

Appendix 26

Analytical results of soil
geochemical samples in Area C

List of Geochemical Analysis (3)

Ser. Sample No.	Location (km)	As	Au	Ba	Co	Cr	Cu	Hg	K	Mg	Mn	Nb	Na	Ni	Pb	S	Sb	Sr	Ti	U	W	Zn	
No.	X-coord	ppm	ppb	ppm	ppm	ppm	ppm	ppb	%	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	
101	4746.180	6	15	83	8	57	10	38	.49	.30	5	1	.04	49	7	.008	14	.28	2.2			31	
102	4746.400	5	15	81	1	55	7	36	.31	.24	5	1	.03	49	5	.014	2.0	22	.27	2.0			27
103	4746.880	3	1	87	19	205	35	58	.44	.67	307	1	.26	79	2	.014	2.0	22	.51	1.6			53
104	4747.170	7	1	253	23	98	25	47	.89	.78	507	1	.51	55	2	.028	3.3	78	.47	1.2			94
105	4747.690	1	1	69	82	600	89	63	.09	3.18	2626	1	1.71	510	2	.030	5.7	91	.59	2.2			105
106	4747.820	30	1	211	37	692	366	52	.97	.62	332	2	1.22	670	284	.734	1.0	39	.42	2.6			1398
107	4747.250	1	1	54	49	331	90	34	.14	2.03	1432	1	1.05	232	2	.017	6.7	58	.55	.2			103
108	4746.200	1	1	54	149	3180	60	43	.29	8.81	2222	1	1.18	1772	5	.012	8.8	13	.16	.4			142
109	4745.950	2	1	120	29	81	36	47	.47	1.25	782	1	1.48	51	2	.015	2.7	51	.63	1.4			130
110	4745.420	14	1	156	5	65	11	41	.95	.42	5	1	1.10	22	9	.008	4.0	.37	2.8				53
111	4745.170	1	22	109	41	506	51	38	.26	3.44	900	1	1.05	179	2	.018	10.2	34	.31	.2			89
112	4745.800	1	1	66	27	67	48	71	.09	1.06	1382	1	1.68	30	2	.018	8.1	58	.60	.4			111
113	4745.610	1	1	128	25	126	40	36	.86	.70	437	1	.29	74	8	.010	7.1	21	.54	1.6			66
114	4745.000	1	1	203	44	224	64	59	.41	1.85	1028	1	.81	132	2	.016	2	47	.62	1.0			80
115	4746.050	1	1	142	54	227	64	189	.25	1.00	2893	1	1.08	84	2	.055	8.6	88	.79	.4			91
116	4745.320	1	1	134	32	149	67	55	.55	.89	1061	1	.46	96	10	.009	6.6	45	.74	1.2			86
117	4745.220	1	1	394	19	62	52	31	1.15	.99	445	1	1.23	31	5	.012	5.5	133	.49	1.6			77
118	4745.000	1	1	398	23	109	46	75	.84	1.18	966	1	1.10	52	2	.017	9.8	138	.59	1.6			71
119	4744.770	1	1	68	46	162	53	60	.09	2.37	1202	1	2.45	197	2	.024	9.6	116	.41	.2			62
120	4744.120	1	1	57	63	367	90	34	.06	2.83	1619	1	1.24	197	2	.021	9.8	77	.73	.2			84
121	4744.450	1	1	47	34	73	41	42	.04	1.75	1160	1	2.52	39	2	.021	9.3	74	.49	.2			54
122	4744.100	1	1	123	22	124	48	27	.93	1.14	484	1	.67	74	6	.007	7.4	34	.42	1.4			70
123	4744.980	1	1	143	27	173	46	53	.49	1.59	1056	1	2.00	94	2	.023	8.1	84	.52	1.2			79
124	4744.050	1	1	156	9	57	21	55	1.15	.50	5	1	.09	25	16	.013	2.1	50	.44	2.6			61
125	4743.960	1	1	63	56	333	82	44	.44	2.51	1990	1	.93	138	2	.023	10.6	89	.79	.2			97
126	4743.740	1	1	10	56	352	57	35	.01	3.05	734	1	1.09	120	2	.025	12.7	73	.70	.2			66
127	4743.980	1	1	53	30	149	98	55	.05	1.65	1208	1	2.34	81	2	.015	6.0	71	.54	.2			112
128	4743.970	1	1	28	39	140	91	42	.13	1.80	869	1	1.98	63	2	.014	5.1	47	.76	.2			60
129	4743.270	1	1	57	45	103	55	68	.01	.59	5	1	.19	71	2	.012	8.5	20	.78	.2			28
130	4743.280	1	1	47	62	272	100	59	.02	1.75	1134	1	1.30	106	2	.022	8.4	62	.92	1.8			71
131	4742.950	1	1	95	2	39	9	47	.64	.29	5	1	.06	9	4	.015	1.7	29	.27	.8			96
132	4742.690	1	1	55	38	145	53	41	.18	2.02	849	1	.96	65	2	.022	11.4	68	.66	.8			28
133	4742.300	1	1	74	46	155	96	34	.07	1.96	1567	1	2.05	63	2	.028	13.0	132	1.33	2.2			28
134	4742.290	9	1	139	14	50	16	61	.78	1.35	459	1	1.13	20	7	.015	1.2	39	.30	2.6			43
135	4744.200	8	1	99	6	43	6	44	.70	.28	5	1	.08	13	2	.012	1.7	18	.25	2.6			23
136	4743.820	1	1	69	1	32	5	38	.35	.24	5	1	.05	6	12	.008	4.4	11	.23	2.2			23
137	4743.330	1	1	140	3	44	10	65	.77	.34	5	1	.09	9	11	.013	4.4	39	.30	2.4			29
138	4743.070	2	1	119	6	56	10	64	.70	.39	5	1	.07	15	7	.018	3.2	31	.81	2.6			40
139	4742.630	2	1	180	16	409	39	41	.25	.25	34	1	.26	207	21	.201	2.9	18	.31	1.6			100
140	4742.300	1	1	102	1	45	6	62	.57	.30	5	1	.05	10	8	.013	4.1	36	.30	2.2			25

Appendix 27

List of stream sediment
geochemical samples in Area C

Ser. No.	Sample No.	Coordinates		Name of Stream	Geology	Geol. Unit	Order	Width (m)	Flow *1	Size *2	Color
		N	E								
1	GC501	1434.26	4752.38	S. Segama	serp./amph.	Pr	4	2.0	4	2	B.G.
2	GC502	1434.40	4752.80	S. Segama	serpentinite	Pr	1	1.0	3	2	Blu.G.
3	GC503	1434.26	4752.78	S. Segama	serp./amph.	Pr	1	1.0	3	2	Blu.G.
4	GC504	1433.93	4751.90	S. Segama	green schist	Gs	1	1.0	3	2	Blu.G.
5	GC505	1433.86	4752.42	S. Segama	green schist	Gs	4	4.0	4	2	Blu.G.
6	GC506	1433.54	4752.38	S. Segama	green schist	Gs	1	1.0	4	2	Blu.G.
7	GC507	1433.44	4751.96	S. Segama	green schist	Gs	1	1.0	4	2	Blu.G.
8	GC508	1433.13	4752.52	S. Segama	sandstone	P ₄ Km	2	2.0	3	2	B.
9	GC509	1432.99	4752.18	S. Segama	sandstone	P ₄ Km	1	1.0	3	2	B.
10	GC510	1432.85	4752.19	S. Segama	sandstone	P ₄ Km	1	1.0	3	2	B.
11	GC511	1433.24	4752.83	S. Segama	sandstone	P ₄ Km	4	10.0	4	2	B.
12	GC512	1432.85	4753.27	S. Segama	sandstone	P ₄ Km	2	1.0	3	2	B.
13	GC513	1432.68	4753.16	S. Segama	sandstone	P ₄ Km	4	10.0	3	2	B.
14	GC514	1432.17	4752.85	S. Segama	sandstone	P ₄ Km	1	1.0	3	2	B.
15	GC515	1432.24	4753.38	S. Segama	sandstone	P ₄ Km	4	5.0	3	2	B.
16	GC516	1432.00	4753.28	S. Segama	sandstone	P ₄ Km	1	0.5	3	2	B.
17	GC517	1431.84	4753.58	S. Segama	basaltic tf.	P ₄ Km	3	5.0	3	2	B.
18	GC518	1431.59	4753.22	S. Segama	basaltic tf.	P ₄ Km	1	1.5	3	2	B.
19	GC519	1434.72	4751.81	S. Segama	serpentinite	Pr	5	40.0	4	2	G.B.
20	GC520	1434.65	4751.28	S. Segama	green schist	Gs	5	40.0	4	2	G.B.
21	GC521	1434.87	4750.90	S. Segama	serpentinite	Pr	5	30.0	4	2	G.B.
22	GC522	1434.53	4750.55	S. Segama	serpentinite	Pr	5	20.0	4	2	G.B.
23	GC523	1434.10	4750.60	S. Segama	serpentinite	Pr	5	20.0	4	2	G.B.
24	GC524	1434.04	4750.02	S. Segama	serpentinite	Pr	1	1.0	4	2	Blu.G.
25	GC525	1433.25	4750.47	S. Segama	serpentinite	Pr	1	1.0	4	2	Blu.G.
26	GC526	1433.19	4750.33	S. Segama	serpentinite	Pr	1	1.0	4	2	Blu.G.
27	GC527	1433.61	4750.13	S. Segama	serpentinite	Pr	5	40.0	3	2	G.B.
28	GC528	1433.53	4749.90	S. Segama	serpentinite	Pr	5	35.0	4	2	B.
29	GC529	1433.90	4749.22	S. Segama	green schist	Gs	3	4.0	3	2	Blu.G.
30	GC530	1434.45	4749.03	S. Segama	green schist	Gs	1	1.5	4	2	Blu.G.
31	GC531	1434.23	4748.85	S. Segama	green schist	Gs	2	3.5	3	2	Blu.G.
32	GC532	1434.37	4748.61	S. Segama	green schist	Gs	1	1.0	3	2	Blu.G.
33	GC533	1434.22	4748.56	S. Segama	green schist	Gs	2	3.0	3	2	Blu.G.
34	GC534	1434.48	4748.03	S. Segama	green schist	Gs	1	0.5	3	2	Blu.G.
35	GC535	1434.30	4747.93	S. Segama	green schist	Gs	1	1.0	4	2	Blu.G.
36	GC536	1433.96	4747.81	S. Segama	green schist	Gs	1	1.0	4	2	Blu.G.
37	GC537	1434.45	4747.87	S. Segama	green schist	Gs	2	3.0	3	2	Blu.G.
38	GC538	1434.66	4747.33	S. Segama	green schist	Gs	2	2.5	3	2	Blu.G.
39	GC539	1434.60	4747.19	S. Segama	green schist	Gs	1	1.0	4	2	Blu.G.
40	GC540	1434.48	4747.27	S. Segama	green schist	Gs	1	1.0	3	2	Blu.G.
41	GC541	1434.35	4746.86	S. Segama	ss/shale/sch	Ps	1	1.0	4	2	Blu.G.
42	GC542	1434.38	4746.40	S. Segama	ss/shale/sch	Ps	1	1.0	3	2	Blu.G.
43	GC543	1433.36	4749.55	S. Segama	—	Ps	5	35.0	3	2	B.
44	GC544	1433.30	4748.93	S. Segama	—	Ps	1	1.0	3	2	B.G.
45	GC545	1433.32	4748.50	S. Segama	—	Ps	1	1.0	3	2	Blu.G.
46	GC546	1433.31	4748.07	S. Segama	—	Gs	1	1.0	3	2	Blu.G.
47	GC547	1433.05	4749.49	S. Segama	—	Ps	5	30.0	3	2	B.
48	GC548	1432.55	4749.35	S. Segama	—	Gs	5	30.0	3	2	B.
49	GC549	1431.94	4749.76	S. Segama	tonalite	I ₁	2	4.0	3	2	B.
50	GC550	1431.78	4750.15	S. Segama	dolerite	Csba	1	2.0	3	2	B.

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

*2: coarse grained(1), medium grained(2), fine grained(3), clayey(4)

Ser. No.	Sample No.	Coordinates		Name of Stream	Geology	Geol. Unit	Order	Width (m)	Flow *1	Size *2	Color
		N	E								
51	GC551	1431.67	4750.05	S. Segama	dolerite	Csba	1	2.0	3	2	B.
52	GC552	1432.08	4749.20	S. Segama	tonalite	I ₁	5	4.0	3	2	G.B.
53	GC553	1431.80	4748.84	S. Segama	serp./amph.	Gs	2	4.0	3	2	G.B.
54	GC554	1431.20	4748.30	S. Segama	—	Csba	1	2.0	3	2	G.
55	GC555	1431.15	4748.75	S. Segama	breccia	Csba	2	2.0	4	2	G.
56	GC556	1430.67	4748.83	S. Segama	breccia	P ₄ Km	1	1.5	4	2	G.
57	GC557	1430.58	4748.67	S. Segama	breccia	P ₄ Km	1	1.5	4	2	B.
58	GC558	1432.05	4748.43	S. Segama	serp./sch.	Pr	5	20.0	3	2	B.
59	GC559	1432.34	4747.92	S. Segama	serp./sch.	Pr	2	1.0	4	1	Blu.G.
50	GC560	1432.67	4747.78	S. Segama	serp./sch.	Pr	1	1.0	4	1	Blu.G.
61	GC561	1432.56	4747.71	S. Segama	serp./sch.	Pr	1	1.0	4	1	Blu.G.
62	GC562	1432.00	4748.03	S. Segama	serp./sch.	Pr	5	30.0	4	1	G.
63	GC563	1431.80	4747.57	S. Segama	serp./sch.	Pr	1	1.0	4	1	Blu.G.
64	GC564	1431.50	4747.59	S. Segama	serpentinite	Pr	1	1.0	4	1	Blu.G.
65	GC565	1431.94	4747.48	S. Segama	serpentinite	Pr	5	30.0	4	1	B.
66	GC566	1431.93	4747.15	S. Segama	serpentinite	Pr	1	1.0	4	1	Blu.G.
67	GC567	1432.12	4747.15	S. Segama	serpentinite	Pr	5	25.0	4	1	B.
68	GC568	1432.35	4746.50	S. Segama	serp./sch.	Gs	5	10.0	4	1	B.
69	GC569	1432.39	4746.04	S. Segama	amphibolite	Gs	4	7.0	4	1	D.G.
70	GC570	1432.98	4746.21	S. Segama	amphibolite	Gs	2	1.5	2	1	D.G.
71	GC571	1433.22	4746.45	S. Segama	green schist	Gs	1	1.0	1	3	D.G.
72	GC572	1433.24	4746.30	S. Segama	green schist	Gs	1	1.0	1	3	D.G.
73	GC573	1432.86	4745.82	S. Segama	green schist	Gs	4	7.0	3	2	D.G.
74	GC574	1433.07	4745.52	S. Segama	green schist	Gs	4	10.0	3	2	D.G.
75	GC575	1432.96	4744.70	S. Segama	green schist	Gs	1	3.0	3	3	D.G.
76	GC576	1433.30	4745.20	S. Segama	green schist	Gs	4	9.0	4	2	D.G.
77	GC577	1433.80	4745.19	S. Segama	green schist	Gs	4	7.0	4	1	D.G.
78	GC578	1434.50	4744.86	S. Segama	green schist	Gs	2	2.0	4	1	Y.G.
79	GC579	1434.88	4744.77	S. Segama	green schist	Gs	2	2.0	3	1	Y.G.
80	GC580	1434.87	4744.67	S. Segama	green schist	Gs	1	2.0	3	1	B.G.
81	GC581	1434.03	4744.50	S. Segama	green schist	Gs	4	7.0	2	3	D.G.
82	GC582	1434.05	4744.12	S. Segama	green schist	Gs	4	12.0	3	3	B.G.
83	GC583	1433.87	4743.72	S. Segama	green schist	Gs	1	2.0	3	2	D.G.
84	GC584	1434.40	4743.82	S. Segama	green schist	Gs	4	10.0	3	2	D.G.
85	GC585	1434.63	4743.00	S. Segama	serpentinite	Pr	1	1.0	3	2	D.G.
86	GC586	1434.85	4742.93	S. Segama	serpentinite	Pr	2	2.0	3	2	D.G.
87	GC587	1434.75	4742.83	S. Segama	serpentinite	Pr	4	10.0	4	1	D.G.
88	GC588	1431.83	4746.09	S. Segama	green schist	Gs	4	5.0	4	2	D.G.
89	GC589	1431.57	4745.60	S. Segama	green schist	Gs	2	2.0	4	1	D.G.
90	GC590	1431.61	4745.10	S. Segama	green schist	Gs	1	1.0	4	1	D.G.
91	GC591	1431.76	4745.07	S. Segama	green schist	Gs	1	1.0	4	1	D.G.
92	GC592	1431.91	4744.62	S. Segama	green schist	Gs	1	1.0	3	1	D.G.
93	GC593	1431.50	4746.08	S. Segama	green schist	Gs	4	5.0	4	2	D.G.
94	GC594	1431.17	4745.95	S. Segama	green schist	Gs	4	7.0	3	3	D.G.
95	GC595	1430.84	4746.11	S. Segama	green schist	Gs	4	8.0	3	3	D.G.
96	GC596	1430.40	4746.47	S. Segama	—	Pr	4	8.0	3	3	D.G.
97	GC597	1430.13	4746.91	S. Segama	—	P ₄ Km	2	1.5	3	2	D.G.
98	GC598	1430.28	4747.35	S. Segama	sandstone	P ₄ Km	1	1.0	2	1	D.G.
99	GC599	1430.13	4747.37	S. Segama	sandstone	P ₄ Km	1	1.0	2	1	D.G.
100	GC600	1429.90	4746.50	S. Segama	—	Pr	4	5.0	3	2	D.G.

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

*2: coarse grained(1), medium grained(2), fine grained(3), clayey(4)

Ser. No.	Sample No.	Coordinates		Name of Stream	Geology	Geol. Unit	Order	Width (m)	Flow *1	Size *2	Color
		N	E								
101	GC601	1429.36	4746.52	S. Segama	sandstone	P ₄ Km	3	4.0	2	2	Y.G.
102	GC602	1429.12	4746.78	S. Segama	sandstone	P ₄ Km	3	3.0	2	2	Y.G.
103	GC603	1428.92	4747.05	S. Segama	sandstone	P ₄ Km	3	3.0	2	2	Y.G.
104	GC604	1428.78	4747.82	S. Segama	sandstone	P ₄ Km	1	1.0	3	1	D.G.
105	GC605	1428.68	4747.90	S. Segama	sandstone	P ₄ Km	1	1.0	3	1	D.G.
106	GC606	1428.62	4747.34	S. Segama	sandstone	P ₄ Km	2	3.0	3	2	D.G.
107	GC607	1430.13	4745.80	S. Segama	—	Csba	1	2.0	2	2	D.G.
108	GC608	1430.26	4745.39	S. Segama	—	Csba	1	1.0	3	1	D.G.
109	GC609	1430.37	4744.98	S. Segama	—	Gb	1	1.0	2	2	D.G.
110	GC610	1429.76	4745.66	S. Segama	basalt	Csba	1	1.0	3	2	D.G.
111	GC611	1429.61	4745.65	S. Segama	basalt	Csba	4	5.0	3	2	D.G.
112	GC612	1428.96	4745.73	S. Segama	sandstone	P ₄ Km	1	3.0	2	2	R.G.
113	GC613	1428.60	4746.00	S. Segama	basalt	P ₄ Km	1	2.0	3	2	D.G.
114	GC614	1429.40	4745.29	S. Segama	basalt	Csba	4	5.0	3	2	Y.G.
115	GC615	1428.80	4745.34	S. Segama	basalt	P ₄ Km	1	2.0	3	2	D.G.
116	GC616	1429.26	4745.03	S. Segama	basalt	Csba	4	2.0	3	2	D.G.
117	GC617	1429.25	4744.70	S. Segama	dolerite	Csba	4	4.0	4	3	Y.G.
118	GC618	1429.40	4744.30	S. Segama	dolerite	Csba	3	4.0	4	1	D.G.
119	GC619	1429.78	4744.30	S. Segama	dolerite	Csba	1	2.0	3	2	Y.G.
120	GC620	1430.08	4744.27	S. Segama	dolerite	Csba	1	2.0	3	2	D.G.
121	GC621	1430.37	4744.21	S. Segama	sandstone	Csba	1	2.0	3	2	D.G.
122	GC622	1430.77	4744.24	S. Segama	basalt	Csba	1	2.0	3	2	D.G.
123	GC623	1429.72	4743.95	S. Segama	dolerite	Csba	3	4.0	3	2	Y.G.
124	GC624	1429.90	4743.68	S. Segama	dolerite	Csba	3	4.0	3	2	D.G.
125	GC625	1430.58	4743.64	S. Segama	gabbro	Gb	2	2.0	3	1	D.G.
126	GC626	1431.10	4743.77	S. Segama	gabbro	Gb	1	2.0	3	1	D.G.
127	GC627	1431.08	4743.66	S. Segama	gabbro	Gb	1	2.0	3	1	Y.G.
128	GC628	1430.20	4743.25	S. Segama	gabbro	Gb	2	4.0	3	1	D.G.
129	GC629	1430.43	4743.00	S. Segama	gabbro	Gb	1	1.0	3	1	D.G.
130	GC630	1430.78	4743.12	S. Segama	gabbro	Gb	1	1.0	2	1	D.G.
131	GC631	1430.38	4742.85	S. Segama	sandstone	P ₄ Km	2	3.0	2	1	Y.G.
132	GC632	1430.67	4742.29	S. Segama	sandstone	P ₄ Km	2	2.0	3	2	Y.B.
133	GC633	1431.00	4742.12	S. Segama	sandstone	P ₄ Km	2	2.0	3	2	Y.B.
134	GC634	1431.38	4742.10	S. Segama	sandstone	P ₄ Km	2	2.0	3	2	D.B.
135	GC635	1431.52	4742.18	S. Segama	sandstone	P ₄ Km	1	1.0	3	1	D.B.
136	GC636	1429.05	4744.10	S. Segama	dolerite	Csba	4	4.0	4	2	Y.G.
137	GC637	1428.64	4743.85	S. Segama	sandstone	P ₄ Km	4	5.0	3	2	Y.G.
138	GC638	1428.44	4743.65	S. Segama	sandstone	P ₄ Km	4	5.0	4	1	Y.
139	GC639	1428.48	4742.90	S. Segama	sandstone	P ₄ Km	2	3.0	3	2	Y.G.
140	GC640	1428.68	4742.40	S. Segama	sandstone	P ₄ Km	2	4.0	2	2	Y.G.

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

*2: coarse grained(1), medium grained(2), fine grained(3), clayey(4)

Appendix 28

Analytical results of stream sediment
geochemical samples in Area C

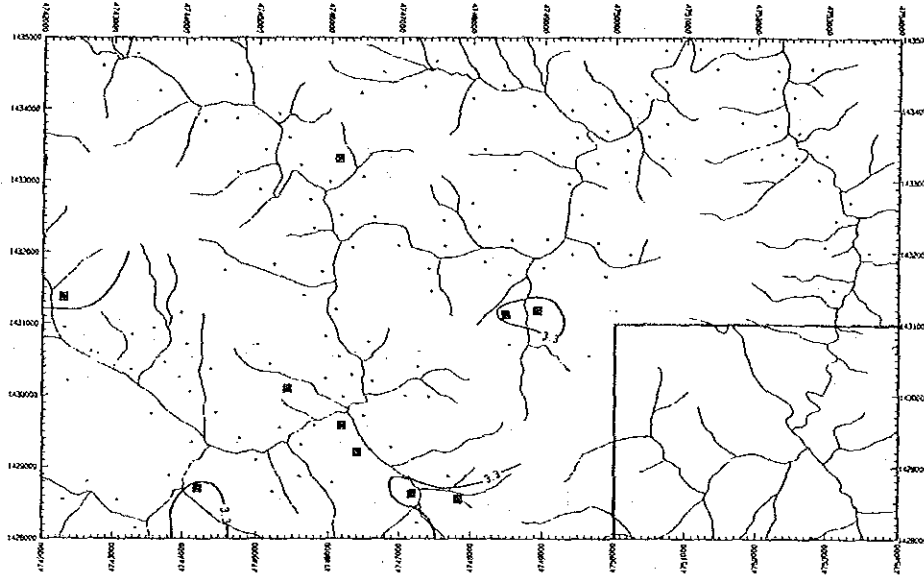
List of Geochemical Analysis (3)

Ser. No.	Sample No.	Location (km)	As	Au	Ba	Co	Cr	Cu	Hg	K	Mg	Mn	Mo	Na	Ni	Pb	S	Sb	Sr	Ti	U	W	Zn
		X-coord Y-coord	ppm	ppb	ppm	ppm	ppm	ppm	ppb	%	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
101	G0601	4746.520 1429.360	>	>	50	12	199	11	11	.19	.50	194	>	.26	34	15	.013	15.9	35	.22	1.2	3	26
102	G0602	4746.780 1429.120	>	>	49	9	199	9	15	.20	.36	104	>	.19	20	12	.011	12.0	24	.17	1.4	4	19
103	G0603	4747.050 1428.920	>	>	43	6	144	11	13	.18	.47	153	>	.26	23	>	.009	6.4	25	.15	.8	>	23
104	G0604	4747.820 1428.780	>	>	178	17	289	22	17	.53	.82	480	>	.86	31	>	.019	7.9	119	.38	1.0	>	45
105	G0605	4747.900 1428.680	1	>	213	12	231	26	21	.60	.96	504	>	1.14	36	>	.027	8.7	192	.42	1.0	>	52
106	G0606	4747.340 1428.620	>	>	55	8	255	13	10	.24	.61	205	>	.34	37	>	.014	7.6	33	.27	1.2	>	27
107	G0607	4745.800 1430.130	>	>	46	29	494	38	10	.21	1.96	716	>	1.73	105	>	.086	14.1	163	.57	.4	>	63
108	G0608	4745.990 1430.260	>	>	49	27	530	33	10	.18	2.23	1022	>	2.15	137	>	.037	10.0	129	.97	.4	>	70
109	G0609	4744.980 1430.370	>	>	38	29	644	30	10	.17	2.15	1013	>	2.16	137	>	.049	10.0	131	.99	.4	>	68
110	G0610	4745.660 1429.760	>	45	62	29	859	30	19	.26	2.95	755	>	1.25	201	>	.047	15.0	147	.99	.4	>	71
111	G0611	4745.650 1429.610	>	>	69	11	249	15	10	.27	.63	241	>	.37	34	5	.019	8.6	39	.26	1.2	3	31
112	G0612	4745.730 1428.960	>	>	90	22	529	21	14	.41	1.23	505	>	.70	61	>	.027	9.7	63	.37	1.0	3	48
113	G0613	4746.000 1428.600	>	>	99	24	374	25	15	.57	1.19	538	>	.57	59	>	.020	7.7	47	.34	1.0	>	53
114	G0614	4745.290 1429.400	>	>	68	8	290	11	12	.25	.56	192	>	.30	38	29	.022	6.9	36	.24	1.2	3	29
115	G0615	4745.340 1428.800	>	>	107	27	473	34	18	.36	2.36	840	>	1.48	113	>	.047	10.3	95	.53	.6	>	55
116	G0616	4745.030 1429.260	>	>	54	5	200	10	13	.24	.50	166	>	.25	24	>	.016	3.8	30	.22	1.4	2	25
117	G0617	4744.700 1429.250	>	>	65	8	143	8	15	.19	.36	115	>	.17	19	2	.011	3.4	22	.16	1.2	>	23
118	G0618	4744.300 1429.400	>	>	65	25	397	28	11	.31	1.78	621	>	1.05	71	>	.040	6.9	104	.52	.6	>	56
119	G0619	4744.300 1429.780	>	>	72	20	522	30	10	.27	2.05	915	>	1.29	122	>	.036	12.1	146	.61	.6	>	59
120	G0620	4744.270 1430.080	>	>	67	23	689	35	10	.33	2.45	1082	>	1.64	144	>	.046	12.9	173	.70	.4	>	70
121	G0621	4744.210 1430.370	>	>	65	23	481	35	10	.27	2.40	939	>	1.54	184	>	.037	9.6	158	.61	.4	>	67
122	G0622	4744.240 1430.770	>	>	52	18	498	34	10	.27	2.78	858	>	1.59	138	>	.044	16.2	192	.59	.2	>	67
123	G0623	4743.950 1429.720	>	>	60	16	364	22	10	.20	1.26	502	>	.92	52	>	.042	8.5	77	.49	.8	>	44
124	G0624	4743.680 1429.900	>	>	68	16	371	28	10	.29	1.73	637	>	.64	65	>	.053	14.2	104	.62	.8	>	56
125	G0625	4743.640 1430.580	>	>	60	20	275	42	11	.26	2.63	943	>	1.94	102	>	.047	12.5	166	.81	.4	>	80
126	G0626	4743.770 1431.100	>	>	53	29	279	42	24	.29	2.48	943	>	1.98	115	>	.045	8.0	175	.77	.4	>	80
127	G0627	4743.660 1431.080	>	>	53	22	228	35	18	.26	1.62	872	>	1.84	45	>	.161	8.0	124	.63	.6	>	86
128	G0628	4743.250 1430.200	>	>	68	15	269	27	17	.32	1.66	555	>	.97	66	>	.041	10.8	96	.48	1.0	3	54
129	G0629	4743.000 1430.430	>	>	38	29	264	21	10	.04	2.04	1684	>	.91	62	>	.031	19.0	122	1.62	.4	>	59
130	G0630	4743.120 1430.780	>	>	25	40	324	28	10	.26	3.78	2605	>	1.50	94	>	.046	17.3	204	3.01	.2	>	85
131	G0631	4742.850 1430.380	>	>	72	13	164	16	10	.26	.76	283	>	.51	27	>	.030	8.1	57	.29	1.2	>	35
132	G0632	4742.290 1430.670	>	>	88	15	137	18	10	.36	.89	308	>	.70	31	>	.038	5.8	68	.31	1.0	>	40
133	G0633	4742.120 1431.000	>	>	78	14	128	20	10	.31	.82	338	>	.75	28	>	.038	5.1	72	.31	1.0	>	40
134	G0634	4742.100 1431.380	2	>	95	10	190	19	10	.35	.85	286	>	.58	30	>	.029	4.9	63	.26	1.0	3	38
135	G0635	4742.180 1431.520	>	>	24	23	160	33	10	.14	1.63	609	>	1.41	43	>	.046	10.6	140	.44	.2	>	56
136	G0636	4744.100 1429.050	>	>	62	4	199	7	10	.17	.30	99	>	.14	20	>	.014	3.9	21	.16	2.4	>	22
137	G0637	4743.850 1428.640	>	>	61	8	188	11	11	.22	.55	161	>	.31	26	>	.015	5.7	29	.20	1.2	2	29
138	G0638	4743.650 1428.440	3	>	61	4	207	7	10	.19	.20	60	>	.09	29	>	.013	3.1	16	.15	1.6	>	19
139	G0639	4742.900 1428.480	>	>	65	7	181	8	10	.20	.31	99	>	.15	19	>	.013	5.5	20	.17	1.6	>	21
140	G0640	4742.400 1428.680	>	>	75	10	192	12	12	.24	.62	171	>	.34	27	>	.020	8.8	33	.24	1.4	2	31

Appendix 29

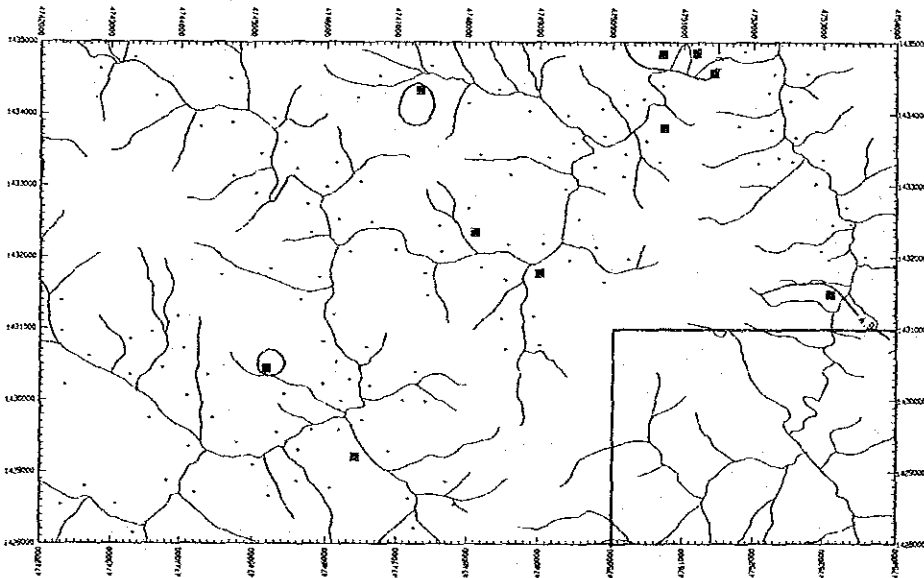
Distribution map of elements
in Area C

Soil



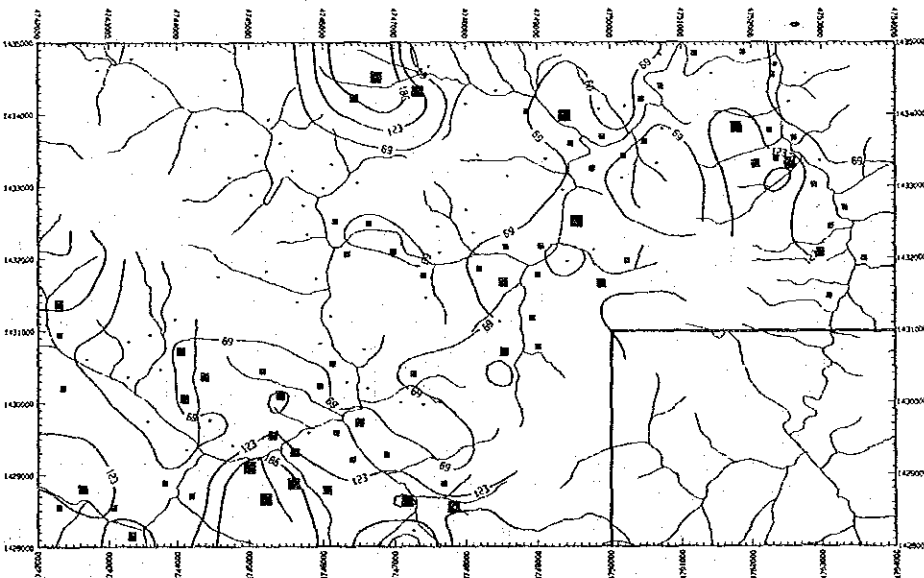
As

3.300



Au

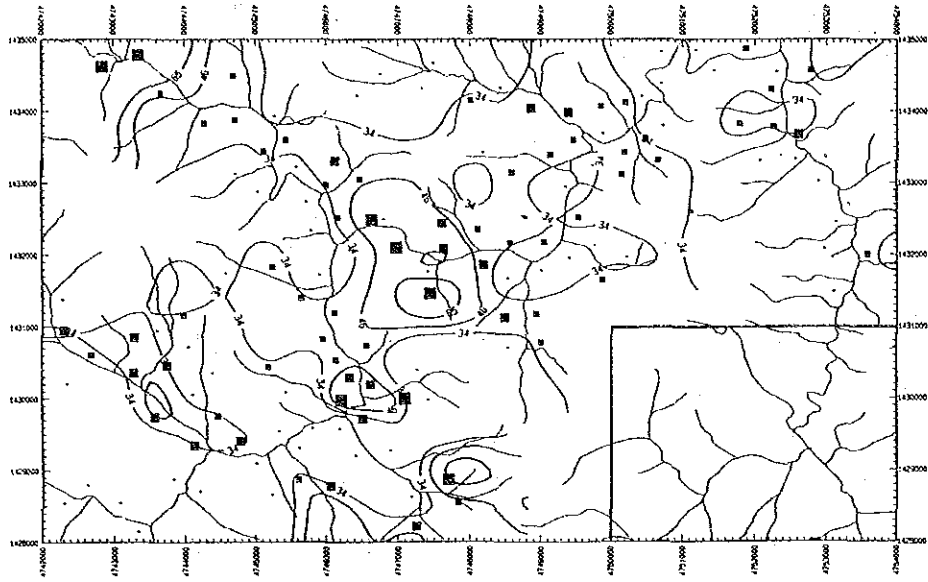
4.500



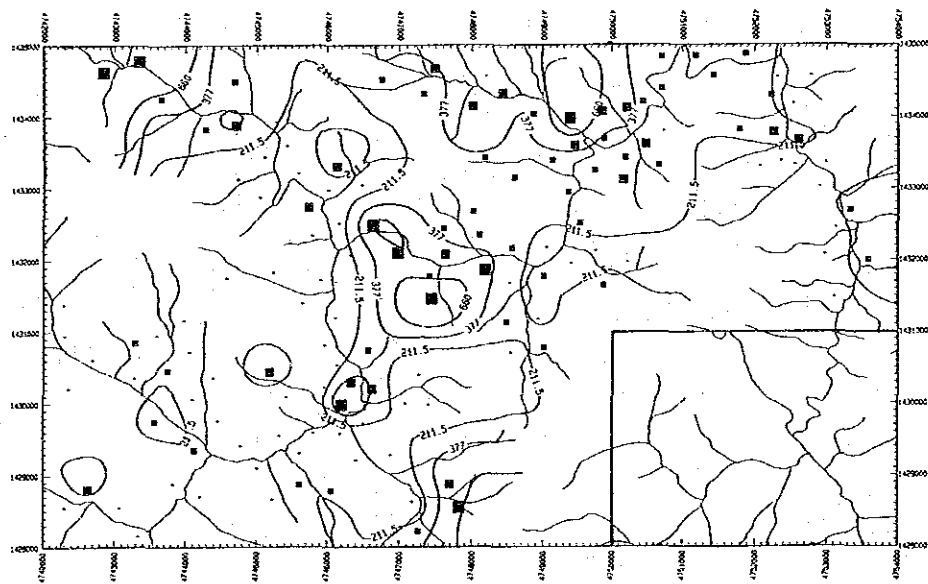
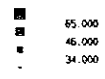
Ba

195,000
123,000
59,000

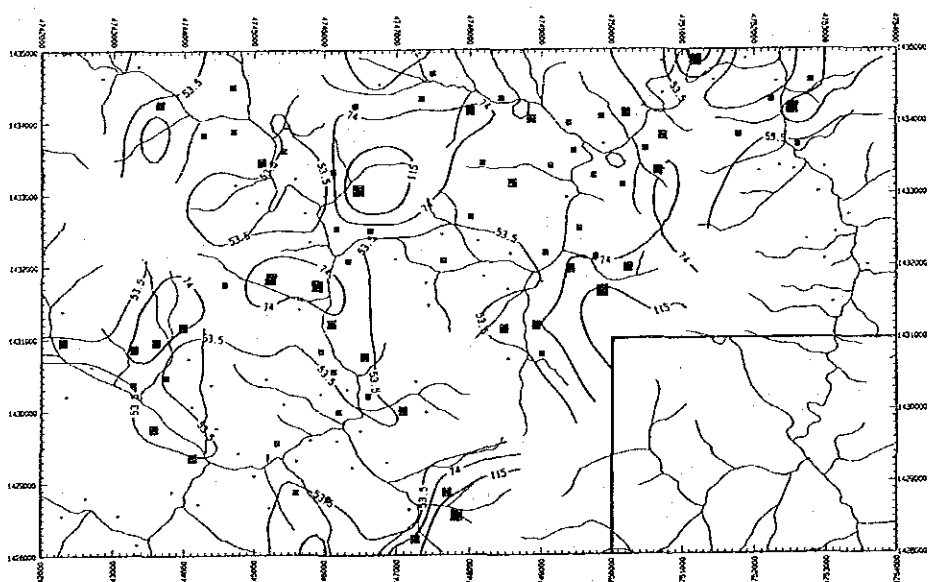
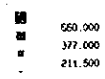
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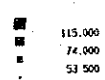
Co



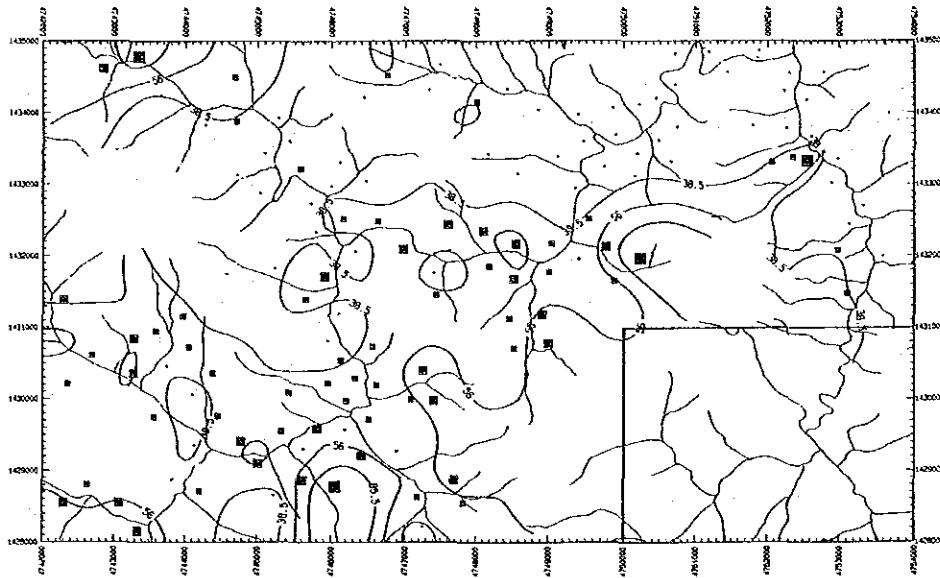
Cr



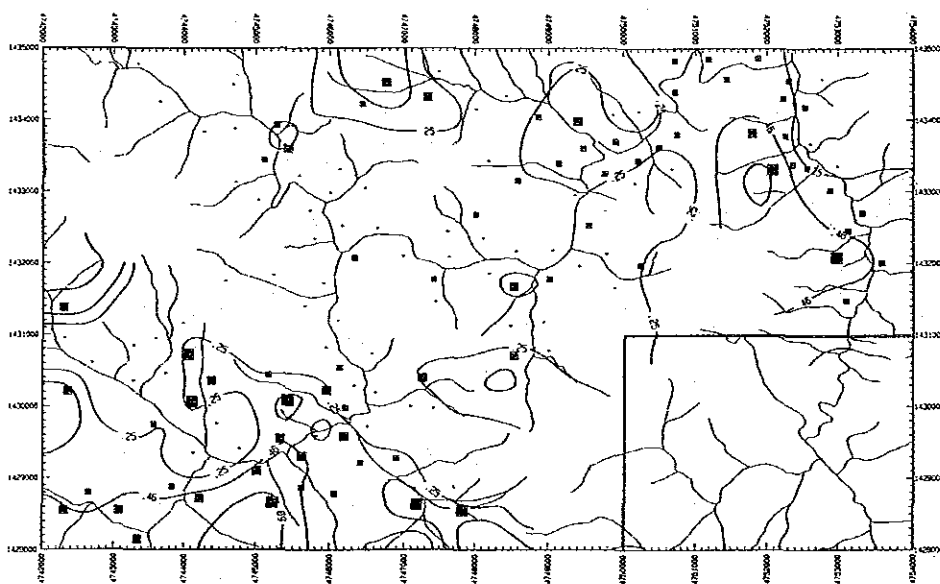
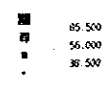
Cu



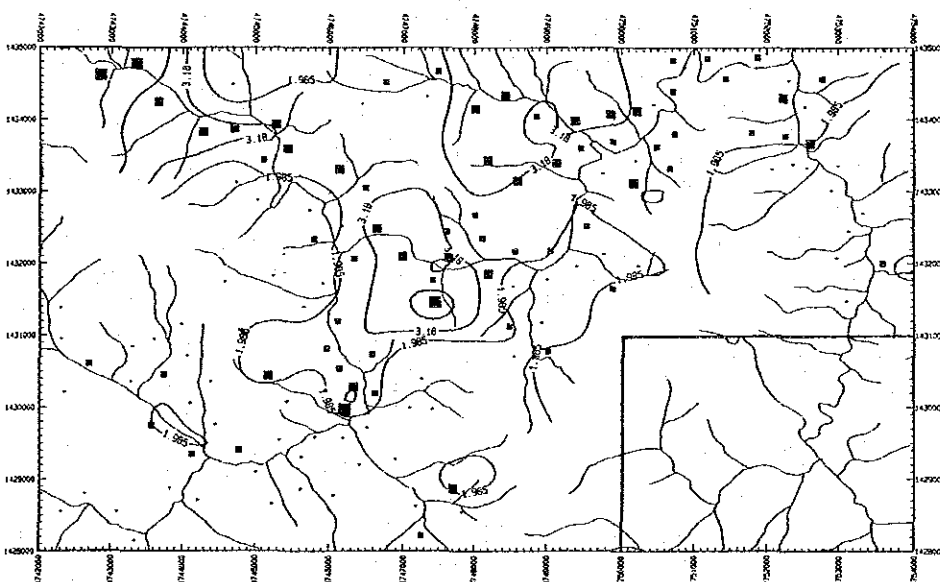
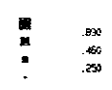
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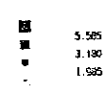
Hg



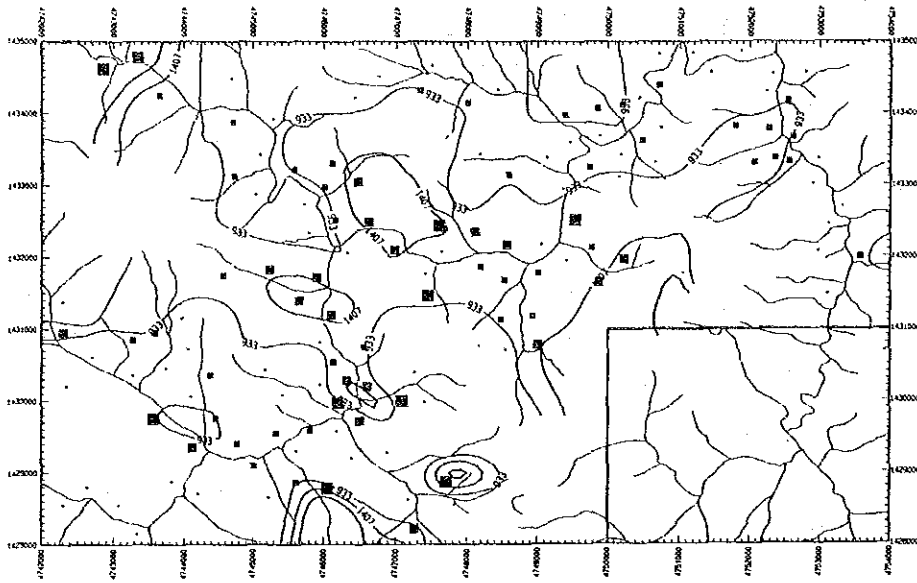
K



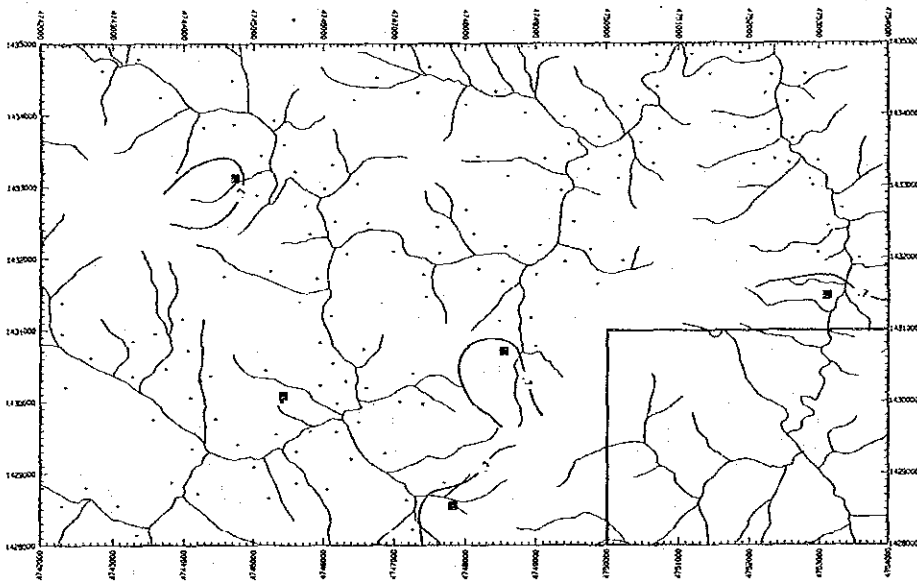
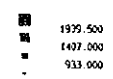
Mg



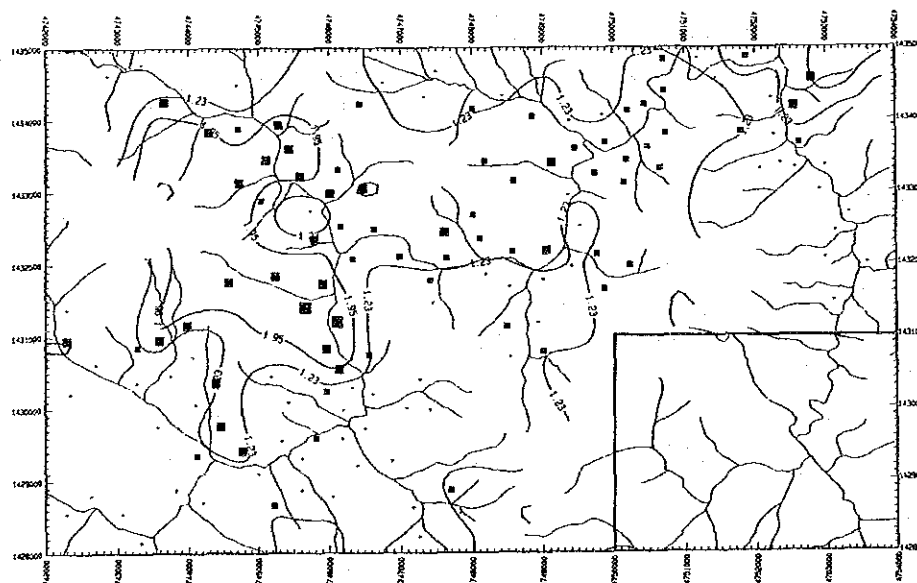
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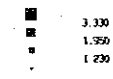
Mn



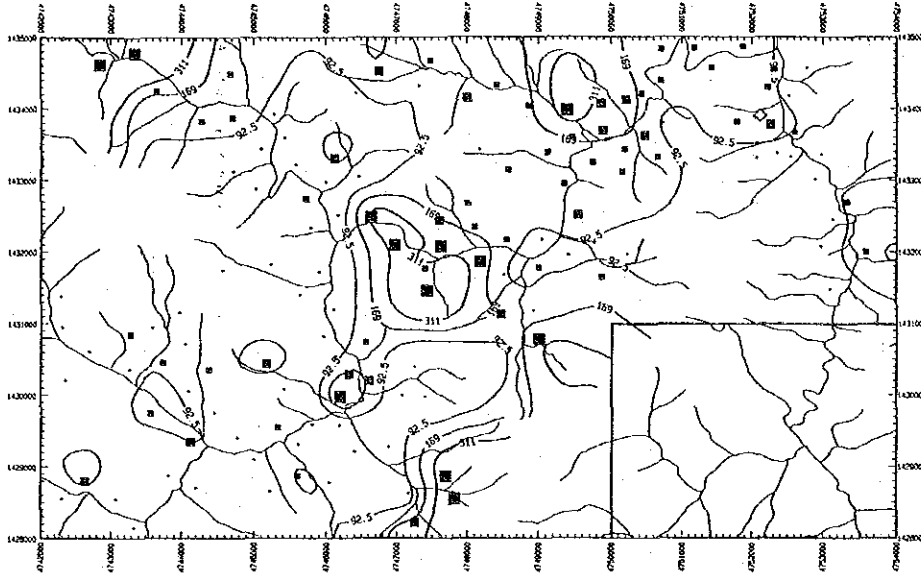
Mo



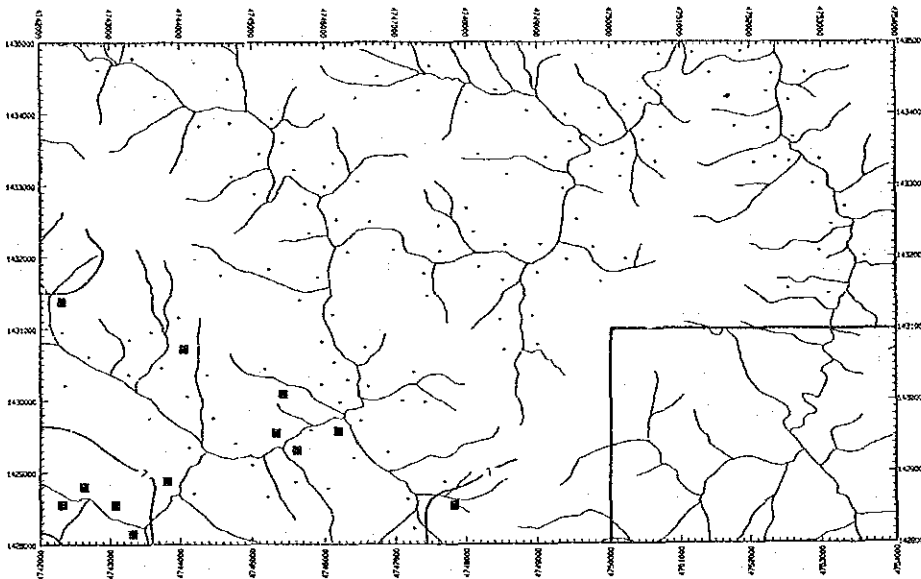
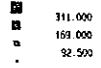
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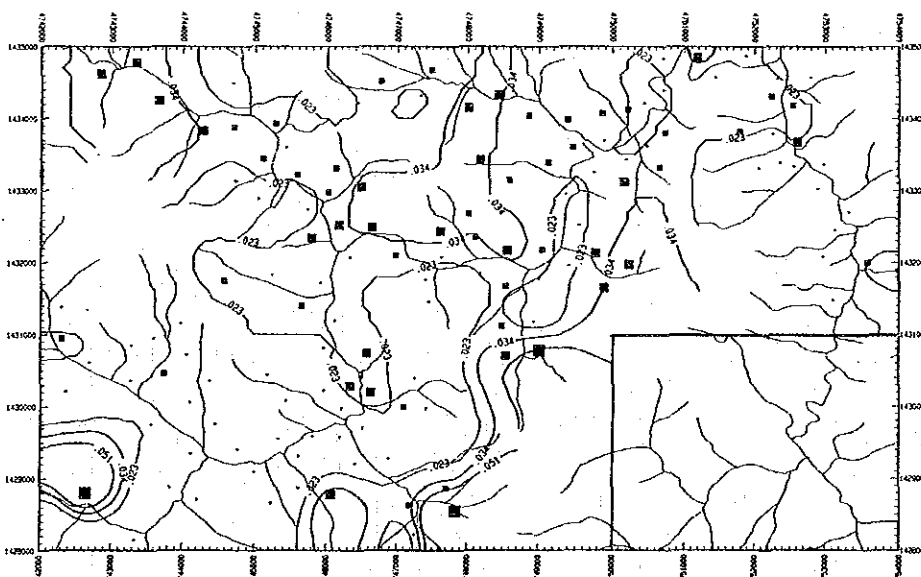
Soil



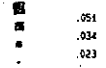
Ni



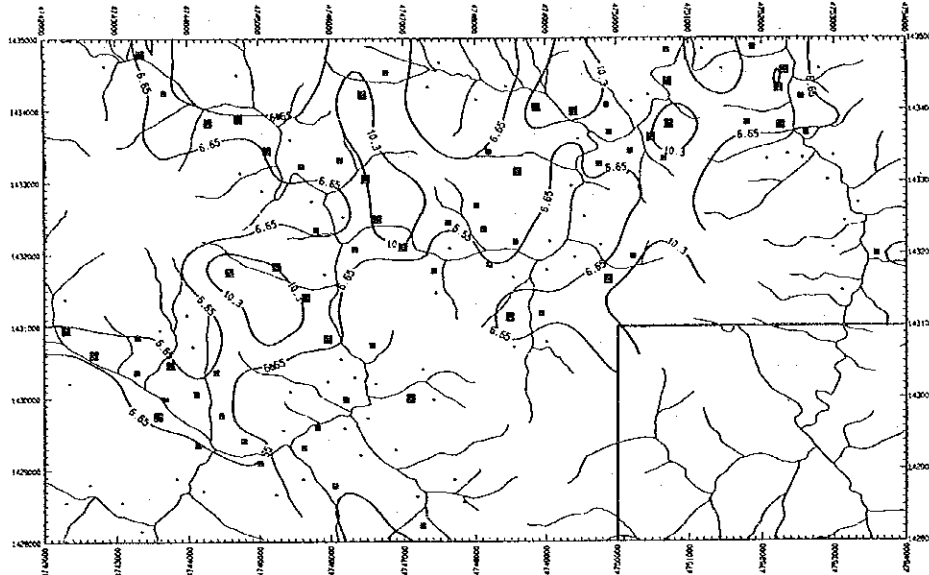
Pb



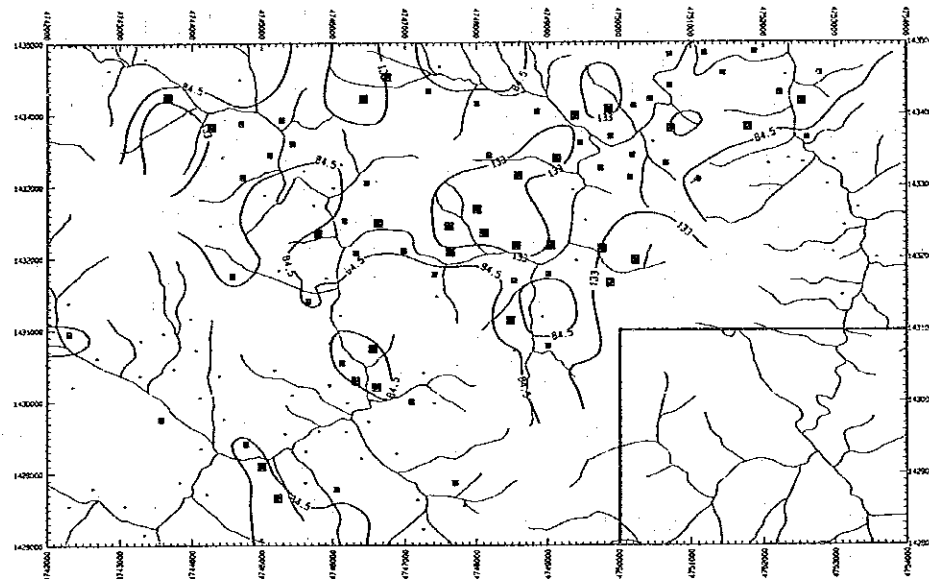
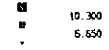
S



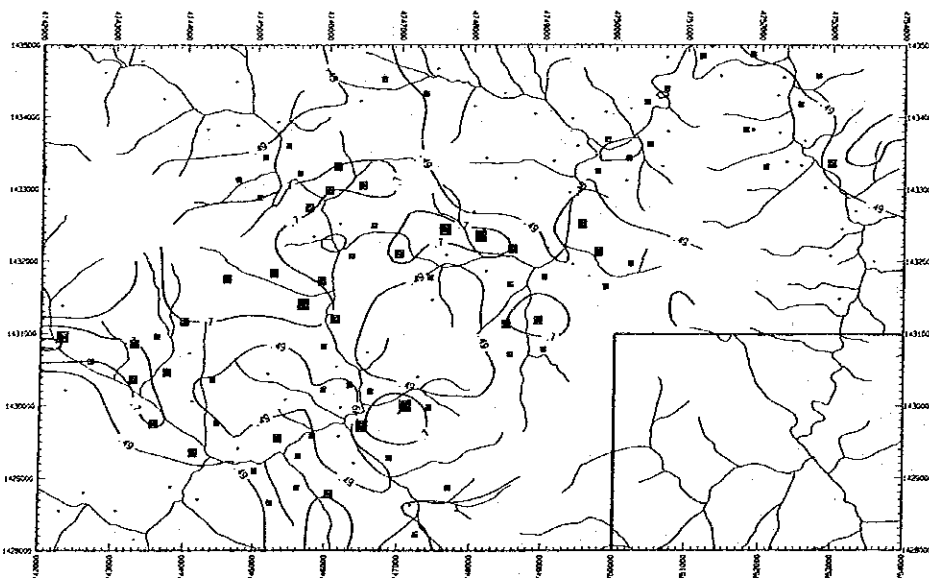
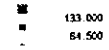
Soil



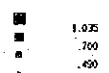
Sb



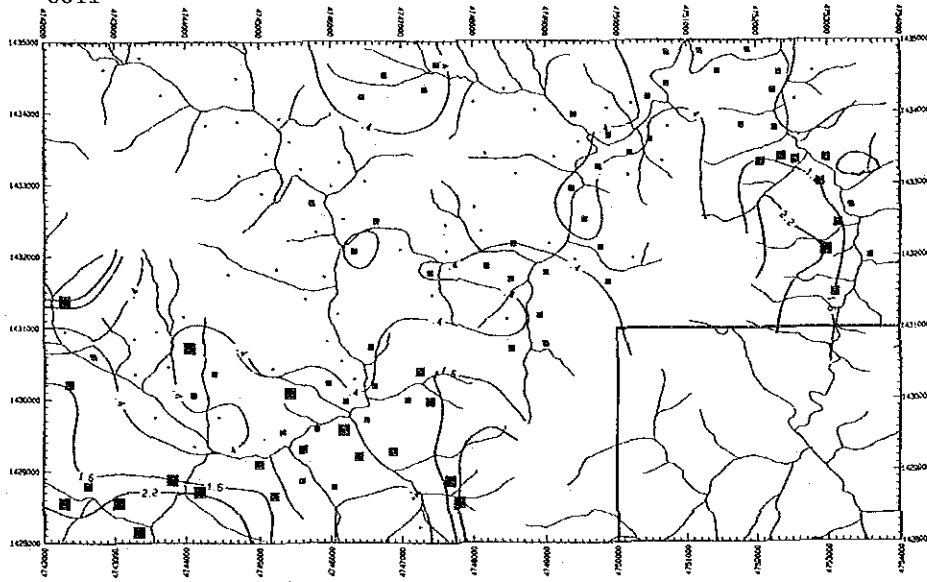
Sr



Ti

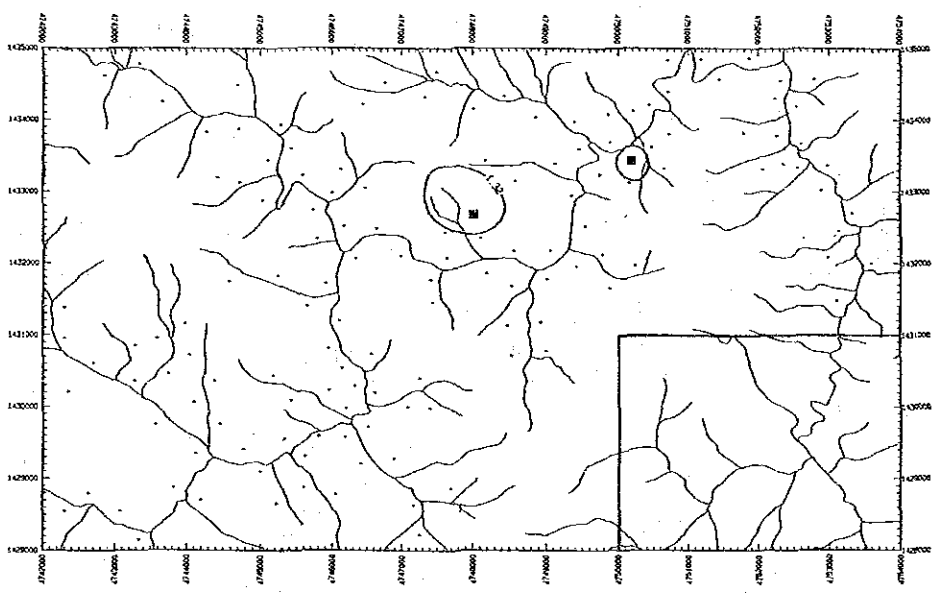


Soil



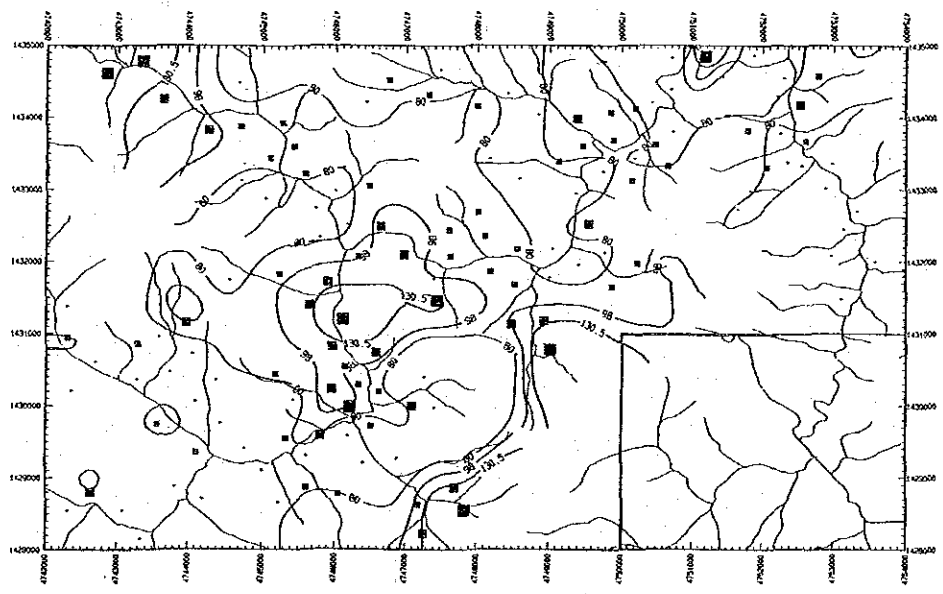
U

- 2.200
- 1.500
- .400



W

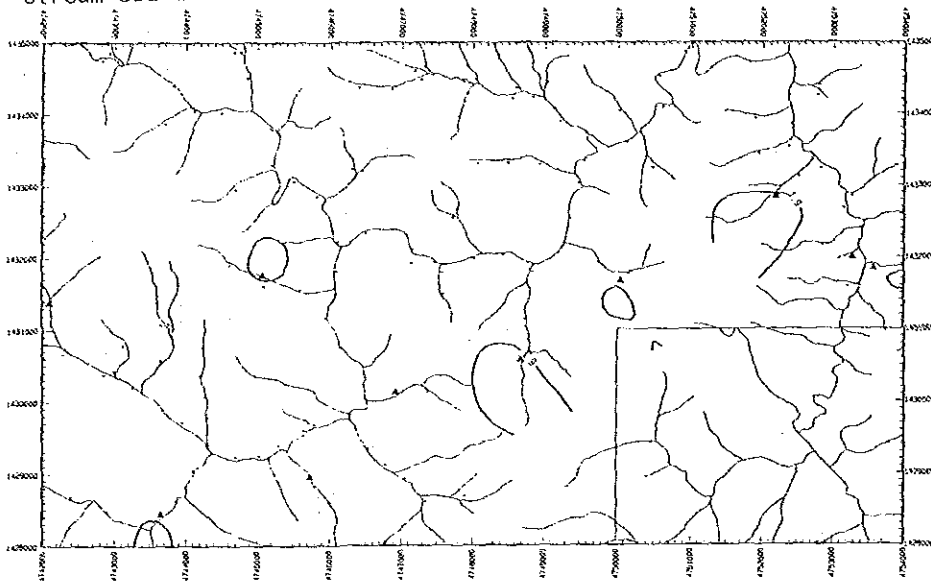
- 1.320



Zn

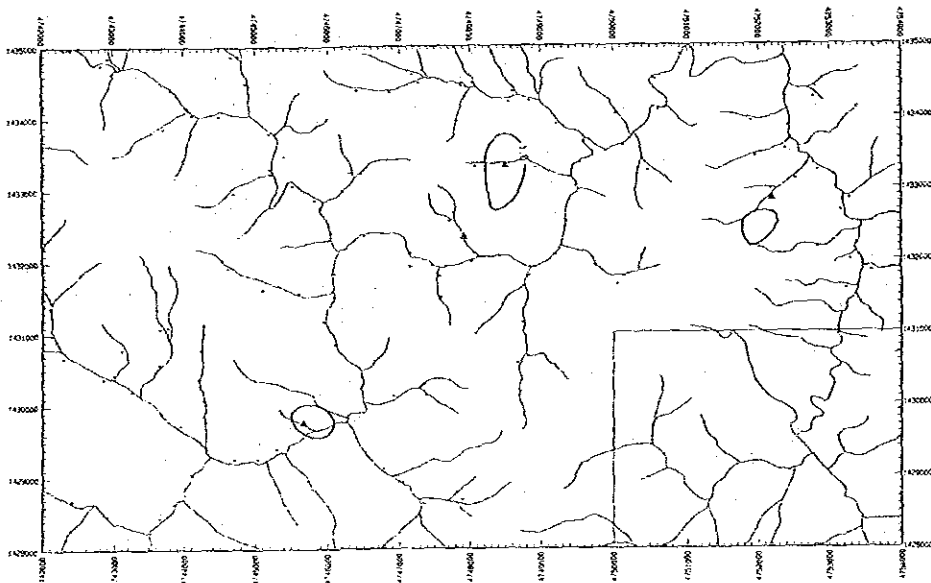
- 130.500
- 98.000
- 65.000

Stream sediments



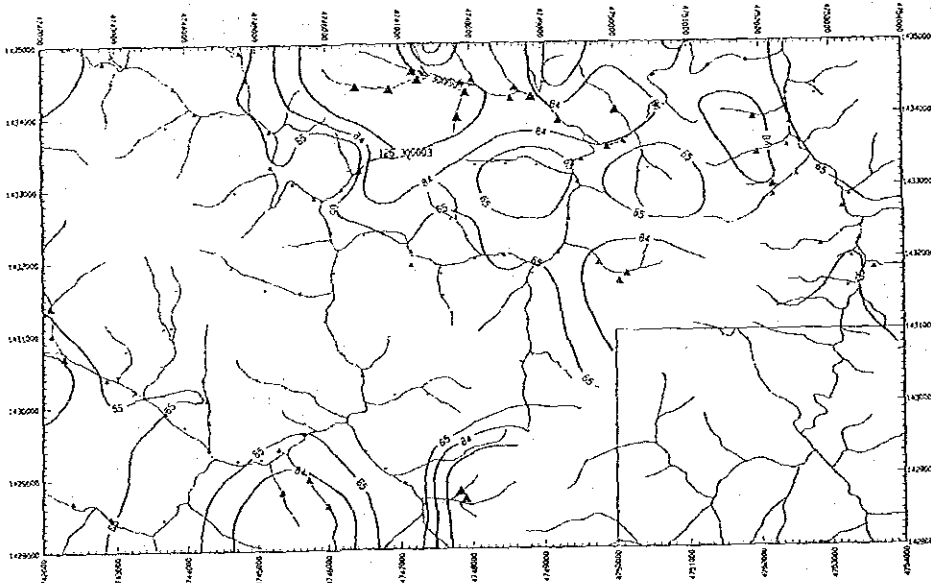
As

▲ 1,900



Au

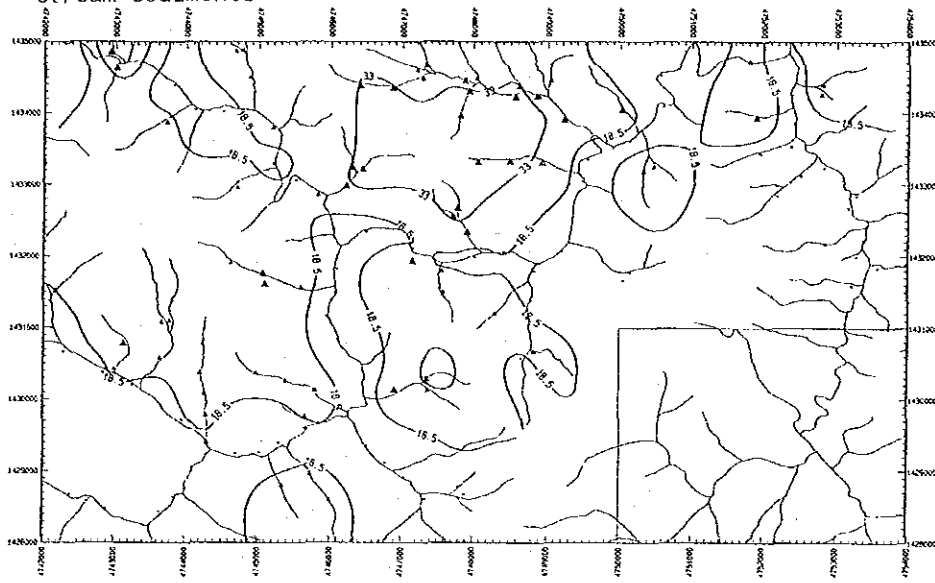
▲ 1,600



Ba

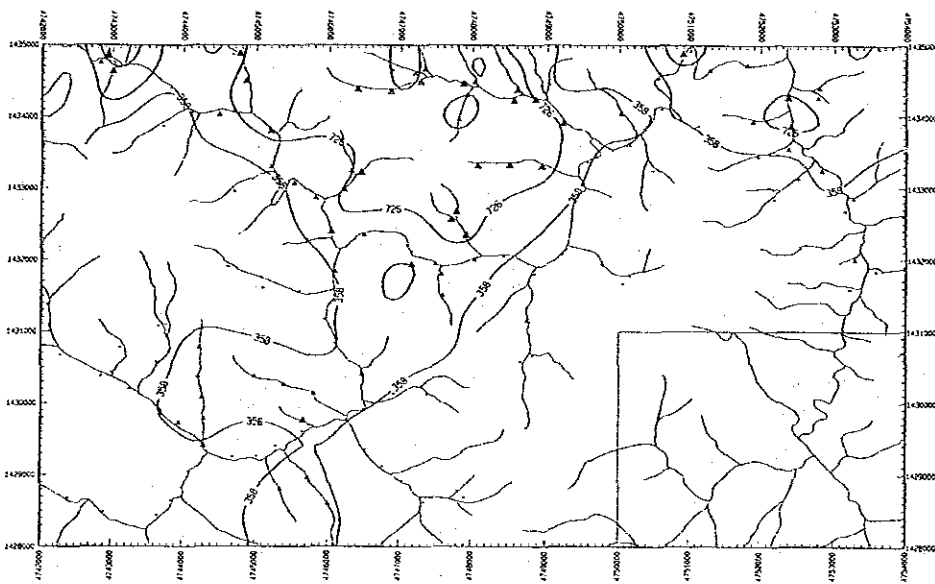
▲ 125,300
▲ 84,000
▲ 65,500

Stream sediments



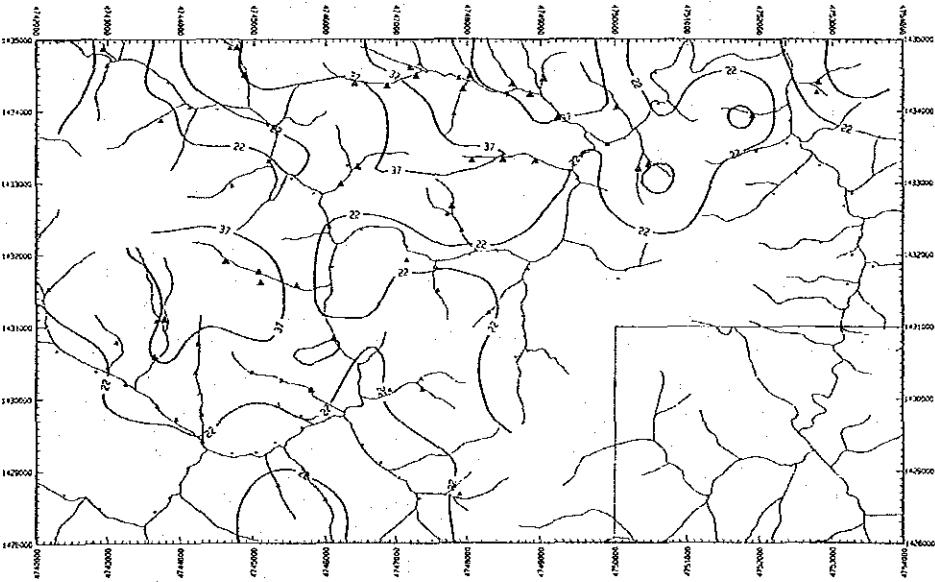
Co

- ▲ 33,000
- 18,500



Cr

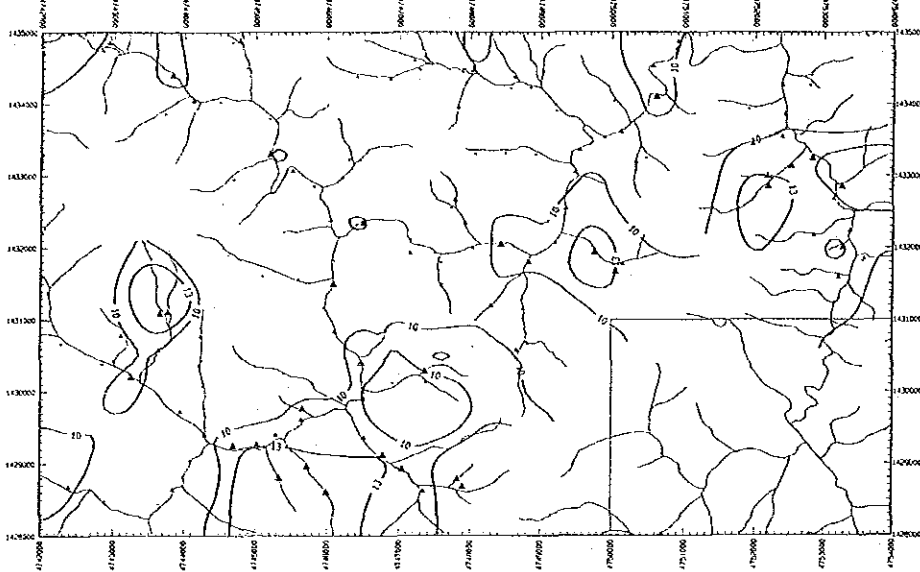
- ▲ 2250,000
- ▲ 726,000
- 358,000



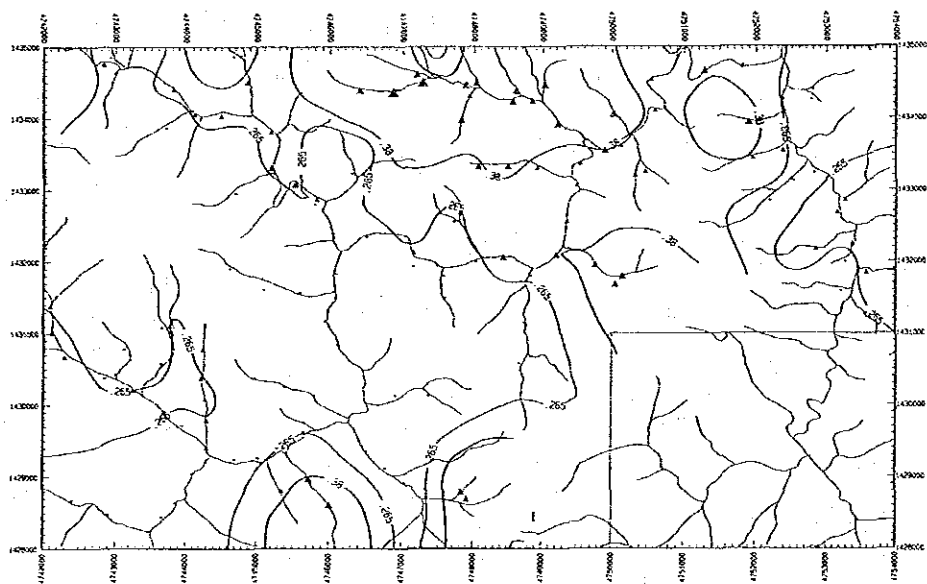
Cu

- ▲ 37,000
- 22,000

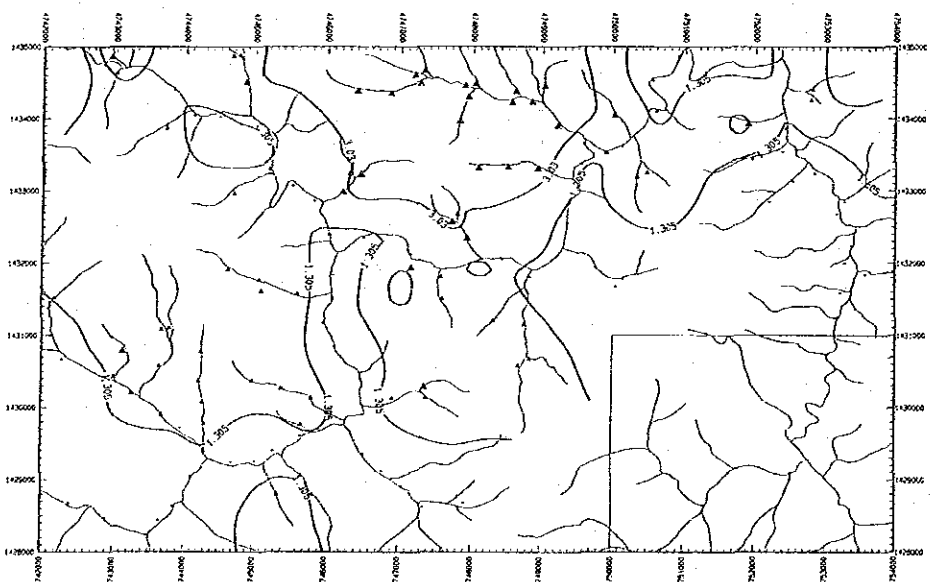
Stream sediments



Hg
 ▲ 13.000
 ● 10.000

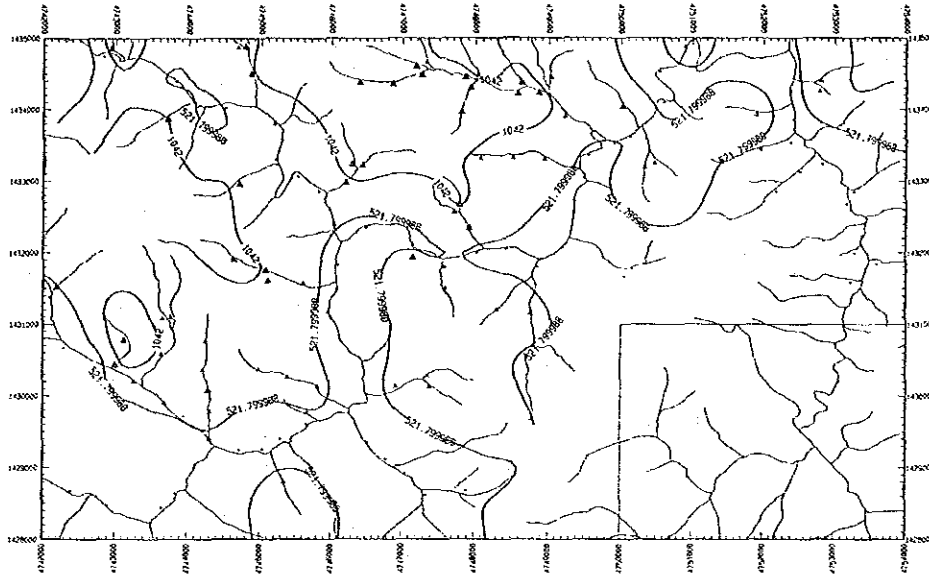


K
 ▲ 753
 ● 380
 ○ 265



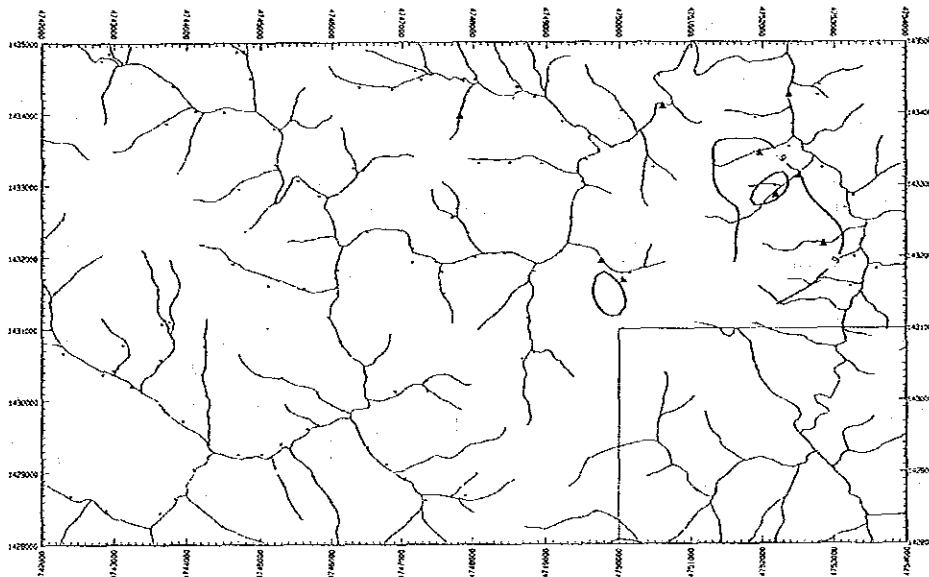
Mg
 ▲ 3.030
 ● 1.365

Stream sediments



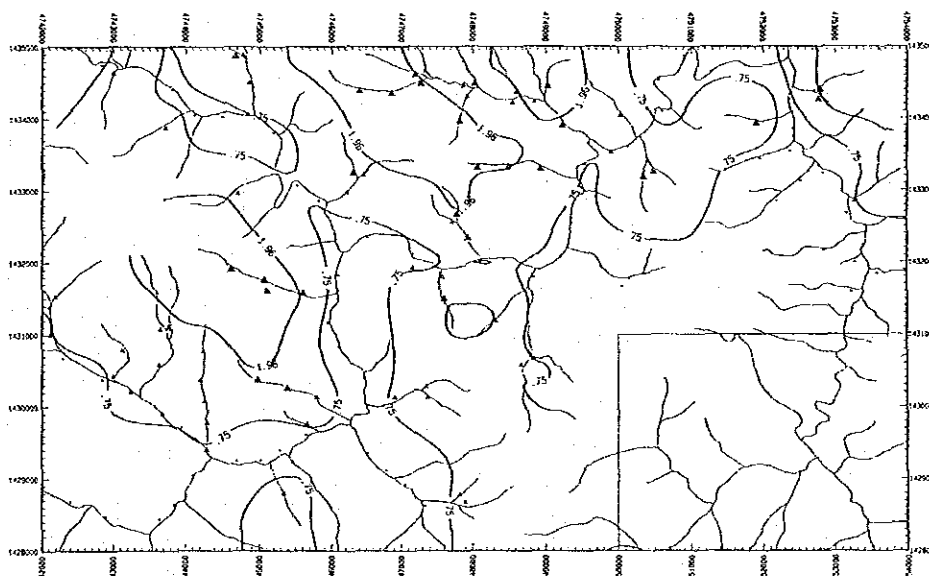
Mn

▲ 1042.000
△ 521.600



Mo

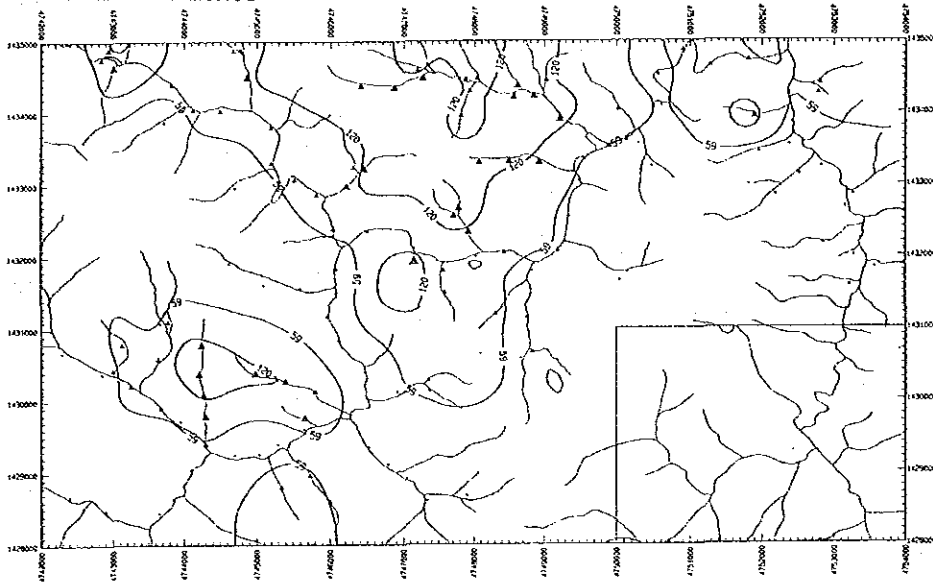
▲ 903



Na

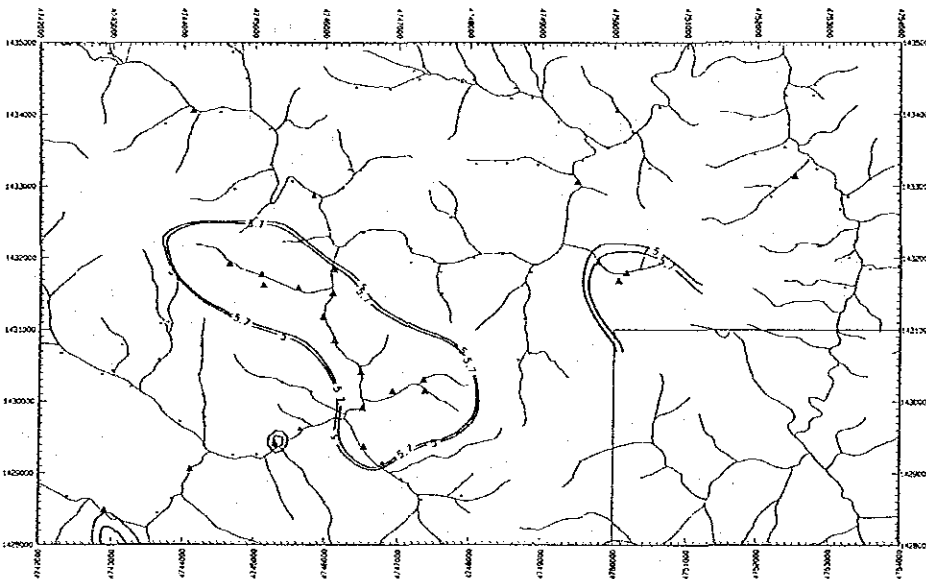
▲ 1.960
△ 750

Stream sediments



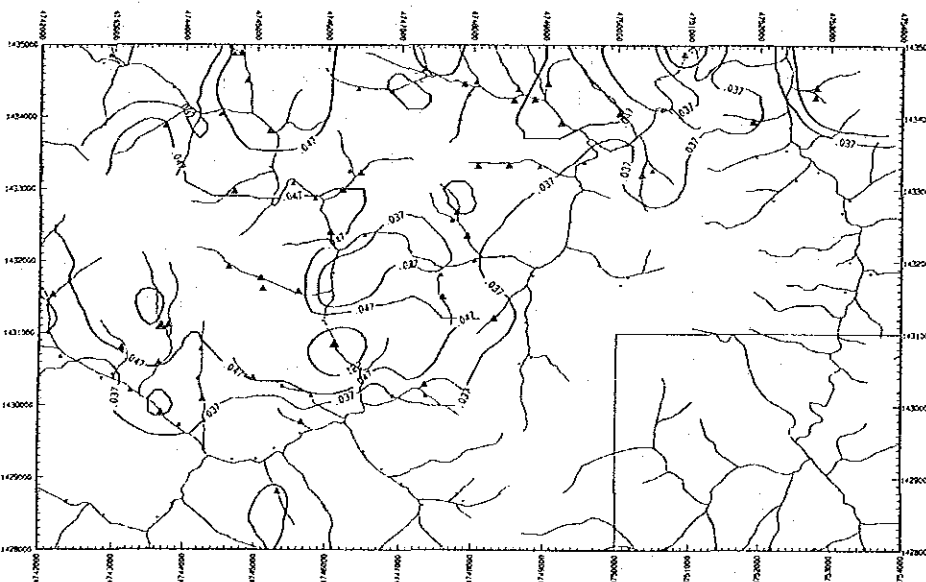
Ni

- ▲ 551.000
- ▲ 120.000
- ▲ 59.000



Pb

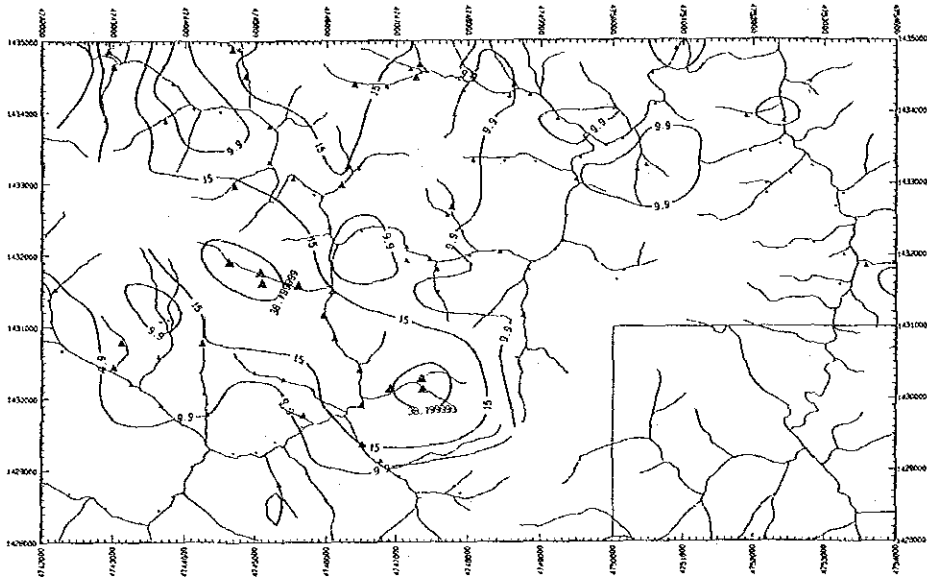
- ▲ 5.700
- ▲ 5.000



S

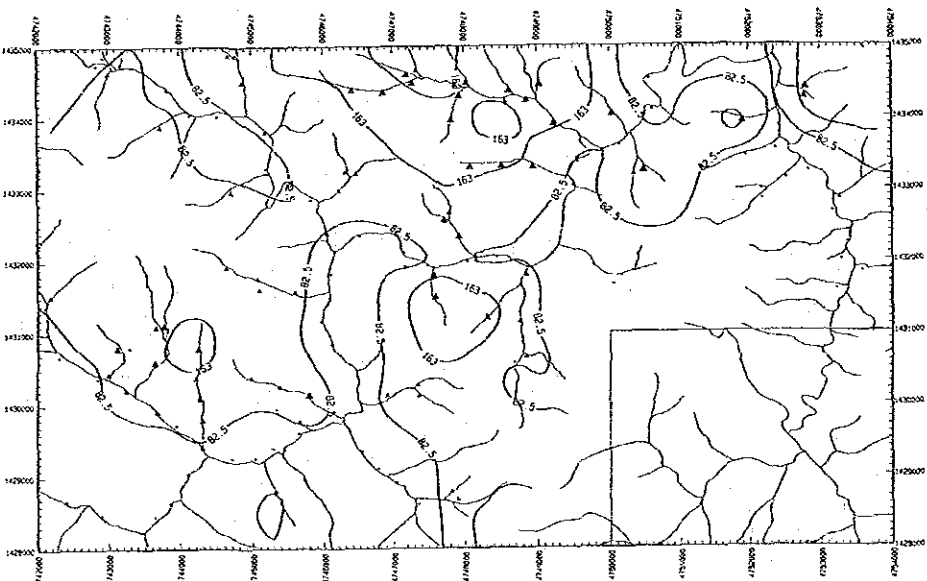
- ▲ 1.22
- ▲ 0.47
- ▲ 0.37

Stream sediments



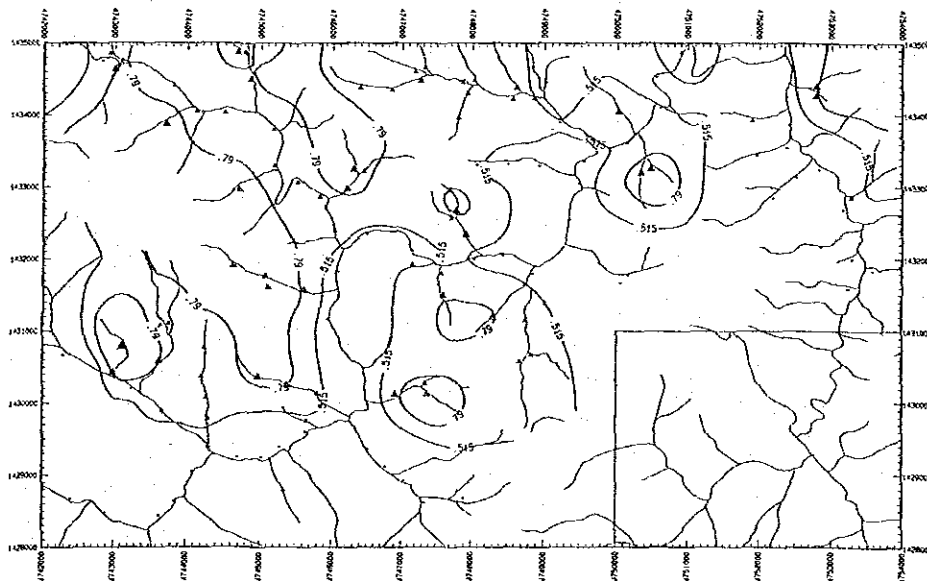
Sb

- ▲ 30.600
- △ 15.000
- 9.900



Sr

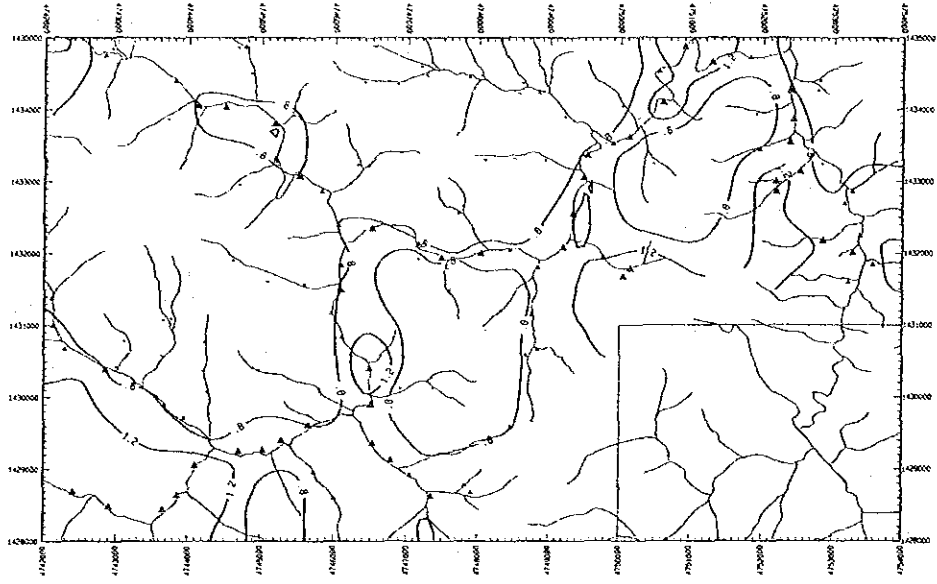
- ▲ 163.000
- 82.500



Ti

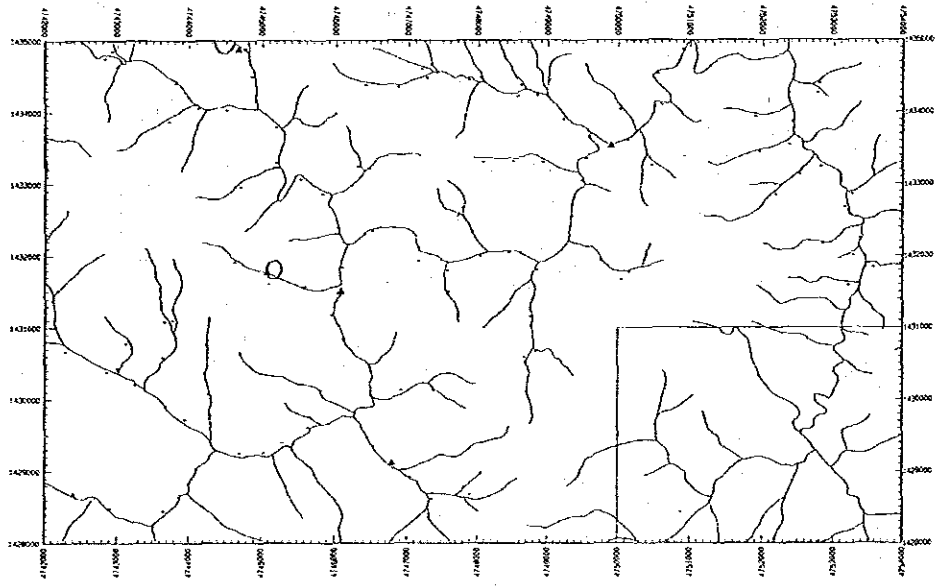
- ▲ 2.729
- △ 190
- 515

Stream sediments



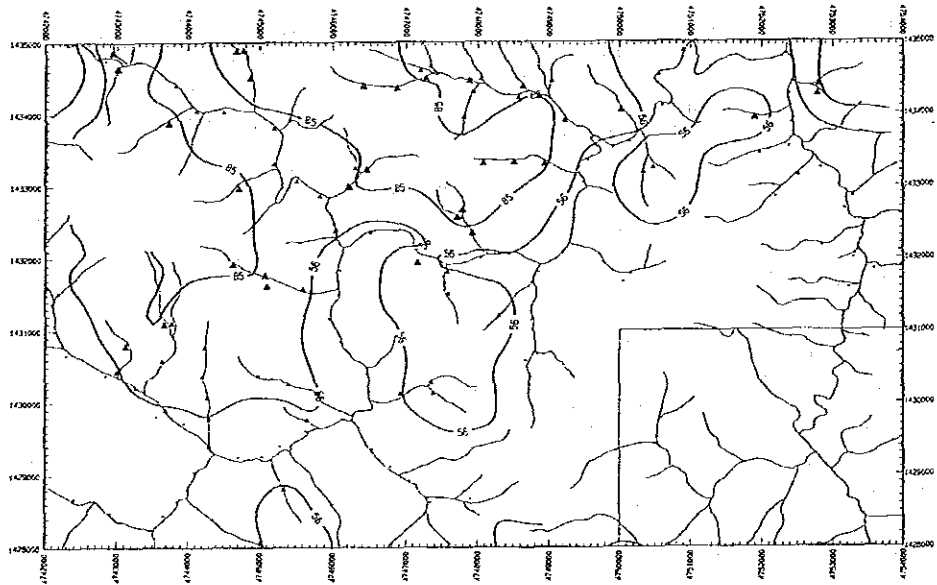
U

▲ 1.200
● .800



W

▲ 3.100



Zn

▲ 25.000
● 56.000

Appendix 30

List of soil geochemical samples
in Area D

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. #1	S. #2	T. #3	H. #4	Vegetation
		N	E										
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	F	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	4765.16	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.	F	C	S	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)

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. #1	S. #2	I. #3	H. #4	Vegetation
		N	E										
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	Gr. 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	C	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)

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. *1	S. *2	T. *3	H. *4	Vegetation
		N	E										
61	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	D.B.	R	C	M	W	Secondary forest
89	GD089	1425.72	4772.25	S. Ulu Bole	---	AS	25	B.	R	C	S	W	Cocoa plantation
90	GD090	1425.27	4772.09	S. Ulu Bole	---	AS	30	B.G.	F	C	S	W	Secondary forest
					---	AS		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)

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. #1	S. #2	T. #3	H. #4	Vegetation
		N	E										
91	GD091	1425.18	4772.57	S. Ulu Bole	—	P.Km	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	1424.57	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: Steep (S), Moderate (M), Flat (F)

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

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

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. #1	S. #2	T. #3	H. #4	Vegetation
		N	E										
121	GDI21	1424.47	4770.26	S. Ulu Bole	—	As	20	B.	R	C	M	W	Secondary forest
122	GDI22	1424.04	4770.25	S. Tingkayu	—	P ₄ Km	30	L.B.	R	C	F	W	Secondary forest
123	GDI23	1424.85	4770.77	S. Ulu Bole	—	As	30	B.	R	C	M	W	Secondary forest
124	GDI24	1424.49	4770.95	S. Ulu Bole	—	P ₄ Km	30	L.B.	R	C	F	W	Cocoa plantation
125	GDI25	1424.73	4771.33	S. Ulu Bole	—	Pr	30	L.B.	R	C	M	W	Cocoa plantation
126	GDI26	1424.27	4771.23	S. Ulu Bole	—	P ₄ Km	30	L.B.	R	C	F	W	Cocoa plantation
127	GDI27	1424.57	4771.80	S. Ulu Bole	—	P ₄ Km	30	B.	R	C	M	W	Cocoa plantation
128	GDI28	1424.12	4771.67	S. Tingkayu	—	P ₄ Km	30	D.R.B.	R	C	F	W	Cocoa plantation
129	GDI29	1424.76	4772.11	S. Ulu Bole	—	P ₄ Km	25	L.B.	M	C	S	W	Secondary forest
130	GDI30	1424.17	4772.20	S. Tingkayu	sandstone	P ₄ Km	30	B.	F	C	M	W	Cocoa plantation
131	GDI31	1424.75	4772.67	S. Ulu Bole	—	P ₄ Km	30	D.B.	M	C	M	W	Cocoa plantation
132	GDI32	1424.06	4772.79	S. Tingkayu	—	P ₄ Km	30	B.	R	C	M	W	Cocoa plantation
133	GDI33	1424.42	4773.12	S. Ulu Bole	—	Gs	30	L.B.	R	C	C	W	Cocoa plantation
134	GDI34	1424.08	4773.37	S. Tingkayu	—	Gs	30	D.B.	M	C	S	W	Secondary forest
135	GDI35	1424.64	4773.89	S. Ulu Bole	—	Q ₂	30	R.B.	R	C	M	W	Secondary forest
136	GDI36	1424.25	4773.84	S. Ulu Bole	peridotite	Pr	30	D.B.	F	C	M	W	Secondary forest
137	GDI37	1424.79	4774.16	S. Ulu Bole	—	Q ₂	30	L.B.	R	C	F	W	Secondary forest
138	GDI38	1424.41	4774.28	S. Ulu Bole	peridotite	Pr	25	D.B.	M	C	M	W	Secondary forest
139	GDI39	1424.83	4774.80	S. Ulu Bole	peridotite	Pr	30	D.B.	M	C	S	W	Secondary forest
140	GDI40	1424.27	4774.85	S. Ulu Bole	peridotite	Pr	20	D.B.	M	C	S	W	Secondary forest
141	GDI41	1423.53	4765.12	S. Tingkayu	—	As	25	B.	F	C	S	W	Secondary forest
142	GDI42	1423.05	4765.18	S. Tingkayu	—	As	35	B.	R	C	M	W	Secondary forest
143	GDI43	1423.78	4765.59	S. Tingkayu	—	As	30	B.	F	C	S	W	Secondary forest
144	GDI44	1423.22	4765.68	S. Tingkayu	—	As	25	B.	F	C	S	W	Secondary forest
145	GDI45	1423.32	4766.12	S. Tingkayu	—	As	25	B.	F	C	S	W	Secondary forest
146	GDI46	1423.72	4766.19	S. Tingkayu	—	As	25	B.	F	C	S	W	Secondary forest
147	GDI47	1423.07	4766.57	S. Tingkayu	—	As	30	Y.B.	R	C	M	W	Secondary forest
148	GDI48	1423.76	4766.75	S. Tingkayu	—	As	30	D.B.	R	C	F	W	Secondary forest
149	GDI49	1423.74	4767.28	S. Tingkayu	—	Q ₂	30	B.	R	C	M	W	Cocoa plantation
150	GDI50	1423.24	4767.08	S. Tingkayu	—	As	30	B.	R	C	F	W	Secondary forest

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

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

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

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

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. #1	S. #2	T. #3	H. #4	Vegetation
		N	E										
151	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 ₄ Km	30	B.	R	C	M	W	Cocoa plantation
156	GD156	1423.15	4768.77	S. Tingkayu	—	P ₄ Km	30	Y.B.	R	C	M	W	Secondary forest
157	GD157	1423.62	4769.03	S. Tingkayu	—	P ₄ Km	30	B.	R	C	M	W	Secondary forest
158	GD158	1423.16	4769.37	S. Tingkayu	—	P ₄ Km	30	B.	R	C	M	W	Secondary forest
159	GD159	1423.85	4769.76	S. Tingkayu	—	P ₄ Km	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 ₄ Km	20	B.	R	C	M	W	Secondary forest
163	GD163	1423.89	4770.82	S. Tingkayu	—	P ₄ Km	30	B.	R	C	M	W	Secondary forest
164	GD164	1423.42	4770.77	S. Tingkayu	—	P ₄ Km	25	Y.B.	R	C	M	D	Secondary forest
165	GD165	1423.04	4770.73	S. Tingkayu	—	P ₄ Km	30	L.B.	F	S	M	W	Secondary forest
166	GD166	1423.78	4771.36	S. Tingkayu	—	P ₄ Km	30	B.	R	C	M	W	Secondary forest
167	GD167	1423.32	4771.25	S. Tingkayu	—	P ₄ Km	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 ₄ Km	20	B.	R	C	M	W	Secondary forest
170	GD170	1423.73	4772.40	S. Tingkayu	—	P ₄ Km	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 ₄ Km	30	B.	R	C	M	W	Cocoa plantation
174	GD174	1423.71	4773.13	S. Tingkayu	sandstone	P ₄ Km	30	Y.B.	F	C	M	W	Cocoa plantation
175	GD175	1423.01	4773.26	S. Tingkayu	—	P ₄ Km	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 ₄ Km	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 ₄ Km	30	B.	F	C	S	W	Cocoa plantation
180	GD180	1423.85	4774.88	S. Tingkayu	—	P ₄ Km	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		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. #1	S. #2	T. #3	H. #4	Vegetation
		N	E										
181	GD181	1423.16	4774.80	S. Tingkayu	sandstone	P ₄ Km	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 ₄ Km	35	B.	F	C	M	W	Secondary forest
185	GD185	1422.24	4765.87	S. Tingkayu	tfc. sandstone	P ₄ Km	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 ₄ Km	30	B.	F	C	M	W	Primary forest
188	GD188	1422.58	4766.84	S. Tingkayu	—	P ₄ Km	30	Y.B.	R	C	M	W	Secondary forest
189	GD189	1422.11	4766.88	S. Tingkayu	—	P ₄ Km	30	Y.B.	R	C	M	W	Secondary forest
190	GD190	1422.88	4767.08	S. Tingkayu	—	P ₄ Km	30	Y.B.	R	C	M	W	Secondary forest
191	GD191	1422.52	4767.40	S. Tingkayu	—	P ₄ Km	30	B.	R	C	M	W	Secondary forest
192	GD192	1422.07	4767.62	S. Tingkayu	—	P ₄ Km	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	F	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 ₄ Km	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 ₄ Km	30	Y.B.	R	C	F	W	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 ₄ Km	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.	R	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	F	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	4771.89	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)

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. #1	S. #2	T. #3	H. #4	Vegetation
		N	E										
211	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

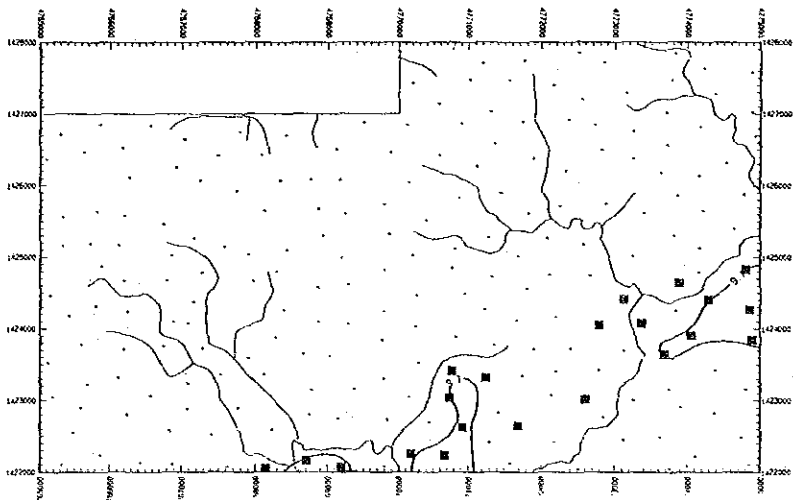
Analytical results of soil
geochemical samples in Area D

List of Geochemical Analysis(5)

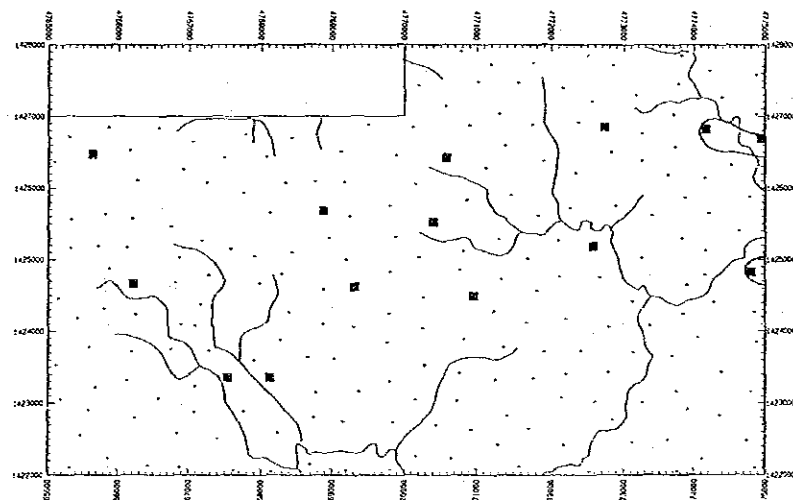
Ser. No.	Sample No.	Location (km)	X-coord	Y-coord	As ppm	Au ppb	Ba ppm	Co ppm	Cr ppm	Cu ppm	Hg ppb	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	Pb ppm	S %	Sb ppm	Sr ppm	Ti %	U ppm	W ppm	Zn ppm
201	GD201	4769.800	1422.080	16	1	186	107	659	48	64	.77	.97	4276	1	.06	140	2	.021	30.2	32	4.76	1.8	2	171	
202	GD202	4770.170	1422.260	16	1	119	14	143	28	25	.84	.56	5	1	.07	86	7	.012	2	32	.43	2.8	2	52	
203	GD203	4770.440	1422.700	16	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	8903	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	6598	33	146	.01	7.77	4512	1	.02	4623	2	.018	24.6	5	.07	.2	2	180	
207	GD207	4771.420	1422.630	8	3	34	312	8419	77	228	.01	.16	2294	1	.10	3986	2	.052	47.5	5	.15	.8	2	184	
208	GD208	4771.560	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	1597	35	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	.62	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

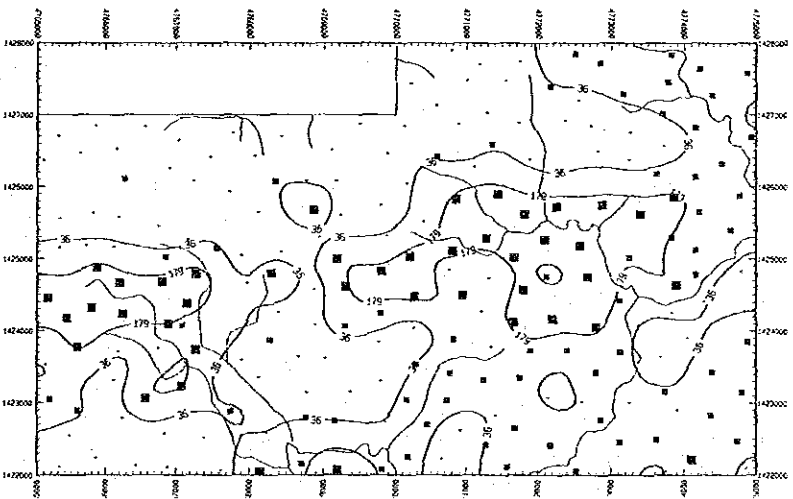
Distribution map of elements
in Area D



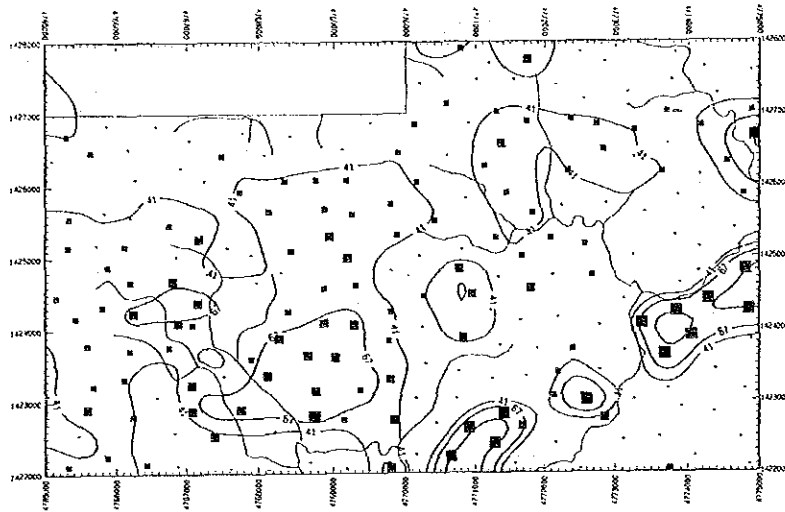
As
 ■ 9.100



Au
 ■ 5.400

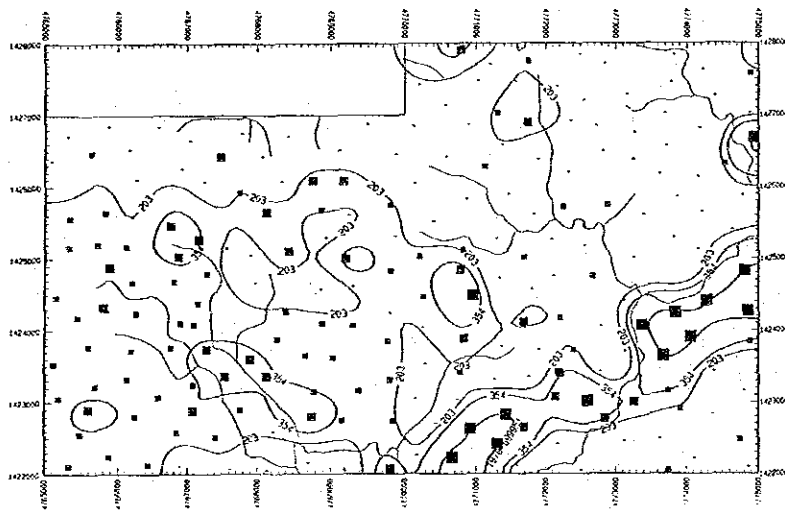


Ba
 ■ 179.000
 ■ 35.000



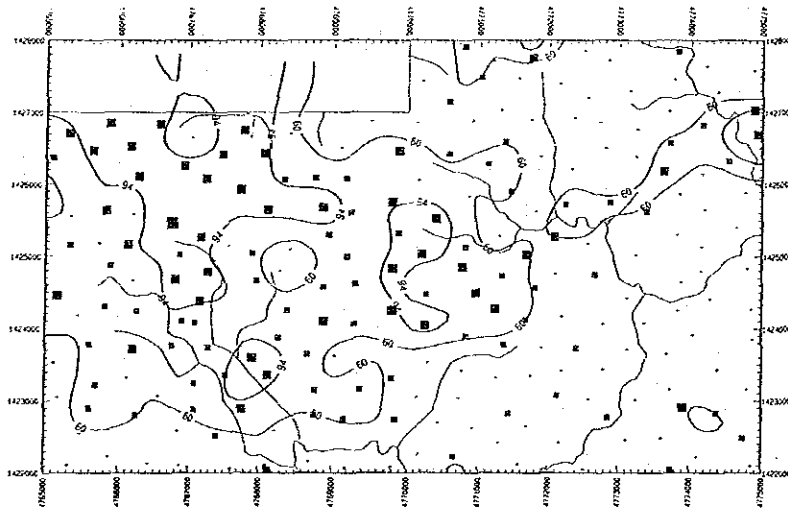
Co

- 150,000
- 67,000
- 41,000



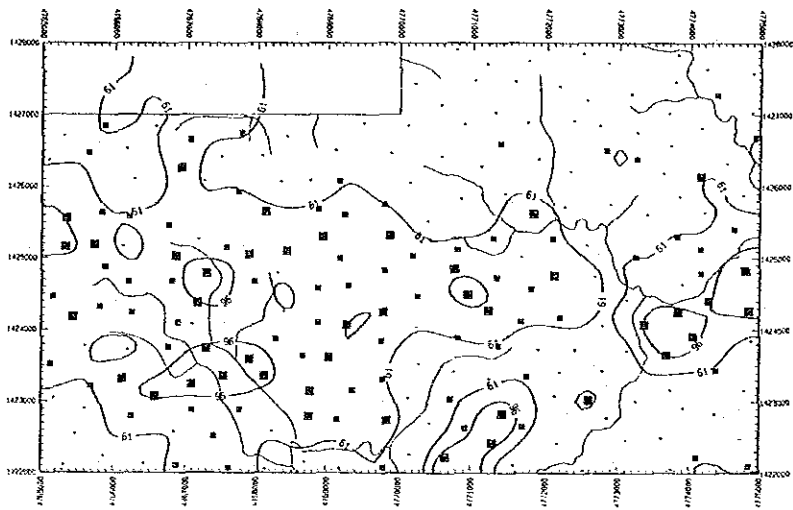
Cr

- 1978,000
- 354,000
- 823,000



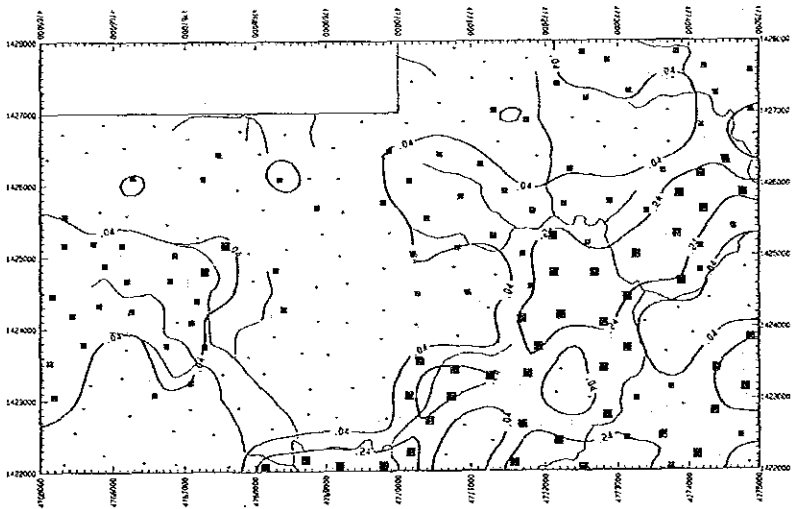
Cu

- 378,500
- 54,000
- 60,000



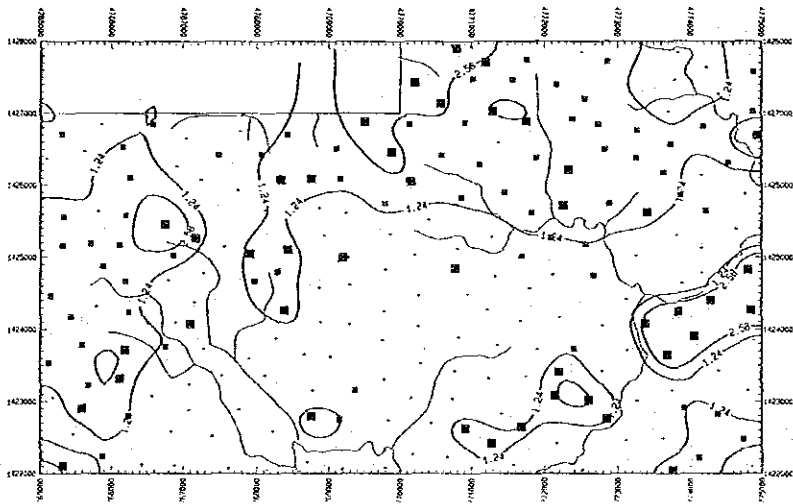
Hg

■ 95.000
□ 51.000



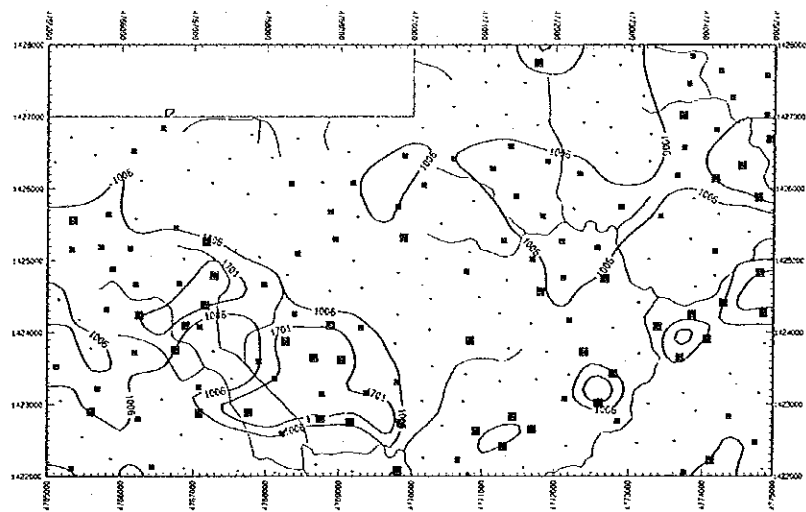
K

■ 0.240
□ 0.040



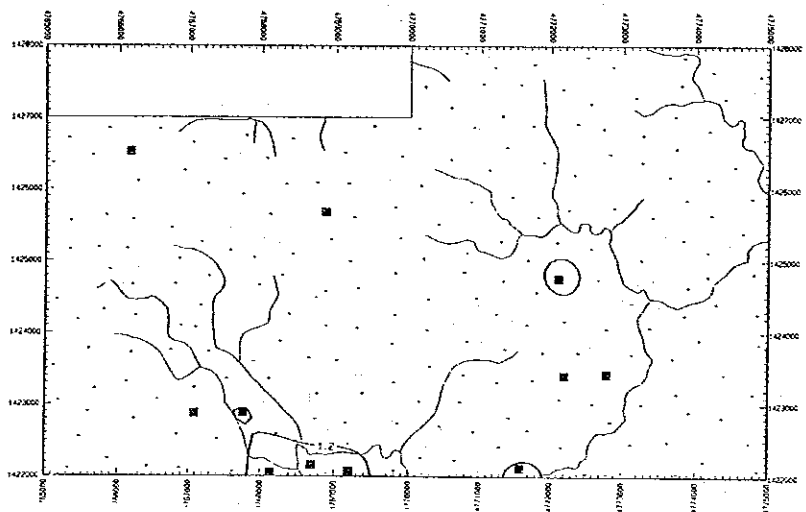
Mg

■ 2.580
□ 1.240



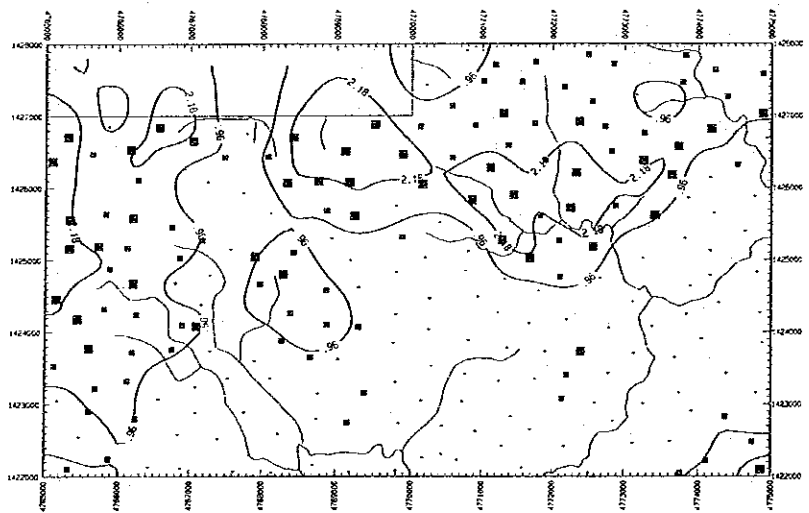
Mn

■ 1101,000
● 1065,000



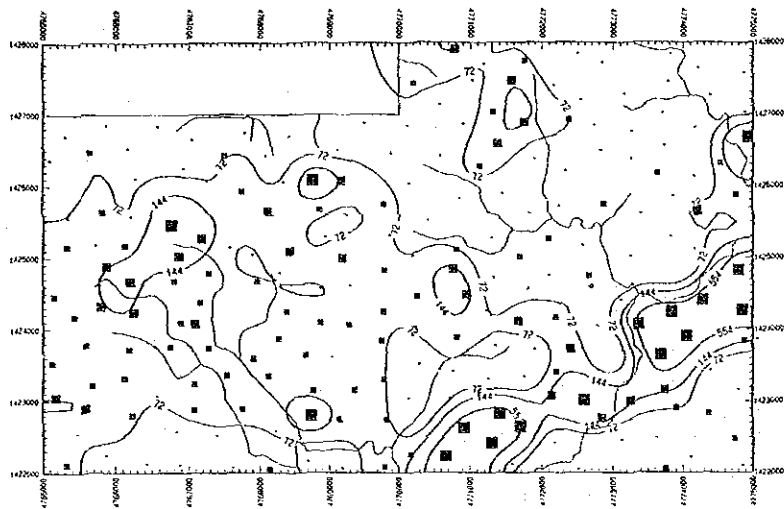
Mo

■ 1,200



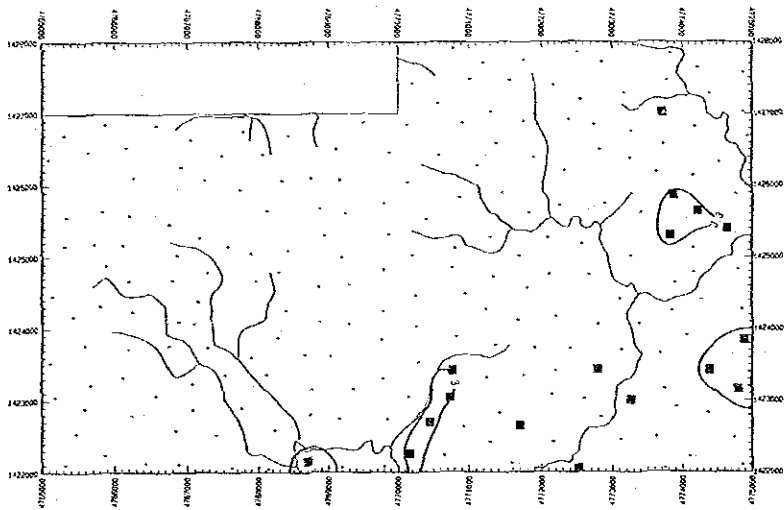
Na

■ 2,180
● 960



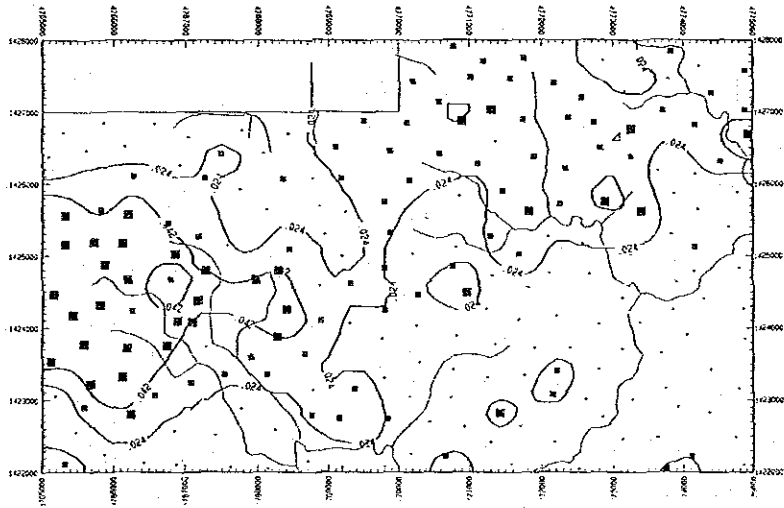
Ni

554,000
144,000
72,000



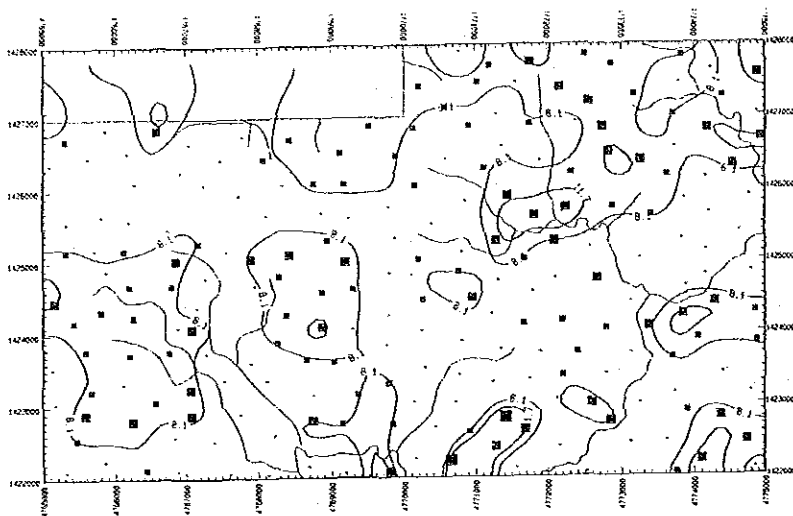
Pb

3.300



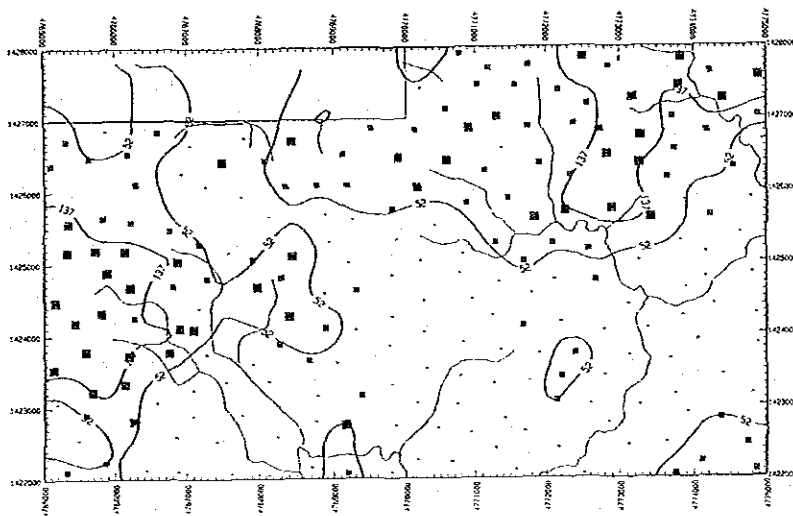
S

0.42
0.24



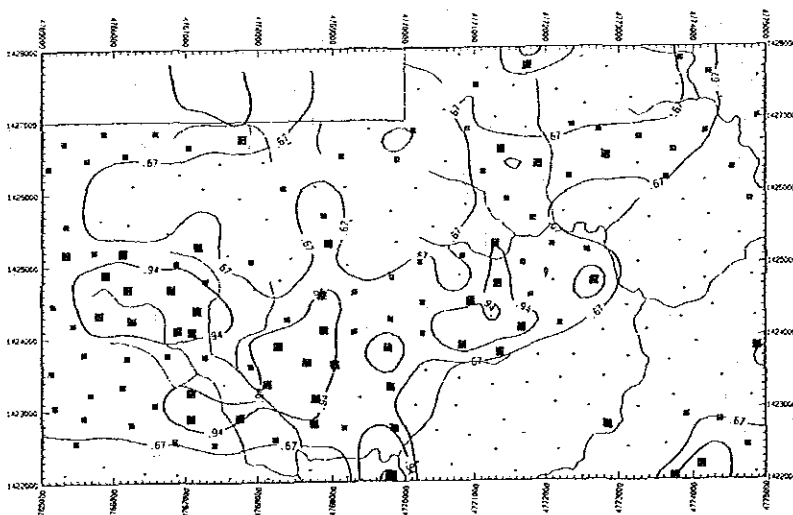
Sb

■ 35.500
 ■ 11.700
 ■ 8.100



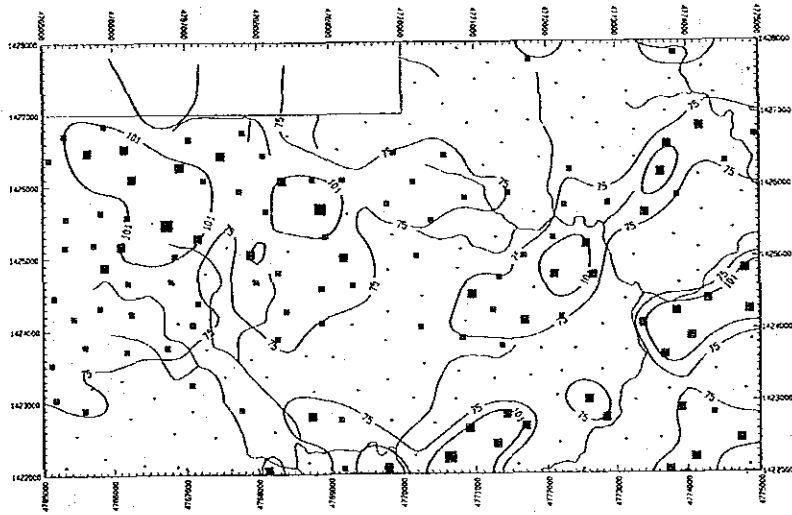
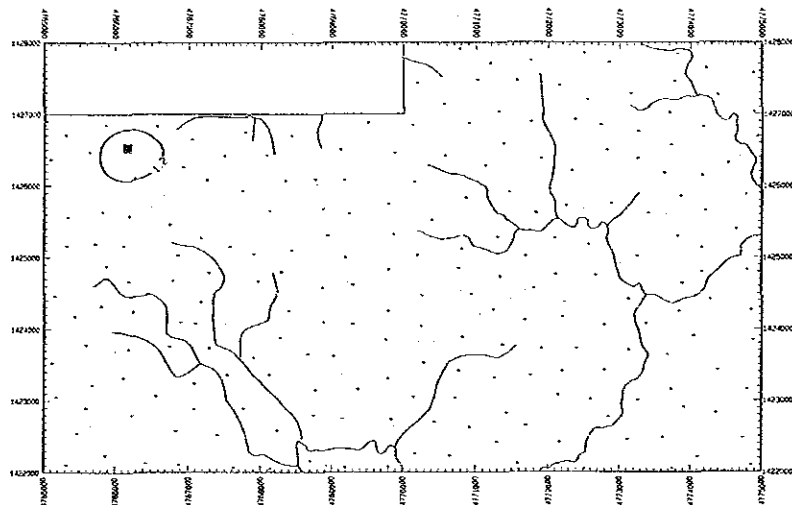
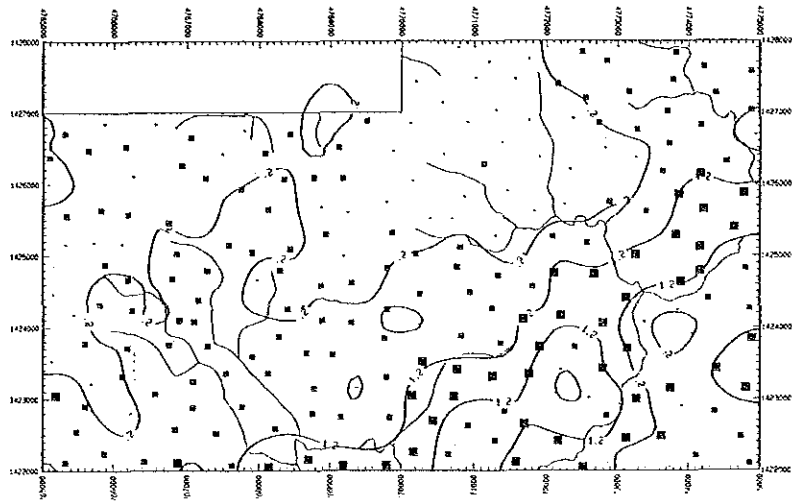
Sr

■ 137.000
 ■ 52.000



Ti

■ 2.504
 ■ .540
 ■ .670



Appendix 33

List of soil geochemical samples
in Area E

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. #1	S. #2	T. #3	H. #4	Vegetation
		N	E										
1	PE001	1403.58	4774.51	S. Tingkayu	—	P ₄ Km	40	R. B.	R	C	M	W	Secondary forest
2	PE002	1403.13	4774.64	S. Tingkayu	and. boulder	P ₄ Km	40	R. B.	R	C	F	W	Secondary forest
3	PE003	1403.62	4775.09	S. Tingkayu	—	P ₄ Km	40	R. Y.	R	C	F	W	Secondary forest
4	PE004	1403.80	4775.45	S. Tingkayu	—	P ₄ Km	40	R. B.	R	C	F	W	Secondary forest
5	PE005	1403.21	4775.56	S. Tingkayu	—	P ₄ Km	40	Y. B.	R	C	F	W	Secondary forest
6	PE006	1403.48	4775.87	S. Tingkayu	—	P ₄ Km	40	L. B.	R	C	M	W	Secondary forest
7	PE007	1403.75	4776.32	S. Tingkayu	—	P ₄ Km	40	Y.	R	C	M	W	Secondary forest
8	PE008	1403.71	4776.91	S. Tingkayu	—	P ₄ Km	40	Y. R.	R	C	F	W	Secondary forest
9	PE009	1403.23	4776.20	S. Tingkayu	—	P ₄ Km	40	L. B.	R	C	F	W	Secondary forest
10	PE010	1403.42	4776.85	S. Tingkayu	—	P ₄ Km	40	Y. R.	R	C	F	W	Secondary forest
11	PE011	1403.29	4777.19	S. Tingkayu	—	P ₄ Km	40	R. Y.	R	C	F	W	Secondary forest
12	PE012	1402.73	4774.70	S. Tingkayu	and. boulder	P ₄ Km	40	L. B.	R	C	M	W	Secondary forest
13	PE013	1402.81	4775.37	S. Tingkayu	and. boulder	P ₄ Km	40	Y. B.	R	C	F	W	Secondary forest
14	PE014	1402.49	4775.54	S. Tingkayu	—	P ₄ Km	30	Y. B.	F	C	F	W	Secondary forest
15	PE015	1402.33	4775.19	S. Tingkayu	and. boulder	P ₄ Km	40	D. B.	R	S	F	W	Secondary forest
16	PE016	1402.09	4775.79	S. Tingkayu	—	P ₄ Km	40	Y. B.	R	C	F	W	Secondary forest
17	PE017	1402.88	4776.30	S. Tingkayu	—	P ₄ Km	40	Y.	R	C	M	W	Secondary forest
18	PE018	1402.67	4776.59	S. Tingkayu	—	P ₄ Km	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 ₄ Km	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 ₄ Km	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	F	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)

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. *1	S. *2	T. *3	H. *4	Vegetation
		N	E										
31	PE031	1401.78	4777.20	S. Tingkayu	alt. andesite	An ₁	40	Y.B.	R	C	M	D	Secondary forest
32	PE032	1401.45	4777.33	S. Tingkayu	agglomerate	An ₁	40	Y.B.	F	C	M	W	Secondary forest
33	PE033	1401.80	4777.82	S. Tingkayu	—	An ₁	40	Y.B.	R	C	M	W	Secondary forest
34	PE034	1401.12	4777.38	S. Tingkayu	—	An ₁	30	Y.B.	F	C	M	W	Secondary forest
35	PE035	1401.56	4778.06	S. Tingkayu	—	An ₁	40	Y.B.	R	C	M	W	Secondary forest
36	PE036	1401.20	4778.26	S. Tingkayu	—	An ₁	40	Y.B.	R	C	M	W	Secondary forest
37	PE037	1400.87	4775.68	S. Tingkayu	and. boulder	An ₁	40	Y.B.	R	C	F	W	Secondary forest
38	PE038	1400.56	4776.10	S. Tingkayu	alt. andesite	An ₁	40	D.B.	R	C	M	W	Secondary forest
39	PE039	1400.47	4776.47	S. Tingkayu	agglomerate	An ₁	40	Y.B.	F	C	M	W	Secondary forest
40	PE040	1400.71	4776.84	S. Tingkayu	sili. andesite	An ₁	40	D.B.	F	C	S	W	Secondary forest
41	PE041	1400.16	4776.15	S. Tingkayu	and. boulder	An ₁	40	Y.B.	R	C	M	W	Secondary forest
42	PE042	1400.60	4777.29	S. Tingkayu	—	An ₁	40	Y.B.	R	C	M	W	Secondary forest
43	PE043	1400.64	4777.68	S. Tingkayu	—	An ₁	40	Y.B.	F	S	M	D	Secondary forest
44	PE044	1400.17	4777.39	S. Tingkayu	—	An ₁	30	Y.B.	R	C	M	W	Secondary forest
45	PE045	1400.18	4777.81	S. Tingkayu	andesite	An ₁	30	Y.B.	F	C	S	W	Secondary forest
46	PE046	1400.72	4778.38	S. Tingkayu	—	An ₁	40	D.B.	R	C	M	W	Secondary forest
47	PE047	1400.32	4778.24	S. Tingkayu	—	An ₁	30	Y.B.	R	C	M	W	Secondary forest
48	PE048	1400.16	4778.56	S. Tingkayu	—	An ₁	40	Y.B.	R	C	M	W	Secondary forest
49	PE049	1399.87	4776.55	S. Tingkayu	agglomerate	An ₁	40	Y.B.	F	C	S	W	Secondary forest
50	PE050	1399.52	4776.33	S. Tingkayu	alt. andesite	An ₁	40	R.B.	R	C	M	W	Secondary forest
51	PE051	1399.59	4776.76	S. Tingkayu	sili. andesite	An ₁	40	D.B.	F	C	S	W	Secondary forest
52	PE052	1399.39	4777.19	S. Tingkayu	sili. andesite	An ₁	40	Y.B.	F	C	M	W	Secondary forest
53	PE053	1399.12	4777.32	S. Tingkayu	agglomerate	An ₁	40	Y.B.	F	C	M	W	Secondary forest
54	PE054	1399.71	4777.89	S. Tingkayu	—	An ₁	40	Y.B.	R	C	M	W	Secondary forest
55	PE055	1399.36	4777.83	S. Tingkayu	—	An ₁	40	Y.B.	R	C	M	W	Secondary forest
56	PE056	1399.81	4778.24	S. Tingkayu	and. w/pyrite	An ₁	40	Y.B.	R	C	M	W	Secondary forest
57	PE057	1399.83	4778.69	S. Tingkayu	—	An ₁	40	Y.B.	R	C	M	W	Secondary forest
58	PE058	1399.26	4778.31	S. Tingkayu	andesite	An ₁	40	Y.B.	R	C	M	W	Secondary forest
59	PE059	1399.41	4778.78	S. Tingkayu	andesite	An ₁	40	Y.B.	R	C	M	W	Secondary forest
60	PE060	1399.39	4779.05	S. Tingkayu	—	An ₁	30	R.B.	F	C	M	W	Secondary forest

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

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. #1	S. #2	T. #3	H. #4	Vegetation
		N	E										
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.B.	R	C	M	W	Secondary forest
66	PE066	1398.40	4778.11	S. Tingkayu	---	An ₁	40	Y.B.	R	C	M	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)

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

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

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

Appendix 34

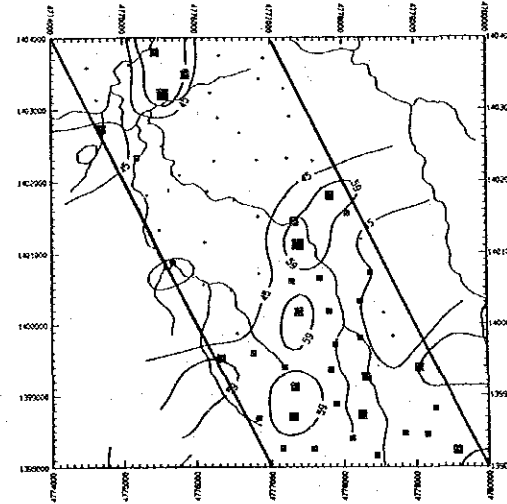
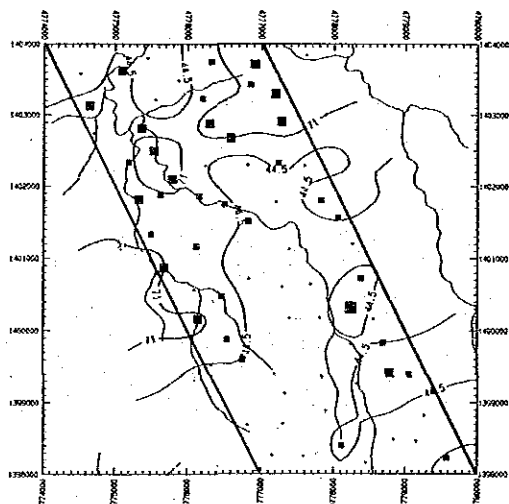
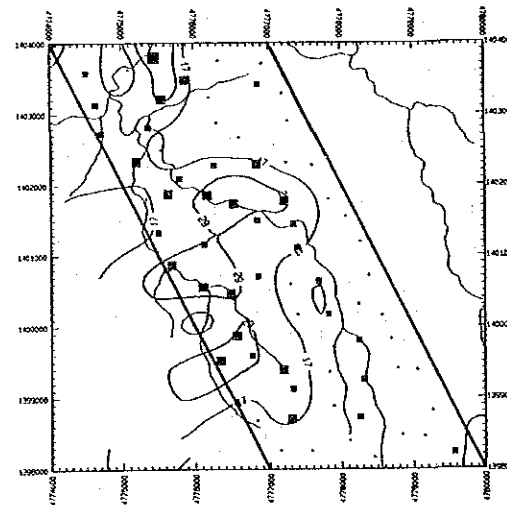
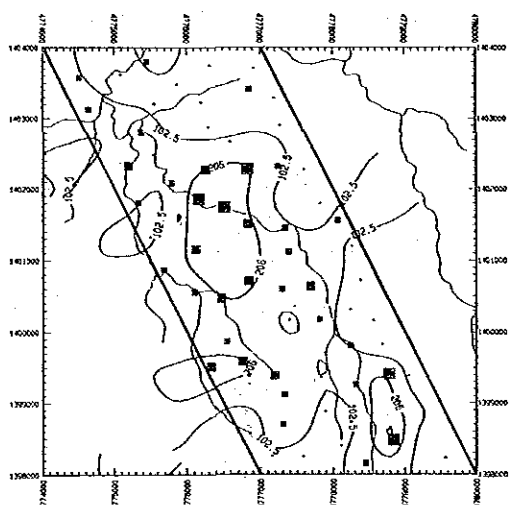
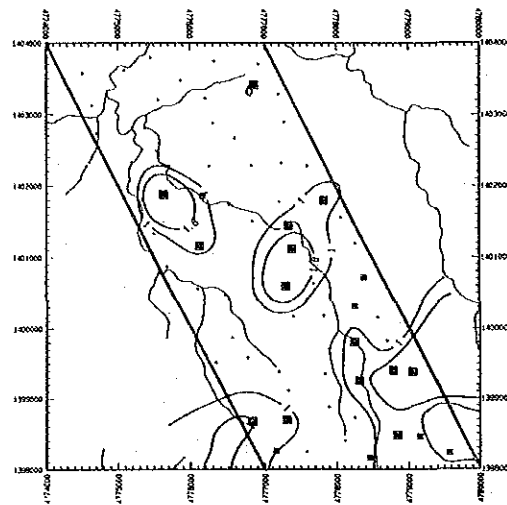
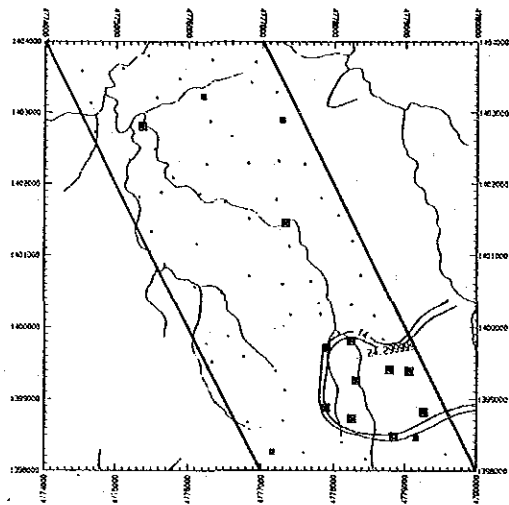
Analytical results of soil
geochemical samples in Area E

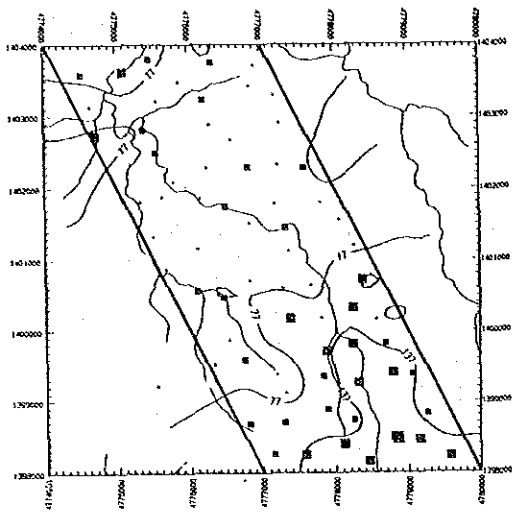
List of Geochemical Analysis (2)

Ser. No.	Sample No.	Location (km)	X-coord	Y-coord	As ppm	Au pbb	Ba ppm	Co ppm	Cr ppm	Cu ppm	Hg pbb	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	>	260	27	51	55	78	.37	.80	692	3	.24	21	>	.067	8.6	60	.71	1.8	>	73	
52	PE052	4777.190	1399.390	1	>	206	36	29	57	46	.39	.97	215	1	.31	15	>	.083	8.0	78	.61	1.8	>	71	
53	PE053	4777.320	1399.120	1	>	131	27	42	67	47	.21	.72	6	1	.21	19	>	.061	7.2	47	.85	1.8	>	66	
54	PE054	4777.890	1399.710	41	>	87	8	35	51	150	.04	.23	5	3	.20	11	12	.028	3.5	27	.93	3.2	>	51	
55	PE055	4777.830	1399.360	6	>	90	11	44	57	105	.07	.38	5	1	.20	15	12	.022	7.3	22	1.06	2.8	>	96	
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	>	69	
57	PE057	4778.690	1399.830	2	>	55	14	50	28	134	.02	.66	5	1	.12	7	>	.028	5.9	8	.73	1.2	>	50	
58	PE058	4778.310	1399.260	1568	2	199	17	44	61	194	.06	.53	33	3	.16	15	243	.052	7.1	25	1.15	2.6	>	65	
59	PE059	4778.780	1399.410	6382	3	406	1	74	40	199	.14	.24	5	12	.11	10	1253	.428	15.0	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	1399.680	1	>	71	12	31	52	122	.03	.48	5	2	.10	12	5	.024	4.4	4	.95	1.2	>	61	
62	PE062	4777.150	1399.260	15	1	98	5	28	53	105	.03	.10	5	5	.15	12	5	.044	4.6	5	.73	2.4	>	56	
63	PE063	4777.300	1399.880	32	2	158	39	38	79	131	.02	.96	1939	1	.11	15	6	.026	5.6	7	.92	1.4	>	79	
64	PE064	4777.890	1399.880	32	>	98	8	38	52	123	.04	.37	5	2	.12	14	11	.022	10.6	11	.94	2.4	>	63	
65	PE065	4777.580	1399.250	1	>	78	2	30	48	147	.03	.10	5	1	.12	10	5	.031	4.6	3	.88	2.4	>	51	
66	PE066	4778.110	1399.400	1	>	88	10	61	45	162	.04	.07	5	1	.13	12	2	.024	2	12	1.02	2.2	>	50	
67	PE067	4778.250	1399.730	512	1	50	26	44	62	100	.07	.55	5	1	.17	23	60	.017	10.2	8	.76	1.8	>	63	
68	PE068	4778.450	1399.160	1	1	115	12	35	57	137	.12	.37	5	1	.17	14	2	.104	7	33	.69	2.4	>	57	
69	PE069	4778.840	1399.480	41	2	1274	3	39	49	254	.11	.08	5	3	.38	12	4	.070	6.4	54	1.06	2.4	>	58	
70	PE070	4779.150	1399.460	14	1	46	4	34	49	193	.01	.08	5	1	.12	12	2	.044	5.8	28	.80	2.0	>	35	
71	PE071	4779.260	1399.820	31	1	101	16	31	46	96	.01	.16	35	1	.12	11	3	.044	2	47	.59	1.8	>	52	
72	PE072	4779.570	1399.230	1	1	80	17	48	59	162	.01	.17	336	1	.14	17	2	.033	4.2	13	.94	1.2	>	69	

Appendix 35

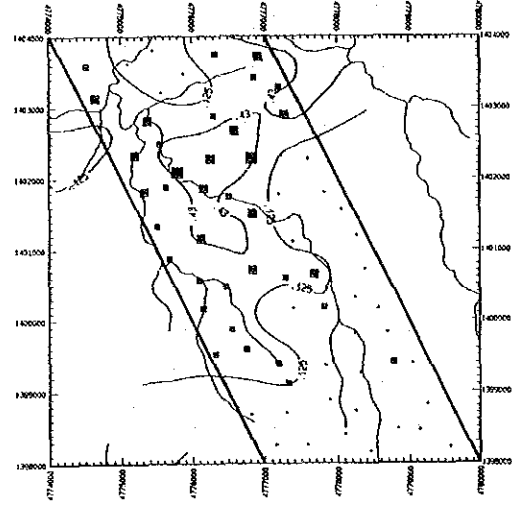
Distribution map of elements
in Area E





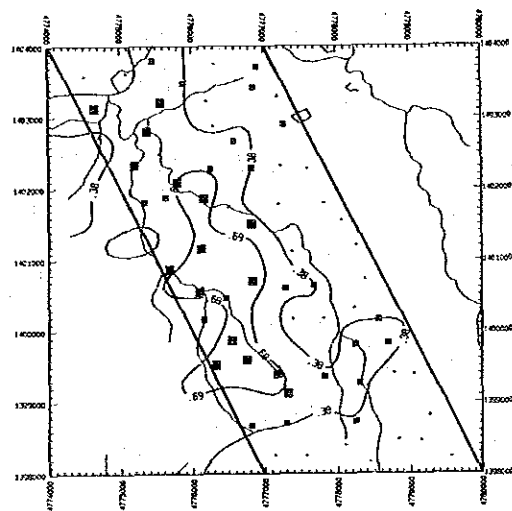
Hg

■ 289,000
 ■ 137,000
 ■ 77,000



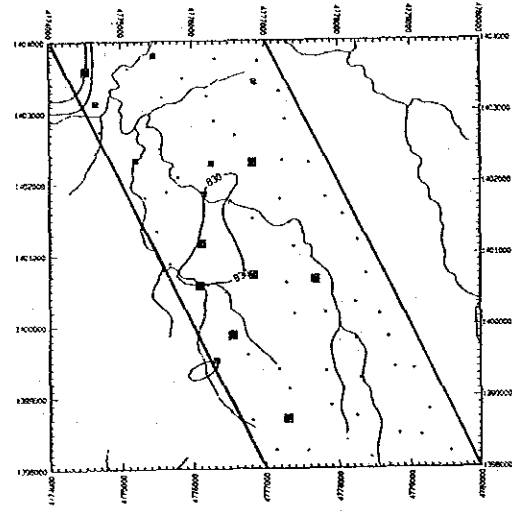
K

■ 915
 ■ 430
 ■ 125



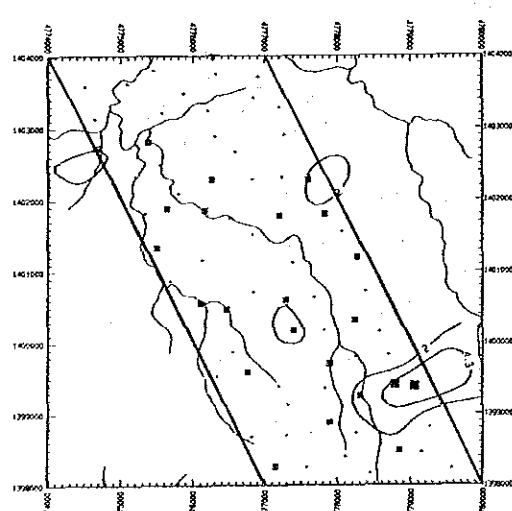
Mg

■ 690
 ■ 380



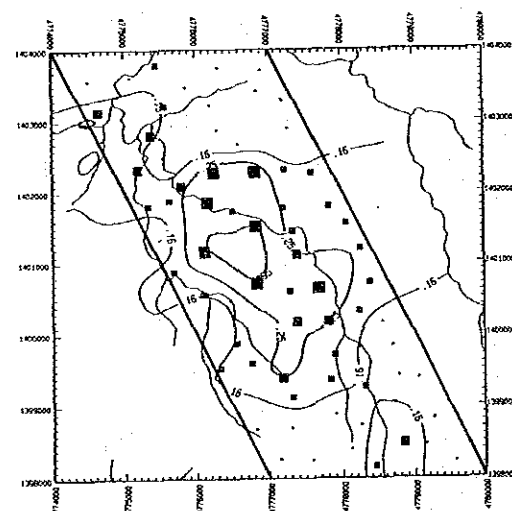
Mn

■ 1576.300
 ■ 630.000



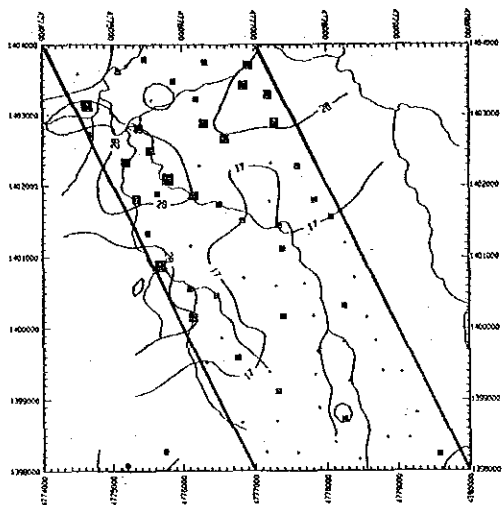
Mo

■ 4.300
 ■ 2.000



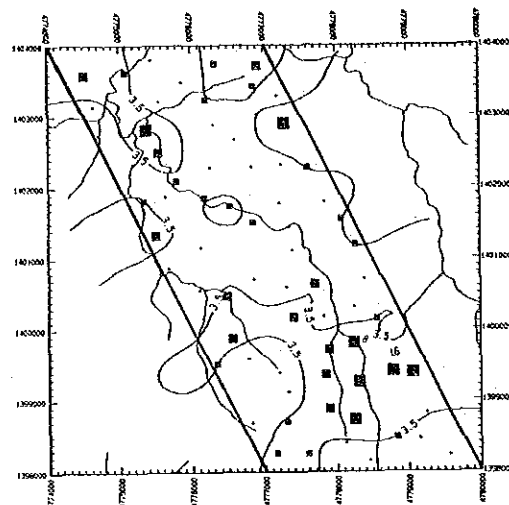
Na

■ .395
 ■ .250
 ■ .150



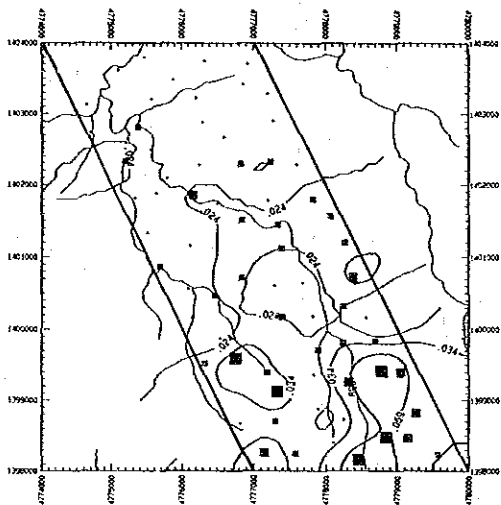
Ni

■ 79.500
□ 28.000
• 17.000



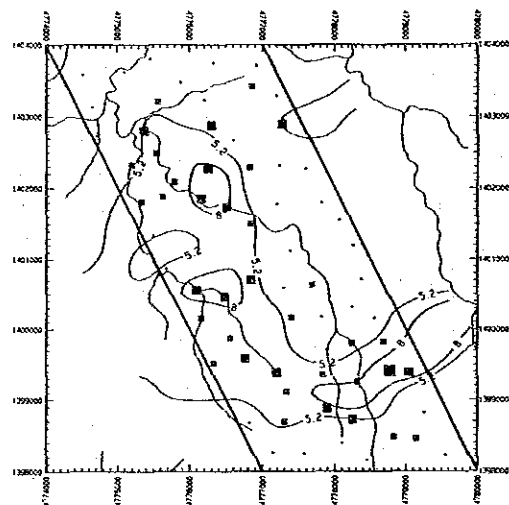
Pb

■ 16.000
□ 6.000
• 3.500



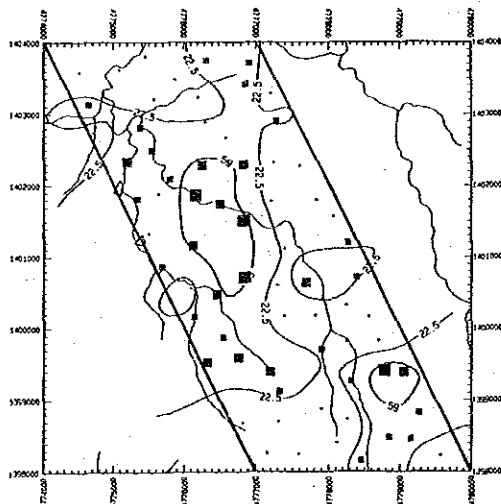
S

■ .058
□ .034
• .024



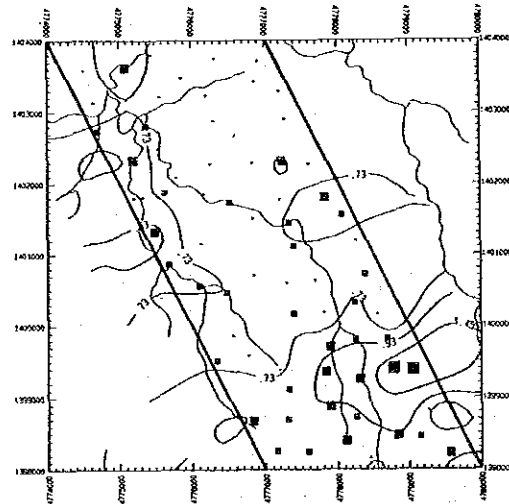
Sb

■ 14.900
□ 9.000
• 5.200



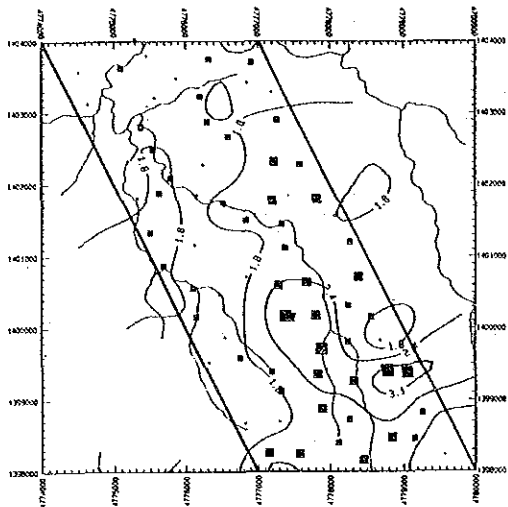
Sr

■ 111.000
□ 59.000
• 22.500

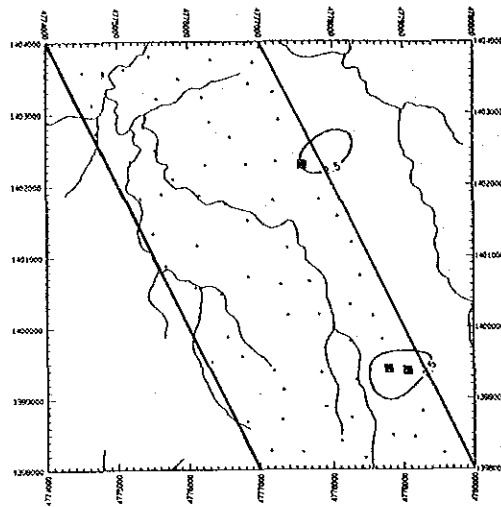


Ti

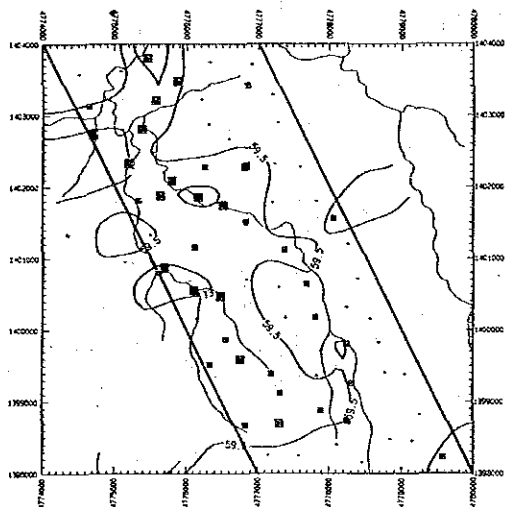
■ 1.405
□ .999
• .730



U



W



Zn



Appendix 36

List of soil geochemical samples
in Area F

Area: Tawau Hill Area (Area F)

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. #1	S. #2	T. #3	H. #4	Vegetation
		N	E										
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	---	Baz	40	Y.B.	R	C	S	W	Oil palm plant.
14	PF014	1387.52	4773.87	Tawau North	---	An ₁	40	B.	F	C	S	W	Cocoa plantation
15	PF015	1387.73	4774.32	Tawau North	---	An ₁	40	Y.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	---	Baz	40	D.B.	R	C	M	W	Cocoa plantation
28	PF028	1386.93	4772.91	Tawau North	---	Baz	40	Y.B.	R	C	M	W	Oil palm plant.
29	PF029	1386.32	4772.70	Tawau North	---	Baz	40	Y.B.	R	C	M	W	Cocoa plantation
30	PF030	1386.37	4773.60	Tawau North	---	Baz	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		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. #1	S. #2	T. #3	H. #4	Vegetation
		N	E										
31	PF031	1386.60	4774.23	Tawau North	—	An1	40	L.B.	R	C	M	W	Cocoa plantation
32	PF032	1386.23	4774.38	Tawau North	—	An1	40	D.B.	F	C	M	W	Cocoa plantation
33	PF033	1386.57	4775.09	Tawau North	—	An1	40	Y.B.	R	C	M	W	Primary forest
34	PF034	1386.74	4775.81	Tawau North	—	An1	40	Y.B.	F	C	M	W	Primary forest
35	PF035	1386.49	4775.47	Tawau North	—	An1	40	Y.B.	F	C	F	D	Primary forest
36	PF036	1386.17	4775.35	Tawau North	—	An1	40	Y.B.	R	C	F	W	Primary forest
37	PF037	1386.28	4776.14	Tawau North	—	An1	40	Y.B.	F	C	S	W	Primary forest
38	PF038	1386.68	4776.92	Tawau North	—	An1	40	Y.B.	R	C	M	W	Primary forest
39	PF039	1386.15	4776.78	Tawau North	—	An1	40	Y.B.	R	C	M	W	Primary forest
40	PF040	1386.70	4777.65	Tawau North	—	An1	40	L.B.	R	C	M	W	Primary forest
41	PF041	1386.11	4777.40	Tawau North	andesite	An1	40	Y.B.	R	C	M	W	Primary forest
42	PF042	1386.94	4778.72	Tawau North	and. boulder	An1	40	Y.	R	C	M	W	Primary forest
43	PF043	1386.66	4778.36	Tawau North	sili. andesite	An1	40	Y.	R	C	M	W	Primary forest
44	PF044	1386.25	4778.08	Tawau North	sili. andesite	An1	40	Y.	R	C	M	W	Primary forest
45	PF045	1385.13	4770.38	Tawau North	—	Baz	30	D.B.	F	S	M	D	Cocoa plantation
46	PF046	1385.35	4771.56	Tawau North	—	Baz	40	D.B.	F	S	M	D	Cocoa plantation
47	PF047	1385.18	4772.65	Tawau North	—	Baz	40	B.	R	C	M	W	Cocoa plantation
48	PF048	1385.73	4773.53	Tawau North	—	Baz	40	D.B.	R	C	F	W	Cocoa plantation
49	PF049	1385.65	4774.25	Tawau North	—	Baz	40	B.	R	C	F	W	Cocoa plantation
50	PF050	1385.77	4774.78	Tawau North	—	An1	40	L.B.	R	C	M	W	Primary forest
51	PF051	1385.75	4775.45	Tawau North	—	An1	40	Y.B.	R	C	F	W	Primary forest
52	PF052	1385.13	4775.07	Tawau North	—	An1	40	B.	R	C	F	W	Cocoa plantation
53	PF053	1385.16	4775.78	Tawau North	—	An1	40	Y.	R	C	S	W	Primary forest
54	PF054	1385.75	4776.75	Tawau North	—	An1	40	Y.B.	R	C	M	W	Primary forest
55	PF055	1385.20	4776.28	Tawau North	—	An1	40	Y.B.	R	C	M	W	Primary forest
56	PF056	1385.11	4776.77	Tawau North	—	An1	40	Y.B.	R	C	M	W	Primary forest
57	PF057	1385.79	4777.22	Tawau North	andesite	An1	40	Y.B.	R	C	M	W	Primary forest
58	PF058	1385.47	4777.28	Tawau North	andesite	An1	40	Y.B.	R	C	M	W	Primary forest
59	PF059	1384.64	4770.00	Tawau North	—	Baz	40	D.B.	R	C	F	W	Cocoa plantation
60	PF060	1384.13	4769.52	Tawau North	—	Da2	40	D.B.	F	C	M	D	Cocoa plantation

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

Area: Tawau Hill Area (Area F)

Ser. No.	Sample No.	Coordinates N E	1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. #1	S. #2	T. #3	H. #4	Vegetation
61	PF061	1384.82	Tawau North	—	Ba ₂	40	D.B.	F	S	S	D	Cocoa plantation
62	PF062	1384.49	Tawau North	—	Ba ₂	40	D.B.	R	C	F	D	Cocoa plantation
63	PF063	1384.43	Tawau North	—	Ba ₂	40	D.B.	R	C	F	D	Cocoa plantation
64	PF064	1384.12	Tawau North	—	Ba ₂	40	D.B.	R	C	F	D	Rubber plant.
65	PF065	1384.43	Tawau North	—	Ba ₂	40	D.B.	R	C	F	D	Cocoa plantation
66	PF066	1384.47	Tawau North	—	Ba ₂	40	D.B.	R	C	F	D	Cocoa plantation
67	PF067	1384.78	Tawau North	—	Ba ₂	40	B.	R	C	M	W	Cocoa plantation
68	PF068	1384.64	Tawau North	—	Ba ₂	40	Y.B.	R	C	W	W	Cocoa plantation
69	PF069	1384.74	Tawau North	—	An ₁	40	Y.B.	R	C	W	W	Bush
70	PF070	1384.11	Tawau North	—	An ₁	40	Y.B.	R	C	S	D	Bush
71	PF071	1384.33	Tawau North	andesite	An ₁	40	Y.B.	R	C	M	D	Primary forest
72	PF072	1384.84	Tawau North	—	An ₁	40	Y.B.	R	C	M	W	Primary forest
73	PF073	1383.68	Tawau North	—	Da ₂	30	B.	F	C	M	D	Rubber plant.
74	PF074	1383.28	Tawau North	—	Da ₂	30	Y.B.	F	C	M	D	Oil palm plant.
75	PF075	1383.77	Tawau North	—	Da ₂	40	Y.B.	F	C	M	D	Rubber plant.
76	PF076	1383.83	Tawau North	—	Da ₂	30	B.	F	C	M	D	Rubber plant.
77	PF077	1383.28	Tawau North	—	Da ₂	30	B.	R	S	M	D	Rubber plant.
78	PF078	1383.40	Tawau North	—	Da ₂	30	D.B.	R	S	M	D	Rubber plant.
79	PF079	1383.87	Tawau North	andesite	Ba ₂	40	L.B.	R	C	M	D	Rubber plant.
80	PF080	1383.20	Tawau North	—	Ba ₂	40	Y.B.	R	C	F	D	Oil palm plant.
81	PF081	1383.63	Tawau North	—	Ba ₂	40	B.	R	C	M	W	Cocoa plantation
82	PF082	1383.12	Tawau North	—	Da ₂	40	D.B.	R	C	M	W	Cocoa plantation
83	PF083	1383.90	Tawau North	—	Ba ₂	40	B.	R	C	M	W	Cocoa plantation
84	PF084	1383.45	Tawau North	—	Ba ₂	40	B.	R	C	M	W	Cocoa plantation
85	PF085	1383.17	Tawau North	—	Da ₂	40	D.B.	R	C	M	W	Cocoa plantation
86	PF086	1383.50	Tawau North	—	Ba ₂	40	Y.B.	R	C	M	W	Cocoa plantation
87	PF087	1383.35	Tawau North	—	Ba ₂	40	D.B.	R	C	M	W	Cocoa plantation
88	PF088	1383.22	Tawau North	—	Ba ₂	40	D.B.	R	C	M	W	Cocoa plantation
89	PF089	1383.65	Tawau North	—	Ba ₂	40	D.B.	R	C	M	W	Cocoa plantation
90	PF090	1383.68	Tawau North	—	Ba ₂	40	D.B.	R	C	M	W	Cocoa plantation

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

Area: Tawau Hill Area (Area F)

Ser. No.	Sample No.	Coordinates		1/50,000 Topo. Sheet	Rock of Basement	Geol. Unit	Depth (cm)	Color	G. #1	S. #2	T. #3	H. #4	Vegetation
		N	E										
91	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	F	M	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	S	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	S	M	D	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	C	D	Oil palm plant.
102	PF102	1382.75	4771.27	Tawau North	—	Da ₂	40	B.	R	F	M	W	Cocoa plantation
103	PF103	1382.86	4771.70	Tawau North	—	Da ₂	40	D.B.	R	C	F	W	Cocoa plantation
104	PF104	1382.27	4771.21	Tawau North	—	Ba ₂	40	D.B.	R	C	F	W	Cocoa plantation
105	PF105	1382.24	4771.89	Tawau North	—	Ba ₂	40	D.B.	R	C	F	W	Cocoa plantation
106	PF106	1382.57	4772.62	Tawau North	—	Ba ₂	40	D.B.	F	C	M	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.	R	F	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	S	D	Oil palm plant.
112	PF112	1381.17	4768.84	Tawau North	—	Da ₂	40	D.B.	R	F	M	D	Rubber plant.
113	PF113	1381.93	4769.35	Tawau North	—	Da ₂	40	B.	F	M	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	F	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

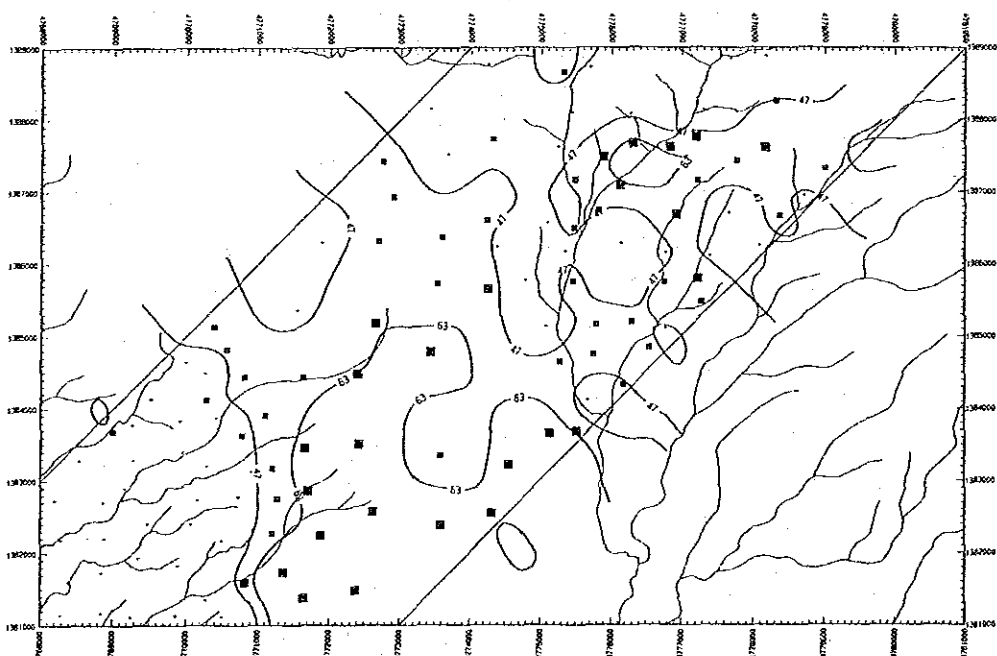
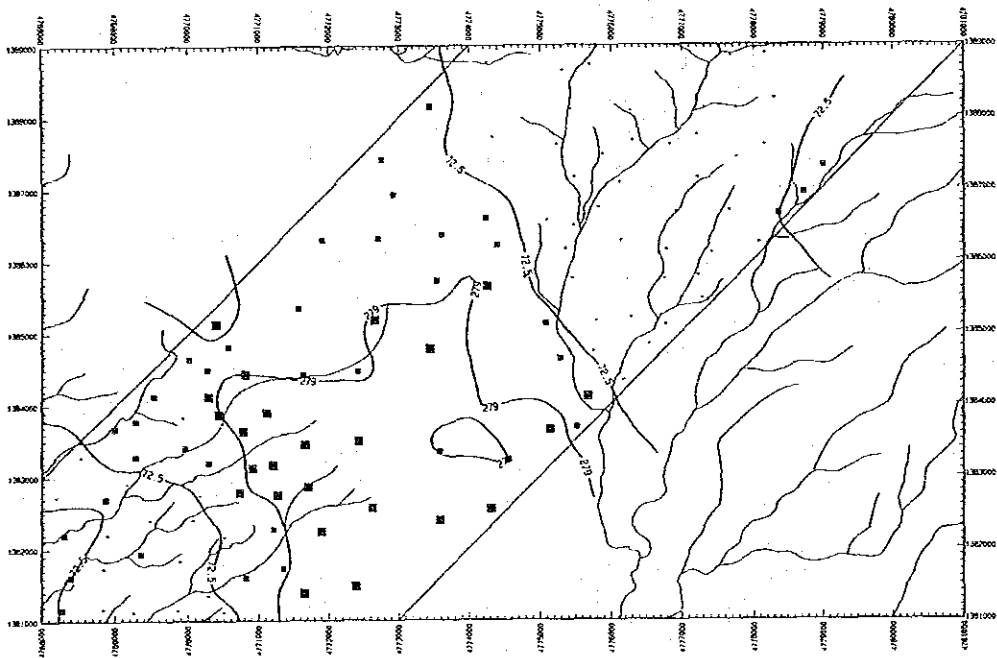
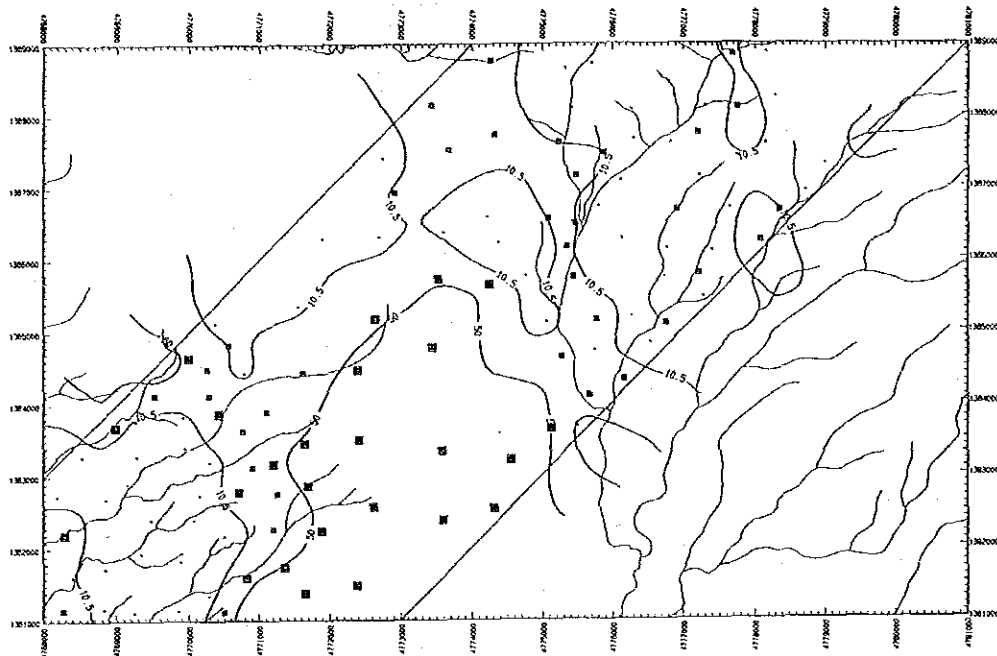
Analytical results of soil
geochemical samples in Area F

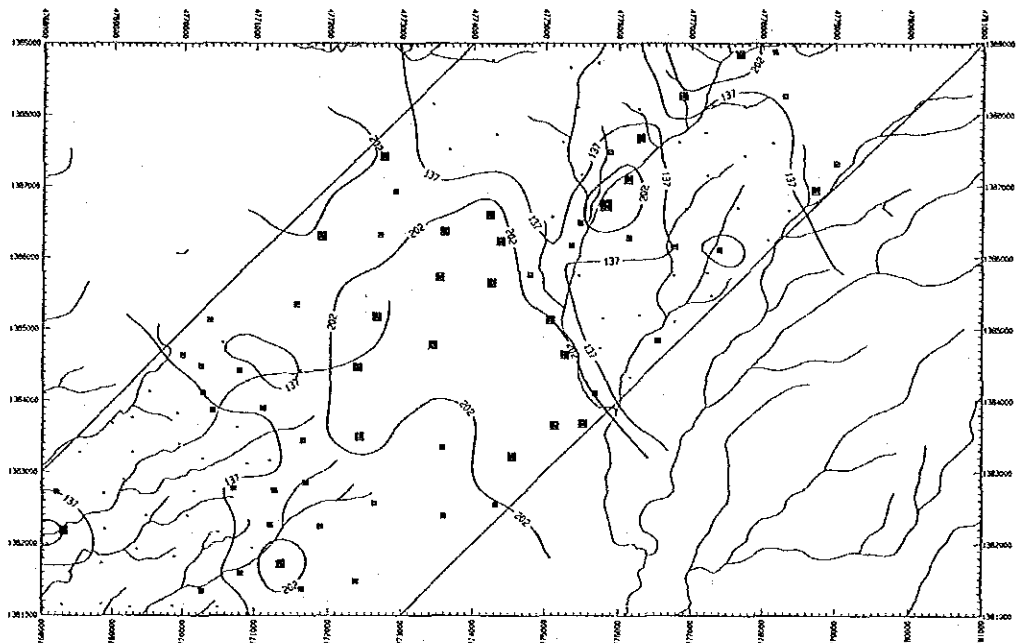
List of Geochemical Analysis (3)

Ser. No.	Sample No.	X-coord	Y-coord	Location (km)	As ppm	Au ppb	Ba ppm	Co ppm	Cr ppm	Cu ppm	Hg ppb	K %	Mg %	Mn ppm	Mb ppm	Na %	Ni ppm	Pb ppm	S %	Sb ppm	Sr ppm	Ti %	U ppm	W ppm	Zn ppm
101	PF101	4770.500	1382.170		4	>	39	2	53	27	104	.02	.04	5	5	.11	12	>	.028	7.7	13	.99	3.2	>	42
102	PF102	4771.270	1382.750		>	>	40	17	284	50	169	.04	.02	6	6	.10	98	>	.047	13.4	4	2.04	1.8	>	146
103	PF103	4771.700	1382.860		>	>	508	80	402	72	144	.07	.15	3	3	.16	239	>	.035	9.9	37	1.84	1.2	>	183
104	PF104	4771.210	1382.270		>	>	51	15	264	56	167	.04	.03	5	5	.16	107	>	.054	7.5	6	2.03	1.6	>	116
105	PF105	4771.890	1382.240		15	>	275	70	341	69	156	.05	.09	5	5	.16	206	>	.081	13.2	10	1.93	1.4	>	169
106	PF106	4772.620	1382.570		77	>	415	74	327	70	168	.21	.18	2	2	.25	192	>	.035	9.6	47	1.81	1.4	>	178
107	PF107	4773.590	1382.390		>	>	429	60	333	76	166	.10	.16	3	3	.11	228	>	.034	10.0	38	1.79	1.6	>	156
108	PF108	4774.310	1382.550		>	>	342	74	359	63	188	.09	.11	4	4	.11	188	>	.055	6.4	9	2.23	1.2	>	190
109	PF109	4768.400	1381.610		10	>	34	10	73	21	129	.02	.05	3	3	.09	19	>	.029	5.7	12	1.14	3.6	>	40
110	PF110	4768.850	1381.730		22	>	14	3	44	19	136	.01	.06	5	5	.08	8	>	.036	1.5	13	.96	3.2	>	39
111	PF111	4768.280	1381.150		15	>	131	44	74	28	34	.20	.37	1	1	.12	51	>	.044	5.0	45	.67	2.0	>	68
112	PF112	4768.840	1381.170		15	>	46	7	42	31	119	.03	.12	5	5	.07	16	>	.024	3.1	22	1.02	2.6	>	49
113	PF113	4769.350	1381.930		22	>	56	9	82	30	80	.06	.19	3	3	.06	25	>	.032	10.0	31	1.02	2.4	>	51
114	PF114	4769.890	1381.830		>	>	25	4	41	24	73	.01	.04	5	5	.12	14	>	.034	4.0	11	.78	3.2	>	39
115	PF115	4769.250	1381.120		>	>	38	1	39	15	73	.01	.06	5	5	.10	7	>	.024	1.8	10	1.11	3.2	>	37
116	PF116	4769.860	1381.140		13	>	31	3	72	22	81	.02	.05	5	5	.12	21	>	.023	4.6	12	1.10	3.0	>	41
117	PF117	4770.280	1381.350		12	>	45	3	56	29	155	.02	.05	5	5	.16	16	>	.033	2.8	14	.97	2.8	>	50
118	PF118	4770.500	1381.120		>	>	60	49	45	17	92	.01	.08	4062	2	.07	11	>	.023	2.8	11	.95	4.0	>	48
119	PF119	4770.820	1381.590		>	>	472	62	275	66	163	.10	.12	2735	2	.13	214	>	.030	13.6	23	1.84	1.4	>	192
120	PF120	4771.360	1381.730		66	185	501	58	251	100	370	.35	.62	4470	3	.71	140	107	.059	10.5	131	1.48	1.6	>	1423
121	PF121	4771.650	1381.380		70	>	877	87	345	82	183	.12	.16	4118	2	.14	208	>	.042	15.6	58	2.11	1.2	>	397
122	PF122	4772.380	1381.480		>	>	323	92	345	77	150	.10	.09	3893	2	.13	200	13	.077	15.6	9	2.18	1.2	>	236

Appendix 38

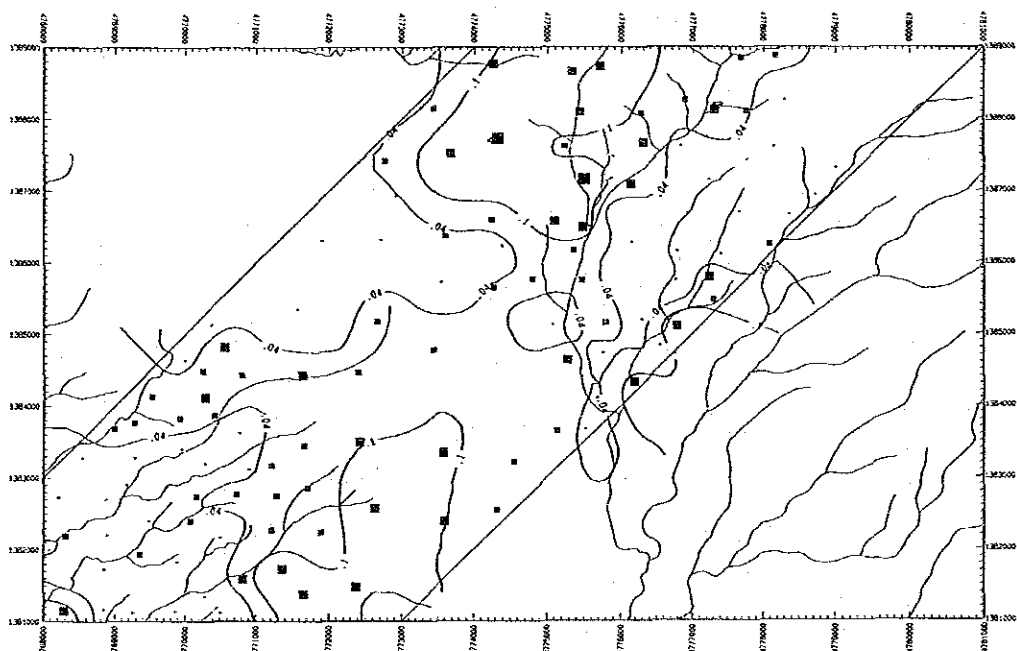
Distribution map of elements
in Area F





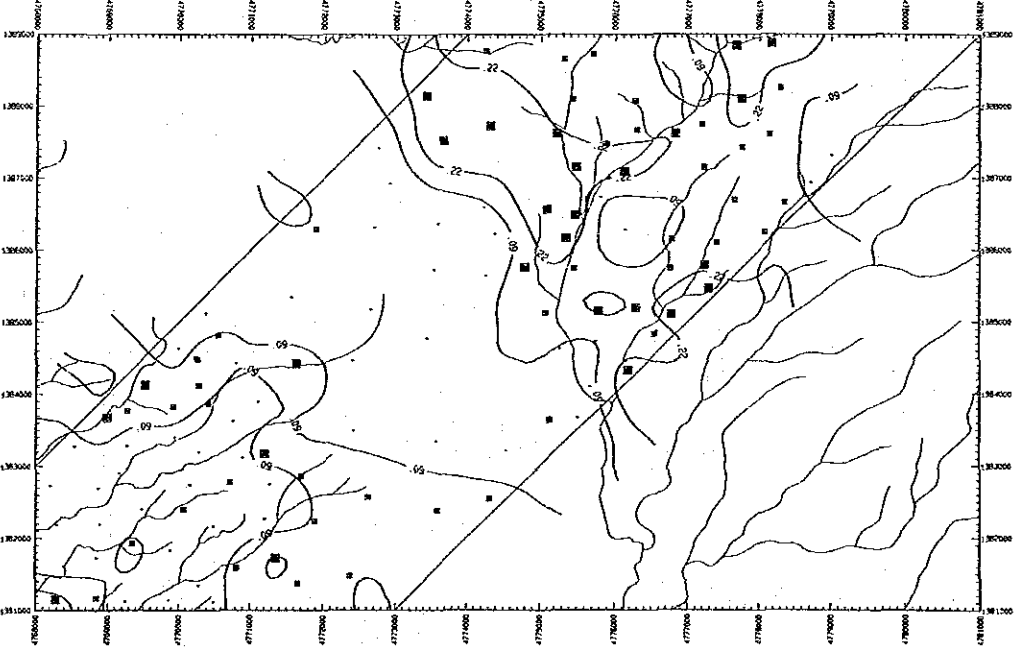
Hg

- 455.700
- 202.000
- 137.000



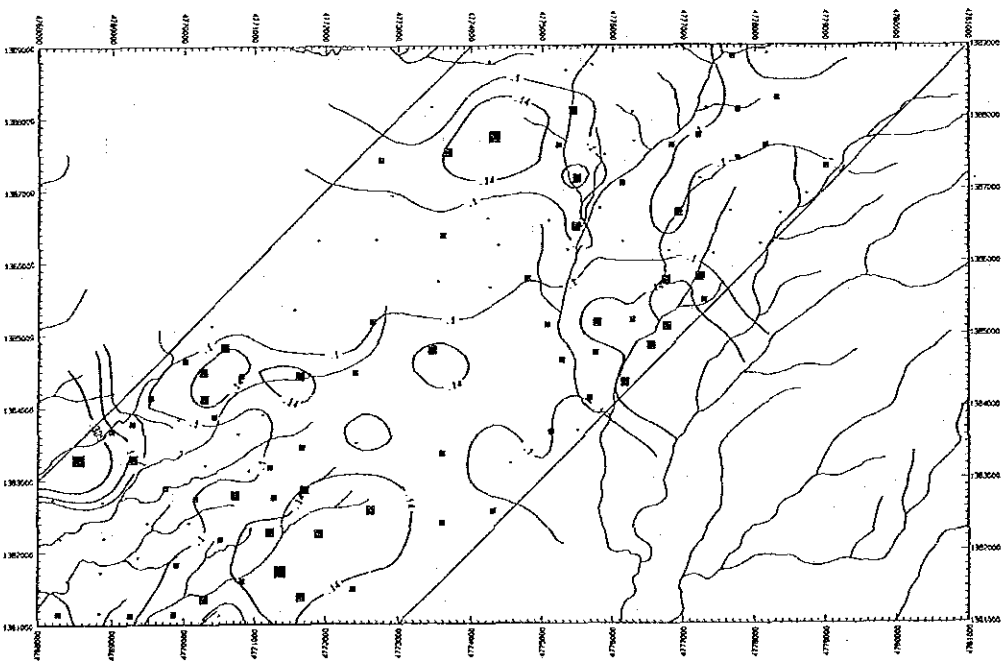
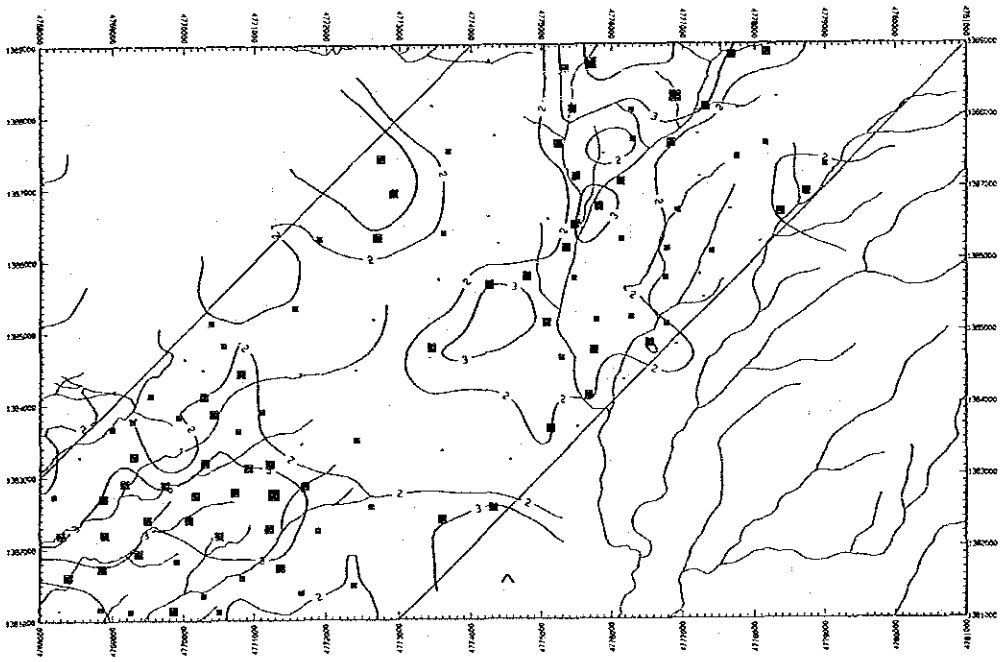
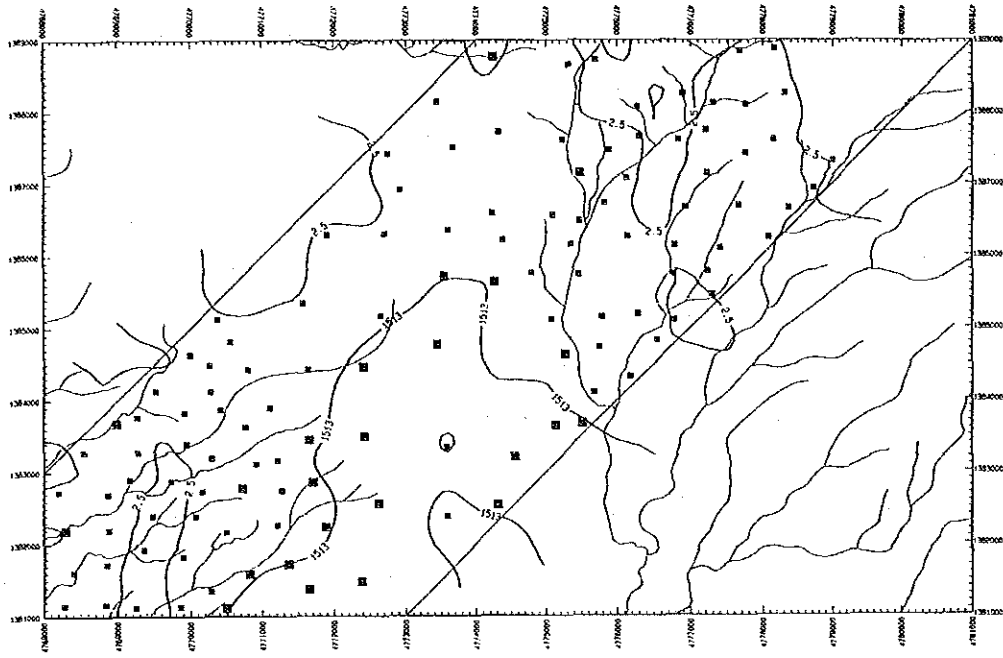
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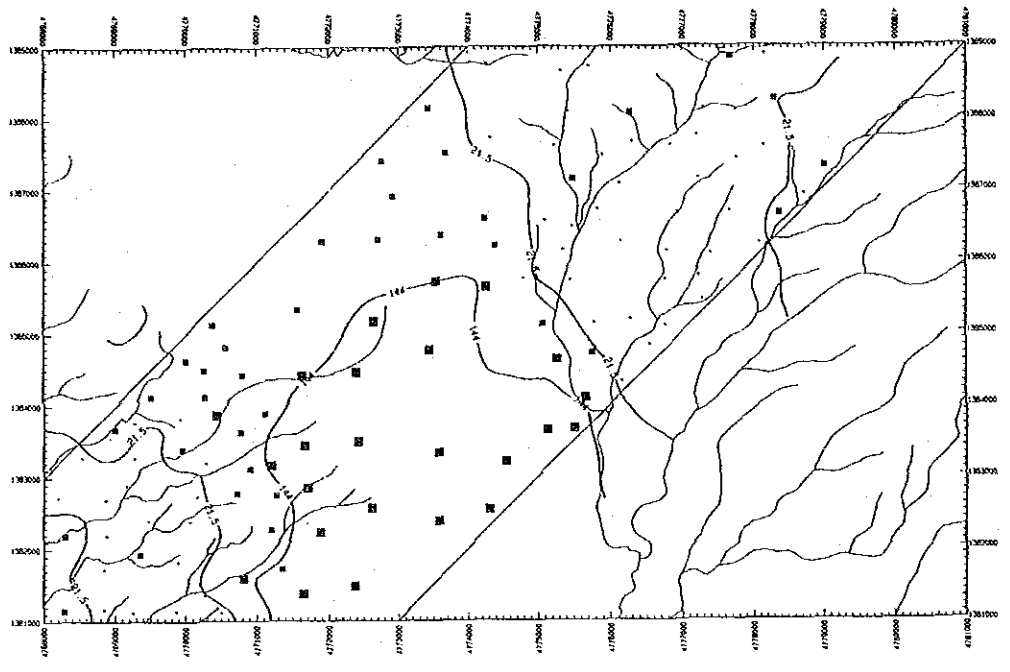
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- .100
- .040



Mg

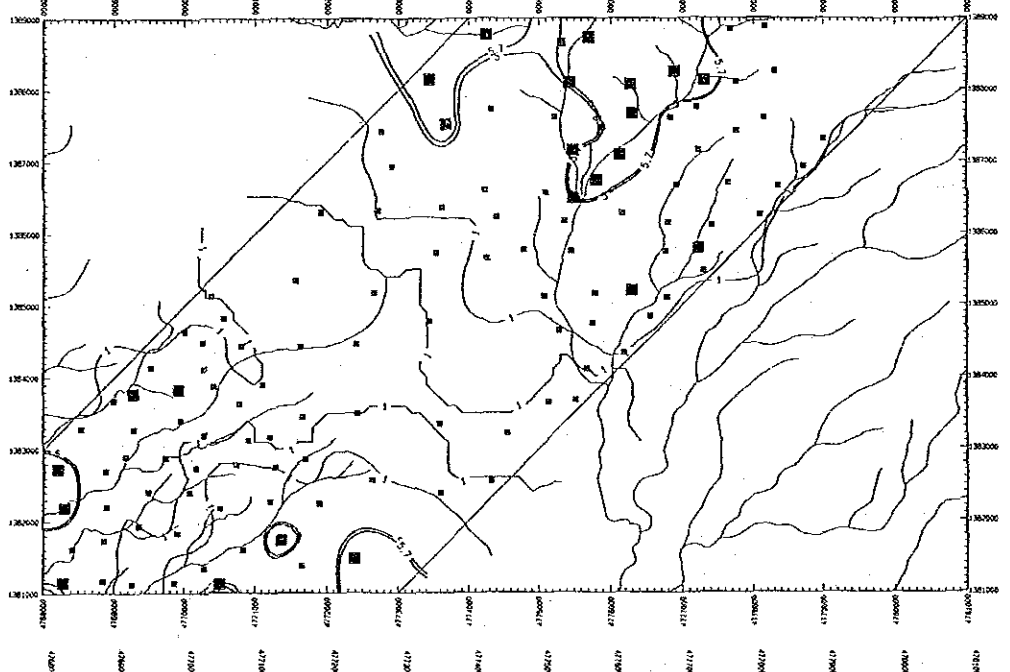
- .720
- .090





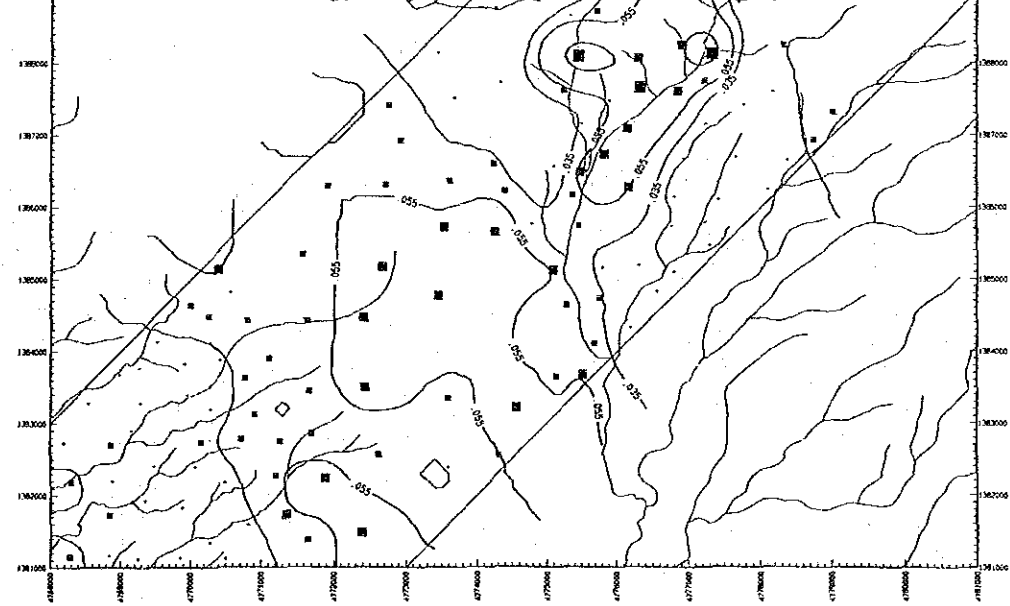
Ni

■	144.000
■	25.500



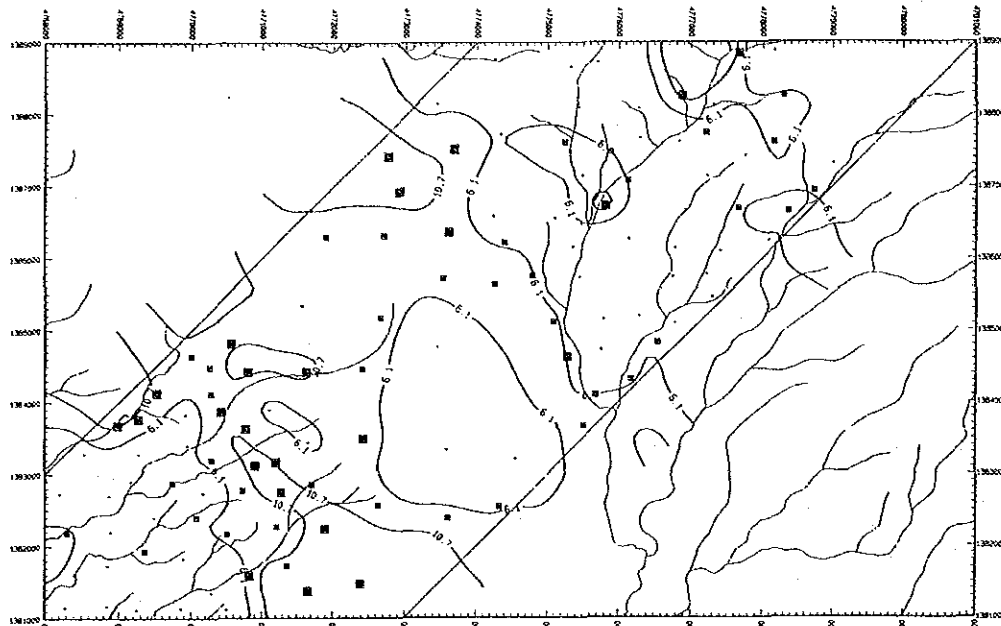
Pb

■	5.700
■	5.000
■	1.000

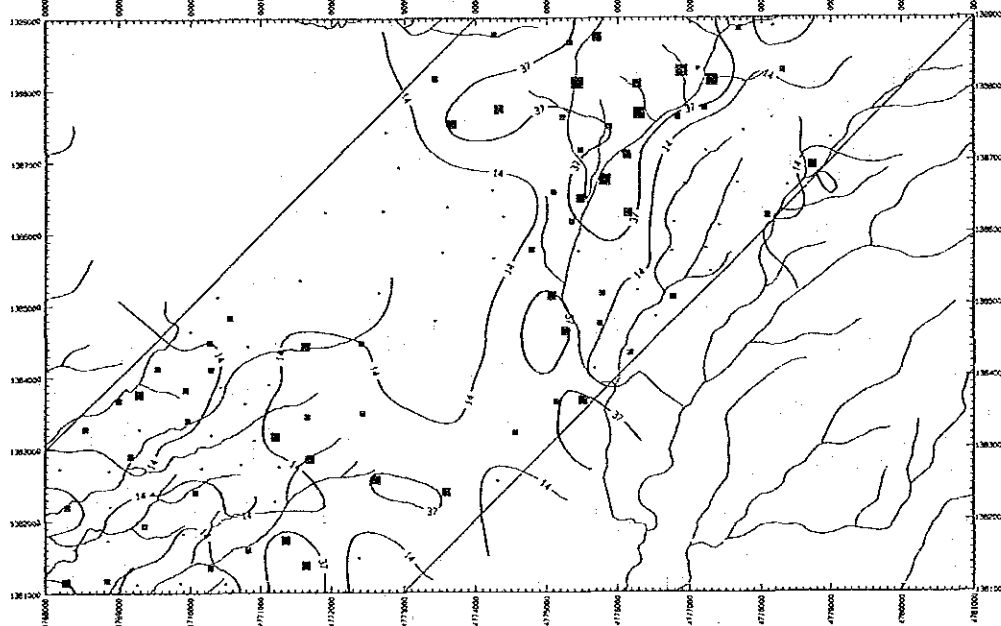
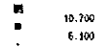


S

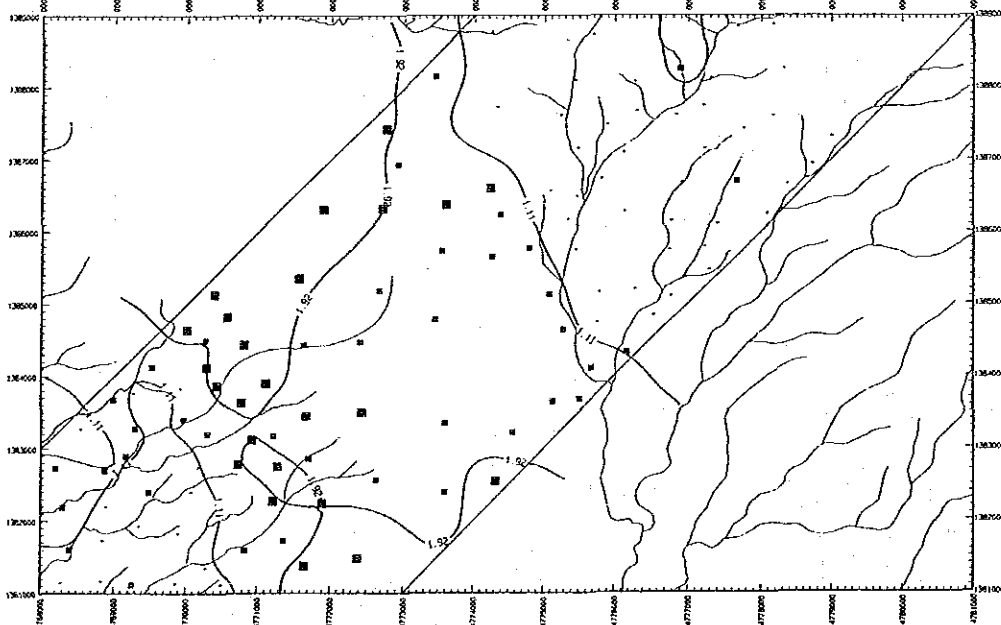
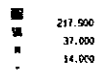
■	1.19
■	0.55
■	0.25



Sb



Sr



Ti

