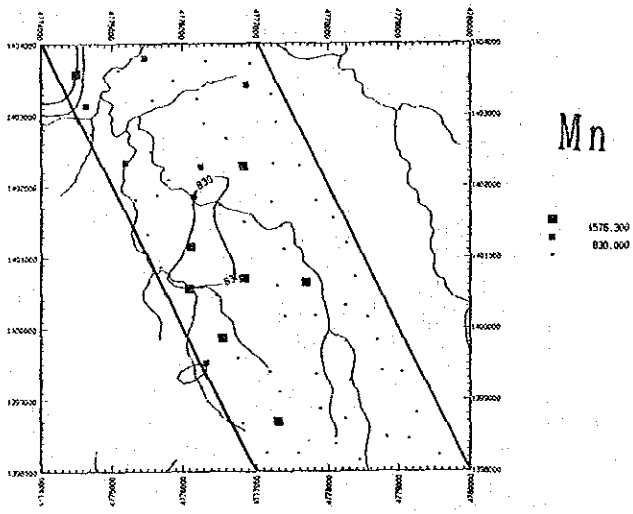
Hg



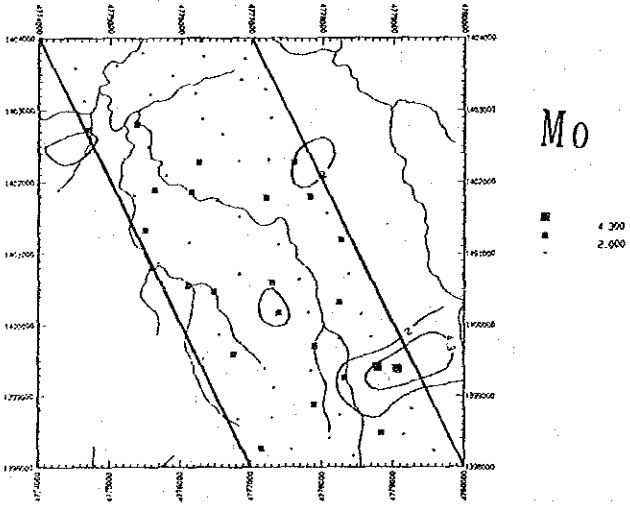
K



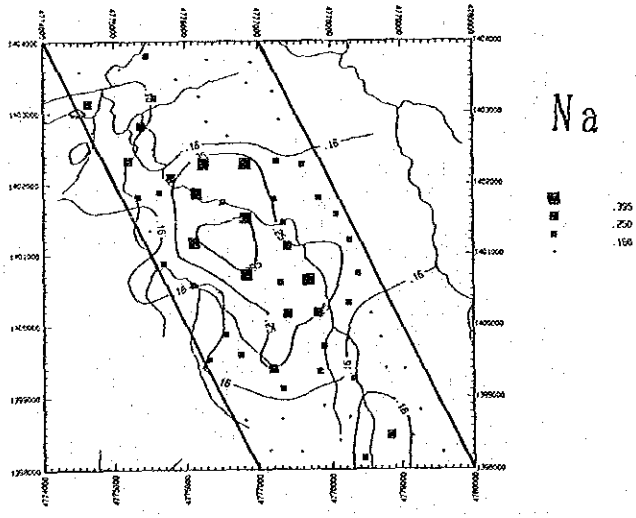
Mg



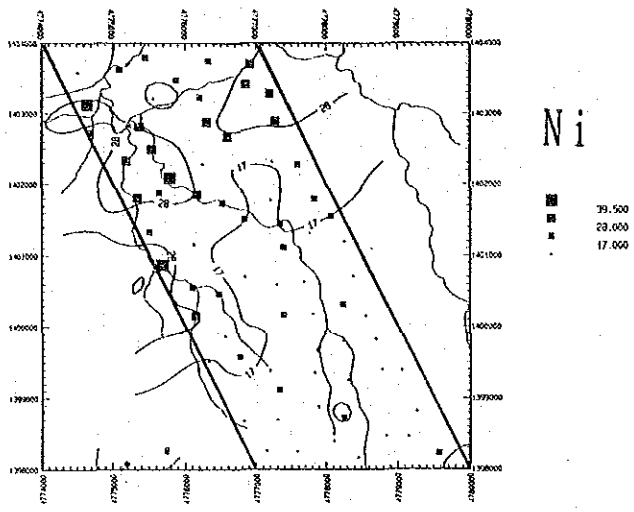
Mn

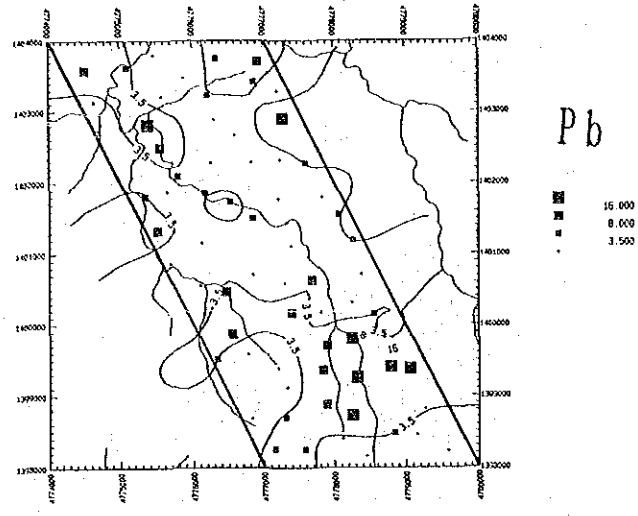


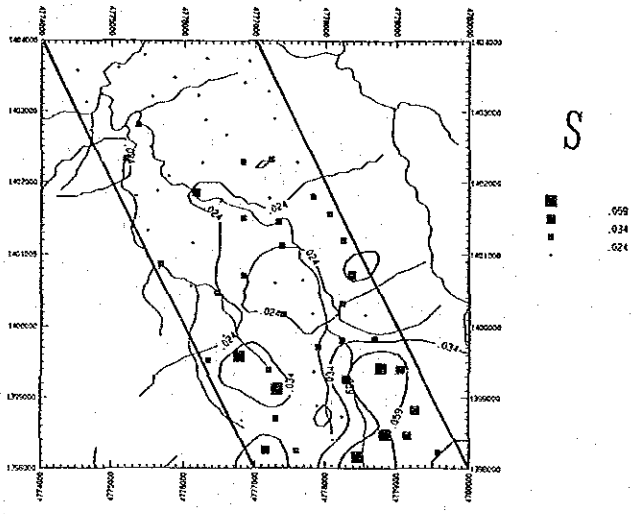
Mo

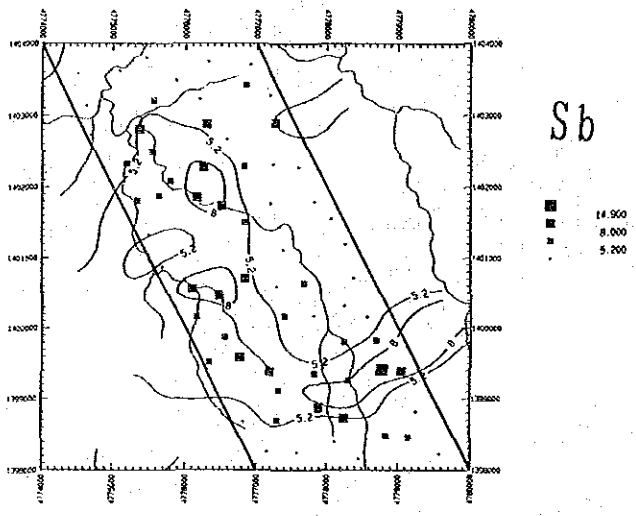


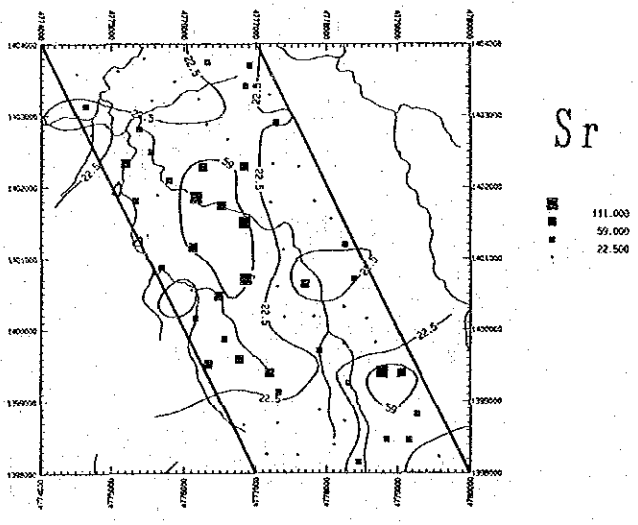
Na

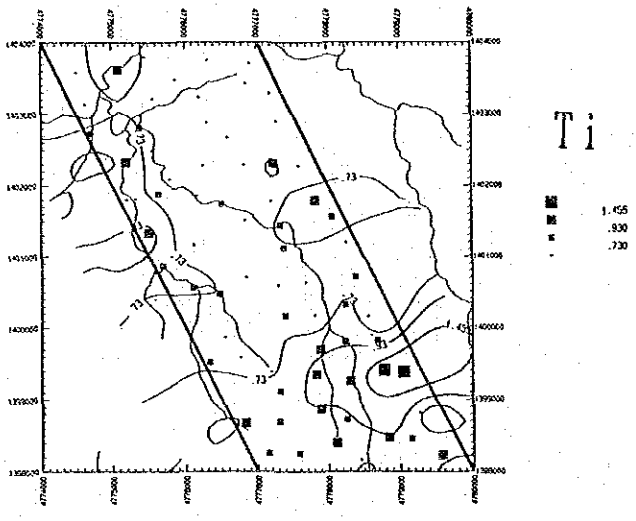

Ni
39.500
28.000
17.000

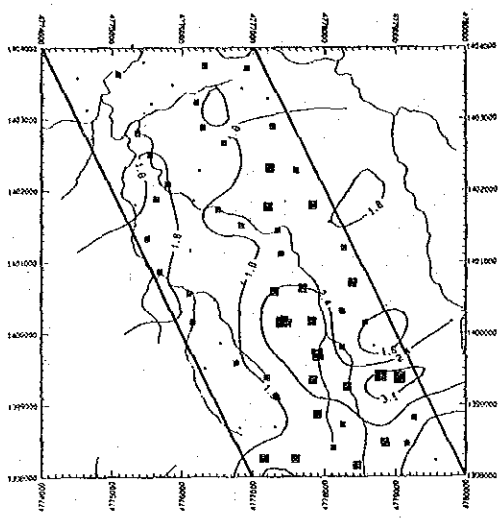

Pb
16.000
8.000
3.500


S
.059
.034
.024


Sb
14.900
8.000
5.200

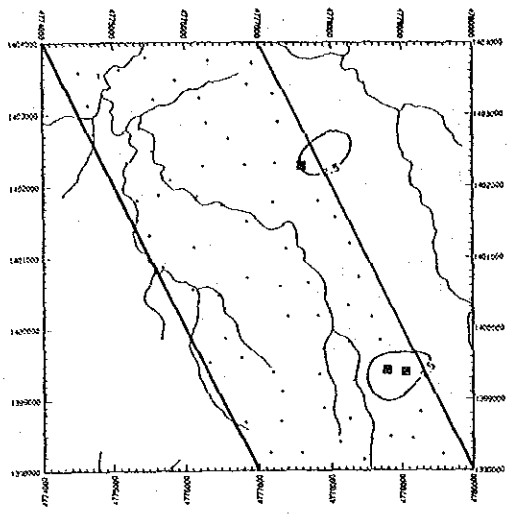

Sr
111.000
59.000
22.500


Ti
1.455
.930
.730



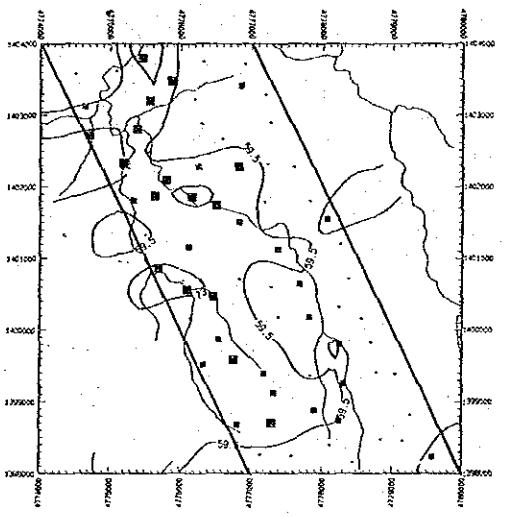
U

3.100
2.400
1.600



W

2.500



Zn

73.000
59.500

Appendix 36

List of soil geochemical samples
in Area F

Area: Tawau Hill Area (Area F)

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	PF001	1388.15	4773.43	Tawau North	—	An_1	40	B.	F	C	M	W	Bush
2	PF002	1388.77	4774.25	Tawau North	—	An_1	40	L.G.	F	C	S	W	Bush
3	PF003	1388.66	4775.32	Tawau North	sili. andesite	An_1	50	Y.B.	F	C	M	W	Primary forest
4	PF004	1388.73	4775.70	Tawau North	alt. andesite	An_1	40	Y.B.	R	C	M	W	Primary forest
5	PF005	1388.10	4775.43	Tawau North	alt. andesite	An_1	40	Y.B.	F	C	M	W	Primary forest
6	PF006	1388.08	4776.27	Tawau North	—	An_1	40	Y.B.	F	C	S	W	Primary forest
7	PF007	1388.26	4776.88	Tawau North	alt. andesite	An_1	40	Y.B.	R	C	M	W	Primary forest
8	PF008	1388.85	4777.67	Tawau North	—	An_1	40	Y.B.	F	C	M	W	Primary forest
9	PF009	1388.13	4777.30	Tawau North	argi. andesite	An_1	50	Y.B.	R	C	M	W	Primary forest
10	PF010	1388.11	4777.75	Tawau North	andesite	An_1	40	Y.B.	R	C	M	W	Primary forest
11	PF011	1388.88	4778.16	Tawau North	—	An_1	50	Y.B.	R	C	M	W	Primary forest
12	PF012	1388.26	4778.30	Tawau North	—	An_1	40	Y.B.	R	C	M	W	Primary forest
13	PF013	1387.42	4772.75	Tawau North	—	Ba_2	40	Y.B.	R	C	M	W	Oil palm plant.
14	PF014	1387.52	4773.67	Tawau North	—	An_1	40	B.	F	C	S	W	Cocao plantation
15	PF015	1387.73	4774.32	Tawau North	—	An_1	40	B.	R	C	S	W	Cocoa plantation
16	PF016	1387.62	4775.23	Tawau North	sili. andesite	An_1	30	Y.B.	F	C	M	W	Primary forest
17	PF017	1387.16	4775.48	Tawau North	andesite	An_1	40	D.B.	M	C	M	W	Primary forest
18	PF018	1387.48	4775.88	Tawau North	—	An_1	40	Y.B.	R	C	S	W	Primary forest
19	PF019	1387.67	4776.30	Tawau North	—	An_1	30	Y.B.	F	C	S	W	Primary forest
20	PF020	1387.62	4776.83	Tawau North	argi. andesite	An_1	40	Y.B.	R	C	M	W	Primary forest
21	PF021	1387.09	4776.12	Tawau North	—	An_1	40	Y.B.	R	C	M	W	Primary forest
22	PF022	1387.75	4777.20	Tawau North	and. boulder	An_1	40	Y.B.	R	C	M	W	Primary forest
23	PF023	1387.43	4777.75	Tawau North	—	An_1	40	Y.B.	R	C	M	W	Primary forest
24	PF024	1387.15	4777.22	Tawau North	—	An_1	40	Y.B.	R	C	M	W	Primary forest
25	PF025	1387.61	4778.15	Tawau North	—	An_1	40	Y.B.	R	C	M	W	Primary forest
26	PF026	1387.32	4779.00	Tawau North	and. boulder	An_1	40	Y.	R	C	M	W	Primary forest
27	PF027	1386.30	4771.90	Tawau North	—	Ba_2	40	D.B.	R	C	M	W	Cocoa plantation
28	PF028	1386.93	4772.91	Tawau North	—	Ba_2	40	Y.B.	R	C	M	W	Oil palm plant.
29	PF029	1386.32	4772.70	Tawau North	—	Ba_2	40	Y.B.	R	C	M	W	Cocoa plantation
30	PF030	1386.37	4773.60	Tawau North	—	Ba_2	40	D.B.	R	C	F	W	Cocoa plantation

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

Area: Tawau Hill Area (Area F)

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
31	PF031	1386.60	4774.23	Tawau North	—	An_1	40	L.B.	R	C	M	W	Cocoa plantation
32	PF032	1386.23	4774.38	Tawau North	—	An_1	40	D.B.	F	C	M	W	Cocoa plantation
33	PF033	1386.57	4775.09	Tawau North	—	An_1	40	Y.B.	R	C	M	W	Primary forest
34	PF034	1386.74	4775.81	Tawau North	—	An_1	40	Y.B.	F	C	M	W	Primary forest
35	PF035	1386.49	4775.47	Tawau North	—	An_1	40	Y.B.	F	C	F	D	Primary forest
36	PF036	1386.17	4775.35	Tawau North	—	An_1	40	Y.B.	R	C	F	W	Primary forest
37	PF037	1386.28	4776.14	Tawau North	—	An_1	40	Y.B.	F	C	S	W	Primary forest
38	PF038	1386.68	4776.92	Tawau North	—	An_1	40	Y.B.	R	C	M	W	Primary forest
39	PF039	1386.15	4776.78	Tawau North	—	An_1	40	Y.B.	R	C	M	W	Primary forest
40	PF040	1386.70	4777.65	Tawau North	—	An_1	40	L.B.	R	C	M	W	Primary forest
41	PF041	1386.11	4777.40	Tawau North	andesite	An_1	40	Y.B.	R	C	M	W	Primary forest
42	PF042	1386.94	4778.72	Tawau North	and. boulder	An_1	40	Y.	R	C	M	W	Primary forest
43	PF043	1386.66	4778.36	Tawau North	sili. andesite	An_1	40	Y.	R	C	M	W	Primary forest
44	PF044	1386.25	4778.08	Tawau North	sili. andesite	An_1	40	Y.	R	C	M	W	Primary forest
45	PF045	1385.13	4770.38	Tawau North	—	Ba_2	30	D.B.	F	S	M	D	Cocoa plantation
46	PF046	1385.35	4771.56	Tawau North	—	Ba_2	40	D.B.	F	S	M	D	Cocoa plantation
47	PF047	1385.18	4772.65	Tawau North	—	Ba_2	40	B.	R	C	M	W	Cocoa plantation
48	PF048	1385.73	4773.53	Tawau North	—	Ba_2	40	D.B.	R	C	F	W	Cocoa plantation
49	PF049	1385.65	4774.25	Tawau North	—	Ba_2	40	B.	R	C	F	W	Cocoa plantation
50	PF050	1385.77	4774.78	Tawau North	—	An_1	40	L.B.	R	C	M	W	Primary forest
51	PF051	1385.75	4775.45	Tawau North	—	An_1	40	Y.B.	R	C	F	W	Primary forest
52	PF052	1385.13	4775.07	Tawau North	—	An_1	40	B.	R	C	F	W	Cocoa plantation
53	PF053	1385.16	4775.78	Tawau North	—	An_1	40	Y.	R	C	S	W	Primary forest
54	PF054	1385.75	4776.75	Tawau North	—	An_1	40	Y.B.	R	C	M	W	Primary forest
55	PF055	1385.20	4776.28	Tawau North	—	An_1	40	Y.B.	R	C	M	W	Primary forest
56	PF056	1385.11	4776.77	Tawau North	—	An_1	40	Y.B.	R	C	M	W	Primary forest
57	PF057	1385.79	4777.22	Tawau North	andesite	An_1	40	Y.B.	R	C	M	W	Primary forest
58	PF058	1385.47	4777.28	Tawau North	andesite	An_1	40	Y.B.	R	C	M	W	Primary forest
59	PF059	1384.64	4770.00	Tawau North	—	Ba_2	40	D.B.	F	C	F	D	Cocoa plantation
60	PF060	1384.13	4769.52	Tawau North	—	Da_2	40	D.B.	F	S	M	D	Cocoa plantation

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

Area: Tawau Hill Area (Area F)

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	PF061	1384.82	4770.56	Tawau North	—	Ba_2	40	D.B.	F	S	S	D	Cocoa plantation
62	PF062	1384.49	4770.26	Tawau North	—	Ba_2	40	D.B.	R	C	F	D	Cocoa plantation
63	PF063	1384.43	4770.80	Tawau North	—	Ba_2	40	D.B.	F	S	F	D	Cocoa plantation
64	PF064	1384.12	4770.28	Tawau North	—	Ba_2	40	D.B.	R	C	F	W	Rubber plant.
65	PF065	1384.43	4771.63	Tawau North	—	Ba_2	40	D.B.	R	S	M	D	Cocoa plantation
66	PF066	1384.47	4772.40	Tawau North	—	Ba_2	40	D.B.	R	C	F	D	Cocoa plantation
67	PF067	1384.78	4773.44	Tawau North	—	Ba_2	40	B.	R	C	M	W	Cocoa plantation
68	PF068	1384.64	4775.27	Tawau North	—	Ba_2	40	Y.B.	R	C	M	W	Cocoa plantation
69	PF069	1384.74	4775.75	Tawau North	—	An_1	40	B.	R	C	S	W	Bush
70	PF070	1384.11	4775.67	Tawau North	—	An_1	40	Y.B.	R	C	S	D	Bush
71	PF071	1384.33	4776.17	Tawau North	andesite	An_1	40	Y.B.	R	C	M	D	Primary forest
72	PF072	1384.84	4776.54	Tawau North	—	An_1	40	Y.B.	R	C	M	W	Primary forest
73	PF073	1383.68	4768.99	Tawau North	—	Da_2	30	B.	F	C	M	D	Rubber plant.
74	PF074	1383.28	4768.54	Tawau North	—	Da_2	30	Y.B.	F	C	M	D	Oil palm plant.
75	PF075	1383.77	4769.27	Tawau North	—	Da_2	40	Y.B.	F	C	M	D	Rubber plant.
76	PF076	1383.83	4769.92	Tawau North	—	Da_2	30	B.	F	S	M	D	Rubber plant.
77	PF077	1383.28	4769.28	Tawau North	—	Da_2	30	B.	R	S	M	D	Rubber plant.
78	PF078	1383.40	4769.95	Tawau North	—	Da_2	30	D.B.	R	S	M	D	Rubber plant.
79	PF079	1383.87	4770.42	Tawau North	andesite	Ba_2	40	L.B.	R	C	M	D	Rubber plant.
80	PF080	1383.20	4770.29	Tawau North	—	Ba_2	40	Y.B.	F	C	F	D	Oil palm plant.
81	PF081	1383.63	4770.77	Tawau North	—	Ba_2	40	B.	R	C	M	W	Cocoa plantation
82	PF082	1383.12	4770.91	Tawau North	—	Da_2	40	D.B.	R	C	M	W	Cocoa plantation
83	PF083	1383.90	4771.11	Tawau North	—	Ba_2	40	B.	F	C	M	W	Cocoa plantation
84	PF084	1383.45	4771.66	Tawau North	—	Ba_2	40	B.	R	C	F	W	Cocoa plantation
85	PF085	1383.17	4771.21	Tawau North	—	Da_2	40	D.B.	M	C	M	W	Cocoa plantation
86	PF086	1383.50	4772.42	Tawau North	—	Ba_2	40	Y.B.	R	C	M	W	Cocoa plantation
87	PF087	1383.35	4773.58	Tawau North	—	Ba_2	40	D.B.	F	C	M	W	Cocoa plantation
88	PF088	1383.22	4774.55	Tawau North	—	Ba_2	40	D.B.	R	C	M	W	Cocoa plantation
89	PF089	1383.65	4775.13	Tawau North	—	Ba_2	40	D.B.	R	C	M	W	Cocoa plantation
90	PF090	1383.68	4775.51	Tawau North	—	Ba_2	40	D.B.	R	C	F	W	Cocoa plantation

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

Area: Tawau Hill Area (Area F)

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
91	PF091	1382.73	4768.20	Tawau North	—	Da_2	40	B.	R	C	M	D	Oil palm plant.
92	PF092	1382.70	4768.87	Tawau North	—	Da_2	40	B.	R	C	M	D	Oil palm plant.
93	PF093	1382.19	4768.30	Tawau North	—	Da_2	30	D.B.	R	S	F	D	Oil palm plant.
94	PF094	1382.20	4768.89	Tawau North	—	Da_2	40	B.	R	S	M	D	Rubber plant.
95	PF095	1382.90	4769.16	Tawau North	—	Da_2	30	D.B.	R	C	M	D	Rubber plant.
96	PF096	1382.88	4769.73	Tawau North	—	Da_2	30	B.	F	S	M	D	Oil palm plant.
97	PF097	1382.40	4769.48	Tawau North	—	Da_2	40	B.	F	S	M	D	Oil palm plant.
98	PF098	1382.74	4770.16	Tawau North	—	Da_2	30	B.	F	S	M	D	Cocoa plantation
99	PF099	1382.78	4770.72	Tawau North	—	Da_2	40	D.B.	R	C	M	W	Cocoa plantation
100	PF100	1382.40	4770.07	Tawau North	—	Da_2	40	B.	R	S	M	D	Oil palm plant.
101	PF101	1382.17	4770.50	Tawau North	—	Da_2	40	B.	R	S	M	D	Oil palm plant.
102	PF102	1382.75	4771.27	Tawau North	—	Da_2	40	B.	R	C	F	W	Cocoa plantation
103	PF103	1382.86	4771.70	Tawau North	—	Da_2	40	D.B.	R	C	M	W	Cocoa plantation
104	PF104	1382.27	4771.21	Tawau North	—	Da_2	40	B.	R	C	F	W	Cocoa plantation
105	PF105	1382.24	4771.89	Tawau North	—	Ba_2	40	D.B.	R	C	M	W	Cocoa plantation
106	PF106	1382.57	4772.62	Tawau North	—	Ba_2	40	D.B.	F	C	F	W	Cocoa plantation
107	PF107	1382.39	4773.59	Tawau North	—	Ba_2	40	D.B.	F	C	M	W	Cocoa plantation
108	PF108	1382.55	4774.31	Tawau North	—	Ba_2	40	D.B.	R	C	M	W	Cocoa plantation
109	PF109	1381.61	4768.40	Tawau North	—	Da_2	30	B.	F	S	M	D	Rubber plant.
110	PF110	1381.73	4768.85	Tawau North	—	Da_2	40	B.	R	S	M	D	Rubber plant.
111	PF111	1381.15	4768.28	Tawau North	—	Da_2	40	B.	R	S	M	D	Oil palm plant.
112	PF112	1381.17	4768.84	Tawau North	—	Da_2	40	D.B.	R	S	F	D	Rubber plant.
113	PF113	1381.93	4769.35	Tawau North	—	Da_2	40	B.	F	S	M	D	Oil palm plant.
114	PF114	1381.83	4769.89	Tawau North	—	Da_2	40	B.	R	S	M	D	Oil palm plant.
115	PF115	1381.12	4769.25	Tawau North	—	Da_2	40	R.B.	R	S	M	D	Oil palm plant.
116	PF116	1381.14	4769.86	Tawau North	—	Da_2	40	B.	R	S	M	D	Oil palm plant.
117	PF117	1381.35	4770.28	Tawau North	—	Da_2	40	B.	R	S	M	D	Oil palm plant.
118	PF118	1381.12	4770.50	Tawau North	—	Da_2	40	D.B.	R	S	F	D	Oil palm plant.
119	PF119	1381.59	4770.82	Tawau North	—	Da_2	30	D.B.	F	C	F	D	Cocoa plantation
120	PF120	1381.73	4771.36	Tawau North	—	Ba_2	40	D.B.	R	S	F	D	Cocoa plantation
121	PF121	1381.38	4771.65	Tawau North	—	Ba_2	40	D.B.	R	C	F	W	Cocoa plantation
122	PF122	1381.48	4772.38	Tawau North	—	Ba_2	40	D.B.	R	C	F	W	Cocoa plantation

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

Appendix 37

Analytical results of soil
geochemical samples in Area F

List of Geochemical Analysis(1)

Ser. No.	Sample No.	Location(km) X-coord	Location(km) Y-coord	As ppm	Au ppb	Ba ppm	Co ppm	Cr ppm	Cu ppm	Hg ppb	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	Pb ppm	S %	Sb ppm	Sr ppm	Ti %	U ppm	W ppm	Zn ppm
1	PF001	4773.430	1388.150	1>	1>	110	22	131	38	130	.04	.25	159	1	.06	57	8	.021	5.5	21	1.73	2.0	2>	76
2	PF002	4774.250	1388.770	3	1>	192	35	29	30	103	.10	.19	2616	1>	.08	10	8	.013	3.9	15	.80	3.0	2>	55
3	PF003	4775.320	1388.660	5	3	65	1>	18	60	115	.12	.10	5>	3	.07	10	5	.033	1.2	24	.53	1.8	2>	51
4	PF004	4775.700	1388.730	15	7	209	2	17	36	110	.34	.17	5>	7	.07	5	11	.039	2.0	121	.34	2.4	2>	30
5	PF005	4775.430	1388.100	131	1>	331	2	12	31	95	.38	.15	4>	4	.16	3	9	.721	3.4	307	.35	1.6	2>	19
6	PF006	4776.270	1388.080	38	2	165	1>	35	46	81	.07	.11	5>	2	.08	22	16	.125	2.7	128	.69	2.6	2>	57
7	PF007	4776.680	1388.260	76	1	174	4	62	20	244	.05	.06	5>	6	.05	15	86	.134	22.3	222	1.83	4.2	11	30
8	PF008	4777.670	1388.850	31	6	160	12	43	45	319	.05	.32	5>	3	.12	22	2>	.030	12.1	18	.66	2.2	2>	55
9	PF009	4777.300	1388.130	103	1>	471	1>	52	23	115	.19	.04	5>	4	.07	6	63	.576	5.7	527	.85	3.6	2>	16
10	PF010	4777.750	1388.110	1>	5	152	36	45	41	86	.07	.74	1202	1	.13	15	2>	.018	5.6	13	.44	3.0	2>	70
11	PF011	4778.160	1388.880	28	2	40	5	39	22	138	.07	.50	5>	3	.07	9	2>	.018	.2>	9	.52	2.2	2>	43
12	PF012	4778.300	1388.260	4	1	58	6	47	49	146	.01	.10	5>	1	.12	23	3	.038	8.6	24	.80	1.8	2>	50
13	PF013	4772.750	1387.420	1>	1>	26	5	200	52	205	.04	.04	5>	5	.12	94	2>	.054	13.8	5	2.03	1.8	2>	117
14	PF014	4773.670	1387.520	1>	1>	174	35	64	42	84	.61	.87	1056	2	.17	24	17	.025	11.5	73	.99	1.8	2>	61
15	PF015	4774.320	1387.730	1>	1>	322	23	19	47	94	1.29	.70	1512	1>	.37	15	2>	.019	5.8	82	.52	2.0	3	58
16	PF016	4775.230	1387.620	12	1>	82	11	32	41	119	.05	.22	5>	3	.11	15	2>	.040	9.7	19	.66	3.0	2>	44
17	PF017	4775.480	1387.160	1>	1>	321	40	66	53	101	.64	.46	1840	3	.27	36	7	.033	5.7	31	.70	2.2	2>	63
18	PF018	4775.880	1387.480	1>	1>	57	15	34	65	169	.02	.14	5>	1	.08	13	2>	.027	6.8	14	1.07	3.4	2>	52
19	PF019	4776.300	1387.670	597	1	333	6	31	74	217	.14	.18	5>	2	.03	10	234	.221	5.2	301	.56	2.2	11	30
20	PF020	4776.830	1387.620	8	1>	27	4	34	63	91	.02	.29	5>	3	.11	11	2>	.097	1.2	24	.68	2.0	2>	49
21	PF021	4776.120	1387.090	87	1>	123	6	31	66	253	.11	.57	5>	3	.10	16	27	.131	6.1	62	.79	2.0	2	71
22	PF022	4777.200	1387.750	51	1>	76	12	39	80	109	.03	.20	5>	1	.13	18	2>	.043	7.3	21	.84	2.0	2>	61
23	PF023	4777.750	1387.430	6	1>	63	9	22	54	111	.03	.16	5>	2	.11	11	2>	.018	2.1	2	.83	3.2	2>	38
24	PF024	4777.220	1387.150	3	1>	78	4	18	53	102	.02	.09	5>	1>	.09	11	4	.025	.6	2	.64	2.6	2>	39
25	PF025	4778.150	1387.610	11	1>	80	10	23	63	124	.01	.12	5>	2	.10	13	4	.029	9.0	2	.81	3.6	2>	49
26	PF026	4779.000	1387.320	18	1>	88	9	135	61	177	.02	.07	5>	2	.10	42	2>	.044	1.1	9	.74	2.4	2>	58
27	PF027	4771.900	1386.300	1>	1>	32	8	241	44	202	.03	.09	5>	2	.07	91	2>	.054	10.1	5	2.08	1.6	2>	99
28	PF028	4772.910	1386.930	1>	1>	24	15	235	50	189	.03	.03	5>	4	.09	93	2>	.047	13.4	3	1.89	1.6	2>	91
29	PF029	4772.700	1386.320	1>	1>	21	7	228	50	164	.02	.03	5>	3	.07	88	2>	.052	7.3	3	1.94	1.8	2>	100
30	PF030	4773.600	1386.370	18	1>	27	9	222	50	215	.04	.03	5>	2	.10	87	2>	.041	11.5	4	1.95	1.8	2>	99
31	PF031	4774.230	1386.600	1>	1>	21	2	218	51	289	.04	.07	5>	1	.06	78	2>	.041	2.3	8	1.94	1.6	2>	82
32	PF032	4774.380	1386.230	1>	1>	18	1>	203	44	257	.02	.02	5>	1	.07	75	2>	.048	6.8	3	1.75	1.6	2>	80
33	PF033	4775.090	1386.570	1>	1>	46	13	25	44	94	.25	.83	5>	1>	.06	12	2>	.014	4.3	17	.71	1.4	2>	59
34	PF034	4775.810	1386.740	370	2	190	1>	14	53	735	.01>	.06	5>	5	.02	1>	24	.056	55.7	221	1.04	2.6	3	16
35	PF035	4775.470	1386.490	49	1>	286	25	29	55	197	.44	.63	1005	5	.21	17	14	.105	6.0	87	.67	2.0	2>	71
36	PF036	4775.350	1386.170	36	1>	104	12	27	46	152	.04	.33	5>	3	.08	17	2>	.052	3.2	33	.72	2.4	2>	62
37	PF037	4776.140	1386.280	81	1>	192	1>	27	19	155	.03	.01	5>	2	.09	4	2>	.081	1.1	201	.65	2.0	2>	20
38	PF038	4776.920	1386.680	1>	1>	77	12	21	70	98	.03	.08	5>	2	.14	14	2>	.022	1.2	2	.70	2.8	2>	38
39	PF039	4776.780	1386.150	1>	1	36	6	27	43	146	.01	.09	5>	2	.08	12	2>	.021	1.7	2	.70	3.4	2>	32
40	PF040	4777.650	1386.700	1>	2	65	9	17	34	97	.03	.14	133	1>	.04	6	2	.013	8.0	3	1.14	4.2	2>	34
41	PF041	4777.400	1386.110	1>	1>	72	8	28	44	179	.02	.13	5>	2	.07	14	2	.018	4.2	3	1.08	4.0	2>	35
42	PF042	4778.720	1386.940	11	1	70	1	96	40	208	.01	.07	5>	3	.07	20	2>	.043	7.7	60	.79	2.0	2>	37
43	PF043	4778.360	1386.660	1>	1>	75	17	83	55	100	.02	.15	5>	3	.07	32	2>	.023	6.1	5	.75	2.8	2>	55
44	PF044	4778.080	1386.250	6	1>	82	15	45	39	111	.04	.21	189	1>	.06	20	2>	.027	6.0	17	.74	1.8	2>	58
45	PF045	4770.380	1385.130	8	1>	22	9	295	49	187	.03	.04	5>	2	.06	114	2>	.057	5.8	4	2.19	2.0	2>	97
46	PF046	4771.560	1385.350	1>	1>	16	9	219	44	174	.01	.02	5>	2	.03	92	2>	.041	6.0	2	1.96	1.4	2>	84
47	PF047	4772.650	1385.180	23	1>	178	50	299	64	265	.08	.07	1484	1>	.11	188	2>	.101	8.2	12	1.74	1.8	2>	128
48	PF048	4773.530	1385.730	4	1>	162	59	261	51	365	.02	.04	3129	1	.06	152	2>	.062	7.1	7	1.46	1.4	2>	121
49	PF049	4774.250	1385.650	1>	1>	301	63	330	64	382	.05	.04	5192	4	.09	189	2>	.105	10.1	7	1.88	1.4	2>	146
50	PF050	4774.780	1385.770	1>	1	42	5	57	24	139	.06	.26	5>	3	.11	16	4	.033	6.8	32	1.21	2.0	2>	38

List of Geochemical Analysis(2)

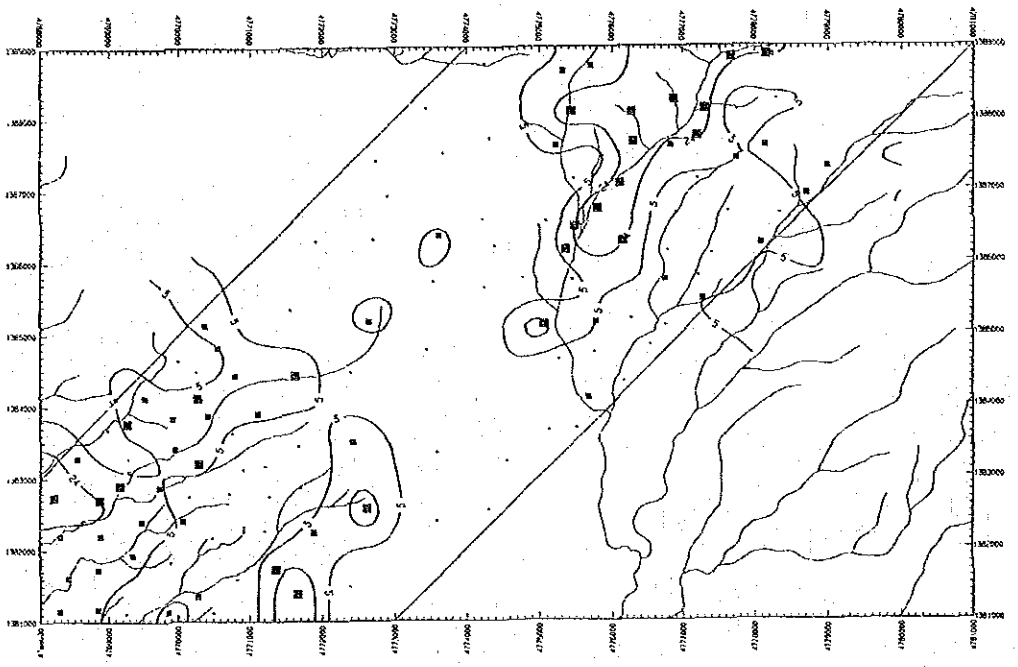
Ser. No.	Sample No.	Location(km) X-coord	Location(km) Y-coord	As ppm	Au ppb	Ba ppm	Co ppm	Cr ppm	Cu ppm	Hg ppb	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	Pb ppm	S %	Sb ppm	Sr ppm	Ti %	U ppm	W ppm	Zn ppm
51	PF051	4775.450	1385.750	1	1>	92	20	49	62	131	.04	.18	1100	2	.09	20	4	.038	2.1	12	.94	2.4	2>	63
52	PF052	4775.070	1385.130	61	2	57	7	94	39	221	.02	.19	5>	3	.11	37	2>	.060	7.6	42	1.33	3.0	2>	56
53	PF053	4775.780	1385.160	8	1>	168	24	24	49	72	.09	.41	5>	2	.21	14	2>	.028	3.3	25	.75	1.4	2>	71
54	PF054	4776.750	1385.750	6	1>	85	9	32	60	119	.01>	.19	5>	2	.15	16	2>	.025	.2>	8	.66	3.0	2>	42
55	PF055	4776.280	1385.200	1>	1	49	6	35	49	134	.02	.23	5>	2	.13	16	7	.028	4.2	9	.91	3.0	2>	45
56	PF056	4776.770	1385.110	1>	1>	173	11	20	44	75	.61	.32	5>	2	.25	10	2>	.012	.2>	19	.59	2.8	2>	46
57	PF057	4777.220	1385.790	1>	1>	135	13	27	64	93	.26	.28	5>	1	.19	14	7	.014	5.6	9	.62	2.6	2>	44
58	PF058	4777.280	1385.470	7	1>	54	4	43	59	91	.08	.24	5>	1	.12	18	2>	.017	.8	5	.69	3.0	2>	38
59	PF059	4770.000	1384.640	1>	1>	111	57	243	46	153	.03	.05	1440	1>	.10	136	2>	.044	6.4	9	2.09	1.2	2>	128
60	PF060	4769.520	1384.130	21	1>	133	47	190	37	77	.07	.22	775	2	.10	90	2>	.034	11.3	28	1.41	1.6	2>	110
61	PF061	4770.560	1384.820	9	1>	63	11	245	49	99	.14	.19	5>	2	.28	102	2>	.028	15.2	27	2.07	1.8	2>	98
62	PF062	4770.260	1384.490	1>	1>	38	14	271	42	161	.06	.19	277	1>	.18	88	2>	.051	10.1	18	1.86	1.6	2>	97
63	PF063	4770.800	1384.430	12	1>	32	7	279	50	153	.05	.08	5>	4	.13	107	2>	.051	12.7	4	2.19	1.4	2>	116
64	PF064	4770.280	1384.120	93	1>	68	20	286	50	163	.10	.17	1488	3	.25	100	2>	.033	9.7	28	1.97	1.8	2>	120
65	PF065	4771.630	1384.430	48	1	120	37	274	59	115	.10	.22	737	1>	.23	144	2>	.046	14.8	37	1.86	1.6	2>	131
66	PF066	4772.400	1384.470	1>	1>	251	68	272	63	317	.04	.06	4632	1	.11	169	2>	.063	9.0	14	1.63	1.6	2>	140
67	PF067	4773.440	1384.780	1>	1>	238	73	312	69	301	.08	.05	3601	3	.15	201	2>	.086	2.9	7	1.73	1.4	2>	142
68	PF068	4775.270	1384.640	1>	1>	373	49	229	55	305	.12	.07	2093	2	.11	155	2>	.035	10.7	58	1.45	1.6	2>	160
69	PF069	4775.750	1384.740	3	1>	38	9	57	58	103	.02	.05	5>	3	.11	22	2>	.041	.2>	15	.80	2.0	3	52
70	PF070	4775.670	1384.110	5	1>	213	18	279	32	190	.03	.07	5>	3	.11	159	2>	.044	8.9	6	1.65	2.0	2>	94
71	PF071	4776.170	1384.330	1>	1>	135	18	35	47	77	.25	.53	550	1>	.16	14	2>	.019	6.7	15	1.11	1.8	2>	65
72	PF072	4776.540	1384.840	1>	1>	224	7	26	50	140	.03	.11	5>	4	.14	12	2>	.030	8.2	3	.85	3.2	2>	40
73	PF073	4768.990	1383.680	1>	1>	242	50	224	51	102	.06	.22	2035	2	.11	115	2>	.034	14.1	33	1.61	1.8	2>	110
74	PF074	4768.540	1383.280	19	1>	32	5	46	25	67	.03	.07	5>	0	30.12	14	2>	.020	4.6	16	.84	3.2	2>	40
75	PF075	4769.270	1383.770	51	1>	55	5	75	33	63	.05	.13	5>	2	.10	14	6	.023	11.1	40	.81	2.0	2>	36
76	PF076	4769.920	1383.830	19	1>	74	4	58	28	59	.08	.13	5>	2	.09	14	8	.024	2.3	35	.98	2.6	2>	41
77	PF077	4769.280	1383.280	1>	1>	24	1>	73	25	96	.03	.05	5>	3	.14	14	2>	.028	2.3	12	1.17	3.0	2>	37
78	PF078	4769.950	1383.400	8	1>	44	4	141	25	81	.02	.08	5>	1>	.04	41	2>	.017	5.0	21	1.18	2.4	2>	43
79	PF079	4770.420	1383.870	21	1>	134	68	396	43	151	.04	.09	463	4	.11	167	2>	.032	13.3	11	2.77	1.4	2>	136
80	PF080	4770.290	1383.200	25	1>	21	7	91	24	90	.02	.04	5>	4	.09	18	2>	.024	8.7	9	1.25	3.0	3	42
81	PF081	4770.770	1383.630	2	1>	42	18	327	47	120	.03	.04	5>	2	.09	118	2>	.041	14.0	5	2.01	1.6	2>	105
82	PF082	4770.910	1383.120	1>	1>	39	11	338	43	114	.03	.07	52	3	.07	112	2>	.050	12.2	6	1.96	1.8	2>	122
83	PF083	4771.110	1383.900	9	1>	44	12	352	47	150	.03	.04	5>	2	.07	121	2>	.046	2.6	8	1.97	1.4	2>	123
84	PF084	4771.660	1383.450	1>	1>	349	67	323	75	197	.05	.08	1881	1	.10	203	2>	.045	4.2	17	1.94	1.0	2>	144
85	PF085	4771.210	1383.170	1>	1>	200	60	334	53	105	.06	.27	1492	3	.13	179	2>	.025	12.9	76	1.74	1.0	2>	127
86	PF086	4772.420	1383.500	17	1>	235	67	322	79	229	.10	.07	3233	2	.09	197	2>	.073	11.0	16	1.92	1.2	2>	153
87	PF087	4773.580	1383.350	1>	1>	204	58	274	51	138	.11	.05	1394	1	.11	188	2>	.050	.2>	13	1.78	1.8	2>	129
88	PF088	4774.550	1383.220	1>	1>	353	72	274	67	354	.06	.07	5112	1>	.08	171	2>	.071	4.7	28	1.72	1.8	2>	172
89	PF089	4775.130	1383.650	1>	1>	641	80	318	75	272	.08	.09	4536	3	.12	207	2>	.053	5.5	30	1.87	1.6	2>	202
90	PF090	4775.510	1383.680	2	1>	1065	6	260	66	406	.03	.06	6315	1>	.05	164	2>	.056	7.9	64	1.54	1.4	2>	180
91	PF091	4768.200	1382.730	53	1>	23	7	62	21	143	.01>	.07	5>	2	.07	14	13	.026	2.2	13	1.25	3.6	2>	41
92	PF092	4768.870	1382.700	24	1>	20	10	77	28	73	.01	.04	5>	3	.08	21	2>	.035	4.3	9	1.13	3.4	3	51
93	PF093	4768.300	1382.190	16	1>	210	59	130	35	235	.05	.05	8171	3	.06	53	15	.044	8.8	16	1.32	3.0	2>	65
94	PF094	4768.890	1382.200	23	1>	26	2	64	21	117	.02	.03	5>	4	.07	12	2>	.021	3.5	13	1.05	3.2	2>	37
95	PF095	4769.160	1382.900	26	1>	35	3	64	31	93	.02	.07	5>	4	.06	11	4	.023	5.4	27	1.14	3.2	2>	33
96	PF096	4769.730	1382.880	6	1>	21	3	63	25	94	.01	.03	5>	3	.10	15	2>	.025	6.9	10	.97	3.2	2>	42
97	PF097	4769.480	1382.400	21	1>	21	1>	62	24	84	.01	.04	5>	3	.08	13	2>	.034	2.6	11	1.11	3.8	2>	38
98	PF098	4770.160	1382.740	1>	1>	22	3	70	23	132	.06	.05	5>	5	.11	16	2>	.036	1.8	10	1.02	3.2	2>	45
99	PF099	4770.720	1382.780	1>	1>	71	63	336	46	168	.06	.12	1793	3	.14	128	2>	.048	10.1	13	2.27	1.6	2>	134
100	PF100	4770.070	1382.400	7	1>	43	7	57	30	72	.04	.10	5>	4	.08	13	2>	.023	7.4	25	.93	2.4	2>	38

List of Geochemical Analysis(3)

Ser. No.	Sample No.	Location(km) X-coord	Location(km) Y-coord	As ppm	Au ppb	Ba ppm	Co ppm	Cr ppm	Cu ppm	Hg ppb	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	Pb ppm	S %	Sb ppm	Sr ppm	Ti %	U ppm	W ppm	Zn ppm
101	PF101	4770.500	1382.170	4	1>	39	2	53	27	104	.02	.04	5>	5	.11	12	2>	.028	7.7	13	.99	3.2	2>	42
102	PF102	4771.270	1382.750	1>	1>	40	17	284	50	169	.04	.02	23	6	.10	99	2>	.047	13.4	4	2.04	1.8	2>	146
103	PF103	4771.700	1382.860	1>	1>	508	80	402	72	144	.07	.15	1786	3	.16	239	2>	.035	9.9	37	1.84	1.2	2>	183
104	PF104	4771.210	1382.270	1>	1>	51	15	264	56	167	.04	.03	5>	5	.16	107	2>	.054	7.5	6	2.03	1.6	2>	116
105	PF105	4771.890	1382.240	15	1>	275	70	341	69	156	.05	.09	1694	2	.16	206	2>	.081	13.2	10	1.93	1.4	2>	169
106	PF106	4772.620	1382.570	77	1>	415	74	327	70	168	.21	.18	3282	2	.25	192	2>	.035	9.6	47	1.81	1.4	2>	178
107	PF107	4773.590	1382.390	1>	1>	429	60	333	76	166	.10	.16	1322	3	.11	226	2>	.034	10.0	38	1.79	1.6	2>	156
108	PF108	4774.310	1382.550	1>	1>	342	74	359	63	188	.09	.11	1513	4	.11	188	2>	.055	6.4	9	2.23	1.2	2>	190
109	PF109	4768.400	1381.610	10	1>	34	10	73	21	129	.02	.05	5>	3	.09	19	2>	.029	5.7	12	1.14	3.6	2>	40
110	PF110	4768.850	1381.730	22	1>	14	3	44	19	136	.01	.06	5>	3	.08	8	2>	.036	1.5	13	.96	3.2	2>	39
111	PF111	4768.280	1381.150	15	1>	131	44	74	28	34	.20	.37	455	1>	.12	51	6	.044	5.0	45	.67	2.0	2>	68
112	PF112	4768.840	1381.170	15	1>	46	7	42	31	119	.03	.12	5>	2	.07	16	2>	.024	3.1	22	1.02	2.6	2>	49
113	PF113	4769.350	1381.930	22	1>	56	9	82	30	80	.06	.19	5>	3	.06	25	2>	.032	10.0	31	1.02	2.4	2>	51
114	PF114	4769.890	1381.830	1>	1>	25	4	41	24	73	.01>	.04	5>	2	.12	14	2>	.034	4.0	11	.78	3.2	2>	39
115	PF115	4769.250	1381.120	1>	1>	38	1>	39	15	73	.01	.06	5>	2	.10	7	2>	.024	1.8	10	1.11	3.2	2>	37
116	PF116	4769.860	1381.140	13	1>	31	3	72	22	81	.02	.06	5>	3	.12	21	2>	.023	4.6	12	1.10	3.0	2>	41
117	PF117	4770.280	1381.350	12	1>	45	3	56	29	155	.02	.05	5>	2	.16	16	2>	.033	.2>	14	.97	2.8	2>	50
118	PF118	4770.500	1381.120	1>	1>	60	49	45	17	92	.01>	.08	4062	2	.07	11	9	.023	2.8	11	.95	4.0	2>	48
119	PF119	4770.820	1381.590	1>	1>	472	62	275	66	163	.10	.12	2735	2	.13	214	2>	.030	13.6	23	1.84	1.4	2>	192
120	PF120	4771.350	1381.730	86	185	501	58	251	100	370	.35	.62	4470	3	.71	140	107	.059	10.5	131	1.48	1.6	2>	1423
121	PF121	4771.650	1381.380	70	1>	877	87	345	82	183	.12	.16	4118	2	.14	208	2>	.042	15.6	58	2.11	1.2	2>	397
122	PF122	4772.380	1381.480	1>	1>	323	92	345	77	150	.10	.09	3893	2	.13	200	13	.077	15.6	9	2.18	1.2	2>	236

Appendix 38

Distribution map of elements
in Area F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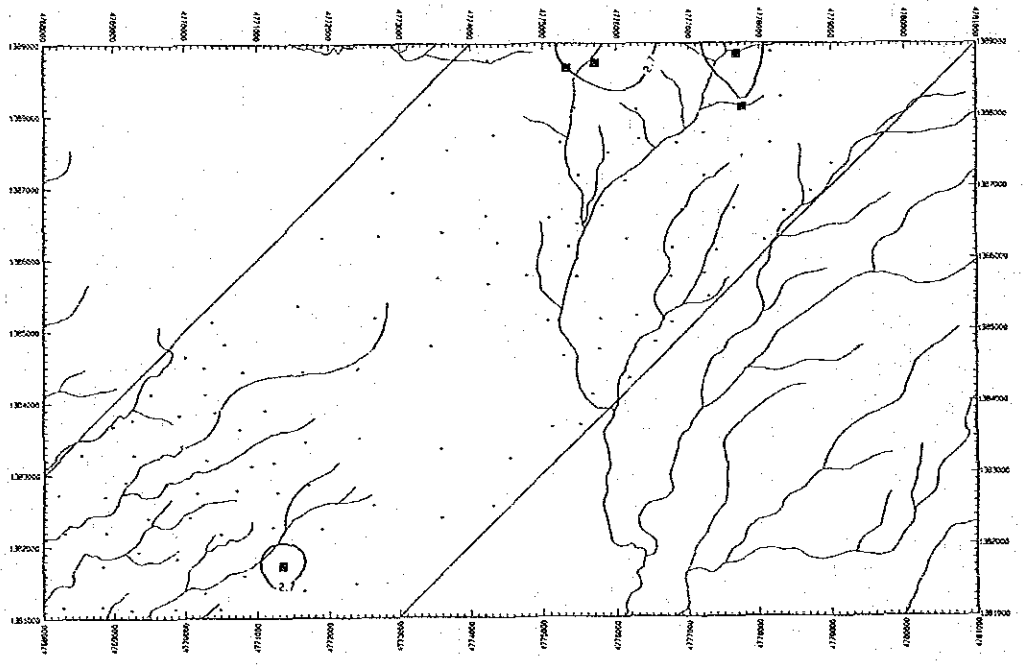
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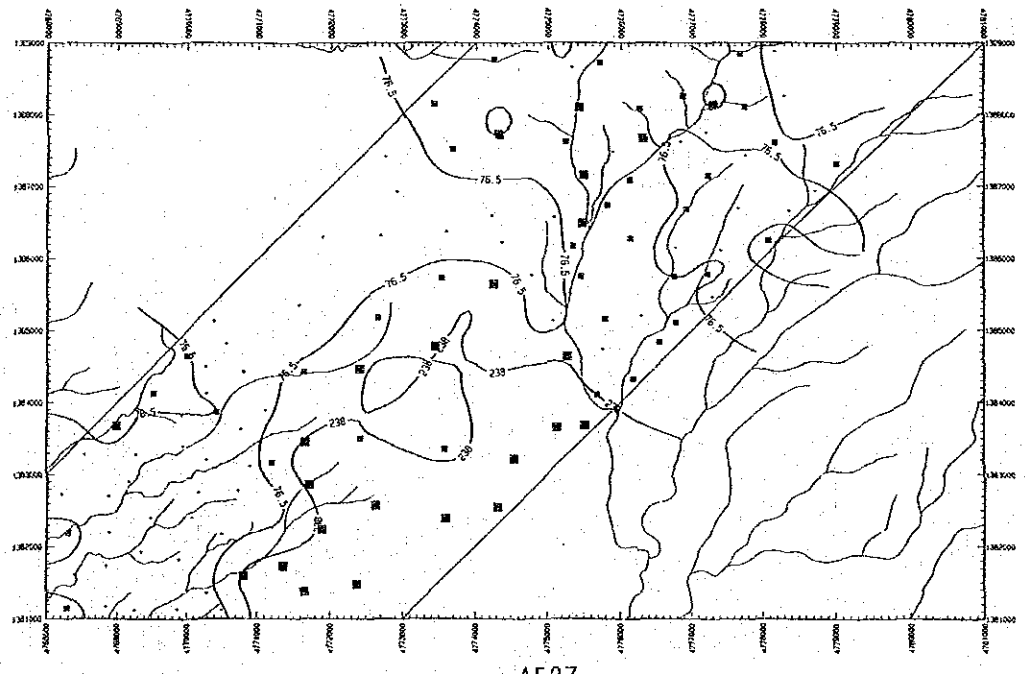
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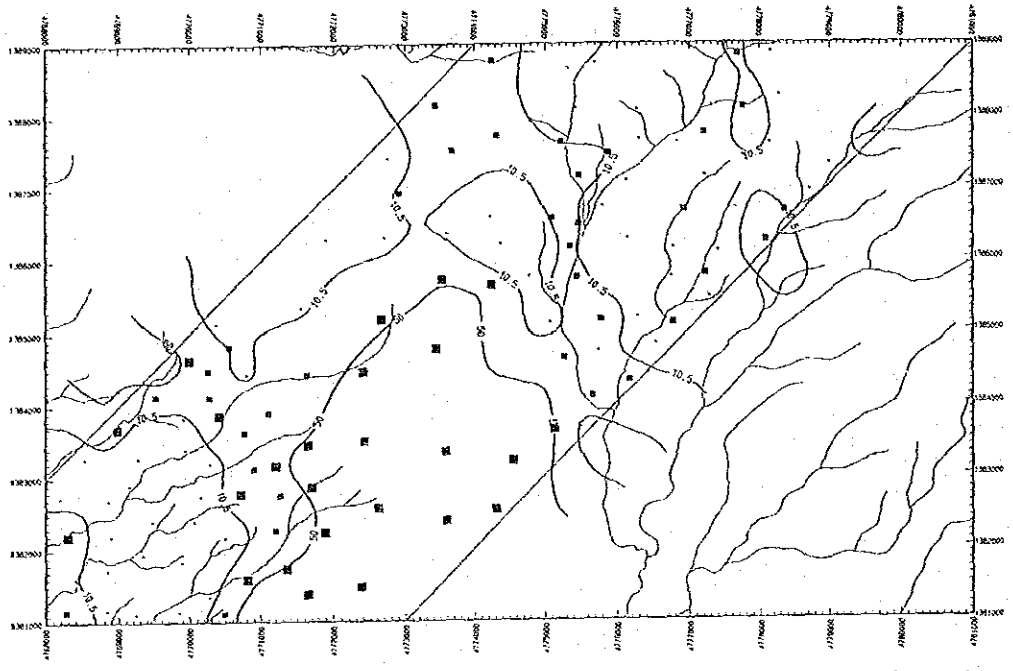
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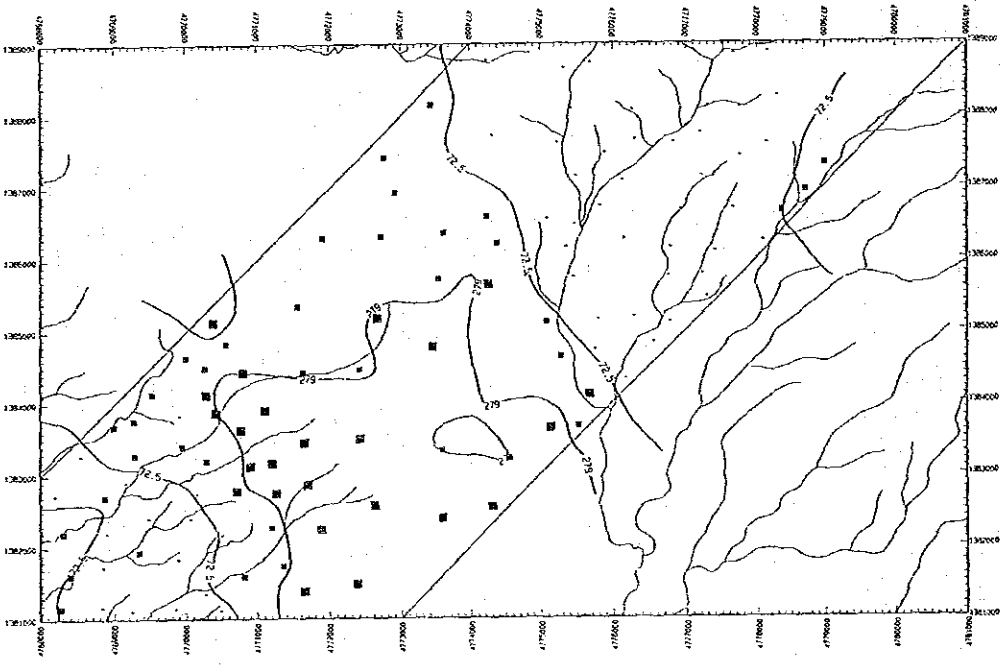
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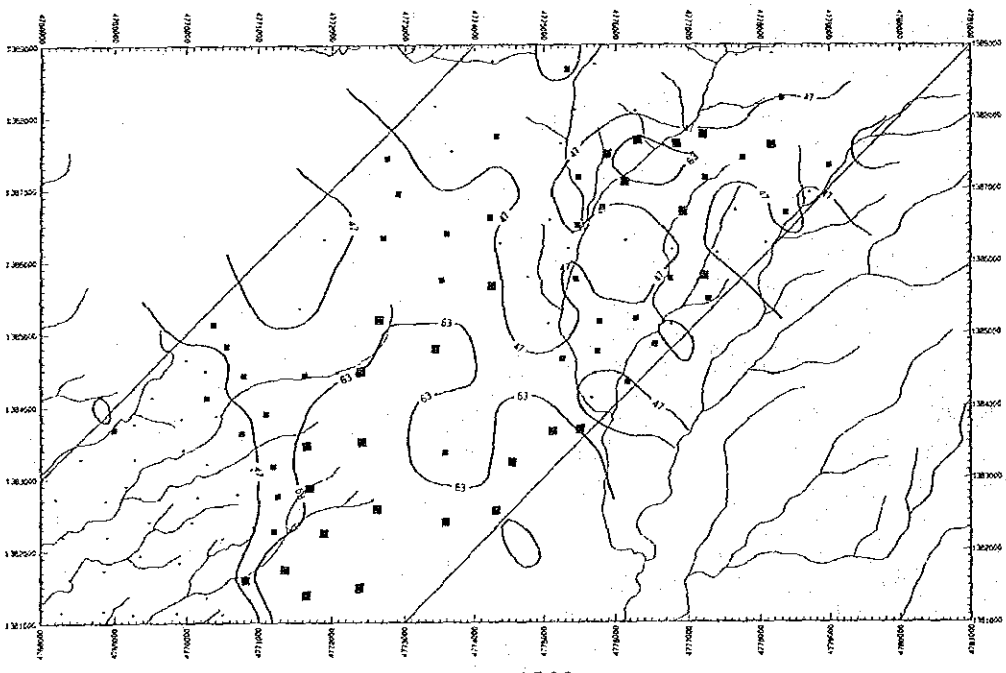
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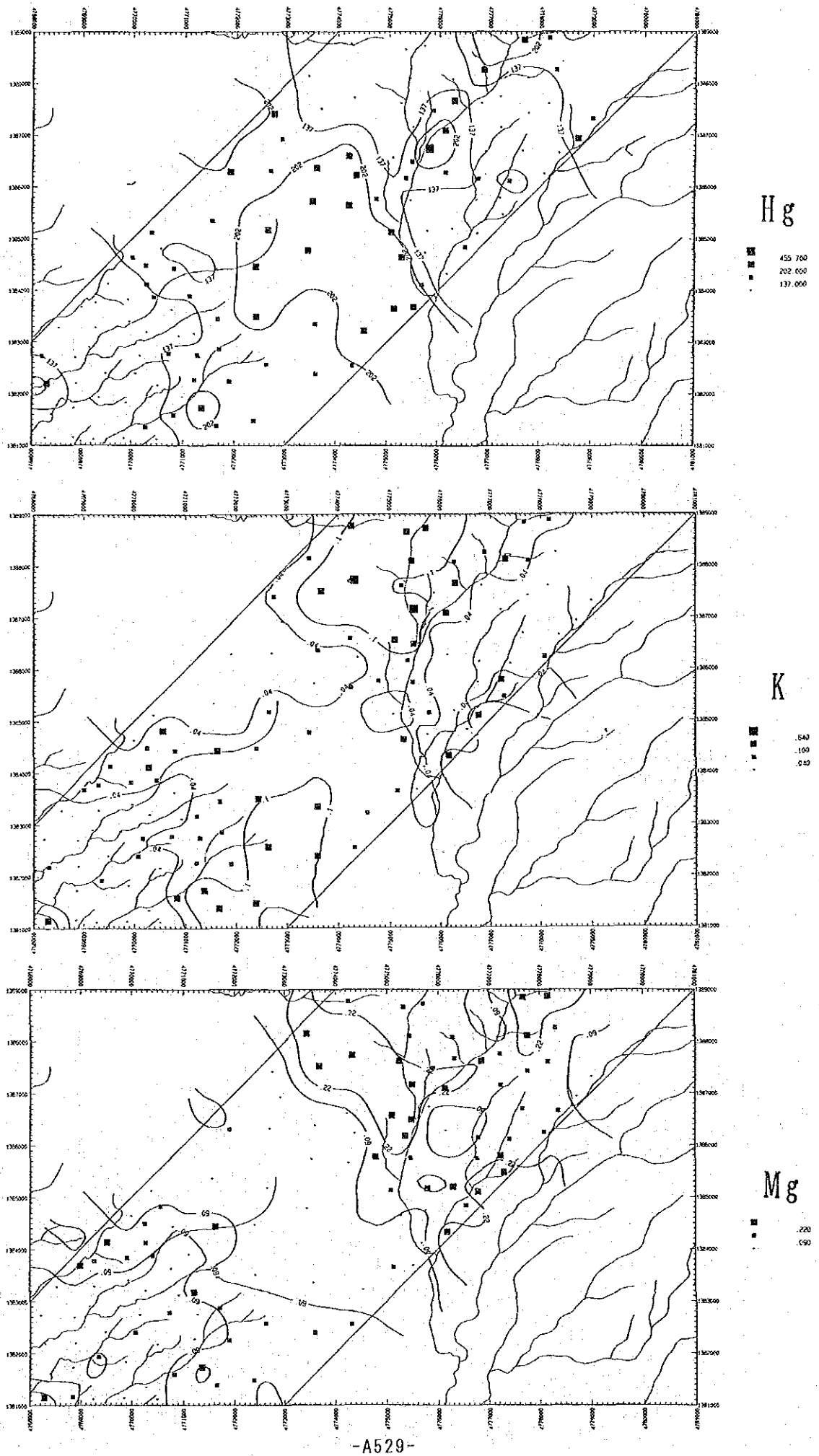
Hg
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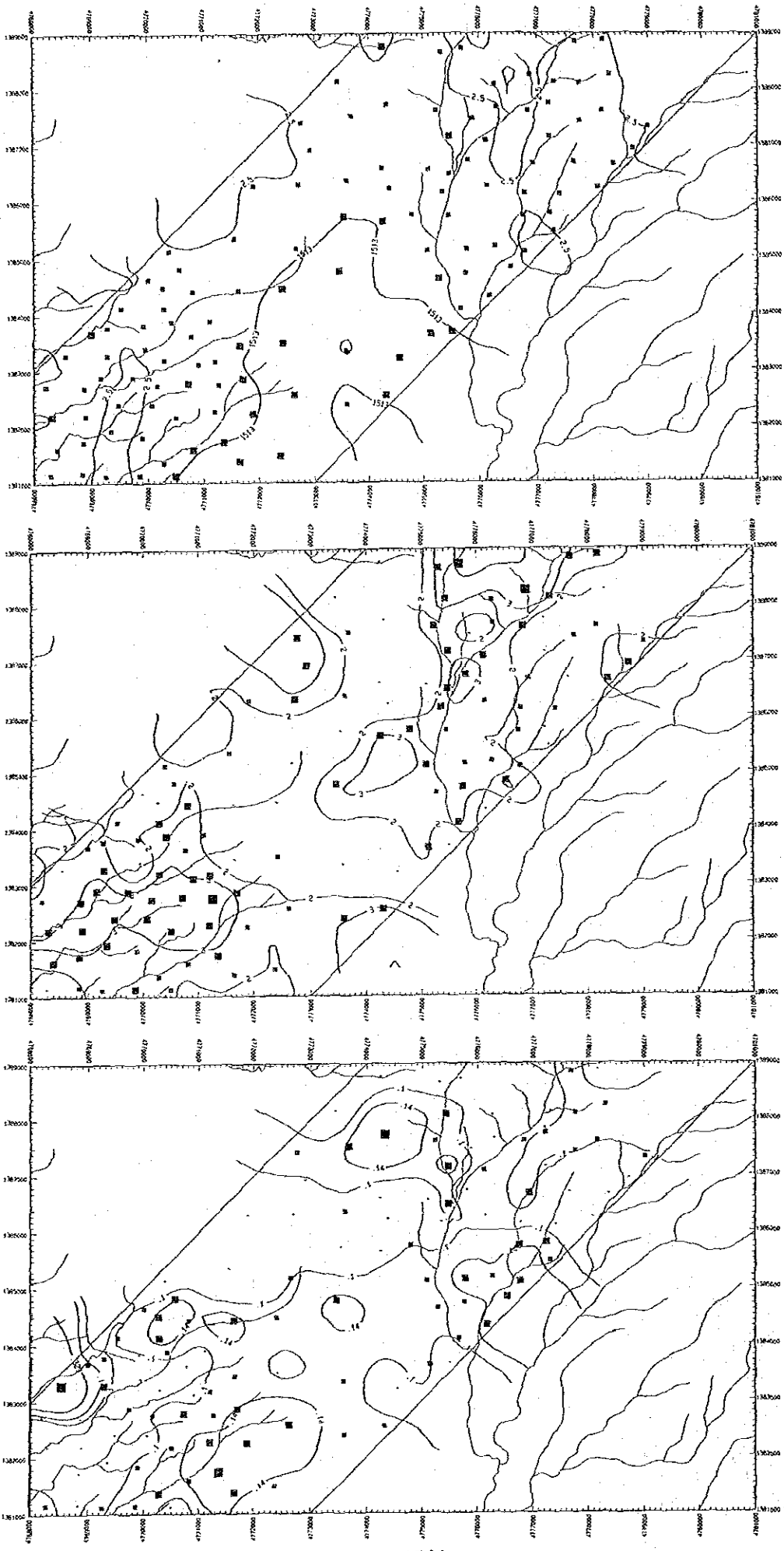
202.000
137.000
K
.640
.100
.060
Mg
.220
.090


Mn
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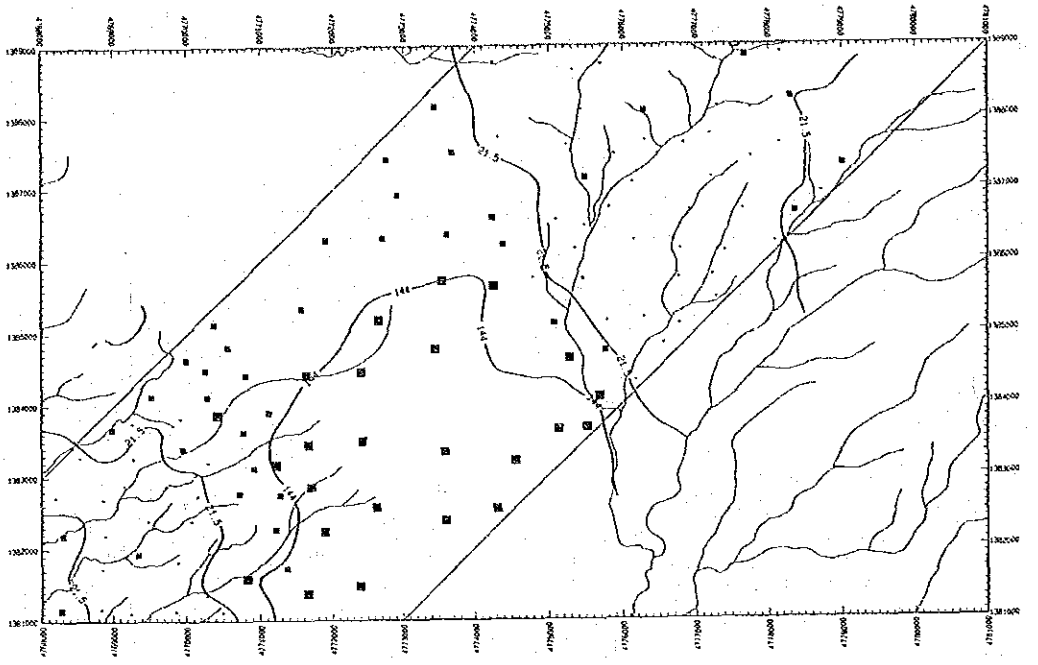
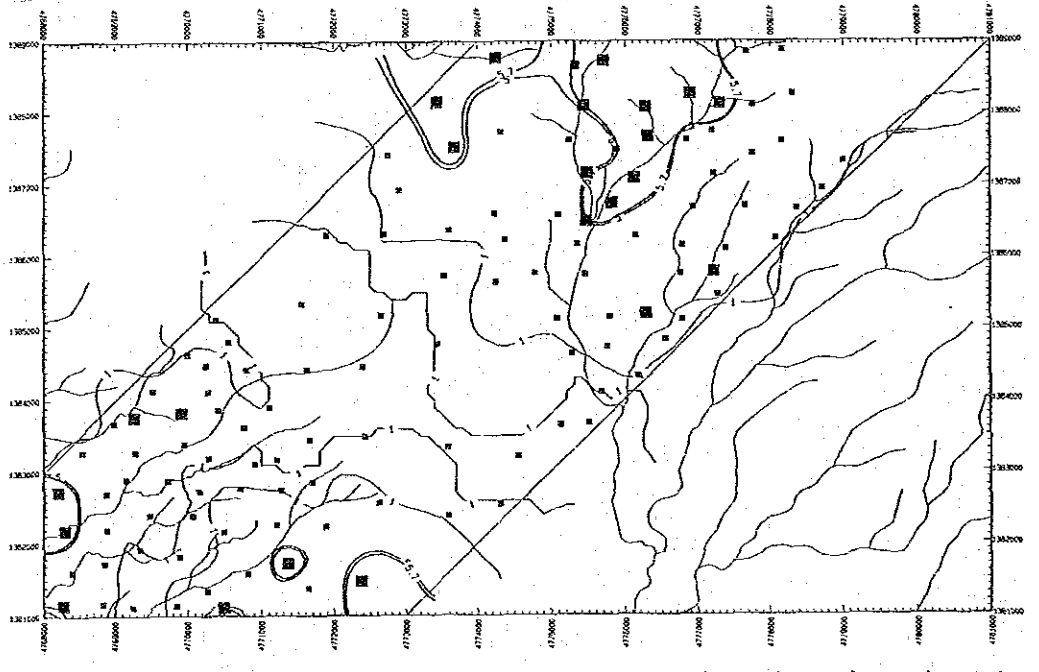
2.500
Mo
5.500
3.000
2.000
Na
.329
.140
.100


Ni
144.000
21.500


Pb
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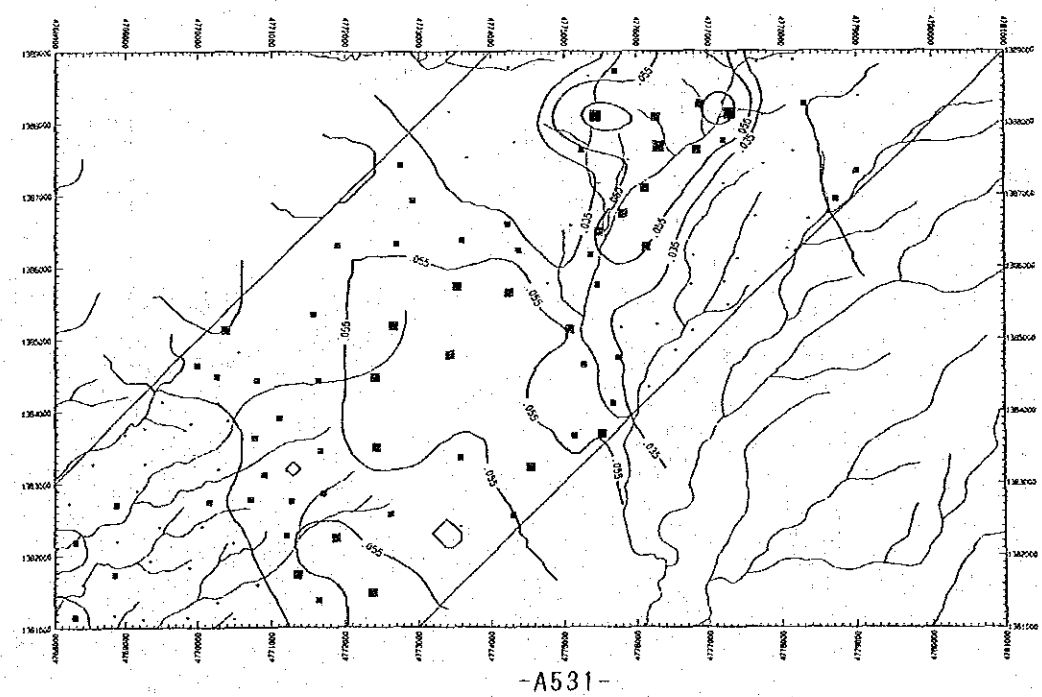
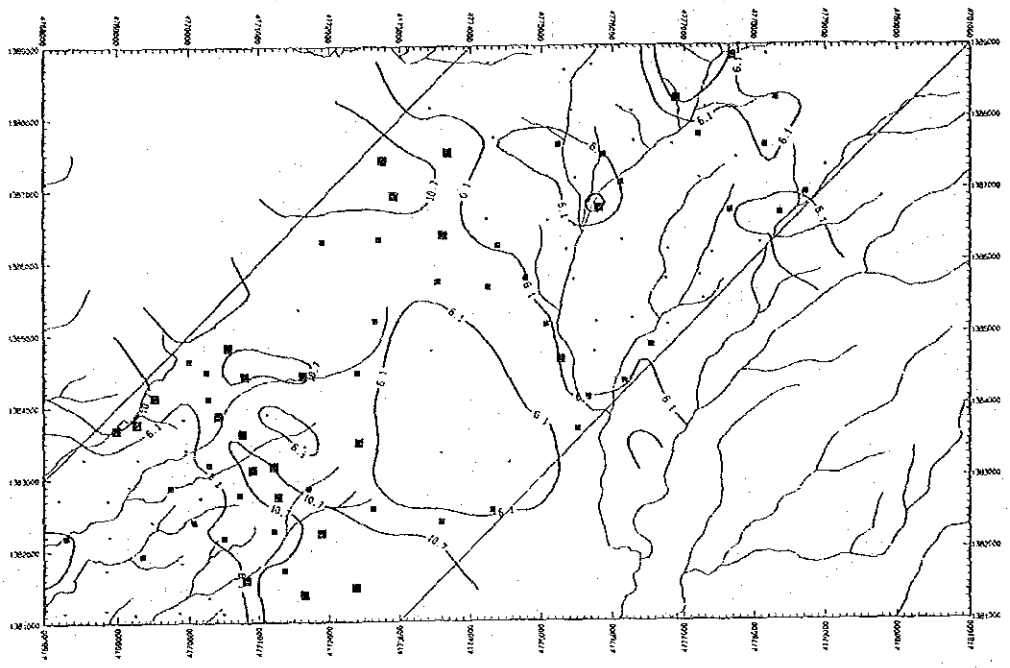
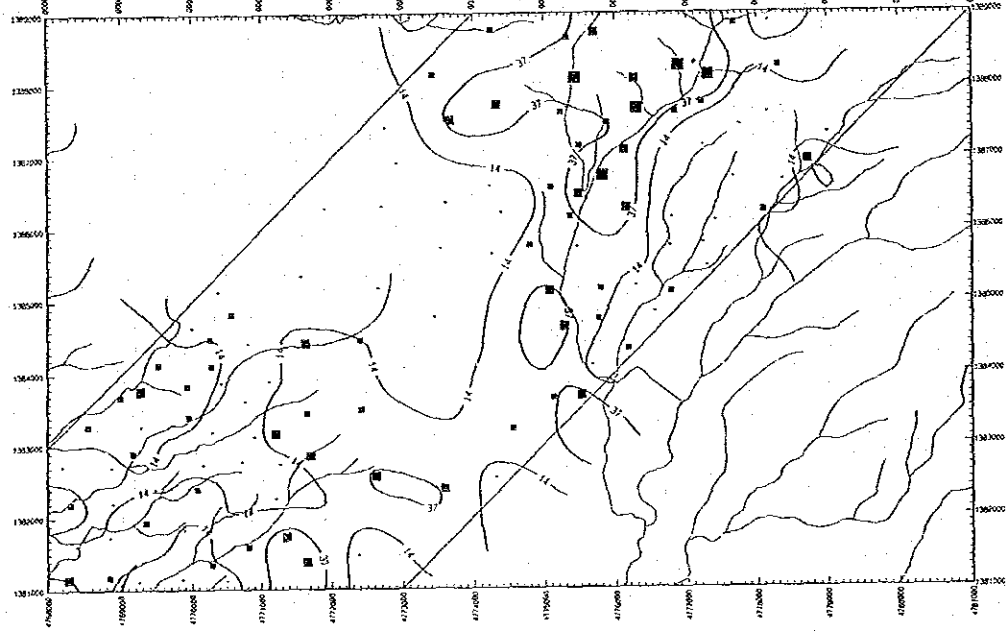
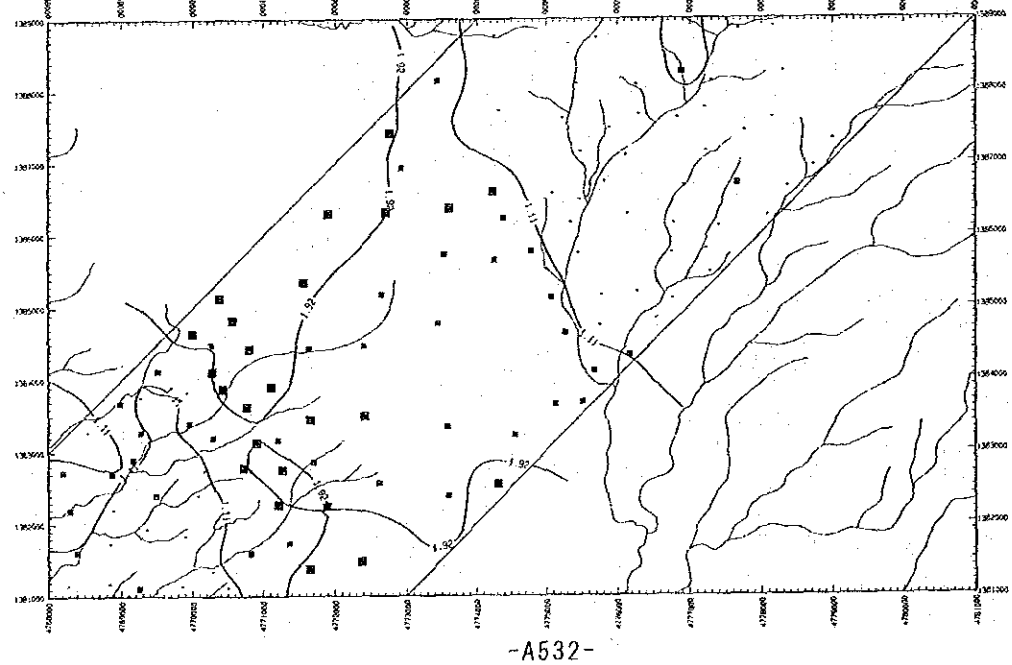
5.000
1.000


S
.143
.055
.035


Sb
10.700
6.100


Sr
237.500
37.000
14.000


Ti
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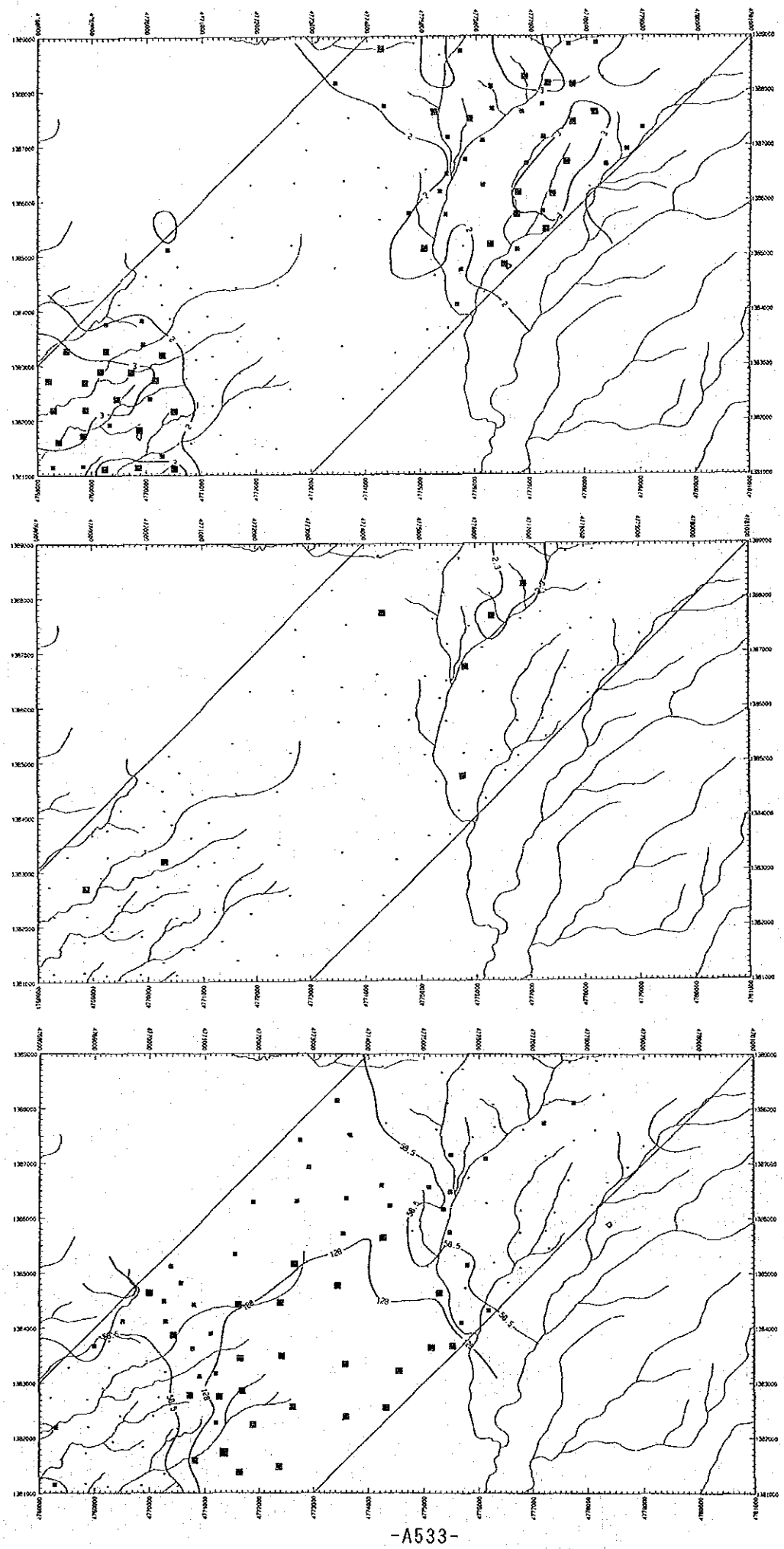
1.110


U
3.000
2.000
W
2.300
Zn
552.000
129.000
59.500

Appendix 39

List of soil geochemical samples
in Area G

Area: Sungai Apas Area (Area G)

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	PG001	1382.12	4785.15	Tawau North	argi. andesite	An_1	40	L.B.	F	C	M	D	Bush
2	PG002	1382.36	4785.44	Tawau North	andesite	An_1	40	B.	F	C	M	D	Bush
3	PG003	1382.39	4785.97	Tawau North	—	Da_2	40	R.B.	R	C	M	D	Bush
4	PG004	1382.18	4786.16	Tawau North	—	Da_2	30	L.R.B.	R	C	M	D	Bush
5	PG005	1382.05	4786.56	Tawau North	—	Da_2	50	L.Y.B.	R	C	M	D	Bush
6	PG006	1382.32	4786.69	Tawau North	—	Da_2	40	L.B.	R	C	F	D	Bush
7	PG007	1382.09	4786.92	Tawau North	—	Da_2	40	R.B.	R	C	F	W	Bush
8	PG008	1382.28	4787.36	Tawau North	—	Da_2	50	L.B.	R	C	F	D	Cocoa plantation
9	PG009	1382.16	4788.04	Apas-Balang	—	Da_2	30	L.R.B.	F	C	M	W	Cocoa plantation
10	PG010	1382.25	4788.22	Apas-Balang	—	Da_2	30	L.R.B.	R	C	M	W	Cocoa plantation
11	PG011	1382.23	4789.19	Apas-Balang	—	Da_2	30	L.B.	F	C	M	W	Cocoa plantation
12	PG012	1382.28	4789.67	Apas-Balang	—	Da_2	30	L.Y.B.	R	C	M	W	Cocoa plantation
13	PG013	1382.21	4790.07	Apas-Balang	—	Da_2	30	L.B.	F	C	M	W	Cocoa plantation
14	PG014	1382.27	4790.75	Apas-Balang	—	An_2	30	D.B.	R	C	F	D	Cocoa plantation
15	PG015	1382.16	4791.16	Apas-Balang	and. boulder	An_2	40	D.B.	F	C	F	D	Cocoa plantation
16	PG016	1382.20	4791.73	Apas-Balang	and. boulder	An_2	50	G.B.	F	C	M	D	Cocoa plantation
17	PG017	1382.37	4792.41	Apas-Balang	—	Dt	40	G.B.	R	C	F	D	Palm oil plant.
18	PG018	1382.34	4792.94	Apas-Balang	—	Dt	30	G.B.	R	C	F	D	Palm oil plant.
19	PG019	1382.33	4793.43	Apas-Balang	—	Dt	40	G.B.	R	C	F	D	Palm oil plant.
20	PG020	1382.38	4793.90	Apas-Balang	—	Dt	30	G.B.	R	C	F	D	Palm oil plant.
21	PG021	1381.56	4785.22	Tawau North	sili. andesite	An_1	50	R.B.	F	C	M	D	Bush
22	PG022	1381.94	4785.75	Tawau North	—	An_1	40	R.B.	R	C	M	D	Bush
23	PG023	1381.62	4785.66	Tawau North	—	An_1	40	R.B.	F	C	M	D	Bush
24	PG024	1381.22	4785.54	Tawau North	—	An_1	40	L.B.R.	R	C	M	D	Cocoa plantation
25	PG025	1381.09	4785.84	Tawau North	sili. andesite	An_1	40	L.B.R.	F	C	M	D	Cocoa plantation
26	PG026	1381.56	4786.14	Tawau North	—	An_1	40	Y.B.	R	C	M	D	Cocoa plantation
27	PG027	1381.89	4786.75	Tawau North	—	An_1	40	Y.B.	R	C	M	D	Bush
28	PG028	1381.66	4786.90	Tawau North	—	An_1	30	B.	R	C	F	D	Cocoa plantation
29	PG029	1381.79	4787.04	Tawau North	—	An_1	40	R.B.	R	C	F	W	Cocoa plantation
30	PG030	1381.51	4786.87	Tawau North	—	An_1	40	B.	R	C	F	D	Cocoa plantation

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

Area: Sungai Apas Area (Area G)

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
31	PG031	1381.35	4786.79	Tawau North	—	An_1	40	B.	R	C	F	W	Cocoa plantation
32	PG032	1381.20	4786.89	Tawau North	—	An_1	40	Y.B.	R	C	F	D	Cocoa plantation
33	PG033	1381.11	4786.36	Tawau North	—	An_1	30	L.B.	M	C	M	D	Cocoa plantation
34	PG034	1380.47	4786.44	Tawau North	—	An_1	40	L.B.	F	C	M	D	Cocoa plantation
35	PG035	1380.99	4786.67	Tawau North	—	An_1	40	B.R.	F	C	M	D	Cocoa plantation
36	PG036	1381.81	4787.37	Tawau North	—	Da_2	50	L.Y.	R	C	F	W	Cocoa plantation
37	PG037	1381.55	4787.19	Tawau North	—	Da_2	30	Y.G.	F	C	F	W	Cocoa plantation
38	PG038	1381.28	4787.33	Tawau North	—	Da_2	40	Y.B.	R	C	F	W	Cocoa plantation
39	PG039	1381.38	4787.81	Apas-Balang	—	Da_2	40	B.	R	C	F	W	Cocoa plantation
40	PG040	1380.99	4787.10	Tawau North	—	An_1	50	Y.B.	R	C	M	W	Cocoa plantation
41	PG041	1380.95	4787.90	Apas-Balang	—	Da_2	30	B.	R	C	F	W	Cocoa plantation
42	PG042	1381.62	4788.24	Apas-Balang	—	Da_2	30	B.	F	C	M	W	Cocoa plantation
43	PG043	1381.57	4788.64	Apas-Balang	—	Da_2	30	R.B.	R	C	F	W	Cocoa plantation
44	PG044	1381.63	4789.03	Apas-Balang	—	Da_2	40	L.R.B.	R	C	M	W	Palm oil plant.
45	PG045	1381.26	4788.55	Apas-Balang	—	Da_2	40	L.B.	R	C	F	W	Cocoa plantation
46	PG046	1381.23	4788.93	Apas-Balang	—	Da_2	40	L.B.	R	C	M	W	Palm oil plant.
47	PG047	1381.80	4789.50	Apas-Balang	—	Da_2	40	L.B.	F	C	M	W	Cocoa plantation
48	PG048	1381.38	4789.35	Apas-Balang	—	Da_2	30	B.	F	C	M	W	Palm oil plant.
49	PG049	1381.23	4789.72	Apas-Balang	—	Da_2	40	Y.B.	R	C	M	W	Palm oil plant.
50	PG050	1381.58	4789.91	Apas-Balang	—	Da_2	30	R.B.	R	C	M	W	Palm oil plant.
51	PG051	1381.88	4790.10	Apas-Balang	—	Da_2	30	B.	F	C	M	W	Cocoa plantation
52	PG052	1381.66	4790.26	Apas-Balang	—	Da_2	30	B.	R	C	M	W	Palm oil plant.
53	PG053	1381.80	4790.47	Apas-Balang	—	An_2	40	Y.G.	R	C	F	D	Cocoa plantation
54	PG054	1381.82	4790.93	Apas-Balang	—	An_2	40	B.	R	C	F	D	Cocoa plantation
55	PG055	1381.37	4790.40	Apas-Balang	—	Da_2	30	Y.B.	R	C	F	D	Bush
56	PG056	1381.50	4790.73	Apas-Balang	—	An_2	50	D.B.	R	C	F	D	Cocoa plantation
57	PG057	1381.26	4790.63	Apas-Balang	—	An_2	40	Y.B.	R	C	F	D	Bush
58	PG058	1381.17	4790.20	Apas-Balang	—	Da_2	30	B.	F	C	M	W	Palm oil plant.
59	PG059	1380.96	4790.43	Apas-Balang	—	Da_2	40	B.	F	C	M	W	Palm oil plant.
60	PG060	1381.59	4791.12	Apas-Balang	—	An_2	30	D.B.	R	C	M	D	Cocoa plantation

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

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	PG061	1381.61	4791.24	Apas-Balang	—	An_2	50	D.B.	R	C	M	W	Cocoa plantation
62	PG062	1381.55	4791.68	Apas-Balang	—	An_2	30	Y.B.	R	C	M	W	Cocoa plantation
63	PG063	1381.16	4791.58	Apas-Balang	—	An_2	30	R.B.	R	C	F	D	Cocoa plantation
64	PG064	1381.31	4791.88	Apas-Balang	—	Dt	40	R.B.	F	C	M	D	Bush
65	PG065	1381.86	4792.37	Apas-Balang	—	Dt	30	Y.B.	R	C	F	D	Coffee plant.
66	PG066	1381.59	4792.70	Apas-Balang	—	Dt	30	Y.B.	R	C	F	D	Cocoa plantation
67	PG067	1381.38	4792.29	Apas-Balang	—	Dt	20	G.B.	R	C	F	D	Cocoa plantation
68	PG068	1381.17	4792.73	Apas-Balang	—	Dt	30	G.B.	R	C	F	D	Cocoa plantation
69	PG069	1381.77	4793.24	Apas-Balang	—	Dt	30	G.B.	R	C	F	D	Bush
70	PG070	1381.55	4793.77	Apas-Balang	—	Dt	40	G.B.	R	C	F	D	Oil palm plant.
71	PG071	1381.16	4793.29	Apas-Balang	—	Dt	30	R.B.	R	C	F	D	Cocoa plantation
72	PG072	1381.06	4793.81	Apas-Balang	—	Dt	30	B.R.	R	C	F	W	Cocoa plantation
73	PG073	1380.78	4785.30	Tawau North	andesite	An_1	30	D.B.G.	F	C	M	D	Bush
74	PG074	1380.31	4785.56	Tawau North	—	An_1	40	D.B.G.	F	C	M	D	Cocoa plantation
75	PG075	1380.76	4786.42	Tawau North	—	An_1	50	B.Y.	R	C	M	W	Cocoa plantation
76	PG076	1380.58	4786.67	Tawau North	and. boulder	An_1	40	G.Y.	F	C	M	W	Cocoa plantation
77	PG077	1380.80	4786.93	Tawau North	—	An_1	40	D.B.	R	C	F	D	Cocoa plantation
78	PG078	1380.49	4786.28	Tawau North	and. boulder	An_1	40	L.Y.B.	F	C	M	W	Cocoa plantation
79	PG079	1380.42	4786.78	Tawau North	—	An_1	40	Y.B.	R	C	F	W	Cocoa plantation
80	PG080	1380.13	4786.29	Tawau North	—	An_1	30	Y.B.	R	C	F	D	Cocoa plantation
81	PG081	1380.14	4786.72	Tawau North	—	An_1	30	R.B.	R	C	F	D	Cocoa plantation
82	PG082	1380.76	4787.30	Tawau North	—	An_1	40	Y.B.	R	C	F	W	Cocoa plantation
83	PG083	1380.30	4787.10	Tawau North	—	An_1	40	Y.B.	R	C	F	W	Cocoa plantation
84	PG084	1380.28	4787.48	Tawau North	—	An_1	30	L.B.R.	R	C	F	D	Cocoa plantation
85	PG085	1380.64	4788.14	Apas-Balang	—	Da_2	30	B.	R	C	F	D	Cocoa plantation
86	PG086	1380.88	4788.51	Apas-Balang	—	Da_2	40	L.B.	R	C	F	W	Oil palm plant.
87	PG087	1380.90	4788.67	Apas-Balang	—	Da_2	40	L.B.	R	C	F	W	Cocoa plantation
88	PG088	1380.48	4788.73	Apas-Balang	—	Da_2	40	L.B.	R	C	F	D	Oil palm plant.
89	PG089	1380.23	4788.37	Apas-Balang	—	Da_2	30	L.B.	R	C	F	D	Cocoa plantation
90	PG090	1380.92	4789.36	Apas-Balang	—	Da_2	40	L.B.	R	C	F	W	Oil palm plant.

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