A-4 Results of Chemical Analysis of Whole Rock Geochemical Survey

A-4 Results of Chemical Analysis of Whole Rock Geochemical Survey (1)

No.	Sample No.	Coordinate X (m)	Coordinate Y (m)	Lithostratigraphic Unit	Rock Code	La (ppm)	Ce (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	Sc (ppm)	Y (ppm)	U (ppm)	Th (ppm)	Nb (ppm)	Ta (ppm)	Zr (ppm)	Mn (ppm)	Sr (ppm)	P (ppm)	Fe (%)
The Orange area																								
1	A 10	-1163	-750	Namaqua Metamorphic Complex	Mgn	36	58	23	1.8	1.1	9.2	3.2	0.6	9.8	25	5	19	27	< 2	38	390	241	545	1.81
2	A 30	-900	-750	Namaqua Metamorphic Complex	Mgn	32	77	27	0.4	0.6	11.1	2.3	0.6	9.4	24	4	33	28	< 2	17	767	220	666	2.33
3	A 50	-600	-750	Namaqua Metamorphic Complex	Mgn	209	363	97	10.9	2.4	10.7	3.0	0.7	8.3	40	5	24	91	< 2	63	972	690	684	2.29
4	A 70	-300	-750	Namaqua Metamorphic Complex	Mgn	43	110	43	5.4	1.6	8.6	2.8	0.6	8.5	36	1	14	33	< 2	39	750	382	486	1.89
5	A 90	0	-750	Namaqua Metamorphic Complex	Mgn	36	88	31	1.1	0.7	11.7	1.0	0.4	11.5	15	2	16	31	< 2	34	614	220	493	2.49
6	B 20	-1050	-600	Namaqua Metamorphic Complex	Mgn	56	140	43	< 0.1	0.6	25.4	1.4	0.8	15.5	15	6	20	57	< 2	43	1450	200	441	5.56
7	B 40	-750	-500	MQC- Carbonatite dyke	Mcd	931	1460	375	39.9	9.1	41.5	3.1	1.4	2.6	49	15	73	849	5	42	28800	1150	575	8.61
8	B 50	-600	-600	MQC- Carbonatite dyke	Mcd	211	439	173	35.6	10.0	11.4	6.6	1.0	< 0.5	83	< 1	1	131	< 2	< 3	7530	9800	3460	1.44
9	B 60	-450	-625	Namaqua Metamorphic Complex	Mgn	75	164	51	1.2	1.6	21.3	1.9	0.8	8.6	22	22	8	235	5	252	1460	696	2090	4.65
10	B 70	-309	-600	Namaqua Metamorphic Complex	Mgn	106	118	38	< 0.1	1.4	27.0	19.0	1.1	42.0	42	1	4	38	< 2	116	1450	287	210	3.40
11	B 80	-152	-600	Namaqua Metamorphic Complex	Mgn	87	214	69	9.9	1.7	6.3	3.5	0.6	6.2	44	3	20	27	< 2	37	393	240	183	0.82
12	Ba 31	-850	-525	Namaqua Metamorphic Complex	Mgn	57	156	54	0.3	1.1	30.9	1.3	1.0	25.1	17	3	29	51	< 2	63	2270	202	350	5.91
13	Ba 32	-800	-525	Namaqua Metamorphic Complex	Mgn	50	97	27	< 0.1	1.0	7.9	1.5	0.5	9.4	14	23	28	27	< 2	194	413	174	243	1.73
14	Ba 40	-750	-525	Namaqua Metamorphic Complex	Mgn	60	163	60	6.9	2.9	17.1	3.1	0.9	12.7	34	2	17	47	< 2	127	1450	428	385	3.47
15	Ba 41	-700	-525	MQC- Massive fenite	Mfn	25	60	17	< 0.1	0.5	10.0	0.3	0.3	< 0.5	4	13	17	477	16	33	424	200	290	1.93
16	Ba 42	-650	-525	MQC- Massive fenite	Mfn	21	70	22	< 0.1	0.9	14.2	0.6	0.4	3.6	9	18	16	498	22	34	727	366	370	2.62
17	Ba 50	-600	-525	Namaqua Metamorphic Complex	Mgn	< 1	15	8	< 0.1	< 0.5	8.9	1.0	0.4	10.0	6	< 1	8	38	< 2	102	533	79	360	1.69
18	Ba 51	-550	-525	Namaqua Metamorphic Complex	Mgn	21	86	34	< 0.1	1.4	16.4	3.2	1.0	13.3	20	1	20	95	< 2	243	1150	313	450	3.05
19	Ba 52	-510	-525	MQC- Sovite	Mcs	87	193	68	4.6	2.4	21.8	4.6	1.2	2.5	32	110	16	1030	47	857	2270	2560	541	5.92
20	Ba 60	-450	-525	MQC- Sovite	Mcs	214	430	126	22.4	6.5	8.3	3.3	0.6	< 0.5	65	3	3	64	< 2	18	1050	4440	1500	1.08
21	Ba 61	-400	-525	Namaqua Metamorphic Complex	Mgn	76	166	47	1.8	1.6	15.2	1.4	0.6	4.7	14	1	10	107	< 2	80	4340	462	920	3.00
22	Ba 62	-350	-525	MQC- Sovite	Mcs	186	432	146	23.8	6.9	12.0	4.0	0.9	1.6	68	268	41	1930	67	114	1450	3900	7170	2.00
23	C 10	-1163	-450	Namaqua Metamorphic Complex	Mgn	38	121	41	2.2	1.2	14.0	2.7	0.8	10.2	34	3	24	42	< 2	41	956	183	442	2.57
24	C 30	-900	-450	Namaqua Metamorphic Complex	Mgn	68	122	43	7.2	1.5	4.9	3.1	0.5	6.8	32	5	24	28	< 2	44	297	97	354	1.09
25	C 31	-850	-450	Namaqua Metamorphic Complex	Mgn	41	74	17	4.2	0.8	1.9	0.8	0.2	6.4	10	3	19	25	< 2	51	210	38	260	0.75
26	C 32	-800	-450	Namaqua Metamorphic Complex	Mgn	41	49	14	< 0.1	0.7	12.3	1.6	0.5	4.8	9	8	21	299	9	419	1430	418	306	3.72
27	C 40	-750	-450	MQC- An beforsite (1)	Mcbl	37	81	15	< 0.1	< 0.5	13.6	0.8	0.6	6.2	6	1	3	62	< 2	< 3	7830	3360	138	4.32
28	C 41	-700	-450	MQC- An beforsite (1)	Mcbl	116	201	58	4.0	1.8	20.8	1.1	0.6	4.0	12	1	16	18	< 2	< 3	7270	5330	131	4.02
29	C 50	-600	-450	MQC- Massive fenite	Mfn	< 1	42	14	< 0.1	< 0.5	9.9	2.2	0.8	1.2	10	21	7	359	12	1110	1260	458	535	5.52
30	C 51	-550	-450	MQC- An beforsite (1)	Mcbl	14	53	13	0.4	< 0.5	9.1	0.5	0.4	4.1	5	3	3	269	5	< 3	5250	5010	499	2.82
31	C 52	-500	-450	MQC- An beforsite (1)	Mcbl	23	70	13	2.6	1.0	7.5	0.5	0.3	4.9	6	< 1	7	111	< 2	< 3	5360	5340	670	2.29
32	C 60	-450	-450	MQC- Sovite	Mcs	150	284	87	16.4	4.7	11.1	4.4	0.8	5.1	48	5	2	112	3	61	2830	4240	1060	1.88
33	C 61	-400	-450	MQC- Sovite	Mcs	190	321	108	22.0	5.8	4.6	3.2	0.4	< 0.5	53	22	5	67	2	4	1120	4890	2700	0.45
34	C 62	-350	-450	MQC- Sovite	Mcs	194	375	84	24.2	6.5	3.2	3.6	0.4	< 0.5	55	4	6	74	2	37	845	3740	3990	0.53
35	C 70	-300	-450	MQC- Sovite	Mcs	177	339	96	21.0	5.8	5.4	3.2	0.5	< 0.5	50	1	2	32	< 2	96	889	4330	3050	1.24
36	C 80	-150	-450	Namaqua Metamorphic Complex	Mgn	33	69	27	7.0	0.8	3.6	18.0	0.4	3.3	37	1	8	9	< 2	11	171	109	220	0.40
37	C 90	0	-450	Namaqua Metamorphic Complex	Mgn	36	87	34	9.2	1.0	1.4	2.4	0.3	2.1	24	1	10	20	< 2	20	249	37	170	0.43
38	Ca 30	-900	-375	Namaqua Metamorphic Complex	Mgn	23	60	15	2.3	0.7	5.8	2.5	0.5	5.8	17	3	26	42	< 2	86	878	166	568	1.65
39	Ca 31	-850	-375	MQC- An beforsite (1)	Mcbl	101	211	63	14.4	3.6	16.0	0.7	0.6	5.4	8	2	61	34	< 2	5	9310	3000	228	4.68
40	Ca 32	-800	-375	Namaqua Metamorphic Complex	Mgn	50	112	31	5.3	1.2	8.0	2.9	0.6	9.0	29	4	22	32	< 2	37	454	167	480	2.13
41	Ca 40	-750	-375	MQC- Massive fenite	Mfn	< 1	46	16	< 0.1	< 0.5	19.6	2.6	1.2	10.7	8	16	6	384	4	733	2480	262	2730	7.05
42	Ca 41	-700	-375	MQC- An beforsite (1)	Mcbl	178	467	193	32.1	8.8	17.9	1.9	0.6	4.7	38	5	7	147	4	< 3	4090	3870	19300	2.89
43	Ca 42	-650	-375	MQC- An beforsite (1)	Mcbl	273	446	109	14.6	3.5	11.2	0.9	0.5	5.7	13	1	31	236	< 2	< 3	5930	4630	132	3.00
44	Ca 50	-600	-375	MQC- An beforsite (1)	Mcbl	85	181	40	3.8	1.3	11.8	0.4	0.4	5.8	9	22	21	4730	9	7	5140	4790	196	2.69
45	Ca 51	-550	-375	MQC- An beforsite (1)	Mcbl	160	259	76	11.4	3.2	12.2	0.9	0.4	8.2	13	4	19	648	< 2	< 3	5790	5220	131	2.68
46	Ca 52	-500	-375	MQC- An beforsite (1)	Mcbl	163	250	80	12.6	3.5	12.4	1.1	0.5	9.5	14	< 1	35	14	< 2	< 3	6360	6060	98	2.75
47	Ca 60	-450	-375	MQC- An beforsite (1)	Mcbl	313	325	58	3.6	1.4	15.8	0.9	0.6	5.0	14	5	24	2510	22	3	7660	5210	3290	3.57
48	Ca 62	-350	-375	MQC- Syenite (undifferentiated)	Msu	99	194	58	6.6	2.2	11.9	1.9	0.4	< 0.5	23	63	22	570	32	338	879	1810	2030	2.04
49	Ca 70	-300	-375	MQC- Syenite (undifferentiated)	Msu	70	116	45	7.4	2.1	4.0	1.9	0.4	0.9	24	85	22	772	22	112	1090	1750	3510	1.06
50	Ca 71	-250	-375	MQC- Sovite	Mcs	196	287	124	27.1	7.4	5.1	3.8	0.6	0.8	61	10	10	54	< 2	25	1090	4090	10100	0.73
51	Ca 72	-210	-375	MQC- Sovite	Mcs	187	286	131	25.6	7.1	7.4	3.5	0.6	0.6	57	5	7	152	3	22	872	3390	11600	1.22
52	D 10	-1163	-300	Namaqua Metamorphic Complex	Mgn	37	76	30	3.9	0.6	8.6	1.7	0.4	9.7	16	3	14	24	< 2	41	571	168	435	1.75
53	D 20	-1068	-300	MQC- Carbonatite dyke	Mcd	948	1810	452	57.0	12.7	26.2	9.6	1.5	19.6	105	20	39	288	4	113	5880	13300	5370	3.77
54	D 22	-950	-300	Namaqua Metamorphic Complex	Mgn	22	36	15	1.9	< 0.5	1.6	0.8	0.2	3.6	6	2	15	23	< 2	63	317	87	221	0.61
55	D 30	-909	-300	MQC- Syenite (undifferentiated)	Msu	19	25	12	< 0.1	0.5	6.5	0.6	0.2	1.9	7	5	8	127	3	93	789	123	929	1.42
56	D 31	-850	-300	MQC- Carbonatite dyke	Mcd	5130	9060	3200	622.2	126.6	46.4	2.4	1.3	5.4	66	26	690	416	15	< 3	6260	2010	222	6.85
57	D 40	-747	-300	MQC- An beforsite (1)	Mcbl	26	53	17	< 0.1	< 0.5	12.1	0.6	0.4	5.3	6	1	2	16	< 2	< 3	6210	4690	127	2.85
58	D 41	-700	-300	MQC- An beforsite (1)	Mcbl	175	235	77	8.4	2.1	13.3	0.9	0.5	5.6	10	8	17	881	3	3	5930	3530	201	3.13
59	D 42	-650	-300	MQC- An beforsite (1)	Mcbl	43	74	24	< 0.1	0.7	12.8	1.0	0.5	6.0	11	2	4	391	< 2	5	5200	3830	215	2.79
60	D 50	-600	-300	MQC- An beforsite (1)	Mcbl	22	48	16	< 0.1	< 0.5	12.5	0.6	0.4	5.5	5	2	< 1	35	< 2	< 3	4970	4610	104	2.90
61	D 51	-550	-300	MQC- An beforsite (1)	Mcbl	75	126	34	2.0	1.0	11.2	0.7	0.4	8.4	8	2	2	508	< 2	< 3	4990	4790	207	2.49
62	D 52	-500	-300	MQC- An beforsite (1)	Mcbl	102	163	42	2.5	1.1	13.4	0.8	0.5	7.1	9	3	6	430	< 2	< 3	5300	4810	67	2.71
63	D 60	-450	-300	MQC- An beforsite (1)	Mcbl	459	651	162	14.1	3.1	21.0	1.5	0.8	5.0	15	11	18	1190	< 2	18	6300	4050	142	4.30
64	D 61	-400	-300	MQC- An beforsite (1)	Mcbl	89	161	51	3.2	1.2	15.0	0.6	0.5	5.2	5	< 1	1	6	< 2	< 3	6440	5270	54	3.01
65	D 62	-350	-300	MQC- An beforsite (1)	Mcbl	81	128	34	2.4	1.2	16.1	0.8	0.5	4.4	8	1	3	37	< 2	< 3	8540	4470	65	2.97

A-4 Results of Chemical Analysis of Whole Rock Geochemical Survey (2)

No.	Sample No.	Coordinate X (m)	Coordinate Y (m)	Lithostratigraphic Unit	Rock Code	La (ppm)	Ce (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	Sc (ppm)	Y (ppm)	U (ppm)	Th (ppm)	Nb (ppm)	Ta (ppm)	Zr (ppm)	Mn (ppm)	Sr (ppm)	P (ppm)	Fe (%)
66	D 70	-300	-300	MQC- An beforsite (1)	Mcbl	59	111	29	0.2	0.7	16.6	0.7	0.6	6.2	6	1	< 1	82	< 2	< 3	6700	4920	63	3.54
67	D 71	-250	-300	MQC- Sovite	Mcs	91	180	59	11.8	3.1	6.7	3.1	0.4	0.8	40	1	1	38	< 2	64	1320	2430	162	0.91
68	D 72	-200	-300	MQC- Sovite	Mcs	125	229	71	11.7	3.6	14.1	4.2	0.9	1.0	41	42	10	522	< 2	290	1730	2730	2650	2.92
69	D 80	-150	-300	Namaqua Metamorphic Complex	Ngn	18	56	21	< 0.1	0.7	16.0	3.2	1.0	15.8	20	19	22	265	4	467	1280	277	632	3.70
70	Da 22	-950	-225	MQC- Syenite (undifferentiated)	Msu	39	88	30	3.4	1.3	7.0	0.7	0.2	2.3	11	11	7	200	5	152	422	262	538	1.23
71	Da 30	-900	-225	Namaqua Metamorphic Complex	Ngn	155	360	160	41.0	12.5	13.9	6.4	1.0	< 0.5	99	31	15	662	26	907	1160	671	7960	2.35
72	Da 31	-850	-225	MQC- Syenite (undifferentiated)	Msu	223	482	192	37.3	10.4	42.0	2.2	1.0	5.6	22	23	76	1440	11	140	4120	861	2030	6.61
73	Da 32	-800	-205	MQC- An beforsite (1)	Mcbl	213	513	190	33.9	9.3	27.8	2.2	0.7	4.3	43	9	2	252	9	11	7290	3960	13000	3.86
74	Da 40	-750	-225	MQC- An beforsite (1)	Mcbl	699	1323	465	89.8	19.2	32.0	1.4	0.8	4.4	20	2	101	31	< 2	< 3	7720	5090	171	4.61
75	Da 41	-700	-225	MQC- An beforsite (1)	Mcbl	20	93	24	< 0.1	< 0.5	32.6	0.8	0.7	2.4	7	3	6	1190	2	< 3	6250	5290	210	4.99
76	Da 42	-650	-225	MQC- An beforsite (1)	Mcbl	131	233	53	3.9	1.6	17.6	0.8	0.4	3.4	11	2	15	510	< 2	< 3	5340	6960	214	2.48
77	Da 50	-600	-225	MQC- An beforsite (1)	Mcbl	41	121	31	< 0.1	0.6	26.3	0.9	0.7	3.0	9	5	6	1960	3	4	5740	5010	278	4.24
78	Da 51	-550	-225	MQC- An beforsite (1)	Mcbl	55	147	37	< 0.1	0.7	32.9	0.9	0.7	4.6	7	2	6	202	< 2	< 3	7770	5780	144	5.02
79	Da 52	-500	-225	MQC- An beforsite (1)	Mcbl	88	186	45	< 0.1	1.2	25.1	0.9	0.6	4.3	10	2	8	284	< 2	4	7580	4620	266	3.70
80	Da 60	-450	-225	MQC- An beforsite (1)	Mcbl	869	1260	292	40.0	9.8	33.7	1.5	0.9	3.9	20	1	95	20	< 2	< 3	8960	5760	134	5.00
81	Da 61	-423	-225	MQC- An beforsite (1)	Mcbl	110	259	56	3.0	1.3	17.8	0.8	0.4	2.9	9	2	8	381	< 2	< 3	5650	5340	143	2.85
82	Da 70	-300	-225	MQC- An beforsite (1)	Mcbl	122	248	62	4.5	1.7	18.1	0.8	0.5	3.9	9	< 1	10	71	< 2	< 3	5790	5080	121	2.67
83	Da 71	-250	-225	MQC- An beforsite (1)	Mcbl	100	206	48	0.6	1.0	25.4	0.8	0.6	2.7	7	< 1	9	61	< 2	< 3	6890	6140	117	3.95
84	Da 72	-200	-225	MQC- Massive fenite	Mfn	48	120	84	< 0.1	0.8	20.3	1.9	0.6	6.9	10	1	5	45	< 2	185	1290	410	1440	3.20
85	Da 80	-150	-225	Namaqua Metamorphic Complex	Ngn	< 1	44	17	< 0.1	< 0.5	26.6	3.2	1.1	5.7	8	16	96	119	2	204	2170	231	1020	4.44
86	Da 81	-100	-225	Namaqua Metamorphic Complex	Ngn	14	82	28	< 0.1	< 0.5	27.1	4.0	1.2	6.6	15	2	31	59	< 2	164	2170	273	1700	4.29
87	E 10	-1163	-150	Namaqua Metamorphic Complex	Ngn	9	19	7	2.2	< 0.5	1.6	2.1	0.3	3.2	13	11	8	8	< 2	21	242	18	285	0.32
88	E 22	-950	-150	MQC- Syenite (undifferentiated)	Msu	15	54	23	< 0.1	< 0.5	17.9	2.5	0.9	11.9	11	1	7	136	< 2	221	1570	346	1110	4.04
89	E 30	-900	-150	MQC- An beforsite (1)	Mcbl	1490	2080	460	57.0	7.9	34.7	1.4	1.2	6.4	16	7	68	4	< 2	< 3	9110	2570	139	8.01
90	E 31	-850	-150	MQC- Syenite (undifferentiated)	Msu	667	1062	422	92.8	19.4	14.9	0.6	0.5	0.9	24	41	156	5310	43	49	1860	866	4840	2.86
91	E 32	-800	-150	MQC- An beforsite (1)	Mcbl	66	143	46	2.2	1.5	20.4	0.7	0.6	5.2	8	5	7	1850	21	< 3	3550	3080	1860	4.14
92	E 40	-750	-150	MQC- An beforsite (1)	Mcbl	70	129	29	< 0.1	< 0.5	18.2	0.8	0.6	5.8	7	2	7	343	< 2	< 3	6290	4430	93	3.61
93	E 41	-700	-150	MQC- An beforsite (1)	Mcbl	317	409	112	12.2	9.2	13.4	0.7	0.5	6.3	12	6	32	1600	< 2	< 3	5040	5080	129	2.56
94	E 42	-650	-150	MQC- An beforsite (1)	Mcbl	51	93	26	< 0.1	0.6	15.5	0.8	0.5	5.9	10	6	7	2020	< 2	3	5390	4790	105	2.93
95	E 50	-600	-150	MQC- An beforsite (1)	Mcbl	77	84	24	< 0.1	0.7	25.8	0.7	0.3	3.2	8	10	5	997	< 2	3	6900	4440	56	4.52
96	E 51	-550	-150	MQC- An beforsite (1)	Mcbl	2000	3230	864	103.1	19.0	25.2	2.9	< 0.1	3.2	48	18	160	507	4	7	6000	5980	149	3.85
97	E 52	-500	-150	MQC- An beforsite (1)	Mcbl	150	235	68	7.9	2.6	12.1	1.0	0.2	4.5	12	< 1	16	13	< 2	< 3	5690	6890	114	2.27
98	E 60	-450	-150	MQC- An beforsite (1)	Mcbl	94	146	37	< 0.1	0.7	21.1	0.7	0.4	2.5	7	4	7	2400	< 2	< 3	7680	4580	66	4.48
99	E 61	-400	-150	MQC- An beforsite (1)	Mcbl	431	821	269	39.1	8.0	17.4	0.8	0.2	2.0	19	3	13	855	< 2	< 3	5860	4650	70	2.99
100	E 62	-350	-150	MQC- An beforsite (1)	Mcbl	82	122	34	< 0.1	1.0	15.6	0.6	0.2	2.2	6	< 1	4	307	< 2	< 3	6280	4060	65	2.97
101	E 70	-300	-150	MQC- An beforsite (1)	Mcbl	237	344	88	6.2	1.8	17.8	0.6	0.3	2.4	7	< 1	8	245	< 2	< 3	7560	4560	84	3.29
102	E 71	-250	-150	MQC- An beforsite (1)	Mcbl	100	144	38	< 0.1	0.9	16.6	0.6	0.2	2.9	5	< 1	4	153	< 2	< 3	6090	4850	59	3.25
103	E 72	-196	-141	MQC- An beforsite (1)	Mcbl	52	151	56	7.9	2.6	12.4	0.9	0.3	3.8	14	< 1	2	117	< 2	< 3	4670	4500	2570	1.84
104	E 80	-133	-150	MQC- Syenite (undifferentiated)	Msu	58	94	32	2.6	1.2	6.2	0.7	0.1	0.5	8	30	18	302	5	79	700	840	720	1.30
105	E 81	-100	-150	Namaqua Metamorphic Complex	Ngn	26	49	15	1.2	< 0.5	1.9	0.2	< 0.1	< 0.5	2	< 1	1	4	< 2	4	214	427	1110	0.38
106	E 90	0	-150	Namaqua Metamorphic Complex	Ngn	75	138	45	4.4	1.4	7.9	3.0	0.5	4.1	22	2	20	56	< 2	108	1100	322	404	1.60
107	Ea 22	-950	-75	MQC- Syenite (undifferentiated)	Msu	15	82	35	2.1	1.7	18.8	2.8	0.8	< 0.5	24	9	11	534	20	695	1910	923	1550	3.67
108	Ea 30	-899	-75	MQC- An beforsite (1)	Mcbl	80	198	47	< 0.1	1.1	28.8	0.8	0.8	2.6	8	< 1	13	49	< 2	< 3	8170	5020	231	5.06
109	Ea 31	-847	-75	MQC- Carbonatite dyke	Mcd	1930	4270	1690	314.0	70.3	45.8	3.3	1.0	4.2	87	18	389	87	3	12	6520	2550	3900	6.12
110	Ea 32	-783	-75	MQC- Sovite	Msu	180	433	160	33.2	10.6	19.5	4.2	1.0	0.7	62	2	42	123	8	174	1990	3270	10300	3.10
111	Ea 40	-748	-75	MQC- An beforsite (1)	Mcbl	167	348	80	2.6	1.9	31.6	1.0	0.8	2.9	9	2	14	93	< 2	< 3	6080	5160	153	5.77
112	Ea 41	-698	-75	MQC- An beforsite (1)	Mcbl	12	97	24	< 0.1	< 0.5	45.1	0.9	1.2	2.8	6	6	6	795	3	3	9450	4140	161	3.11
113	Ea 42	-648	-75	MQC- An beforsite (1)	Mcbl	210	402	97	8.6	3.0	21.6	1.3	0.6	4.1	18	5	26	180	< 2	13	6990	4810	283	3.77
114	Ea 50	-598	-75	MQC- An beforsite (1)	Mcbl	12	88	23	< 0.1	< 0.5	24.8	0.7	0.6	2.7	6	3	4	690	< 2	< 3	6160	5030	128	4.40
115	Ea 51	-548	-75	MQC- An beforsite (1)	Mcbl	95	244	67	1.5	1.7	30.9	1.0	0.9	4.4	10	2	14	317	< 2	< 3	7850	5080	216	5.69
116	Ea 52	-498	-75	MQC- An beforsite (1)	Mcbl	79	215	55	< 0.1	1.0	27.2	0.7	0.7	3.0	8	8	12	1030	< 2	< 3	6560	4770	145	4.98
117	Ea 60	-446	-75	MQC- An beforsite (1)	Mcbl	42	126	30	< 0.1	0.6	22.3	0.6	0.6	3.2	7	4	9	1360	< 2	< 3	6650	4600	126	4.06
118	Ea 61	-393	-75	MQC- An beforsite (1)	Mcbl	134	311	88	10.1	3.4	18.6	1.3	0.6	6.8	16	< 1	27	10	< 2	< 3	7380	7170	144	3.28
119	Ea 62	-342	-75	MQC- An beforsite (1)	Mcbl	68	171	47	0.5	1.1	20.8	0.7	0.5	2.8	6	1	9	185	< 2	< 3	6230	5270	116	3.58
120	Ea 70	-298	-70	MQC- An beforsite (1)	Mcbl	102	155	45	1.8	1.4	17.5	0.8	0.4	2.4	7	1	8	35	2	4	6130	4800	184	3.45
121	Ea 71	-248	-70	MQC- An beforsite (1)	Mcbl	111	208	47	1.0	1.1	21.0	0.6	0.5	2.3	6	1	8	312	< 2	< 3	6430	5760	131	3.43
122	Ea 72	-197	-70	MQC- An beforsite (1)	Mcbl	95	206	53	2.6	1.4	19.5	0.8	0.5	2.3	7	1	10	55	< 2	< 3	6280	5630	148	3.44
123	Ea 80	-154	-70	MQC- Sovite	Mcs	183	384	128	27.2	7.4	6.0	4.4	0.6	2.6	62	2	4	107	< 2	3	2701	3570	2380	0.56
124	Ea 81	-100	-70	MQC- Syenite (undifferentiated)	Msu	9	37	9	< 0.1	< 0.5	7.5	0.5	0.2	0.8	4	7	20	359	8	154	256	201	173	1.33
125	F 20	-1050	0	Namaqua Metamorphic Complex	Ngn	11	82	31	0.4	0.8	16.2	2.2	0.6	7.2	15	10	6	147	3	514	1140	582	1350	2.95
126	F 30	-900	0	MQC- Syenite (undifferentiated)	Msu	70	219	71	6.6	3.1	23.9	2.9	0.9	< 0.5	29	2	4	38	2	456	1720	2570	5960	4.27
127	F 31	-850	0	MQC- An beforsite (1)	Mcbl	347	603	144	16.0	3.8	24.2	1.3	0.7	4.1	14	< 1	30	10	< 2	< 3	6960	5710	122	4.07
128	F 32	-800	0	MQC- An beforsite (1)	Mcbl	133	333	105	10.0	3.3	32.1	1.0	0.9	3.2	8	< 1	25	17	< 2	< 3	6580	4170	179	5.71
129	F 40	-750	0	MQC- An beforsite (1)	Mcbl	233	414	97	6.8	1.9	24.0	0.7	0.6	2.0	5	1	14	251	< 2	< 3	5670	4960	131	4.03
130	F 41	-700	0	MQC- An beforsite (1)	Mcbl	78	131	45	3.3	1.4	13.1	0.8	0.2	2.8	6	< 1	19	132	2	8	5720	5860	166	3.00
131	F 42	-650	0	MQC- An beforsite (1)	Mcbl	111	148	39	2.9	1.1	14.3	0.8	0.3	2.8	7	2	8	467	< 2	< 3	6010	5540	130	2.92

A-4 Results of Chemical Analysis of Whole Rock Geochemical Survey (3)

No.	Sample No.	Coordinate X (m)	Coordinate Y (m)	Lithostratigraphic Unit	Rock Code	La (ppm)	Ce (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	Sc (ppm)	Y (ppm)	U (ppm)	Th (ppm)	Nb (ppm)	Ta (ppm)	Zr (ppm)	Mn (ppm)	Sr (ppm)	P (ppm)	Fe (%)
132	F 50	-600	0	MQC- An beforsite (1)	Mcbl	84	108	30	<0.1	0.8	18.6	0.8	0.4	2.8	8	3	7	764	2	<3	6140	5520	139	3.92
133	F 51	-550	0	MQC- An beforsite (1)	Mcbl	376	579	156	18.4	4.2	16.3	1.1	0.4	5.4	17	<1	19	5	<2	<3	6840	4630	171	3.39
134	F 52	-500	0	MQC- An beforsite (1)	Mcbl	204	292	81	5.6	2.0	25.0	0.9	0.5	4.5	10	2	18	671	4	<3	6960	4710	249	5.16
135	F 60	-450	0	MQC- An beforsite (1)	Mcbl	57	68	19	<0.1	<0.5	18.1	0.5	0.4	2.4	5	2	3	445	<2	<3	6180	4770	115	3.87
136	F 61	-400	0	MQC- An beforsite (1)	Mcbl	213	323	79	6.0	1.9	15.1	0.8	0.3	2.8	10	4	18	1230	<2	<3	5780	4050	116	3.17
137	F 62	-350	0	MQC- An beforsite (1)	Mcbl	112	153	39	1.1	0.9	20.3	0.6	0.5	2.4	7	5	7	1570	3	<3	7860	4910	114	3.95
138	F 70	-300	0	MQC- An beforsite (1)	Mcbl	319	510	135	14.4	3.2	21.8	0.8	0.6	2.6	10	4	20	722	2	4	7600	4200	180	4.82
139	F 71	-250	0	MQC- An beforsite (1)	Mcbl	265	363	90	9.6	2.4	18.8	0.6	0.5	2.0	6	10	16	1200	3	5	6190	4560	132	3.83
140	F 72	-200	0	MQC- An beforsite (1)	Mcbl	465	686	177	25.0	5.6	14.8	1.0	0.4	3.8	19	2	25	1540	19	<3	6590	4820	9070	3.03
141	F 80	-150	0	MQC- Syenite (undifferentiated)	Msu	82	135	45	4.6	1.8	10.1	1.6	0.4	<0.5	17	17	8	209	12	332	1220	1660	3310	2.92
142	F 81	-100	0	MQC- Syenite (undifferentiated)	Msu	186	343	125	20.2	5.6	15.8	2.7	0.8	<0.5	37	5	14	339	30	653	1800	2870	10000	4.03
143	F 90	0	0	Namaqua Metamorphic Complex	Ngn	56	99	35	5.0	1.3	6.8	1.9	0.4	3.9	13	3	19	40	2	94	493	92	282	1.49
144	Fa 31	-843	70	MQC- An beforsite (1)	Mcbl	130	167	41	0.4	0.8	19.6	1.1	0.6	4.2	9	1	6	86	2	54	6190	4440	174	4.04
145	Fa 32	-793	70	MQC- An beforsite (1)	Mcbl	471	685	221	28.4	7.4	40.4	1.9	1.3	3.1	17	1	42	41	9	<3	9270	3780	305	8.11
146	Fa 40	-750	70	MQC- An beforsite (1)	Mcbl	271	427	132	15.6	4.3	26.3	1.0	0.7	4.5	10	8	33	700	13	4	3570	3160	1490	4.53
147	Fa 41	-700	70	MQC- An beforsite (1)	Mcbl	83	120	35	<0.1	0.7	20.9	0.7	0.5	3.0	5	1	8	341	4	<3	5670	5100	128	3.56
148	Fa 42	-650	70	MQC- An beforsite (1)	Mcbl	76	104	29	<0.1	0.7	22.0	0.7	0.5	2.8	6	2	7	762	2	<3	5920	5200	127	3.67
149	Fa 50	-600	70	MQC- An beforsite (1)	Mcbl	56	69	19	<0.1	<0.5	24.5	0.6	0.4	2.4	6	3	8	1320	4	4	6050	5250	108	4.04
150	Fa 51	-550	70	MQC- An beforsite (1)	Mcbl	70	105	28	<0.1	0.8	16.3	0.6	0.4	2.9	7	3	7	967	<2	<3	5510	5720	103	2.79
151	Fa 52	-500	70	MQC- An beforsite (1)	Mcbl	61	77	21	<0.1	<0.5	25.4	0.7	0.6	2.5	6	2	3	658	3	<3	5860	4900	122	4.26
152	Fa 60	-450	70	MQC- An beforsite (1)	Mcbl	2500	4270	1250	161.0	30.9	35.7	1.8	0.9	3.5	56	31	233	1030	10	<3	6940	5120	127	5.14
153	Fa 61	-400	70	MQC- An beforsite (1)	Mcbl	108	148	37	<0.1	0.7	24.2	0.8	0.6	3.2	7	5	5	1450	2	<3	6460	4740	133	4.20
154	Fa 62	-350	70	MQC- An beforsite (1)	Mcbl	182	231	59	3.8	1.4	19.8	0.7	0.6	2.6	7	1	18	36	2	<3	6250	4410	115	3.58
155	Fa 70	-300	70	MQC- An beforsite (1)	Mcbl	558	709	164	17.8	4.1	25.8	0.9	0.8	2.5	11	1	28	140	2	<3	6410	5990	115	4.41
156	Fa 71	-250	70	MQC- An beforsite (1)	Mcbl	89	133	40	1.1	1.1	18.1	0.8	0.5	2.6	7	<1	5	4	<2	<3	5690	5350	154	3.05
157	Fa 72	-200	70	MQC- An beforsite (1)	Mcbl	174	258	75	4.7	1.9	24.7	1.0	0.6	3.9	10	1	15	<2	2	<3	6280	6210	166	4.02
158	Fa 80	-150	70	MQC- Syenite (undifferentiated)	Msu	96	145	52	2.2	2.2	20.8	2.8	0.9	<0.5	23	3	13	277	17	790	1620	1600	3900	4.34
159	Fa 81	-100	70	MQC- Syenite (undifferentiated)	Msu	116	192	68	7.4	2.9	17.7	2.2	0.7	<0.5	23	2	5	265	20	575	1450	2840	5250	3.48
160	G 20	-1063	129	Namaqua Metamorphic Complex	Ngn	79	143	58	4.6	1.9	20.3	2.6	1.0	7.8	13	10	13	211	6	303	1640	517	716	4.12
161	G 30	-913	129	MQC- Syenite (undifferentiated)	Msu	101	158	54	4.4	2.2	21.5	2.5	0.9	0.5	22	8	8	120	11	436	1660	2460	4050	4.17
162	G 31	-863	129	MQC- Syenite (undifferentiated)	Msu	27	42	18	0.1	<0.5	11.0	1.2	0.5	<0.5	7	5	4	511	36	708	914	545	1290	2.80
163	G 32	-813	129	MQC- Syenite (undifferentiated)	Msu	300	455	160	29.6	7.4	24.5	1.2	0.7	1.7	14	5	52	391	12	17	3570	3470	1280	3.90
164	G 40	-763	129	MQC- An beforsite (1)	Mcbl	1360	1710	337	47.8	10.6	26.3	1.1	0.8	2.9	16	20	76	146	7	<3	6480	7440	550	4.60
165	G 41	-713	129	MQC- An beforsite (1)	Mcbl	245	341	84	7.5	2.0	16.9	0.7	0.5	2.7	7	2	18	634	2	<3	5790	5970	729	3.17
166	G 42	-663	129	MQC- An beforsite (1)	Mcbl	47	74	21	<0.1	0.6	12.9	0.5	0.4	2.4	5	1	3	293	<2	<3	5260	5840	107	2.51
167	G 50	-613	129	MQC- An beforsite (1)	Mcbl	182	278	81	2.9	2.1	34.8	1.3	1.1	3.6	12	3	22	238	8	<3	5970	4110	155	6.87
168	G 51	-563	129	MQC- An beforsite (1)	Mcbl	67	120	32	<0.1	0.6	19.6	0.4	0.5	2.5	6	5	13	3350	7	3	5380	5410	162	3.61
169	G 52	-513	129	MQC- An beforsite (1)	Mcbl	48	88	25	<0.1	0.6	12.2	0.6	0.4	2.1	6	6	8	1400	10	<3	4680	4810	167	2.37
170	G 60	-463	129	MQC- An beforsite (1)	Mcbl	62	98	27	<0.1	<0.5	22.5	0.6	0.6	2.3	5	3	5	601	2	<3	6780	4670	161	4.05
171	G 61	-413	129	MQC- An beforsite (1)	Mcbl	634	949	278	35.1	6.4	29.2	0.8	0.8	2.3	12	4	46	1390	4	<3	6780	3350	120	5.09
172	G 62	-363	129	MQC- An beforsite (1)	Mcbl	127	180	42	2.1	1.3	22.3	0.7	0.6	2.3	7	1	19	638	2	<3	6500	4630	141	3.89
173	G 70	-313	129	MQC- An beforsite (1)	Mcbl	266	355	80	4.5	1.9	19.4	0.7	0.5	2.6	8	3	38	2300	7	4	5840	4210	115	3.63
174	G 71	-263	129	MQC- An beforsite (1)	Mcbl	68	107	30	<0.1	0.7	18.5	0.9	0.6	3.7	8	3	5	246	3	7	6790	5240	135	3.39
175	G 72	-213	129	MQC- Sovite	Mcs	306	524	186	34.8	9.1	16.4	2.8	0.6	<0.5	54	9	16	23	<2	28	1290	3330	15700	2.23
176	G 80	-163	129	MQC- Syenite (undifferentiated)	Msu	27	43	20	<0.1	<0.5	11.3	1.6	0.6	2.6	9	5	4	555	15	797	1050	3450	725	2.87
177	G 90	-13	129	Namaqua Metamorphic Complex	Ngn	78	132	41	6.7	1.1	8.4	1.6	0.4	3.9	13	2	26	27	<2	87	460	97	293	1.15
178	Ga 31	-863	204	MQC- Syenite (undifferentiated)	Msu	12	22	10	<0.1	<0.5	8.4	0.7	0.3	<0.5	3	12	8	207	11	405	554	309	496	1.94
179	Ga 32	-813	204	MQC- Syenite (undifferentiated)	Msu	40	69	24	0.2	0.6	12.8	1.2	0.6	<0.5	10	34	28	1670	57	493	846	647	2100	2.98
180	Ga 40	-763	204	MQC- Carbonatite dyke	Mcd	2730	4920	1990	336.0	71.1	36.3	1.8	0.8	3.1	52	4	716	88	5	3	7890	6210	1240	7.13
181	Ga 41	-713	204	MQC- Syenite (undifferentiated)	Msu	50	102	53	11.5	4.3	11.6	1.3	0.2	<0.5	18	16	25	313	13	143	1120	991	3100	2.99
182	Ga 42	-663	204	MQC- An beforsite (1)	Mcbl	215	304	92	6.8	2.9	27.5	0.9	0.6	1.7	8	2	22	47	2	3	5200	2580	344	6.49
183	Ga 50	-613	204	MQC- An beforsite (1)	Mcbl	2570	3920	1050	190.7	36.8	36.5	1.5	0.8	3.0	26	4	157	36	4	<3	7400	2900	2150	7.97
184	Ga 51	-563	204	MQC- An beforsite (1)	Mcbl	135	198	61	4.0	1.6	19.6	0.7	0.3	2.8	6	1	14	87	<2	<3	7100	4970	150	4.28
185	Ga 52	-513	204	MQC- An beforsite (1)	Mcbl	270	409	133	17.2	4.8	24.2	0.9	0.8	3.5	11	29	35	2020	35	<3	8420	4910	144	5.60
186	Ga 60	-463	204	MQC- An beforsite (1)	Mcbl	375	565	180	25.6	5.9	25.2	1.0	0.8	3.4	11	27	44	1850	28	<3	7970	4860	155	5.44
187	Ga 61	-413	204	MQC- An beforsite (1)	Mcbl	783	1180	343	44.0	8.1	24.6	1.1	0.5	2.4	14	2	61	210	2	5	8140	4020	153	5.97
188	Ga 62	-363	204	MQC- Sovite	Mcs	692	868	183	17.2	4.2	22.6	1.6	0.6	3.1	17	6	32	1980	8	3	7380	4860	116	4.91
189	Ga 70	-313	204	MQC- Syenite (undifferentiated)	Msu	100	206	95	17.6	7.5	17.0	9.4	1.5	<0.5	105	5	8	214	19	949	1830	969	7120	5.09
190	Ga 71	-263	204	MQC- Sovite	Mcs	216	383	133	21.6	6.9	14.0	3.6	0.7	<0.5	55	2	11	20	<2	132	1430	2580	10120	2.99
191	Ga 72	-213	204	MQC- Sovite	Mcs	172	353	153	30.5	7.6	7.8	4.4	0.7	<0.5	61	26	17	88	<2	14	1380	4340	2140	1.15
192	H 20	-1063	278	Namaqua Metamorphic Complex	Ngn	36	68	24	<0.1	0.6	11.1	1.5	0.5	<0.5	9	21	7	546	31	750	1340	877	1160	4.00
193	H 30	-913	278	MQC- Sovite	Mcs	184	309	103	13.0	5.2	9.0	17.0	0.6	<0.5	47	10	5	595	26	242	783	3410	6940	1.22
194	H 40	-763	278	MQC- Syenite (undifferentiated)	Msu	4	12	6	<0.1	<0.5	6.9	0.8	0.3	<0.5	2	8	3	305	16	455	598	341	561	2.57
195	H 50	-613	278	MQC- Sovite	Mcs	152	261	89	13.1	4.3	11.8	3.3	0.7	<0.5	42	3	8	176	15	365	1340	3150	3800	2.81
196	H 60	-463	278	MQC- Sovite	Mcs	180	325	114	21.2	6.2	10.2	3.6	0.7	<0.5	52	4	11	27	<2	130	1370	2730	5580	2.02
197	H 70	-313	278	MQC- Sovite	Mcs	128	252	86	11.8	4.3	9.6	2.5	0.6	<0.5	30	94	18	355	20	261	961	2170	6390	2.26

A–4 Results of Chemical Analysis of Whole Rock Geochemical Survey (4)

No.	Sample No.	Coordinate X (m)	Coordinate Y (m)	Lithostratigraphic Unit	Rock Code	La (ppm)	Ce (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	Sc (ppm)	Y (ppm)	U (ppm)	Th (ppm)	Nb (ppm)	Ta (ppm)	Zr (ppm)	Mn (ppm)	Sr (ppm)	P (ppm)	Fe (%)
198	H 80	-163	278	MQC- Syenite (undifferentiated)	Msu	49	79	30	< 0.1	0.8	17.8	2.3	0.8	2.8	12	21	10	398	15	786	1680	421	1640	4.29
199	I 10	-1187	414	Namaqua Metamorphic Complex	Ngn	47	101	35	4.4	1.3	11.6	2.3	0.6	5.0	19	2	11	21	< 2	128	830	326	478	2.24
200	I 30	-929	414	Namaqua Metamorphic Complex	Ngn	71	135	48	2.3	1.3	15.8	2.7	0.9	7.0	13	2	4	25	2	133	1330	383	1240	3.25
201	I 50	-629	414	MQC- Syenite (undifferentiated)	Msu	2	11	4	< 0.1	< 0.5	9.9	0.5	0.3	0.5	2	6	8	254	15	94	352	431	276	1.99
202	I 60	-497	414	MQC- Sovite	Mcs	268	558	194	38.8	11.0	10.4	6.2	1.0	7.0	90	2	1	61	< 2	3	3960	9160	3420	1.25
203	I 70	-329	414	MQC- Syenite (undifferentiated)	Msu	72	60	22	< 0.1	< 0.5	26.0	18.0	1.1	6.8	13	2	2	587	13	1620	1800	165	750	4.19
204	I 80	-179	414	MQC- Reddish porphyritic Ne syenite	Msr	33	68	25	< 0.1	0.9	13.3	1.9	0.7	< 0.5	13	9	11	639	14	849	1560	598	2220	3.74
205	I 90	-29	414	Namaqua Metamorphic Complex	Ngn	129	213	52	4.9	1.2	9.6	1.6	0.4	4.2	12	5	11	80	2	155	591	346	317	1.99
206	Ia 71	-266	501	MQC- Syenite (undifferentiated)	Msu	176	335	124	17.3	5.5	17.4	2.8	0.6	< 0.5	37	4	10	113	5	236	1610	3060	11500	3.63
207	Ia 72	-196	501	Namaqua Metamorphic Complex	Ngn	47	90	38	1.7	1.2	15.6	2.4	0.6	10.9	13	2	7	73	< 2	140	1620	587	1080	3.15
208	Ia 80	-166	501	Namaqua Metamorphic Complex	Ngn	12	22	8	< 0.1	< 0.5	4.7	0.3	< 0.1	1.2	2	< 1	3	24	< 2	31	232	27	173	1.00
209	Ia 81	-116	501	Namaqua Metamorphic Complex	Ngn	13	26	10	0.6	< 0.5	3.9	0.6	< 0.1	1.1	3	3	19	27	< 2	61	329	82	178	0.77
210	Ia 82	-66	501	Namaqua Metamorphic Complex	Ngn	47	76	28	0.2	0.7	12.2	1.5	0.4	5.7	8	2	7	37	< 2	189	1230	416	476	2.55
211	Ia 90	-28	509	MQC- An beforsite (2)	Mcb2	63	107	44	3.8	2.0	17.4	1.0	0.3	2.0	13	< 1	1	57	< 2	4	5080	3730	2460	2.89
212	J 20	-1025	590	Namaqua Metamorphic Complex	Ngn	55	112	43	5.7	1.8	8.0	2.3	0.4	4.0	18	1	17	22	< 2	101	543	190	436	1.49
213	J 40	-726	593	MQC- Sovite	Mcs	182	302	112	26.6	7.8	6.0	5.1	0.6	1.0	70	4	35	32	< 2	< 3	1160	5390	821	0.56
214	J 50	-571	594	MQC- Sovite	Mcs	217	318	104	1.1	4.8	39.0	22.0	1.4	< 0.5	45	5	5	382	24	767	1980	2720	7800	4.87
215	J 60	-426	595	MQC- Sovite	Mcs	155	285	95	18.1	5.3	4.8	3.5	0.4	< 0.5	52	6	10	28	< 2	30	948	5030	780	0.59
216	J 70	-271	596	Namaqua Metamorphic Complex	Ngn	20	21	8	< 0.1	< 0.5	15.3	0.9	0.3	3.2	3	3	4	66	< 2	111	1030	209	790	2.98
217	J 71	-225	596	MQC- Sovite	Mcs	81	157	62	6.9	2.9	15.0	1.3	0.3	< 0.5	18	1	< 1	111	< 2	4	7600	3700	3550	2.80
218	J 72	-168	598	Namaqua Metamorphic Complex	Ngn	119	193	73	5.7	2.8	24.9	1.9	0.7	6.4	22	2	13	71	< 2	243	1440	424	1620	4.85
219	J 80	-122	602	Namaqua Metamorphic Complex	Ngn	29	55	19	0.3	< 0.5	9.1	0.9	0.2	3.2	6	2	10	22	< 2	107	466	217	352	1.70
220	J 82	-19	600	MQC- Micro-granite ???	Mgr	259	657	384	127.6	46.7	32.1	44.8	5.0	< 0.5	860	1	294	10	< 2	7	48	1270	40400	0.14
221	J 90	-27	588	MQC- Micro-granite	Mgr	30	64	20	1.6	0.8	5.6	0.3	0.2	< 0.5	3	2	6	53	< 2	6	28	15	226	1.15
222	Ja 71	-265	654	Namaqua Metamorphic Complex	Ngn	3	9	3	< 0.1	< 0.5	7.5	0.6	0.2	2.0	2	1	1	14	< 2	100	376	6	249	1.70
223	Ja 72	-216	654	MQC- Sovite	Mcs	250	511	203	42.3	12.4	13.5	7.2	1.3	< 0.5	105	27	48	2520	54	9	4020	6210	11900	1.95
224	Ja 80	-165	654	MQC- An beforsite (2)	Mcb2	223	466	181	32.1	8.6	12.2	2.1	0.5	1.3	42	1	14	3170	< 2	6	5140	3930	13710	2.24
225	Ja 81	-114	654	Namaqua Metamorphic Complex	Ngn	98	181	54	4.4	1.5	10.3	3.5	0.8	6.6	23	2	29	40	< 2	185	692	269	243	2.10
226	Ja 82	-64	654	MQC- An beforsite (2)	Mcb2	662	925	218	27.4	6.6	14.0	1.3	0.6	0.6	21	< 1	9	661	< 2	< 3	5900	8620	7980	2.96
227	Ja 90	-14	654	MQC- An beforsite (2)	Mcb2	113	271	104	16.4	5.0	14.0	1.7	0.6	1.7	28	< 1	4	2000	< 2	< 3	6340	5373	12360	2.90
228	K 40A	-613	877	MQC- Sovite	Mcs	142	276	87	13.9	4.4	8.4	3.5	0.7	< 0.5	49	8	9	358	6	259	1020	4080	3870	1.88
229	K 10	-1173	728	Namaqua Metamorphic Complex	Ngn	44	82	32	3.8	1.2	8.8	2.9	0.5	4.4	20	3	11	64	< 2	207	1100	271	376	1.78
230	K 20	-1024	728	Namaqua Metamorphic Complex	Ngn	99	128	38	< 0.1	1.5	34.0	18.0	0.9	18.0	21	5	5	164	< 2	257	1050	462	1050	3.87
231	K 30	-875	698	MQC- Sovite	Mcs	131	259	99	17.6	5.1	9.1	4.0	0.6	0.6	50	4	2	390	< 2	11	2140	5400	484	1.37
232	K 50	-598	726	MQC- Syenite (undifferentiated)	Msu	9	10	5	< 0.1	< 0.5	15.0	0.4	0.2	< 0.5	2	29	12	249	6	116	637	154	681	2.85
233	K 60	-455	724	MQC- Sovite	Mcs	178	316	110	20.4	6.0	7.6	4.5	0.6	2.1	61	12	12	278	4	72	2380	4410	1290	0.96
234	K 70	-288	723	MQC- Sovite	Mcs	186	376	148	29.7	8.4	8.0	5.6	0.8	< 0.5	75	1	2	40	< 2	< 3	3140	5610	1170	1.04
235	K 71	-261	722	Namaqua Metamorphic Complex	Ngn	105	151	42	1.2	1.0	13.7	1.6	0.5	4.9	10	3	10	27	< 2	182	953	176	273	2.92
236	K 72	-206	722	Namaqua Metamorphic Complex	Ngn	74	109	36	< 0.1	0.9	22	13	0.7	3.2	11	4	9	60	< 2	223	881	289	470	2.44
237	K 80	-183	721	MQC- An beforsite (2)	Mcb2	259	583	279	48.8	12.1	19.0	2.0	0.4	1.7	45	2	20	4800	10	3	5660	4380	22600	3.14
238	K 81	-100	720	MQC- An beforsite (2)	Mcb2	48	103	42	4.6	1.9	11.6	0.8	0.2	0.8	11	< 1	< 1	26	< 2	< 3	6660	4810	2490	2.28
239	K 82	-51	720	MQC- An beforsite (2)	Mcb2	57	87	33	2.8	1.4	8.3	0.6	0.1	0.6	6	< 1	< 1	3	< 2	< 3	6420	2660	1240	2.29
240	K 90	0	719	MQC- An beforsite (2)	Mcb2	104	250	98	15.3	5.1	13.4	1.6	0.6	0.6	27	< 1	8	66	< 2	< 3	6800	3860	6320	2.60
241	Ka 11	-1134	802	MQC- Greyish-white porphyritic syenite	Msw	294	606	178	22.4	4.2	7.6	0.5	0.2	< 0.5	8	38	21	776	11	22	1740	910	250	1.35
242	Ka 12	-1084	802	MQC- Greyish-white porphyritic syenite	Msw	16	34	8	< 0.1	< 0.5	12.2	0.9	0.4	< 0.5	7	8	11	83	2	83	653	1420	228	2.49
243	Ka 20	-1034	802	MQC- Porphyritic Ne syenite(REE bearing)	Msp	143	279	79	9.3	2.2	8.4	1.6	0.5	1.8	13	20	17	409	5	159	1310	582	490	1.65
244	Ka 21	-992	802	MQC- Porphyritic Ne syenite(REE bearing)	Msp	90	187	56	4.2	1.7	11.5	4.0	1.1	3.1	22	3	9	62	3	422	1340	915	655	2.68
245	Ka 22	-939	812	MQC- Greyish-white porphyritic syenite	Msw	31	106	42	2.4	2.4	14.4	3.0	0.8	< 0.5	22	10	16	187	7	449	1150	1760	691	3.16
246	Ka 61	-394	801	MQC- Syenite (undifferentiated)	Msu	23	25	8	< 0.1	< 0.5	4.8	0.5	0.2	< 0.5	5	210	39	1810	63	280	874	393	241	2.33
247	Ka 62	-341	801	MQC- Sovite	Mcs	248	431	159	90.1	8.0	13.2	3.9	0.6	< 0.5	62	13	9	105	5	14	1310	1640	11500	2.64
248	Ka 70	-291	801	MQC- Sovite	Mcs	279	560	215	43.6	11.7	9.6	6.8	1.0	3.1	95	1	1	145	< 2	< 3	5240	4250	8140	1.35
249	Ka 71	-241	801	MQC- An beforsite (2)	Mcb2	104	129	55	2.6	1.5	22.8	3.3	0.7	10.6	35	1	2	84	< 2	67	1450	269	4390	5.89
250	Ka 72	-190	801	MQC- An beforsite (2)	Mcb2	80	117	43	4.1	1.6	12.3	0.8	0.2	0.6	10	< 1	5	2770	< 2	9	7850	1840	1880	3.03
251	Ka 80	-141	801	MQC- An beforsite (2)	Mcb2	162	290	120	18.6	6.6	16.4	2.6	0.5	4.3	46	2	33	2350	< 2	< 3	5540	1570	7400	3.57
252	Ka 81	-91	800	MQC- An beforsite (2)	Mcb2	279	559	249	49.8	12.8	12.2	2.2	0.3	< 0.5	55	< 1	2	14	< 2	< 3	5900	2320	21400	2.19
253	Ka 82	-50	797	MQC- An beforsite (2)	Mcb2	70	93	31	1.4	1.2	11.3	0.7	0.1	< 0.5	9	< 1	2	< 2	< 2	< 3	6230	6340	191	2.36
254	Ka 90	1	797	MQC- An beforsite (2)	Mcb2	164	269	115	18.6	5.7	16.0	1.4	0.2	0.6	28	< 1	2	102	< 2	< 3	5150	4040	8950	3.09
255	L 10	-1184	877	Namaqua Metamorphic Complex	Ngn	111	234	85	6.2	2.7	30.0	4.7	1.5	15.2	45	2	21	46	7	135	1820	730	1550	5.80
256	L 11	-1134	877	MQC- Greyish-white porphyritic syenite	Msw	33	73	24	3.1	0.8	9.4	2.7	0.7	3.5	20	7	16	39	< 2	122	585	135	509	1.74
257	L 12	-1084	877	MQC- Greyish-white porphyritic syenite	Msw	145	274	81	9.7	2.4	17.0	7.0	1.5	10.0	60	6	25	58	3	153	698	224	341	3.30
258	L 20	-1034	877	MQC- Porphyritic Ne syenite(REE bearing)	Msp	18	40	12	< 0.1	< 0.5	8.9	0.6	0.2	< 0.5	4	10	9	127	< 2	53	430	698	237	1.74
259	L 21	-984	877	MQC- Porphyritic Ne syenite(REE bearing)	Msp	36	86	32	< 0.1	0.8	17.7	2.5	1.0	1.4	15	5	9	955	15	512	1580	819	691	3.88
260	L 22	-927	877	MQC- Porphyritic Ne syenite(REE bearing)	Msp	57	117	99	2.4	1.6	11.8	2.8	0.7	< 0.5	30	79	56	259	< 2	700	1280	1270	388	2.82
261	L 60	-424	875	MQC- Sovite	Mcs	199	328	117	23.4	6.3	7.5	4.1	0.5	< 0.5	63	9	35	733	29	22	1060	4100	4160	0.75
262	L 61	-391	875	MQC- Syenite (undifferentiated)	Msu	48	31	15	< 0.1	< 0.5	19.3	1.0	0.4	11.4	6	1	1	68	< 2	270	1160	332	1180	4.61
263	L 62	-340	880	MQC- An beforsite (2)	Mcb2	229	405	190	57.0	10.1	19.1	2.1	0.4	< 0.5	48	1	14	5280	3	< 3	6150	4100	18400	3.36

A-4 Results of Chemical Analysis of Whole Rock Geochemical Survey (5)

No.	Sample No.	Coordinate X (m)	Coordinate Y (m)	Lithostratigraphic Unit	Rock Code	La (ppm)	Ce (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	Sc (ppm)	Y (ppm)	U (ppm)	Th (ppm)	Nb (ppm)	Ta (ppm)	Zr (ppm)	Mn (ppm)	Sr (ppm)	P (ppm)	Fe (%)
264	L 70	-291	875	Namaqua Metamorphic Complex	Ngn	217	278	93	3.0	2.6	27.7	1.6	0.5	8.5	15	1	9	103	2	345	1400	277	539	6.66
265	L 71	-242	870	MQC- An beforsite (2)	Mcb2	235	442	204	40.9	10.4	14.4	1.9	0.2	0.6	46	1	6	1080	< 2	< 3	4580	4800	15500	2.44
266	L 72	-194	875	MQC- An beforsite (2)	Mcb2	60	28	7	< 0.1	< 0.5	30.9	2.4	0.7	3.0	26	24	5	3870	6	10	11900	958	138	6.65
267	L 80	-146	875	MQC- An beforsite (2)	Mcb2	215	410	177	33.0	8.9	14.2	2.1	0.3	0.6	44	< 1	4	13	< 2	< 3	6200	5470	14200	2.64
268	L 81	-98	875	MQC- An beforsite (2)	Mcb2	158	293	131	25.6	7.0	13.9	1.8	0.2	1.8	37	< 1	2	292	< 2	< 3	5540	3910	11400	2.35
269	L 82	-48	875	MQC- An beforsite (2)	Mcb2	168	309	135	22.4	6.4	14.2	1.4	0.2	1.2	30	< 1	3	1540	< 2	< 3	6190	4990	12400	2.66
270	L 90	0	875	Nama group	Nsh	104	136	50	3.6	2.5	22.9	6.0	0.9	11.4	67	5	56	40	< 2	96	1210	362	417	4.70
271	La 12	-1084	952	MQC- Porphyritic Ne syenite(REE bearing)	Msp	11	27	9	0.4	< 0.5	5.5	0.7	0.2	< 0.5	5	30	8	103	< 2	94	355	551	584	0.93
272	La 20	-1034	952	MQC- Porphyritic Ne syenite(REE bearing)	Msp	12	32	11	< 0.1	< 0.5	7.1	0.6	0.2	< 0.5	4	10	4	514	< 2	40	463	2310	652	1.44
273	La 21	-984	952	MQC- Porphyritic Ne syenite(REE bearing)	Msp	100	185	55	8.0	2.4	5.8	2.0	0.4	< 0.5	22	39	9	< 2	< 2	286	1230	1900	1530	0.97
274	La 22	-934	952	MQC- Sovite	Mcs	228	392	122	24.2	6.4	3.5	4.6	0.6	< 0.5	68	1	< 1	257	< 2	< 3	1290	6960	78	0.22
275	La 61	-394	950	MQC- Sovite	Mcs	253	434	162	35.0	9.8	7.9	6.6	0.9	< 0.5	92	1	1	228	< 2	< 3	4620	2660	2710	0.91
276	La 62	-344	950	MQC- Sovite	Mcs	361	625	253	46.1	14.0	31.2	6.0	1.0	< 0.5	93	4	90	8770	38	11	3450	1870	19500	6.64
277	La 70	-291	950	MQC- An beforsite (2)	Mcb2	145	259	109	18.6	5.8	12.1	2.1	0.2	1.0	36	< 1	5	922	3	< 3	5810	1600	8650	2.49
278	La 71	-243	953	MQC- An beforsite (2)	Mcb2	351	608	230	33.6	8.4	24.1	2.7	0.6	1.8	41	7	28	2610	2	< 3	8480	1420	3710	5.10
279	La 72	-195	950	MQC- An beforsite (2)	Mcb2	55	14	5	< 0.1	< 0.5	26.7	2.5	0.6	6.9	25	27	4	1630	4	15	12500	629	149	6.15
280	La 80	-146	950	MQC- An beforsite (2)	Mcb2	180	329	140	24.8	7.3	13.8	1.5	0.1	1.9	35	< 1	5	1300	< 2	< 3	5400	4000	12400	2.50
281	La 81	-96	950	Nama group	Nsh	85	129	55	6.0	2.6	15.4	3.7	0.3	7.2	41	4	5	104	3	243	1780	956	1600	3.56
282	La 90	2	950	Nama group	Nsh	72	81	33	< 0.1	0.8	21.6	4.0	0.5	12.2	42	4	12	32	< 2	114	912	204	316	4.19
283	M 10	-1180	1027	MQC- Greyish-white porphyritic syenite	Msw	53	117	35	5.0	1.4	5.2	1.4	0.3	0.9	13	14	11	859	6	57	740	427	973	1.34
284	M 11	-1134	1027	MQC- Greyish-white porphyritic syenite	Msw	95	158	40	2.7	0.9	6.4	0.9	0.3	< 0.5	10	78	19	268	2	27	660	438	1620	1.48
285	M 12	-1084	1027	MQC- Greyish-white porphyritic syenite	Msw	222	350	80	9.2	2.0	7.6	1.0	0.4	< 0.5	17	91	14	900	3	23	1610	1340	2260	1.69
286	M 20	-1034	1027	MQC- Porphyritic Ne syenite(REE bearing)	Msp	57	78	27	< 0.1	0.7	14.0	1.1	0.6	1.2	13	34	18	496	5	320	861	1230	2560	3.86
287	M 21	-984	1027	MQC- Porphyritic Ne syenite(REE bearing)	Msp	138	252	68	10.3	2.3	6.6	1.4	0.3	< 0.5	24	286	50	3170	15	25	2180	3020	1220	1.51
288	M 22	-934	1027	MQC- Carbonatite dyke, calcitic	Mcd	1600	3530	1210	154.0	51.0	33.3	4.6	1.2	5.1	79	1	147	13	< 2	< 3	10200	12810	613	6.74
289	M 30	-884	1027	MQC- Sovite	Mcs	69	128	43	9.0	2.4	2.2	2.0	0.1	< 0.5	26	10	4	134	< 2	11	801	2410	773	0.25
290	M 40	-732	1032	MQC- Sovite	Mcs	274	478	143	22.0	7.2	16.0	24.0	1.0	0.7	77	4	5	2100	< 2	13	1460	4390	3200	1.37
291	M 50	-579	1028	MQC- Sovite	Mcs	226	361	112	23.3	6.2	4.2	4.7	0.5	< 0.5	71	1	1	8	< 2	16	1250	6040	370	0.31
292	M 60	-427	1028	MQC- Sovite	Mcs	215	344	112	20.7	6.0	8.2	4.4	0.6	< 0.5	66	1	4	856	< 2	7	1240	5440	2040	1.19
293	M 61	-376	1028	MQC- An beforsite (2)	Mcb2	79	128	48	5.6	2.9	12.6	0.7	< 0.1	1.3	12	< 1	< 1	126	< 2	< 3	6250	6290	2880	2.20
294	M 62	-326	1029	MQC- An beforsite (2)	Mcb2	78	125	49	6.4	2.6	11.8	1.0	0.2	0.5	16	< 1	4	768	< 2	4	5700	3810	3180	2.49
295	M 70	-288	1029	MQC- An beforsite (2)	Mcb2	178	340	150	28.0	7.9	13.4	1.6	0.2	2.8	37	< 1	8	1980	< 2	< 3	4990	4070	13900	2.38
296	M 71	-239	1029	MQC- An beforsite (2)	Mcb2	187	326	138	19.7	7.6	27.0	2.1	0.5	0.8	40	1	47	4090	5	4	5130	3740	12600	5.17
297	M 72	-195	1029	MQC- An beforsite (2)	Mcb2	218	409	160	28.4	7.9	14.2	1.0	0.2	1.2	38	< 1	4	1480	< 2	< 3	5180	5210	12200	2.63
298	M 80	-160	1029	MQC- An beforsite (2)	Mcb2	229	315	86	3.0	2.0	21.6	1.4	0.5	6.0	16	28	14	3520	3	4	8750	4030	142	4.45
299	M 81	-98	1029	Nama group	Nsh	95	120	43	< 0.1	1.2	22.8	3.3	0.6	9.8	32	4	17	51	2	101	994	510	415	4.90
300	M 90	3	1029	Nama group	Nsh	53	116	56	14.8	4.1	3.8	1.1	< 0.1	0.5	29	< 1	2	44	< 2	33	287	82	429	0.53
301	Ma 12	-1076	1102	MQC- Greyish-white porphyritic syenite	Msw	110	198	50	7.3	2.1	8.0	1.2	0.3	< 0.5	19	109	14	1170	5	16	1830	910	2640	1.73
302	Ma 20	-1034	1102	MQC- Porphyritic Ne syenite(REE bearing)	Msp	94	139	38	< 0.1	0.7	20.8	1.0	0.6	0.7	13	14	11	309	3	64	1170	724	1770	4.42
303	Ma 21	-984	1102	MQC- Porphyritic Ne syenite(REE bearing)	Msp	87	139	40	2.4	1.6	15.6	1.9	0.5	0.8	25	56	8	519	2	46	1670	2030	2120	3.08
304	Ma 22	-934	1102	MQC- Porphyritic Ne syenite(REE bearing)	Msp	64	107	33	0.4	1.0	13.6	1.2	0.5	< 0.5	14	2	7	124	< 2	156	1150	2550	790	2.94
305	Ma 51	-544	1111	MQC- Sovite	Mcs	222	381	105	21.6	5.7	3.9	3.2	0.4	< 0.5	65	1	< 1	9	< 2	< 3	1260	8620	504	0.30
306	Ma 52	-493	1111	MQC- Sovite	Mcs	205	347	99	17.0	5.2	8.5	3.4	0.5	< 0.5	63	4	1	60	< 2	110	1330	6960	216	1.28
307	Ma 60	-434	1111	MQC- An beforsite (2)	Mcb2	175	301	100	13.0	4.1	18.0	0.8	0.6	1.5	16	10	41	2200	< 2	7	5530	6220	305	3.63
308	Ma 61	-384	1110	MQC- An beforsite (2)	Mcb2	146	234	81	6.2	3.9	28.0	1.1	0.8	< 0.5	23	1	3	916	< 2	< 3	5650	9340	8450	6.13
309	Ma 62	-333	1110	MQC- An beforsite (2)	Mcb2	117	219	76	9.6	3.7	15.0	0.9	0.6	0.8	21	1	9	737	< 2	3	5430	6940	7070	3.37
310	Ma 70	-282	1110	MQC- An beforsite (2)	Mcb2	182	272	67	7.1	2.8	17.5	2.0	0.5	1.1	27	< 1	4	14	< 2	5	7270	5500	1060	3.81
311	Ma 71	-247	1113	MQC- An beforsite (2)	Mcb2	9450	11470	2020	235.0	36.3	16.4	0.8	0.6	0.9	22	1	29	354	< 2	< 3	7880	20120	6600	2.88
312	Ma 72	-196	1113	Nama group	Nsh	166	259	72	5.3	2.6	21.6	4.9	1.0	6.7	59	4	11	32	< 2	181	2330	430	1150	4.66
313	Ma 80	-147	1113	Namaqua Metamorphic Complex	Ngn	89	134	34	2.4	1.1	9.1	3.9	0.6	5.9	48	4	16	18	< 2	65	791	465	671	1.98
314	Ma 82	-48	1113	Nama group	Nsh	49	87	28	1.1	0.6	5.6	0.2	0.2	1.2	4	< 1	3	22	< 2	86	210	180	134	1.14
315	N 20	-1059	1187	MQC- Greyish-white porphyritic syenite	Msw	63	79	24	< 0.1	0.5	21.0	1.2	0.6	0.7	14	17	10	353	4	241	1340	1190	2050	4.15
316	N 21	-1008	1187	MQC- Porphyritic Ne syenite(REE bearing)	Msp	74	111	30	< 0.1	0.9	20.4	1.4	0.5	1.6	16	60	8	504	4	148	1110	2110	3930	4.35
317	N 22	-959	1187	MQC- Porphyritic Ne syenite(REE bearing)	Msp	71	95	25	< 0.1	0.5	20.7	1.2	0.5	2.1	14	34	9	688	6	169	930	1820	2440	4.61
318	N 40	-757	1186	MQC- Sovite	Mcs	264	496	146	35.0	9.6	7.6	3.8	0.4	0.5	83	37	16	1530	< 2	6	1460	7120	13300	0.83
319	N 61	-410	1185	MQC- An beforsite (2)	Mcb2	92	211	89	18.9	4.9	8.4	0.8	0.2	3.6	19	1	5	3020	< 2	< 3	7310	6450	13600	3.20
320	N 72	-204	1188	MQC- An beforsite (2)	Mcb2	155	315	98	13.7	3.1	15.6	1.0	0.5	4.1	12	6	10	1020	2	< 3	4640	1990	8020	7.27
321	N 82	-48	1188	Nama group	Nsh	490	792	289	84.8	35.3	42.1	11.1	1.3	4.8	469	11	70	330	6	16	9090	1700	12900	4.04
322	N 90	5	1188	Namaqua Metamorphic Complex	Ngn	38	30	14	< 0.1	1.4	13.1	1.5	0.3	25.9	18	8	10	72	< 2	51	869	295	5250	2.78
323	Na 11	-1142	1261	MQC- Greyish-white porphyritic syenite	Msw	44	75	18	3.6	1.1	3.6	0.7	0.2	< 0.5	10	118	8	1030	3	12	958	2880	3560	1.44
324	Na 12	-1088	1261	MQC- Greyish-white porphyritic syenite	Msw	12	26	9	< 0.1	< 0.5	8.3	0.5	0.3	1.1	4	38	7	538	5	93	803	1610	2110	3.95
325	Na 20	-1038	1261	MQC- Greyish-white porphyritic syenite	Msw	28	55	14	0.7	0.5	6.9	0.7	0.2	0.8	6	110	20	1900	11	43	1650	1460	1950	3.06
326	Na 21	-988	1261	MQC- Greyish-white porphyritic syenite	Msw	36	78	21	3.8	1.1	9.1	0.5	0.1	< 0.5	8	109	53	3020	7	21	858	1670	5630	1.17
327	Na 22	-936	1261	MQC- Porphyritic Ne syenite(REE bearing)	Msp	86	137	46	3.6	1.6	9.6	1.6	0.6	< 0.5	21	10	14	339	3	347	1250	1810	2350	3.97
328	Na 51	-544	1261	MQC- Greyish-white porphyritic syenite	Msw	295	711	463	186.3	77.2	45.8	69.8	8.3	< 0.5	1280	6	332	45	< 2	4	47	3140	87400	0.07
329	Na 52	-492	1262	MQC- An beforsite (2)	Mcb2	264	275	76	< 0.1	1.7	47.0	5.2	1.4	12.4	41	13	12	685	5	< 3	12400	1330	302	9.73

A-4 Results of Chemical Analysis of Whole Rock Geochemical Survey (6)

No.	Sample No.	Coordinate X (m)	Coordinate Y (m)	Lithostratigraphic Unit	Rock Code	La (ppm)	Ce (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	Sc (ppm)	Y (ppm)	U (ppm)	Th (ppm)	Nb (ppm)	Ta (ppm)	Zr (ppm)	Mn (ppm)	Sr (ppm)	P (ppm)	Fe (%)
330	Na 60	-438	1262	MQC- Greyish-white porphyritic syenite	Msw	91	135	50	4.2	2.1	13.7	0.8	0.2	<0.5	10	2	6	177	4	41	780	508	941	2.50
331	Na 61	-387	1263	MQC- An beforsite (2)	Mcb2	85	76	29	<0.1	5.5	34.9	6.6	1.2	7.8	151	8	25	149	3	4	10500	991	1470	5.79
332	Na 62	-336	1263	MQC- Greyish-white porphyritic syenite	Msw	66	101	34	1.2	1.3	12.4	2.0	0.4	<0.5	17	10	9	257	10	382	1210	1210	510	2.80
333	Na 70	-303	1263	MQC- Greyish-white porphyritic syenite	Msw	85	127	39	2.4	1.4	10.6	2.0	0.3	<0.5	20	6	8	218	7	180	1120	1490	901	2.36
334	Na 71	-253	1269	Nama group	Nsh	250	282	95	1.8	8.3	62.6	4.5	1.5	66.1	72	33	36	420	8	531	1380	365	2960	12.50
335	Na 72	-203	1264	Nama group	Nsh	931	1530	437	88.8	27.7	26.5	5.0	0.6	1.8	202	38	119	822	7	8	3060	1410	3110	2.58
336	Na 80	149	1264	Nama group	Nsh	298	350	119	12.5	13.3	70.6	9.3	1.8	46.3	227	2	60	234	7	249	1590	344	5180	12.40
337	Na 82	-48	1265	Namaqua Metamorphic Complex	Ngn	448	560	186	19.7	16.3	96.4	10.6	2.7	66.4	190	5	92	356	9	156	3450	410	4240	18.30
338	D 10	-1185	1338	MQC- Greyish-white porphyritic syenite	Msw	27	69	25	1.6	0.9	9.3	1.2	0.4	1.3	12	2	6	152	6	354	1530	1300	1340	4.48
339	D 20	-1038	1338	MQC- Greyish-white porphyritic syenite	Msw	67	147	43	7.4	1.6	10.0	1.9	0.4	<0.5	22	8	26	271	16	415	1770	1210	1300	3.86
340	D 30	-908	1337	MQC- Greyish-white porphyritic syenite	Msw	68	136	40	4.6	1.8	11.4	2.2	0.6	1.6	24	10	32	226	12	328	1650	1460	1960	4.76
341	D 40	-735	1320	MQC- Greyish-white porphyritic syenite	Msw	9	20	8	<0.1	<0.5	5.7	0.3	0.1	<0.5	3	3	4	71	<2	23	535	1460	447	1.77
342	D 50	-572	1320	MQC- Greyish-white porphyritic syenite	Msw	81	174	66	15.0	6.8	11.0	15.0	0.3	1.6	103	1	9	63	<2	41	837	338	4900	0.83
343	D 60	-418	1320	MQC- Greyish-white porphyritic syenite	Msw	18	40	15	3.9	1.6	2.8	0.8	0.1	0.5	22	22	33	432	5	11	470	148	1900	0.43
344	D 61	-366	1320	Namaqua Metamorphic Complex	Ngn	27	32	11	<0.1	<0.5	49.5	2.0	1.1	56.5	15	3	10	208	16	142	1440	133	983	17.94
345	D 62	-336	1335	MQC- An beforsite (2)	Mcb2	103	145	33	5.5	1.5	4.8	1.8	0.3	2.9	21	3	17	27	<2	<3	2030	816	390	1.29
346	D 70	-285	1335	Namaqua Metamorphic Complex	Ngn	54	127	48	20.0	8.4	6.3	6.8	0.3	<0.5	174	28	141	952	2	4	413	594	18240	0.43
347	D 80	-129	1335	Namaqua Metamorphic Complex	Ngn	62	111	27	3.0	1.1	11.1	1.7	0.4	6.8	19	2	21	37	<2	30	634	232	649	3.81
348	P 10	-1185	1487	MQC- Greyish-white porphyritic syenite	Msw	20	42	11	0.8	0.6	6.3	0.7	0.2	<0.5	6	7	10	170	5	118	1000	932	601	2.42
349	P 20	-1061	1486	MQC- Greyish-white porphyritic syenite	Msw	80	141	37	6.4	2.1	6.9	1.8	0.3	<0.5	20	17	13	404	3	24	2530	3540	5080	2.08
350	P 40	-735	1476	Namaqua Metamorphic Complex	Ngn	133	197	41	4.6	1.7	12.4	1.8	0.4	5.7	20	5	28	57	2	70	1200	434	1330	4.41
351	P 60	-439	1477	Namaqua Metamorphic Complex	Ngn	30	45	12	<0.1	0.6	7.7	1.4	0.3	4.9	12	7	25	19	<2	654	472	296	688	2.30
352	P 80	-129	1478	Namaqua Metamorphic Complex	Ngn	27	47	15	2.4	0.6	6.0	2.0	0.3	5.7	17	4	20	8	<2	12	501	123	465	1.87
353	T 10A	-89	-698	Namaqua Metamorphic Complex	Ngn	59	122	61	5.5	1.0	6.6	2.9	0.4	3.0	18	7	117	2	<2	55	258	212	258	0.56
354	T 11A	-369	311	MQC- Syenite (undifferentiated)	Msu	26	25	13	0.1	0.5	6.8	0.8	0.3	0.8	[illegible]	4	5	48	<2	291	544	295	334	2.01
355	T 12A	-203	548	Namaqua Metamorphic Complex	Ngn	25	26	22	1.2	0.8	7.2	1.6	0.9	2.9	4	1	4	24	<2	70	372	61	383	1.56
356	T 13A	-218	521	MQC- Sovite	Mcs	360	571	280	52.1	13.1	10.1	5.3	1.0	2.2	111	3	18	452	3	<3	3120	7340	7770	0.72
357	T 1A	-175	-605	MQC- Carbonatite dyke	Mcd	4240	7760	3290	362.0	51.0	8.3	2.2	1.6	15.3	40	<1	101	14	73	4	37700	12900	519	8.19
358	T 2A	-378	-458	MQC- Sovite	Mcs	218	315	144	19.5	4.1	5.7	4.8	1.0	2.2	49	7	8	2	<2	698	1880	3890	200	2.33
359	T 4A	-588	-180	MQC- An beforsite (1)	Mcb1	84	98	43	7.6	2.2	5.5	0.8	0.7	5.7	10	<1	13	2	<2	<3	7920	5310	215	3.50
360	T 5A	-526	-92	MQC- An beforsite (1)	Mcb1	106	134	51	5.2	0.5	5.8	1.1	0.7	8.1	14	6	9	7	<2	<3	6140	5470	156	2.78
361	T 6A	-766	836	Namaqua Metamorphic Complex	Ngn	89	46	41	6.9	1.5	7.4	2.9	2.2	15.6	8	3	5	6	<2	494	1610	160	1690	7.67
362	T 7A	-1045	944	MQC- Porphyritic Ne syenite(REE bearing)	Msp	264	482	230	33.4	1.9	7.1	0.7	0.2	0.8	12	56	36	1290	<2	10	1290	1700	567	0.90
363	T 8A	-1017	973	MQC- Carbonatite dyke	Mcd	3780	5230	1810	186.0	29.4	6.2	10.0	2.5	9.6	119	1	16	5	4	6	12800	12000	4830	4.72
364	T 9A	-694	960	MQC- Sovite	Mcs	183	274	137	20.3	5.0	6.6	3.6	0.5	1.6	51	3	14	4	<2	708	1260	6140	80	0.85
The Kalkfeld area																								
365	Q 10	-398	-760	Damara Sequence	Ma	4	14	7	0.3	<0.5	4.0	1.0	0.2	3.1	11	5	10	6	<2	19	270	2590	850	1.41
366	Q 20	-298	-757	Damara Sequence	Ma	7	19	11	1.9	0.6	2.8	0.8	0.2	2.0	10	3	25	12	<2	13	428	3050	640	1.06
367	Q 30	-199	-755	Damara Sequence	Ma	6	17	8	0.8	<0.5	4.7	2.1	0.4	2.8	22	3	11	11	<2	18	421	1520	720	1.37
368	Q 40	-100	-753	Damaran Granitoid	Gp	10	22	8	1.4	0.7	1.7	0.4	0.1	0.6	7	3	18	<2	<2	17	125	128	760	0.48
369	Q 50	20	-751	OD-Volcanic Breccia	Vb	203	381	162	37.0	9.0	14.0	1.0	0.4	<0.5	25	79	370	296	12	5	5120	805	4090	3.67
370	Q 60	100	-746	Damara Sequence	Ma	23	40	15	0.8	0.6	6.5	1.3	0.3	4.1	15	4	14	6	<2	18	840	864	660	1.98
371	Q 70	200	-769	Damaran Granitoid	Gp	86	177	81	18.0	6.6	24.0	4.2	0.9	7.2	70	19	282	75	3	112	877	372	3490	6.44
372	Q 80	299	-751	OD-Volcanic Breccia	Vb	335	546	184	29.0	8.2	24.0	2.2	0.8	5.9	37	10	205	169	4	38	6300	1430	5450	6.28
373	R 10	-400	-610	Damara Sequence	Ma	9	12	5	0.1	0.5	3.3	1.6	0.3	0.8	18	1	10	2	<2	4	1300	2140	280	0.80
374	R 20	-300	-607	Damara Sequence	Ma	15	28	11	0.6	0.5	5.1	1.2	0.3	2.3	13	3	13	4	<2	17	434	2490	710	1.18
375	R 30	-200	-605	Damara Sequence	Ma	8	13	5	0.3	0.5	2.8	0.9	0.2	1.4	10	1	6	3	<2	11	286	1440	490	0.69
376	R 40	-100	-603	Damaran Granitoid	Gp	21	47	17	2.2	0.8	5.0	0.8	0.2	1.5	12	5	25	18	<2	29	171	339	720	1.38
377	R 50	1	-595	Damaran Granitoid	Gp	61	110	35	4.3	1.5	8.6	0.5	0.3	3.2	7	2	40	19	<2	57	242	387	450	2.49
378	R 60	100	-601	Damaran Granitoid	Gp	30	63	23	4.0	0.8	9.4	0.6	0.2	2.4	9	2	22	9	<2	24	237	357	560	0.93
379	R 70	198	-589	Damara Sequence	Ma	24	39	10	1.5	0.6	9.3	1.3	0.2	1.4	18	1	9	4	<2	17	409	2510	370	0.69
380	R 80	299	-601	OD-Volcanic Breccia	Vb	381	591	178	27.0	8.4	25.0	2.2	0.8	7.3	23	3	207	16	<2	64	5440	5270	3300	6.36
381	R 90	399	-601	Damaran Granitoid	Gp	208	365	111	16.0	4.2	16.0	0.7	0.4	3.4	8	1	104	18	<2	29	4820	789	1120	4.23
382	Ra 30	-200	-530	Damara Sequence	Ma	25	43	14	1.9	0.5	6.2	2.1	0.4	3.7	24	2	19	13	<2	32	423	2450	1130	1.39
383	Ra 35	-152	-539	Damara Sequence	Ma	6	10	<5	0.2	<0.5	2.0	0.5	0.1	1.2	6	1	9	<2	<2	7	190	3120	460	0.50
384	Ra 40	-99	-530	Damara Sequence	Ma	53	96	37	8.4	3.0	10.0	2.2	0.4	4.0	38	2	40	27	<2	45	1810	1670	1730	2.27
385	Ra 45	-50	-527	OD-Volcanic Breccia	Vb	176	315	83	7.1	2.6	24.0	1.0	0.6	6.3	9	3	42	66	<2	83	4940	632	1350	6.29
386	Ra 50	0	-526	OD-Volcanic Breccia	Vb	182	340	112	20.0	6.0	23.0	2.5	0.7	6.2	45	3	115	48	<2	58	4430	1090	5630	5.31
387	Ra 55	51	-524	OD-Volcanic Breccia	Vb	98	155	47	2.1	2.8	31.0	1.4	0.7	10.0	16	2	52	25	2	101	1610	544	1440	7.87
388	Ra 60	100	-523	OD-Volcanic Breccia	Vb	194	320	102	16.0	5.7	22.0	2.0	0.6	6.4	35	4	91	21	<2	80	3470	1110	3100	5.37
389	Ra 65	150	-522	Damara Sequence	Ma	6	10	<5	0.3	0.5	2.5	1.5	0.3	1.5	16	1	11	<2	<2	7	424	3520	960	0.62
390	S 10	-398	-460	Damaran Granitoid	Gb	57	101	30	4.6	0.5	4.0	0.7	0.2	1.3	11	6	27	6	<2	80	208	201	410	1.10
391	S 15	-349	-459	Damara Sequence	Ma	3	5	<5	<0.1	<0.5	1.2	0.3	0.1	0.6	4	1	4	<2	<2	9	115	2030	380	0.28
392	S 20	-288	-457	OD-Volcanic Breccia	Vb	926	1200	255	37.0	7.9	20.0	1.8	0.6	2.1	31	14	119	66	5	60	10300	4060	3760	4.37
393	S 25	-249	-456	Damara Sequence	Ma	11	21	9	2.0	0.8	3.3	1.8	0.3	1.2	21	<1	3	3	<2	11	690	1380	210	0.60
394	S 30	-199	-455	Damara Sequence	Ma	9	16	7	0.1	0.5	4.0	1.2	0.3	1.8	14	1	13	4	<2	19	458	2910	590	0.94

A-4 Results of Chemical Analysis of Whole Rock Geochemical Survey (7)

No.	Sample No.	Coordinate X (m)	Coordinate Y (m)	Lithostratigraphic Unit	Rock Code	La (ppm)	Ce (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	Sc (ppm)	Y (ppm)	U (ppm)	Th (ppm)	Nb (ppm)	Ta (ppm)	Zr (ppm)	Mn (ppm)	Sr (ppm)	P (ppm)	Fe (%)
395	S 35	-150	-449	DD-Beforsite	Be	922	1630	382	63.0	17.0	40.0	3.0	1.2	3.9	42	7	390	154	10	< 3	19000	10900	330	10.10
396	S 40	-100	-453	DD-Volcanic Breccia	Vb	199	389	132	< 0.1	4.0	100.0	1.4	2.2	0.6	10	4	125	< 2	22	< 3	14500	2570	2320	30.40
397	S 45	-50	-452	DD-Beforsite	Be	59	98	32	< 0.1	2.2	27.0	1.6	0.7	5.7	20	1	32	37	3	64	1870	979	6610	6.91
398	S 50	0	-451	DD-Volcanic Breccia	Vb	275	473	138	13.0	4.8	35.0	1.4	0.8	4.7	18	2	135	102	6	98	3920	769	2340	8.33
399	S 55	53	-449	DD-Volcanic Breccia	Vb	487	767	198	32.0	7.6	16.0	0.8	0.4	0.8	20	45	199	278	29	8	6170	1000	4710	3.33
400	S 60	103	-448	DD-Volcanic Breccia	Vb	16	36	11	< 0.1	0.6	21.0	1.5	0.6	0.9	14	1	16	12	< 2	32	2550	286	900	5.42
401	S 65	153	-447	Damara Sequence	Ma	17	34	14	2.8	1.3	5.8	1.8	0.4	2.2	25	1	13	5	< 2	15	905	2000	1110	1.20
402	S 70	203	-446	Damara Sequence	Ma	12	27	11	0.2	0.7	7.4	1.5	0.4	3.2	21	2	22	19	< 2	20	918	2210	1140	1.57
403	S 80	304	-443	Damara Sequence	Ma	10	21	9	1.3	0.9	5.6	1.6	0.3	2.8	19	1	18	6	< 2	26	481	2550	830	1.19
404	S 90	407	-441	Damara Sequence	Ma	17	39	20	5.4	2.5	5.7	1.7	0.3	1.4	26	1	35	19	< 2	5	1330	1840	450	1.12
405	Sa 10	-400	-384	Damara Sequence	Ma	357	476	130	28.0	5.9	5.8	1.6	0.3	0.7	26	3	242	21	< 2	< 3	1760	3490	1050	1.02
406	Sa 15	-342	-383	Damara Sequence	Ma	10	19	7	0.8	0.5	4.1	1.6	0.3	1.3	20	1	18	5	< 2	12	578	1600	740	0.80
407	Sa 20	-300	-382	Damaran Granitoid	Gb	59	100	30	3.8	0.6	4.0	0.8	0.2	1.5	11	5	21	11	< 2	81	265	99	480	1.06
408	Sa 25	-250	-381	Damaran Granitoid	Gb	61	105	28	1.9	0.9	9.5	0.6	0.2	3.2	6	2	20	31	< 2	71	1560	334	370	2.41
409	Sa 30	-200	-380	DD-Volcanic Breccia	Vb	318	479	124	18.0	5.3	22.0	1.6	0.7	12.0	27	1	64	41	5	147	5520	2030	1050	5.70
410	Sa 35	-150	-379	DD-Volcanic Breccia	Vb	222	379	142	22.0	6.8	50.0	1.6	1.2	4.5	21	2	163	24	11	82	11800	1400	1260	14.80
411	Sa 40	-100	-377	DD-Beforsite	Be	245	514	217	12.0	7.0	102.0	1.6	2.3	< 0.5	19	2	223	< 2	28	< 3	29900	1080	660	32.50
412	Sa 45	-50	-376	DD-Beforsite	Be	797	1750	570	101.0	28.0	88.0	2.5	1.9	< 0.5	52	4	975	7	23	5	25300	2970	2590	25.20
413	Sa 50	0	-375	DD-Beforsite	Be	626	955	261	45.0	12.0	34.0	1.3	0.8	4.7	14	1	352	7	3	11	12400	1610	420	8.56
414	Sa 55	50	-374	DD-Beforsite	Be	253	447	124	15.0	5.5	28.0	1.2	0.7	0.4	10	1	116	7	3	48	6050	2510	340	7.21
415	Sa 60	102	-373	DD-Beforsite	Bc	923	1290	252	30.0	6.3	16.0	0.8	0.4	5.2	10	5	132	117	5	< 3	19200	1740	844	6.45
416	Sa 65	152	-372	DD-Volcanic Breccia	Vb	302	526	169	22.0	5.3	15.0	1.9	0.5	3.6	36	5	97	245	< 2	36	7750	840	5180	5.93
417	Sa 70	202	-371	Damara Sequence	Ma	54	95	35	5.0	1.6	7.4	1.4	0.2	2.6	15	2	26	50	< 2	21	3540	1920	415	2.08
418	T 40A	-75	-317	DD-Iron Ore	Io	133	137	91	< 0.1	3.1	71.0	2.0	1.8	< 0.5	14	2	123	< 2	32	< 3	36300	947	464	34.80
419	T 21A	220	-686	DD-Volcanic breccia	Vb	585	851	478	64.9	12.6	7.5	2.9	1.6	14.9	17	1	188	11	< 2	176	7520	1000	144	6.66
420	T 22A	-115	-357	DD-Iron ore	Io	899	1540	1200	300.0	70.2	29.3	5.7	6.1	4.8	76	2	2260	7	< 2	19	37000	442	559	31.92
421	T 23A	-90	-366	DD-Iron ore	Io	687	750	631	140.0	17.3	16.3	4.2	7.7	1.8	33	3	274	9	< 2	< 3	40300	14400	408	37.82
422	T 10	-400	-309	Damara Sequence	Ma	4	7	3	0.8	< 0.5	1.3	0.8	0.1	< 0.5	11	2	5	< 2	< 2	< 3	405	1110	595	0.31
423	T 15	-350	-308	Damara Sequence	Ma	68	100	31	4.2	1.2	2.1	0.8	0.1	0.8	14	1	28	18	< 2	6	377	1230	1330	0.76
424	T 20	-300	-307	Damara Sequence	Ma	343	423	86	10.0	0.9	8.3	3.4	0.5	0.9	56	8	92	73	< 2	4	4890	1780	2730	2.83
425	T 25	-250	-305	DD-Beforsite	Be	774	1540	627	135.0	40.0	36.0	11.0	1.4	2.6	326	17	560	1840	5	< 3	14400	2960	37800	8.28
426	T 30	-200	-304	DD-Beforsite	Bc	720	1130	376	42.0	8.5	27.0	2.2	0.8	5.9	40	7	171	123	10	< 3	22700	1540	1480	11.40
427	T 35	-150	-303	DD-Beforsite	Be	20	21	12	0.9	1.6	12.0	2.5	0.5	1.6	35	1	38	4	< 2	4	3220	1460	1150	4.90
428	T 40	-100	-302	DD-Beforsite	Be	291	455	158	24.0	0.7	19.0	0.8	0.5	2.1	9	1	150	26	2	7	7090	2530	3210	8.39
429	T 45	-50	-301	DD-Volcanic Breccia	Vb	298	468	154	19.0	5.2	20.0	1.0	0.5	6.4	9	1	135	210	6	55	6000	1810	527	8.56
430	T 50	0	-300	DD-Beforsite	Be	269	428	157	22.0	5.4	20.0	0.6	0.5	6.0	7	1	158	75	< 2	25	7640	1430	248	8.28
431	T 55	42	-299	DD-Beforsite	Be	175	260	89	10.0	3.0	16.0	0.6	0.3	1.8	4	1	64	203	3	12	7920	879	340	6.26
432	T 60	100	-297	DD-Volcanic Breccia	Vb	656	855	243	35.0	7.5	14.0	0.9	0.4	2.3	10	4	230	117	4	32	5570	1170	770	5.41
433	T 65	150	-296	DD-Volcanic Breccia	Vb	168	273	90	8.5	2.7	20.0	0.8	0.4	5.2	4	1	123	57	6	52	4460	739	842	8.40
434	T 70	200	-295	Damara Sequence	Ma	59	98	44	10.0	4.4	8.1	4.8	0.7	2.1	86	9	140	39	< 2	10	2390	1430	5110	2.28
435	T 80	300	-293	Damara Sequence	Ma	11	21	11	2.4	0.8	2.5	1.0	0.2	0.9	12	1	12	5	< 2	4	905	1900	321	0.92
436	T 90	400	-291	Damaran Granitoid	Gp	48	93	33	5.4	1.1	5.3	1.0	0.2	2.7	11	6	40	40	< 2	47	318	167	520	2.13
437	T 100	500	-288	Damara Sequence	Ma	293	487	191	42.0	11.0	7.4	1.9	0.3	0.8	41	3	341	47	< 2	4	3710	4910	1590	1.78
438	Ta 25	-250	-231	Damara Sequence	Ma	5	8	< 5	0.9	0.5	1.2	0.8	0.1	< 0.5	12	2	9	< 2	< 2	< 3	418	862	878	0.31
439	Ta 30	-200	-230	DD-Volcanic Breccia	Vb	232	413	157	27.0	8.0	16.0	2.9	0.5	5.6	70	10	117	197	6	167	3260	3450	5680	5.99
440	Ta 35	-150	-228	DD-Volcanic Breccia	Vb	100	155	71	4.0	1.7	22.0	1.6	0.5	7.2	12	< 1	36	107	7	81	5980	1490	270	9.06
441	Ta 40	-100	-227	DD-Volcanic Breccia	Vb	371	594	210	27.0	7.3	21.0	1.3	0.5	5.4	13	5	37	106	5	32	5780	2960	1080	8.04
442	Ta 45	-50	-226	DD-Beforsite	Be	728	1140	406	56.0	16.0	46.0	2.5	1.2	2.1	49	4	222	< 2	25	< 3	24800	2770	11600	19.20
443	Ta 50	0	-225	DD-Beforsite	Be	423	654	219	37.0	11.0	23.0	1.7	0.6	4.1	40	2	176	39	3	5	7020	3350	6600	7.96
444	Ta 55	50	-224	DD-Beforsite	Be	251	357	124	18.0	7.0	21.0	1.5	0.6	5.0	23	1	146	37	6	16	3810	2710	4870	8.46
445	Ta 60	100	-223	DD-Volcanic Breccia	Vb	186	269	105	14.0	4.9	20.0	1.3	0.6	7.3	13	3	134	261	10	33	8870	1150	3830	8.89
446	Ta 65	150	-222	DD-Volcanic Breccia	Vb	377	493	166	27.0	7.0	14.0	1.1	0.4	3.8	13	2	146	95	5	69	6310	1400	1570	6.59
447	Ta 70	200	-220	DD-Volcanic Breccia	Vb	366	523	184	24.0	5.9	17.0	1.0	0.5	4.3	9	1	52	78	4	46	5340	882	351	7.24
448	Ta 75	250	-219	Damara Sequence	Ma	7	11	6	1.5	0.7	1.6	0.7	0.1	1.1	11	< 1	4	4	< 2	8	490	1700	504	0.67
449	Ta 80	300	-218	Damaran Granitoid	Gp	111	184	63	8.6	2.4	7.0	1.0	0.2	3.5	14	4	24	62	< 2	57	1120	435	1400	3.18
450	Ta 85	350	-217	Damaran Granitoid	Gp	19	41	16	2.4	0.6	2.4	0.6	0.1	2.5	7	2	8	33	< 2	30	292	224	718	1.08
451	U 10	-370	-159	Damara Sequence	Ma	1	2	< 5	0.2	< 0.5	0.7	0.4	0.1	0.5	4	< 1	1	< 2	< 2	< 3	113	1830	271	0.09
452	U 20	-300	-157	Damara Sequence	Ma	532	870	246	37.0	10.0	9.4	5.0	0.6	< 0.5	133	8	237	90	< 2	< 3	4640	4210	16300	2.15
453	U 30	-200	-154	Damara Sequence	Ma	27	47	18	2.8	0.9	1.8	0.7	0.1	< 0.5	9	1	14	< 2	< 2	< 3	790	1110	515	0.50
454	U 35	-150	-153	DD-Volcanic Breccia	Vb	58	92	97	5.7	1.6	3.0	1.4	0.2	0.5	20	1	23	8	< 2	< 3	1990	1450	1390	1.00
455	U 40	-100	-152	DD-Beforsite	Be	468	869	224	29.0	7.1	18.0	0.9	0.5	5.2	8	2	98	156	6	49	7150	1640	930	8.39
456	U 45	-50	-151	DD-Beforsite	Be	3502	5042	1834	330.0	90.0	48.0	3.4	1.0	5.2	149	3	765	7	13	< 3	25800	3470	12800	10.80
457	U 50	0	-150	DD-Beforsite	Be	1406	2043	741	135.0	39.0	33.0	2.3	0.8	8.1	49	1	323	21	12	4	15600	1770	645	10.40
458	U 55	50	-149	DD-Beforsite	Be	1762	2919	1202	279.0	80.0	43.0	2.4	0.9	2.7	67	6	2290	32	15	< 3	17100	1840	4430	11.70
459	U 60	100	-148	DD-Beforsite	Be	270	411	177	31.0	8.9	26.0	1.3	0.7	4.6	12	4	345	226	13	29	3670	1160	913	11.30
460	U 65	150	-147	DD-Volcanic Breccia	Vb	693	953	327	49.0	12.0	20.0	1.2	0.6	1.7	20	11	430	99	8	22	10800	1850	1490	8.52

A-4 Results of Chemical Analysis of Whole Rock Geochemical Survey (8)

No.	Sample No.	Coordinate X (m)	Coordinate Y (m)	Lithostratigraphic Unit	Rock Code	La (ppm)	Ce (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	Sc (ppm)	Y (ppm)	U (ppm)	Th (ppm)	Nb (ppm)	Ta (ppm)	Zr (ppm)	Mn (ppm)	Sr (ppm)	P (ppm)	Fe (%)
461	U 70	200	-145	OD-Volcanic Breccia	Vb	204	307	117	18.0	6.1	15.0	2.2	0.5	2.9	43	8	191	97	3	28	7760	3030	9790	5.88
462	U 75	250	-144	OD-Beforsite	Be	241	342	127	25.0	10.0	26.0	4.5	1.0	9.1	90	9	334	150	11	34	10400	1510	8170	10.60
463	U 80	300	-143	Damaran Granitoid	Gp	83	129	44	5.2	1.5	7.0	0.7	0.2	2.6	7	2	48	63	< 2	61	770	287	600	3.31
464	U 85	350	-142	Damaran Granitoid	Gp	71	118	43	5.5	1.6	6.2	0.8	0.2	2.8	10	3	60	47	< 2	59	612	168	962	3.34
465	U 90	400	-141	Damara Sequence	Ma	15	19	10	2.6	0.3	5.0	17.0	0.4	2.6	39	3	47	15	< 2	16	918	1050	3350	1.79
466	U 100	500	-139	Damara Sequence	Ma	6	8	4	1.4	< 0.5	1.0	14.0	0.1	0.6	8	1	5	4	< 2	9	442	1530	426	0.50
467	Ua 30	-200	-80	Damara Sequence	Ma	27	41	16	3.3	1.3	4.7	16.0	0.3	0.9	21	4	30	21	< 2	6	1570	2790	1350	1.59
468	Ua 35	-150	-78	OD-Volcanic Breccia	Vb	420	636	215	36.0	9.2	20.0	13.0	0.6	3.8	39	2	161	111	< 2	20	6560	2390	5260	6.05
469	Ua 40	-100	-77	OD-Volcanic Breccia	Vb	360	553	203	30.0	7.4	29.0	13.0	0.8	1.3	19	5	263	127	< 2	13	12600	2460	2460	10.10
470	Ua 45	-50	-76	OD-Volcanic Breccia	Vb	269	406	134	18.0	5.3	21.0	14.0	0.6	7.1	13	2	120	161	< 2	52	4800	1590	1260	7.22
471	Ua 50	0	-75	OD-Volcanic Breccia	Vb	387	596	193	27.0	7.0	22.0	12.0	0.6	5.6	10	2	149	255	< 2	46	6000	1080	180	7.45
472	Ua 55	50	-74	OD-Volcanic Breccia	Vb	291	408	125	16.0	4.7	27.0	13.0	0.6	1.0	8	7	161	498	< 2	6	16600	1260	1120	8.14
473	Ua 60	100	-73	OD-Volcanic Breccia	Vb	428	591	191	33.0	8.9	29.0	13.0	0.8	6.3	9	2	316	314	< 2	78	10400	8490	850	9.04
474	Ua 65	150	-72	OD-Beforsite	Be	321	496	140	18.0	4.6	21.0	12.0	0.5	1.6	7	1	108	66	< 2	3	12700	1290	470	6.52
475	Ua 70	200	-70	OD-Volcanic Breccia	Vb	438	593	153	18.0	5.1	24.0	13.0	0.7	6.3	14	3	101	160	< 2	72	6270	1400	710	7.41
476	Ua 75	250	-69	Damara Sequence	Ma	213	322	107	21.0	6.3	11.0	16.0	0.6	2.2	56	11	91	190	< 2	16	4200	2170	3260	2.56
477	Ua 80	300	-68	Damara Sequence	Ma	47	66	28	4.2	1.9	8.6	16.0	0.5	3.8	27	1	30	100	< 2	72	1900	1100	600	2.64
478	V 10	-400	-9	Damara Sequence	Ma	93	156	52	8.9	2.5	5.2	14.0	0.3	1.4	21	2	26	41	< 2	7	1240	1540	810	1.36
479	V 20	-300	-7	Damara Sequence	Ma	2	4	1	0.2	< 0.5	0.6	14.0	< 0.1	< 0.5	3	1	2	< 2	< 2	3	155	2380	310	0.12
480	V 30	-200	-5	Damara Sequence	Ma	47	77	30	5.9	2.4	6.8	15.0	0.4	1.9	34	2	33	63	< 2	16	2070	2870	1570	1.63
481	V 35	-150	-3	Damara Sequence	Ma	312	474	151	20.0	5.3	22.0	13.0	0.6	2.4	12	6	86	223	7	24	7170	1030	1820	6.37
482	V 40	-100	-2	OD-Volcanic Breccia	Vb	416	697	249	41.0	9.5	25.0	12.0	0.7	0.9	11	4	205	25	< 2	6	9070	1700	2920	7.15
483	V 45	-50	-1	Damaran Granitoid	Gp	92	151	49	5.2	2.3	17.0	14.0	0.4	4.4	6	1	62	114	< 2	88	783	250	610	5.04
484	V 50	0	0	Damaran Granitoid	Gb	116	187	59	7.9	2.3	13.0	14.0	0.4	2.7	7	1	45	102	< 2	95	1730	325	750	3.74
485	V 55	50	1	Damaran Granitoid	Gp	68	101	37	2.8	1.6	18.0	14.0	0.4	3.0	6	1	50	151	< 2	124	453	177	560	5.12
486	V 60	100	2	Damaran Granitoid	Gp	259	374	111	14.0	4.5	28.0	14.0	0.7	3.3	8	2	98	226	< 2	61	12000	1840	2070	7.69
487	V 65	150	3	Damara Sequence	Ma	265	411	117	16.0	4.7	19.0	15.0	0.7	3.2	35	3	67	94	< 2	51	5780	1680	1500	4.76
488	V 70	200	5	Damara Sequence	Ma	978	1736	523	87.0	18.0	30.0	10.0	0.8	< 0.5	28	3	352	55	< 2	< 3	16100	1630	540	8.55
489	V 75	250	6	Damara Sequence	Ma	3	6	2	0.3	< 0.5	1.1	14.0	< 0.1	< 0.5	4	1	2	2	< 2	< 3	142	919	280	0.14
490	V 80	300	7	Damara Sequence	Ma	12	20	7	1.4	0.5	2.2	15.0	0.1	< 0.5	9	1	6	4	< 2	< 3	529	1070	350	0.42
491	V 90	400	9	Damara Sequence	Ma	2	4	1	0.8	< 0.5	0.5	14.0	< 0.1	< 0.5	4	< 1	1	< 2	< 2	< 3	167	914	180	0.12
492	V 100	500	11	Damara Sequence	Ma	3	5	< 5	0.7	< 0.5	< 0.1	14.0	< 0.1	< 0.5	3	< 1	1	< 2	< 2	< 3	202	624	240	0.11
493	W 10	-405	140	Damara Sequence	Ma	1	3	< 5	0.6	< 0.5	1.2	14.0	< 0.1	< 0.5	4	1	< 1	< 2	< 2	< 3	69	1870	430	0.10
494	W 20	-305	143	Damara Sequence	Ma	2	4	< 5	0.2	< 0.5	1.1	14.0	< 0.1	< 0.5	7	< 1	2	< 2	< 2	< 3	176	1800	540	0.14
495	W 30	-205	145	Damara Sequence	Ma	2	4	< 5	0.8	< 0.5	0.7	15.0	0.1	< 0.5	6	1	1	2	< 2	< 3	152	1410	620	0.25
496	W 40	-105	147	Damara Sequence	Ma	12	17	4	0.7	< 0.5	0.6	14.0	0.1	< 0.5	6	1	2	3	< 2	3	216	1740	330	0.17
497	W 50	-5	149	Damara Sequence	Ma	186	271	82	20.0	6.3	8.4	16.0	0.5	1.0	55	2	90	62	< 2	< 3	2320	3310	3270	1.45
498	W 60	95	152	Damara Sequence	Ma	16	22	8	2.1	1.1	4.5	17.0	0.4	0.8	33	2	13	100	< 2	< 3	953	2070	1130	0.66
499	W 70	205	154	Damara Sequence	Ma	2	3	1	0.2	< 0.5	0.3	14.0	< 0.1	< 0.5	4	< 1	1	< 2	< 2	< 3	141	1590	220	0.07
500	W 80	295	156	Damara Sequence	Ma	4	7	< 5	1.3	< 0.5	0.4	15.0	0.1	< 0.5	3	2	2	5	< 2	3	319	1610	390	0.24
501	W 90	394	159	Damara Sequence	Ma	1	1	< 5	0.7	< 0.5	0.3	14.0	< 0.1	< 0.5	2	< 1	< 1	< 2	< 2	< 3	52	1670	390	0.05
502	W 100	494	161	Damara Sequence	Ma	< 1	2	< 5	0.1	< 0.5	< 0.1	14.0	< 0.1	< 0.5	1	< 1	< 1	< 2	< 2	< 3	45	1230	210	0.03
503	Wa 40	-108	222	Damara Sequence	Ma	< 1	3	< 5	0.4	< 0.5	0.6	14.0	< 0.1	< 0.5	2	< 1	< 1	< 2	< 2	< 3	48	1700	340	0.06
504	Wa 45	-58	223	Damaran Granitoid	Gp	37	62	23	7.1	2.2	5.3	16.0	0.4	1.6	33	4	34	39	< 2	48	336	266	1750	1.10
505	Wa 50	-8	224	Damara Sequence	Ma	161	220	56	7.4	2.3	9.1	15.0	0.4	2.2	22	1	40	34	< 2	20	4650	1540	980	2.32
506	Wa 55	43	224	Damara Sequence	Ma	5	7	< 5	1.1	< 0.5	0.2	14.0	< 0.1	< 0.5	3	< 1	1	< 2	< 2	< 3	191	1620	250	0.09
507	Wa 60	95	223	Damara Sequence	Ma	3	5	< 5	1.3	0.7	1.0	15.0	0.1	< 0.5	11	2	11	3	< 2	< 3	259	1330	610	0.30
508	X 20	-311	292	Damara Sequence	Ma	4	8	< 5	1.2	0.5	0.8	15.0	0.1	0.5	9	1	9	4	< 2	< 3	219	3250	350	0.18
509	X 30	-211	294	Damara Sequence	Ma	5	8	< 5	0.8	< 0.5	0.6	14.0	< 0.1	< 0.5	4	< 1	1	< 2	< 2	< 3	133	1270	280	0.11
510	X 40	-111	297	Damara Sequence	Ma	13	19	7	1.8	0.7	2.6	15.0	0.2	< 0.5	11	1	5	8	< 2	< 3	536	1200	400	0.55
511	X 45	-61	298	Damara Sequence	Ma	432	546	137	24.0	6.9	10.0	14.0	0.4	1.0	42	2	123	75	< 2	7	2850	2700	1690	2.27
512	X 50	-11	299	Damara Sequence	Ma	79	96	24	3.1	1.4	8.4	16.0	0.4	1.9	24	1	17	45	< 2	9	3350	914	700	2.27
513	X 55	47	299	Damara Sequence	Ma	250	286	61	11.0	4.3	12.0	16.0	0.6	2.1	44	4	51	114	< 2	5	5040	2020	1190	2.92
514	X 60	84	300	Damara Sequence	Ma	2	4	< 5	0.8	< 0.5	0.5	14.0	< 0.1	< 0.5	2	< 1	1	< 2	< 2	< 3	105	996	290	0.10
515	X 70	178	293	Damara Sequence	Ma	6	7	< 5	1.1	< 0.5	1.3	14.0	0.1	< 0.5	6	1	5	4	< 2	< 3	329	957	310	0.26
516	X 80	278	291	Damara Sequence	Ma	2	4	< 5	1.1	< 0.5	0.9	14.0	< 0.1	< 0.5	4	1	1	< 2	< 2	3	91	1250	400	0.10
517	X 90	379	290	Damara Sequence	Ma	1	3	< 5	0.1	< 0.5	0.5	14.0	< 0.1	< 0.5	4	< 1	< 1	< 2	< 2	< 3	145	1300	260	0.12
518	X 100	478	289	Damara Sequence	Ma	3	5	< 5	< 0.1	< 0.5	0.1	8.5	< 0.1	0.5	3	1	< 1	< 2	< 2	3	269	583	200	0.11
519	Xa 40	-113	372	Damara Sequence	Ma	97	134	134	6.1	1.9	1.5	7.2	0.1	< 0.5	17	1	16	10	< 2	< 3	430	1120	500	0.28
520	Xa 45	-63	373	Damara Sequence	Ma	5	10	< 5	< 0.1	< 0.5	0.9	9.5	0.1	0.7	9	1	2	5	< 2	< 3	260	1160	250	0.25
521	Xa 50	-14	374	Damara Sequence	Ma	4	8	< 5	< 0.1	< 0.5	< 0.1	8.7	< 0.1	0.5	1	< 1	< 1	< 2	< 2	< 3	164	1050	250	0.11
522	Xa 55	47	373	Damara Sequence	Ma	1	4	< 5	0.4	< 0.5	0.3	8.8	< 0.1	0.3	4	1	< 1	< 2	< 2	< 3	135	1460	470	0.08
523	Xa 60	96	373	Damara Sequence	Ma	3090	4150	604	94.0	26.0	28.0	< 0.1	1.5	3.1	149	6	263	157	< 2	28	11500	5540	3200	3.72
524	Y 30	-216	444	Damara Sequence	Ma	4	7	< 5	< 0.1	< 0.5	0.7	8.6	< 0.1	< 0.5	4	< 1	4	2	< 2	< 3	93	1420	270	0.08
525	Y 40	-116	446	Damara Sequence	Ma	4	8	< 5	0.5	< 0.5	0.1	9.6	< 0.1	< 0.5	7	< 1	< 1	< 2	< 2	< 3	109	1300	240	0.09
526	Y 50	-16	449	Damaran Granitoid	Gp	40	75	25	5.7	0.5	3.1	13.0	0.6	3.6	38	6	14	31	< 2	100	168	95	210	0.44

A-4 Results of Chemical Analysis of Whole Rock Geochemical Survey (9)

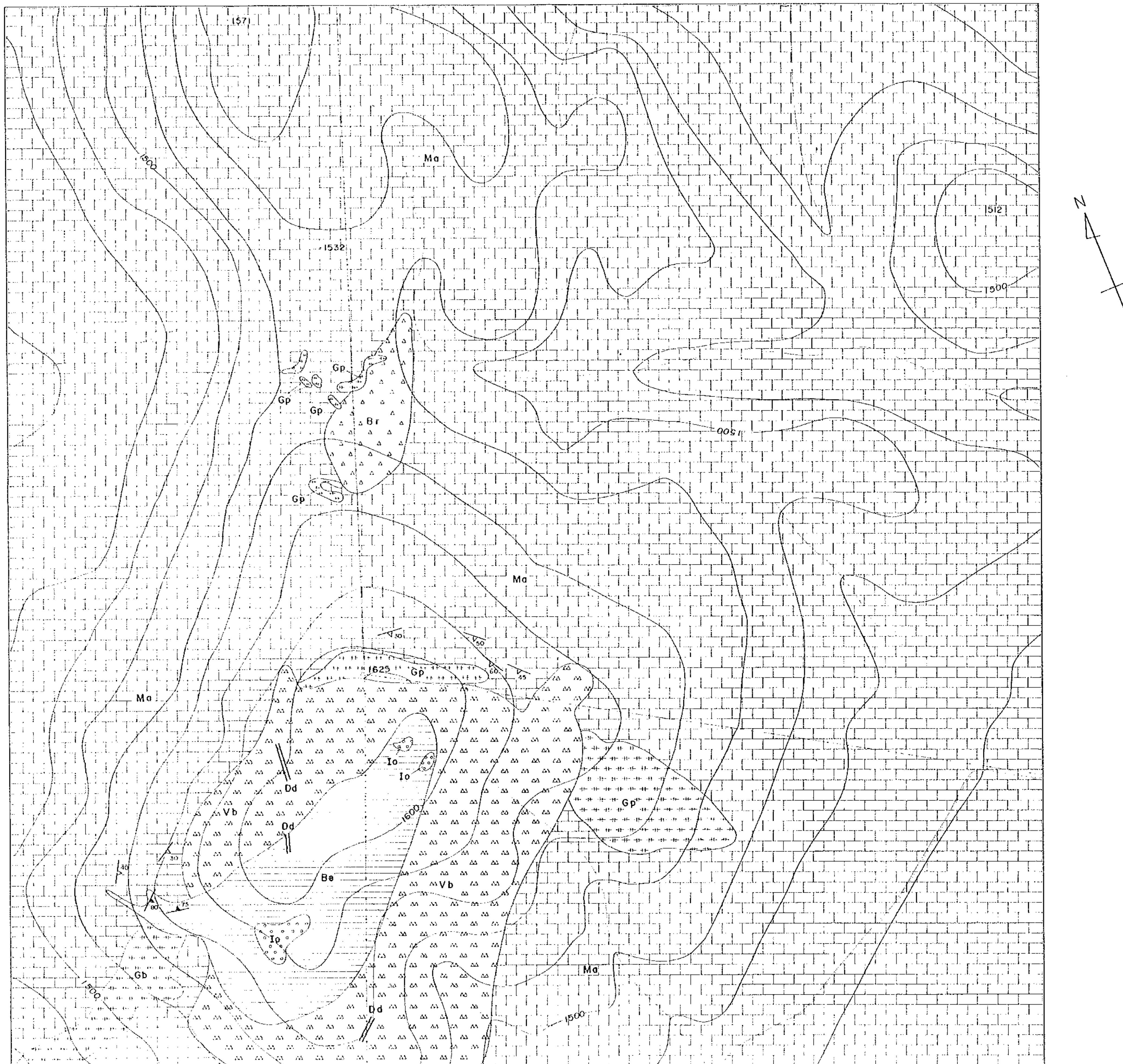
No.	Sample No.	Coordinate X (m)	Coordinate Y (m)	Lithostratigraphic Unit	Rock Code	La (ppm)	Ce (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	Sc (ppm)	Y (ppm)	U (ppm)	Th (ppm)	Nb (ppm)	Ta (ppm)	Zr (ppm)	Mn (ppm)	Sr (ppm)	P (ppm)	Fe (%)
527	Y 60	82	447	Damara Sequence	Ma	4	7	< 5	0.2	< 0.5	< 0.1	9.5	< 0.1	0.8	5	1	< 1	< 2	< 2	4	151	1220	290	0.10
528	Y 70	181	446	Damara Sequence	Ma	3	5	< 5	0.6	< 0.5	1.2	9.2	< 0.1	< 0.5	8	1	< 1	< 2	< 2	< 3	128	1270	290	0.08
529	Y 80	279	445	Damara Sequence	Ma	2	4	< 5	< 0.1	< 0.5	1.1	9.7	< 0.1	< 0.5	6	< 1	< 1	5	< 2	< 3	95	862	370	0.06
530	Y 90	379	444	Damara Sequence	Ma	2	5	< 5	0.5	< 0.5	0.4	9.6	< 0.1	< 0.5	4	1	< 1	< 2	< 2	< 3	75	779	300	0.08
531	Y 100	479	443	Damaran Granitoid	Gp	19	43	20	3.5	< 0.5	2.6	25.0	0.9	3.1	62	8	10	28	< 2	23	87	57	220	0.49

The Mineral Exploration
at the Orange and Kalkfeld Areas,
the Republic of Namibia

Phase I

Fig. II-1-4

Compiling Geological Map of the Kalkfeld Area (after Verwoerd, 1967)



JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN

February 1994

Post-Karoo Intrusions
- Dolerite

Osongombo Diatreme
- Iron ore
- Beforsite
- Volcanic breccia

- Brecciated granite and Damara marble

Damaran Granitoid
- Pegmatitic granite
- Biotite granite

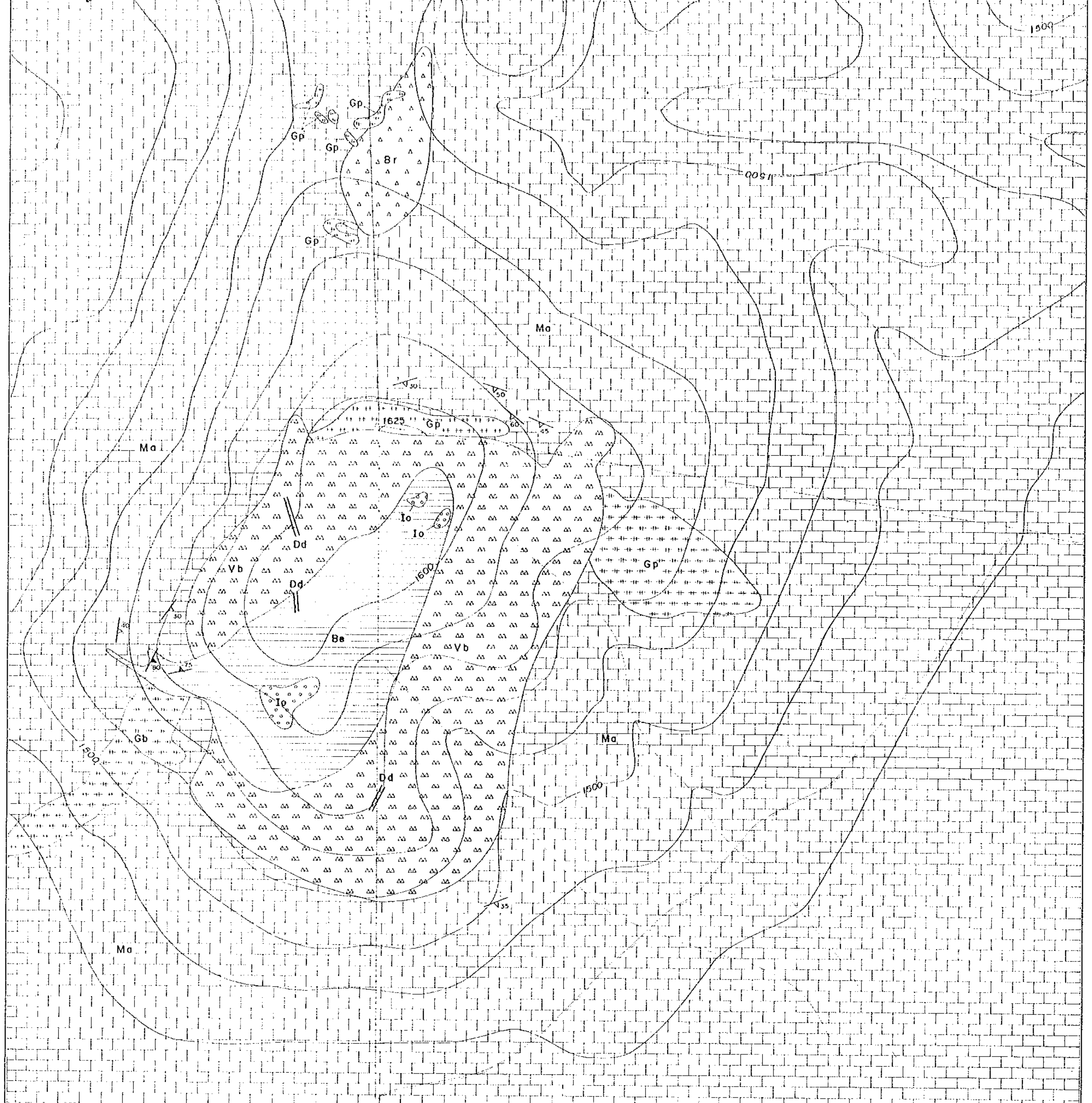
Damara Sequence
- marble

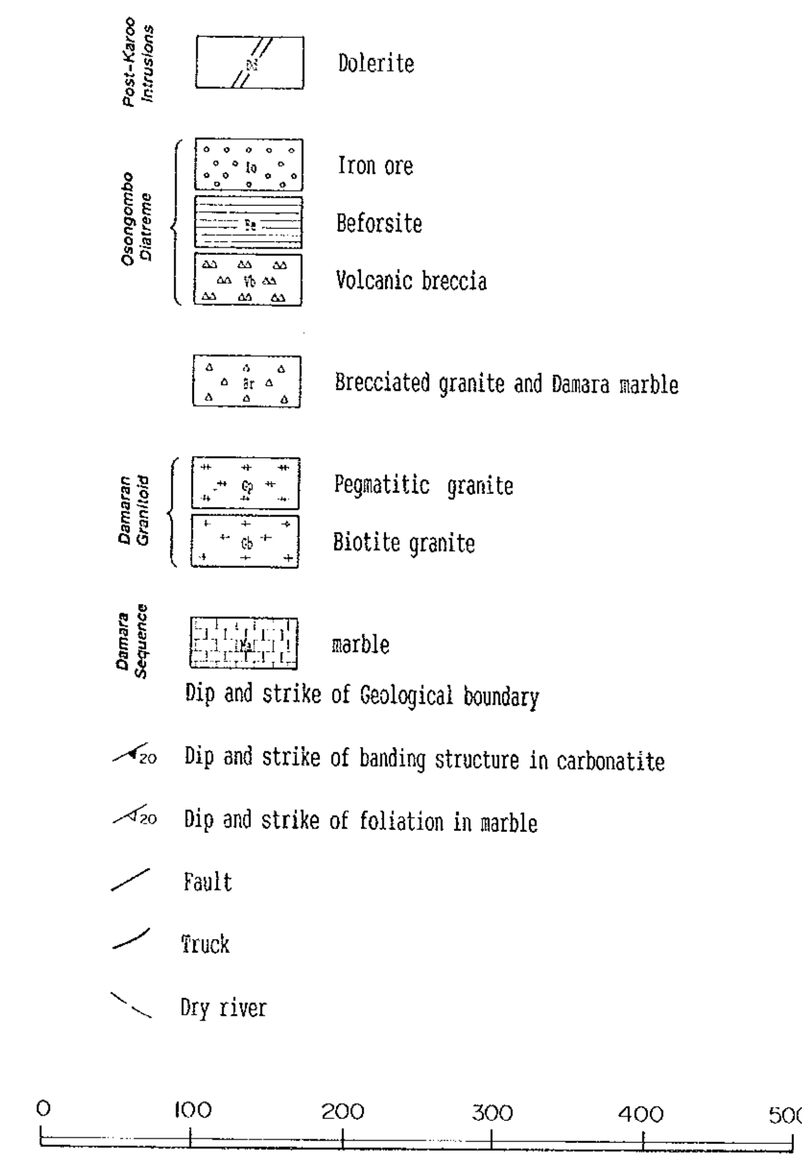
Dip and strike of Geological boundary

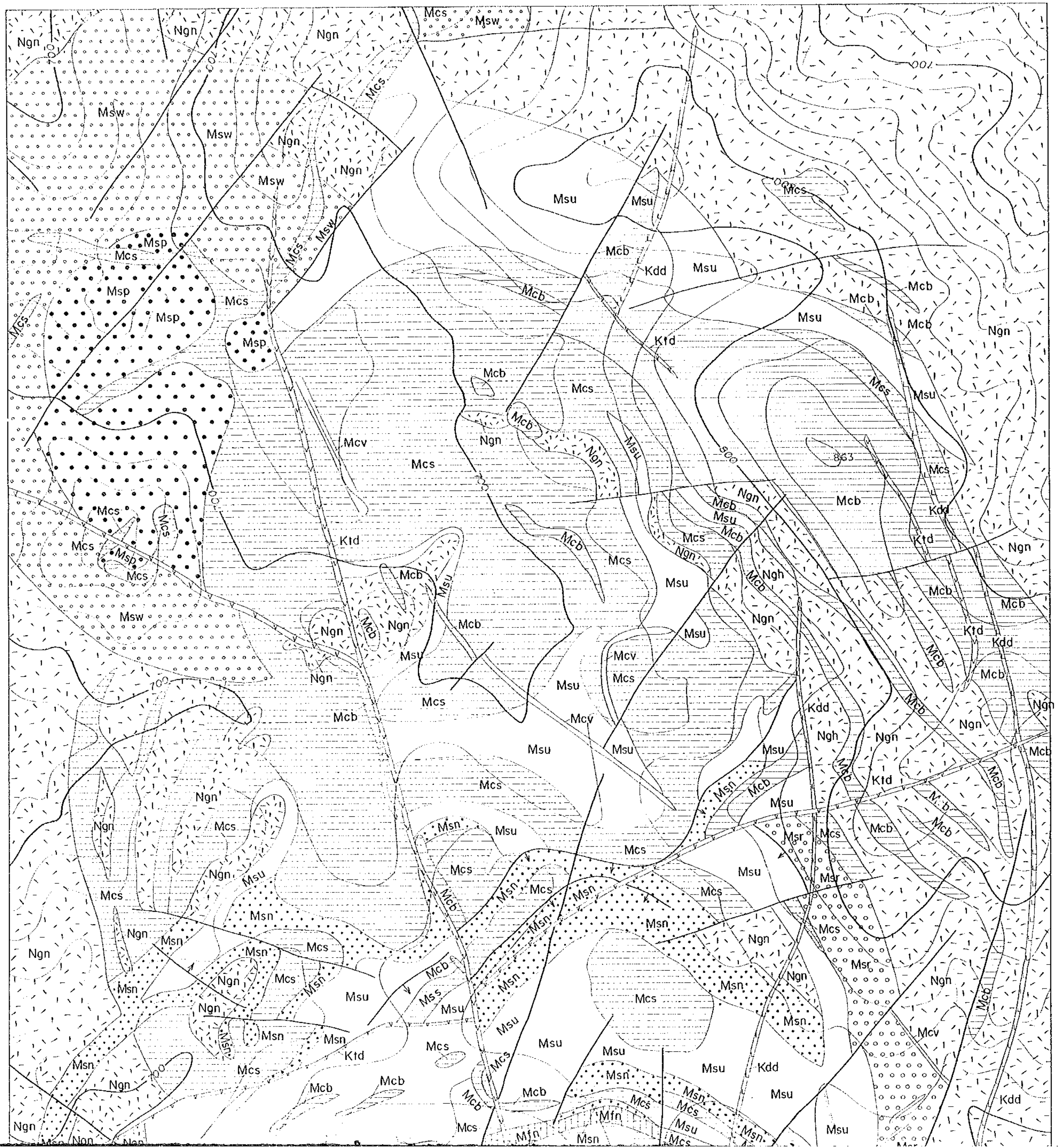
20 Dip and strike of banding stiucture in carbonatite

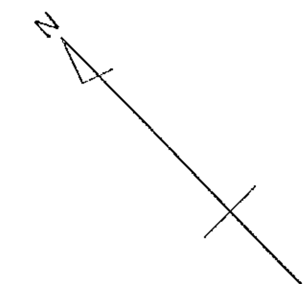
JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN

February 1994









The Mineral Exploration
at the Orange and Kalkfeld Areas,
the Republic of Namibia

Phase I

Fig. II-1-3
Compiling Geological Map of the Orange Area
(after Shommarz, 1990)

JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN

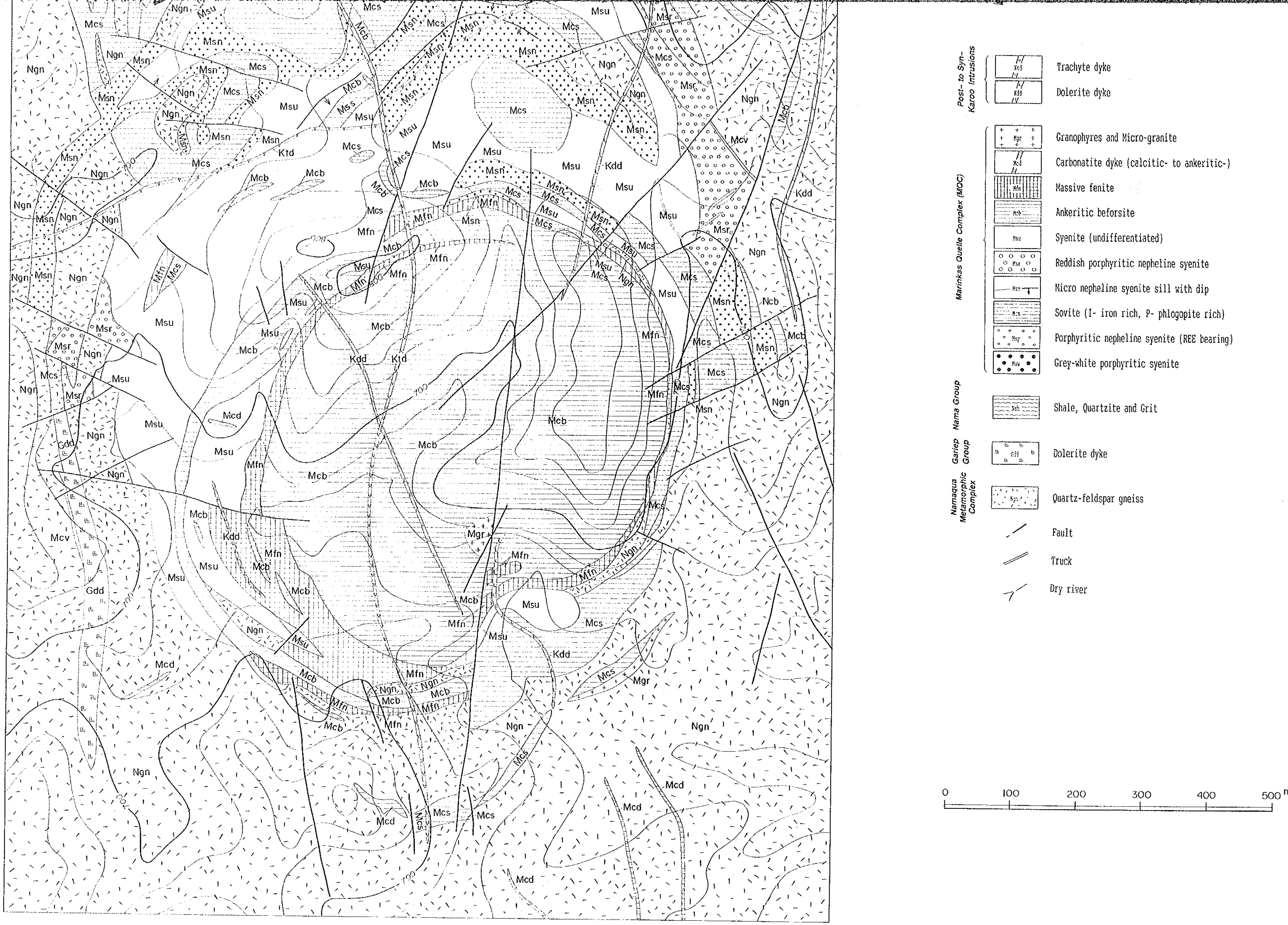
February 1994

Post- to Syn-Karoo Intrusions

- Ktd — Trachyte dyke
- Kdd — Dolerite dyke

Complex (MOC)

- Mgr — Granophyres and Micro-granite
- Mcd — Carbonatite dyke (calcitic- to ankeritic-)
- Mfn — Massive fenite
- Mcb — Ankeritic beforsite


Post- to Syn-Karoo Intrusions
Trachyte dyke
Dolerite dyke
Marinkas Quelle Complex (MQC)
Granophyres and Micro-granite
Carbonatite dyke (calcitic- to ankeritic-)
Massive fenite
Ankeritic beforsite
Syenite (undifferentiated)
Reddish porphyritic nepheline syenite
Micro nepheline syenite sill with dip
Sovite (I- iron rich, P- phlogopite rich)
Porphyritic nepheline syenite (REE bearing)
Grey-white porphyritic syenite
Nama Group
Shale, Quartzite and Grit
Gariep Group
Dolerite dyke
Namaqua Metamorphic Complex
Quartz-feldspar gneiss
Fault
Truck
Dry river
0 100 200 300 400 500 m

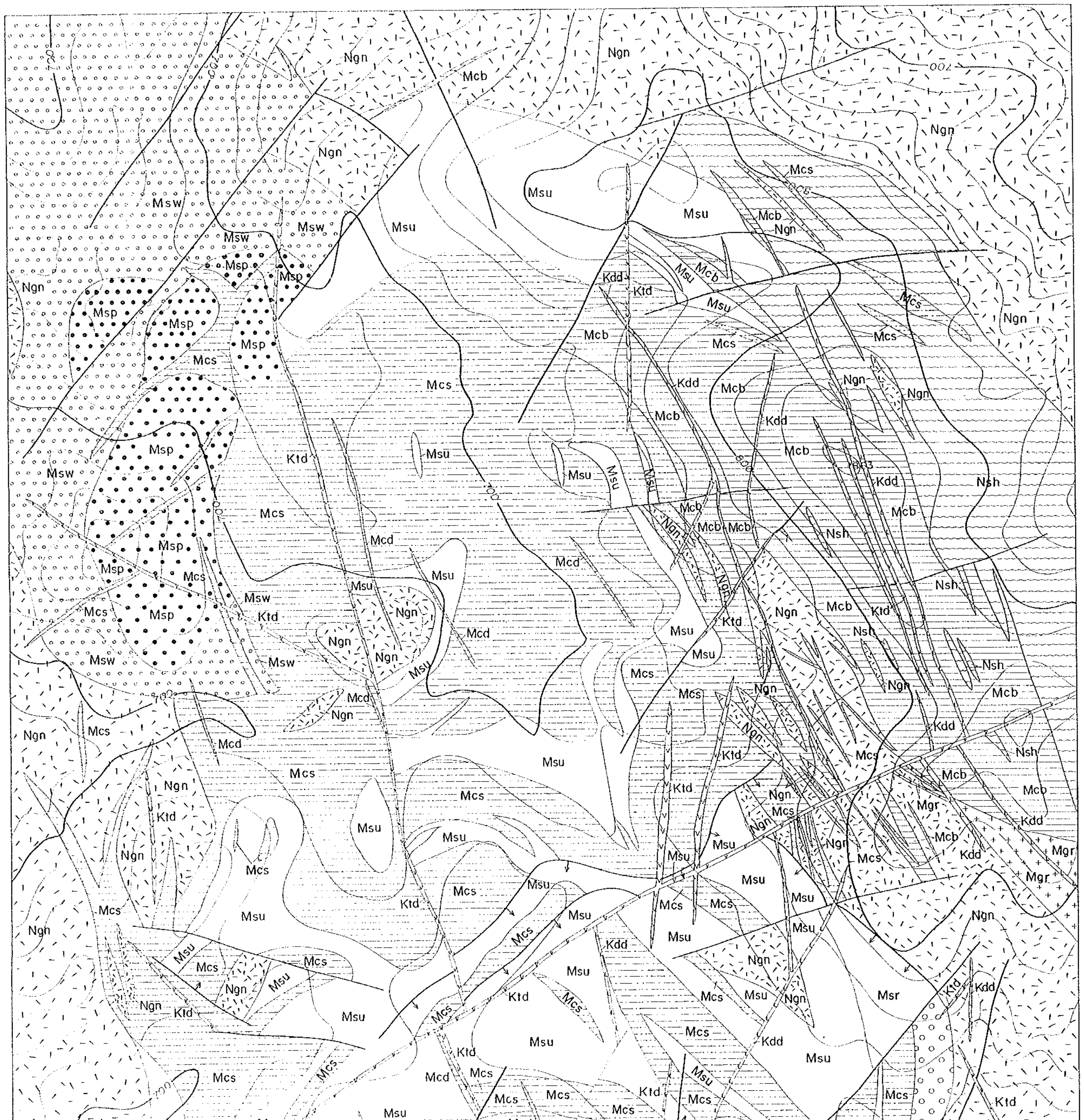
The Mineral Exploration
at the Orange and Kalkfeld Areas,
the Republic of Namibia

Phase I

Fig. II-2-2
Geological Map of the Orange Area

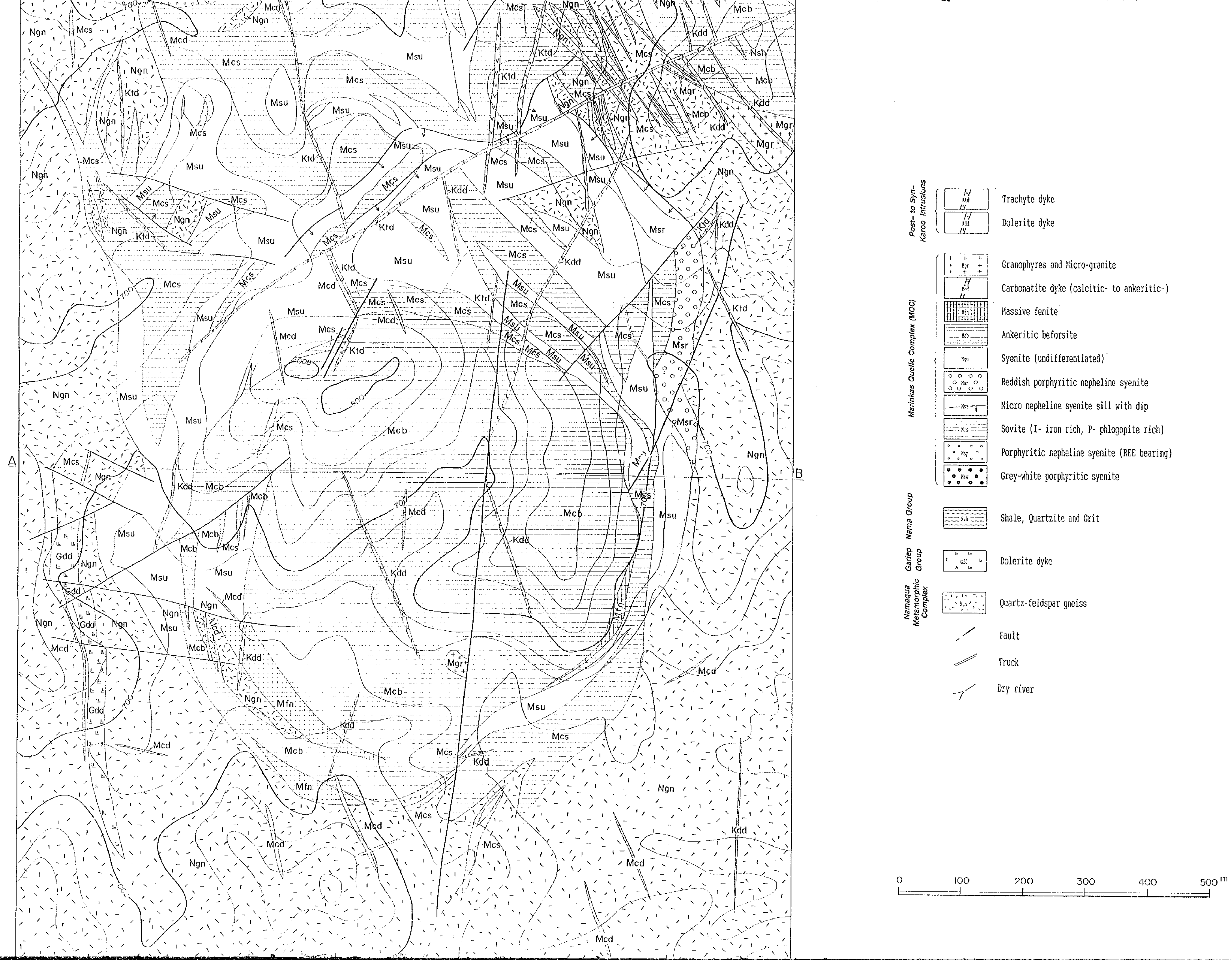
JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN

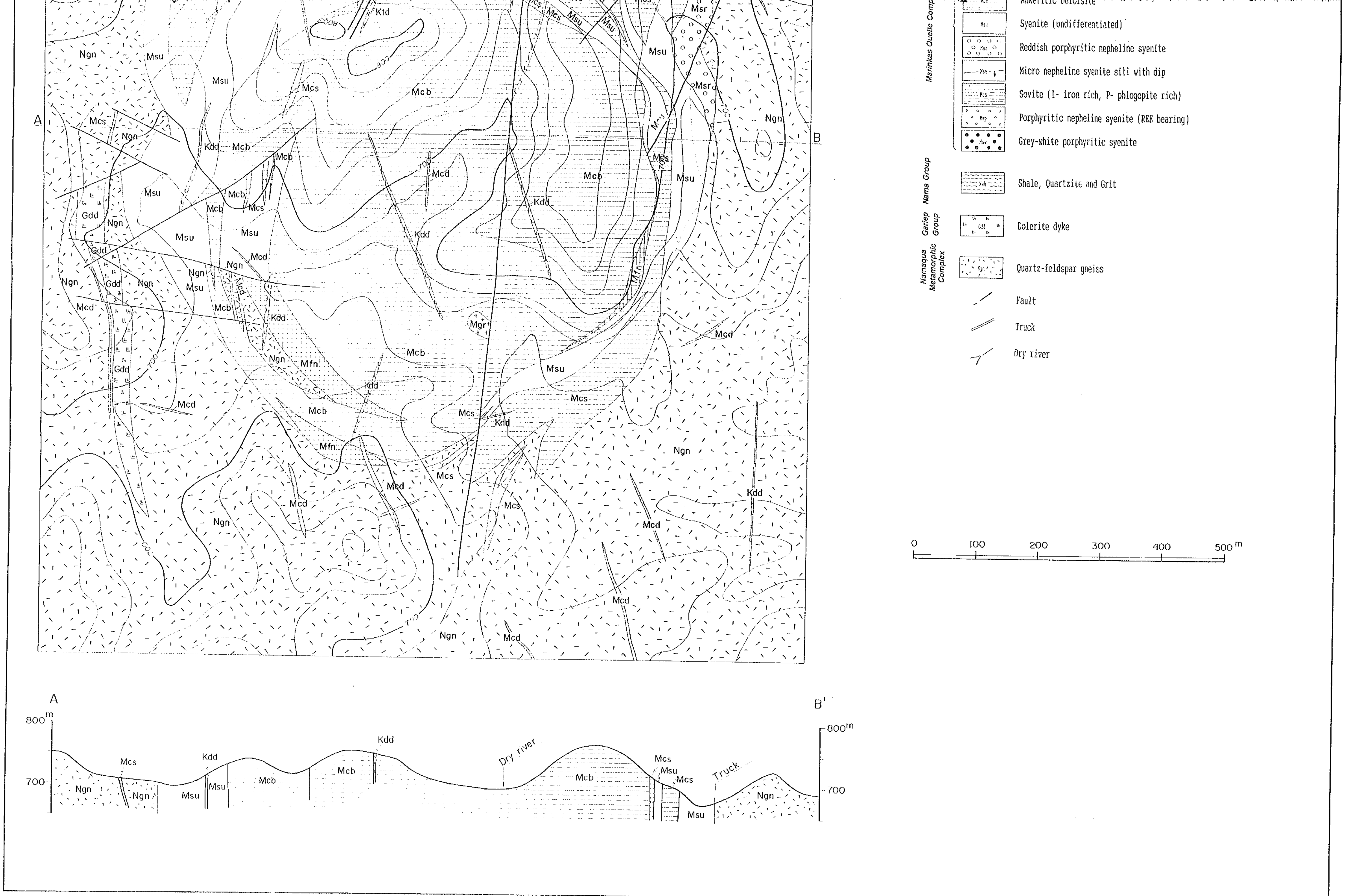
February 1994



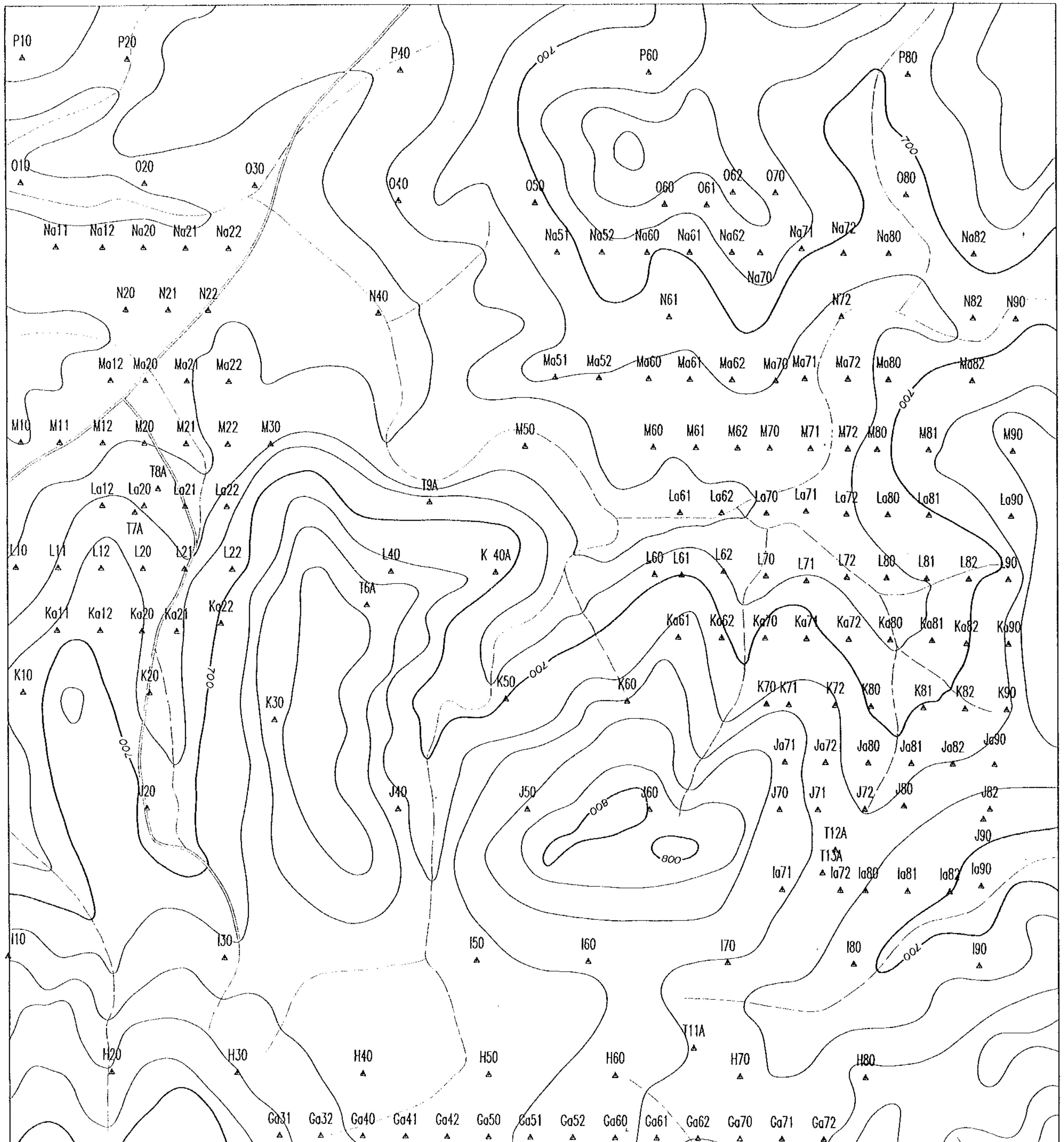
Post- to Syn-Karoo Intrusions
- Trachyte dyke
- Dolerite dyke

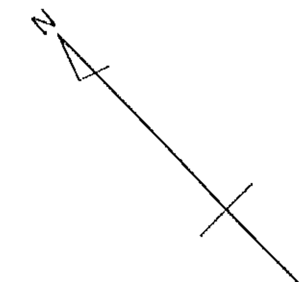
...ex (MOC)
- Granophyres and Micro-granite
- Carbonatite dyke (calcitic- to ankeritic-)
- Massive fenite
- Ankeritic beforsite


A
B
Post- to Syn-Karoo Intrusions
Trachyte dyke
Dolerite dyke
Marinkas Quelle Complex (MQC)
Granophyres and Micro-granite
Carbonatite dyke (calcitic- to ankeritic-)
Massive fenite
Ankeritic beforsite
Syenite (undifferentiated)
Reddish porphyritic nepheline syenite
Micro nepheline syenite sill with dip
Sovite (I- iron rich, P- phlogopite rich)
Porphyritic nepheline syenite (REE bearing)
Grey-white porphyritic syenite
Nama Group
Shale, Quartzite and Grit
Gariep Group
Dolerite dyke
Namaqua Metamorphic Complex
Quartz-feldspar gneiss
Fault
Truck
Dry river
0 100 200 300 400 500 m



A
B
Ankeritic beforsite
Marinkas Quelle Comp
Syenite (undifferentiated)
Reddish porphyritic nepheline syenite
Micro nepheline syenite sill with dip
Sovite (I- iron rich, P- phlogopite rich)
Porphyritic nepheline syenite (REE bearing)
Grey-white porphyritic syenite
Nama Group
Shale, Quartzite and Grit
Gariep Group
Dolerite dyke
Namaqua Metamorphic Complex
Quartz-feldspar gneiss
Fault
Truck
Dry river
0 100 200 300 400 500 m
A
B'
800m
700
Dry river
Truck





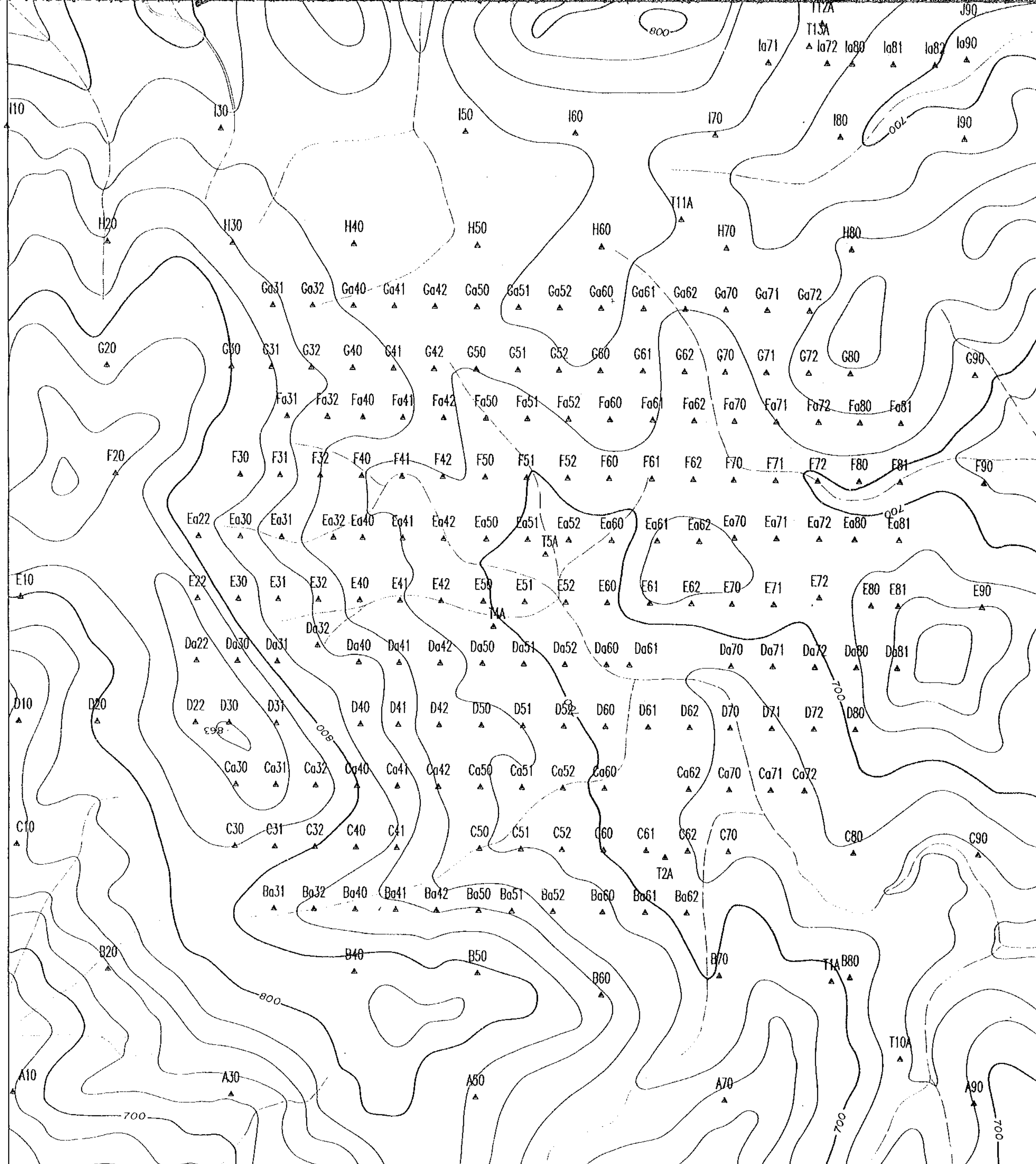
The Mineral Exploration
at the Orange and Kalkfeld Areas,
the Republic of Namibia

Phase I

Fig. II-2-5
Sampling Locality of Whole Rock Geochemical Survey at the Orange Area

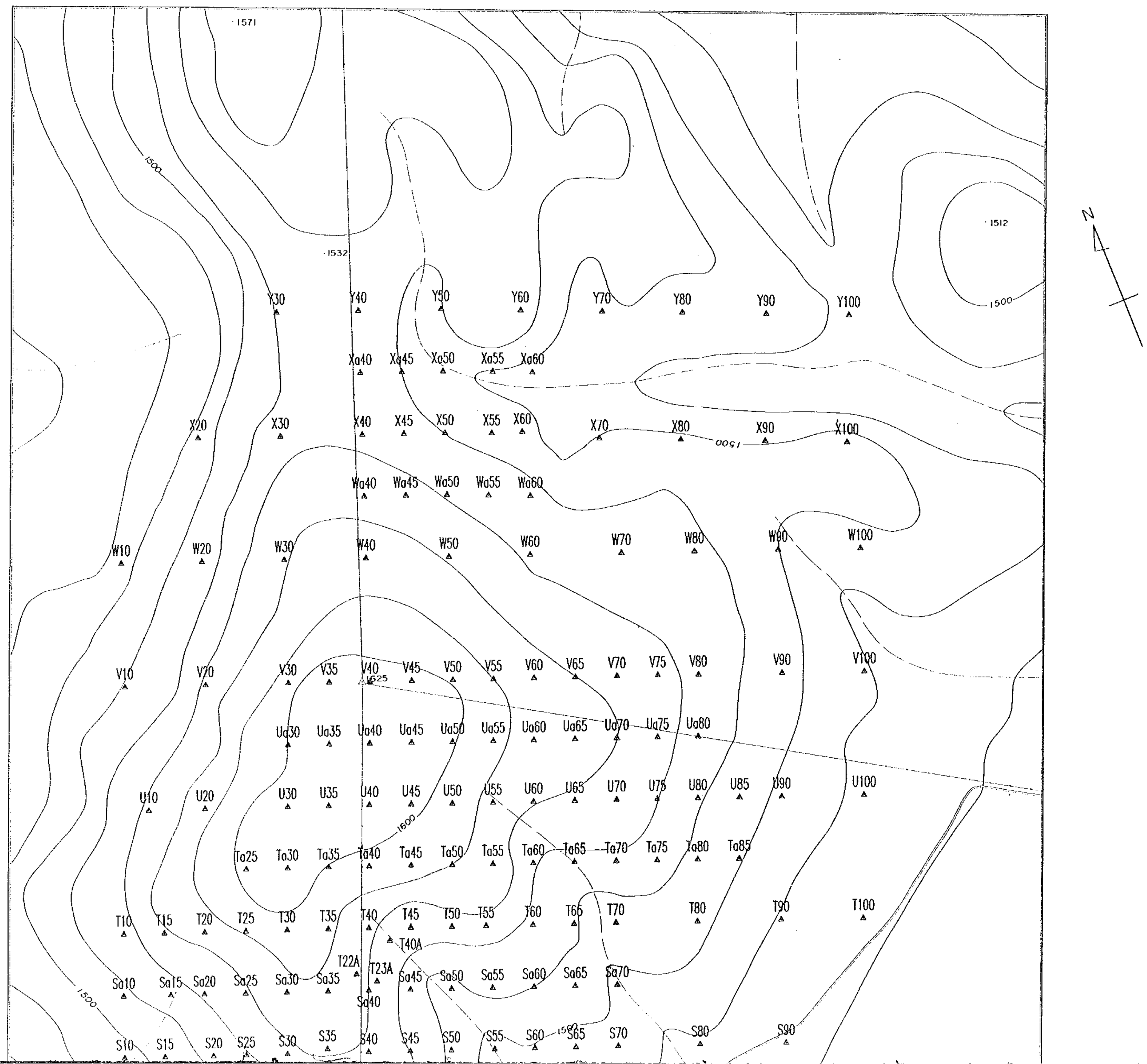
JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN

February 1994



I12A J90
T13A
Ia71 Ia72 Ia80 Ia81 Ia82 Ia90
800
I10 I30 I50 I60 I70 I80 I90
700
T11A
H20 H30 H40 H50 H60 H70 H80
Ga31 Ga32 Ga40 Ga41 Ga42 Ga50 Ga51 Ga52 Ga60 Ga61 Ga62 Ga70 Ga71 Ga72
G20 G30 G31 G32 G40 G41 G42 G50 G51 G52 G60 G61 G62 G70 G71 G72 G80 G90
Fa31 Fa32 Fa40 Fa41 Fa42 Fa50 Fa51 Fa52 Fa60 Fa61 Fa62 Fa70 Fa71 Fa72 Fa80 Fa81
F20 F30 F31 F32 F40 F41 F42 F50 F51 F52 F60 F61 F62 F70 F71 F72 F80 F81 F90
Ea22 Ea30 Ea31 Ea32 Ea40 Ea41 Ea42 Ea50 Ea51 Ea52 Ea60 Ea61 Ea62 Ea70 Ea71 Ea72 Ea80 Ea81
T5A
E10 E22 E30 E31 E32 E40 E41 E42 E50 E51 E52 E60 E61 E62 E70 E71 E72 E80 E81 E90
T4A
Da32
Da22 Da30 Da31 Da40 Da41 Da42 Da50 Da51 Da52 Da60 Da61 Da70 Da71 Da72 Da80 Da81
D10 D20 D22 D30 D31 D40 D41 D42 D50 D51 D52 D60 D61 D62 D70 D71 D72 D80
863
800
700
Ca30 Ca31 Ca32 Ca40 Ca41 Ca42 Ca50 Ca51 Ca52 Ca60 Ca62 Ca70 Ca71 Ca72
C10 C30 C31 C32 C40 C41 C50 C51 C52 C60 C61 C62 C70 C80 C90
T2A
Ba31 Ba32 Ba40 Ba41 Ba42 Ba50 Ba51 Ba52 Ba60 Ba61 Ba62
B20 B40 B50 B60 B70 T1A B80
800
T10A
A10 A30 A50 A70 A90
700
700
700

0 100 200 300 400 500 m



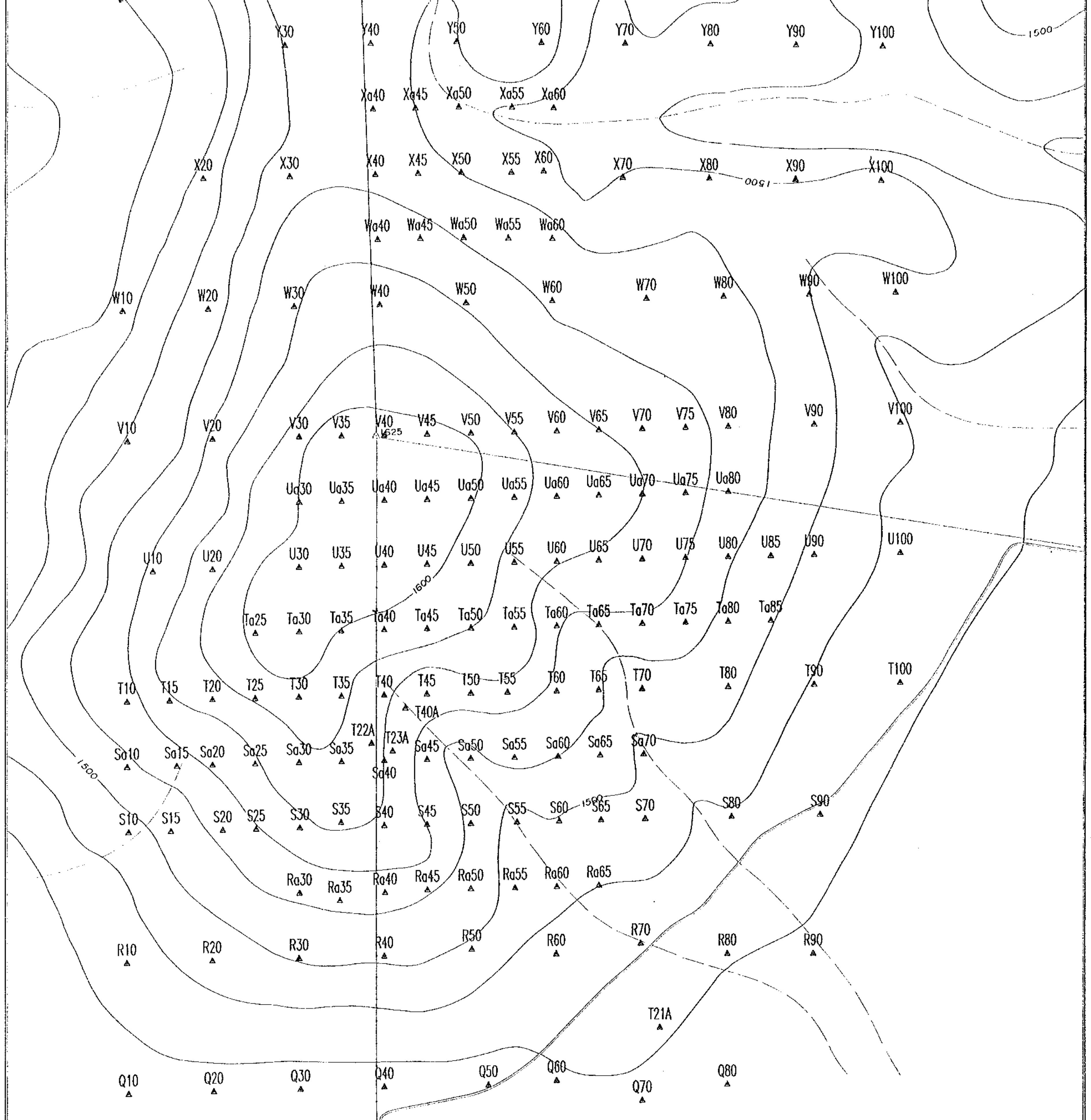
The Mineral Exploration
at the Orange and Kalkfeld Areas,
the Republic of Namibia

Phase I

Fig. II–3–5
Sampling Locality of Whole Rock Geochemical Survey at the Kalkfeld Area

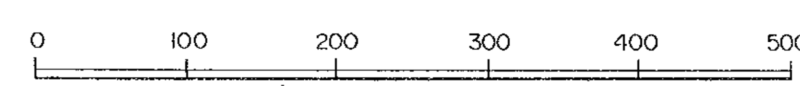
JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN

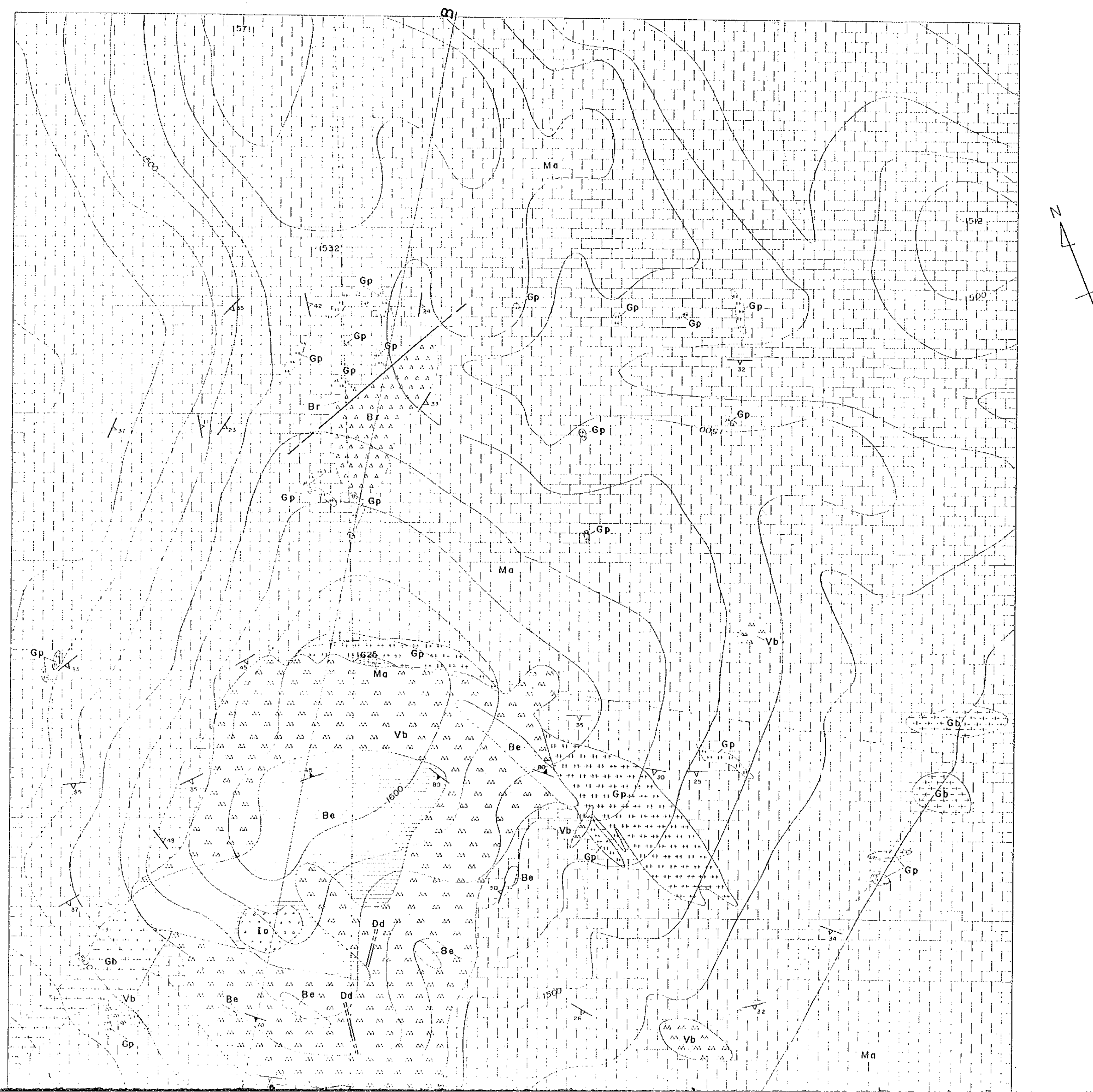
February 1994



JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN

February 1994





The Mineral Exploration
at the Orange and Kalkfeld Areas,
the Republic of Namibia

Phase I

Fig.II-3-2
Geological Map of the Kalkfeld Area

JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN

February 1994

Post-Karoo Intrusions
- Dolerite

Osongombo Diatreme
- Iron ore
- Beforsite
- Volcanic breccia

- Brecciated granite and Damara marble

Damaran Granitoid
- Pegmatitic granite
- Biotite granite

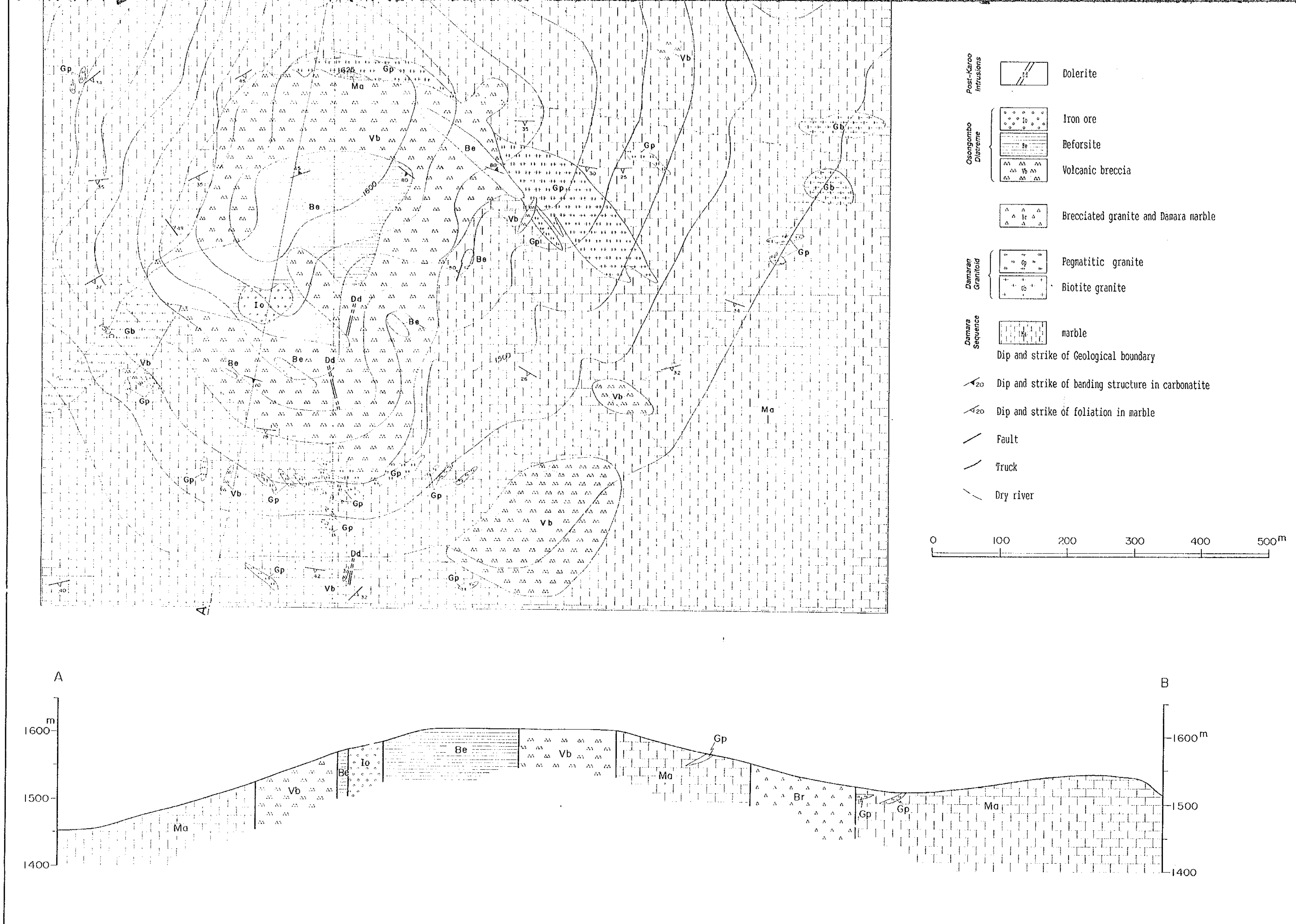
Damara Sequence
- marble

Dip and strike of Geological boundary

Dip and strike of banding structure in carbonatite

Dip and strike of foliation in marble

Fault


Post-Karoo Intrusions
Dolerite
Osongombo Diatreme
Iron ore
Beforsite
Volcanic breccia
Brecciated granite and Damara marble
Damaran Granitoid
Pegmatitic granite
Biotite granite
Damara Sequence
marble
Dip and strike of Geological boundary
Dip and strike of banding structure in carbonatite
Dip and strike of foliation in marble
Fault
Truck
Dry river
0
100
200
300
400
500m
Ma
Vb
Be
Io
Dd
Gp
Gb
Br
1625
1600
1500
A
B
1600
1500
1400
m

JICA