



**Diamond Indicator Minerals
from Till, Northern Alberta
1995-1997 Data from Electron
Probe Analysis**

Diamond Indicator Minerals from Till, Northern Alberta 1995-1997 Data from Electron Probe Analysis

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Purpose

The purpose of this geo-note report is to release data from diamond indicator minerals recovered from till samples collected from 1995 to 1997. This consists of all data subsequent to those used in AGS Bulletin 63, the Diamond Potential of Alberta.

Summary

Regional till sampling for geochemistry and diamond indicator minerals has been ongoing in Alberta since 1992, initially as part of the Canada-Alberta Agreement on Mineral Development (MDA) program in Alberta. Indicator results from 1992 to 1994 were published in Dufresne et al. (1996), the Diamond Potential of Alberta. Each year AGS has continued reconnaissance scale till sampling throughout Northern Alberta. The report releases the results from the 125 samples collected from 1995 to 1997.

Location

The location of all samples in this report are shown in Figure 1. Sample sites are concentrated in the northcentral region of Alberta and in a western portion between 54°N and 55°N as part of the Wapiti study. Each site number on the map corresponds to the sample number in the table of locations (Table 1).

Sample Collection and Analysis

The diamond indicator sample consisted of a 5 gallon (23 litre) pail of till weighing about 25 kg. Samples were collected primarily from road cuts by truck or river sections using helicopters. A few were collected by digging from surface down to a sampling depth of 1m. Additional samples were collected from core from auger boreholes. Table 1 shows the depth each sample was collected from and indicates which are borehole samples.

Sample processing and preliminary grain picking were performed at the Saskatchewan Research Council (SRC) laboratory in Saskatoon. After the heavy mineral concentrates were returned additional grains were selected. The geochemistry of each grain was determined using the electron microprobe at the University of Saskatchewan. A summary of the processing and microprobe procedures at the SRC and University of Saskatchewan are given in Swanson and Gent (1993). All the microprobe data were processed for mineral identification using computer programs written in QBASIC and provided by the SRC (Quirt, 1992a and 1992b; Gent, 1993).

Results

A total of 125 till samples were collected and analyzed for diamond indicators. The geochemical data from microprobing are shown in Table 2. Little effort has been made in this report to provide additional interpretation of the results, however based on the mineral identification programs, there appear to be some sites which yielded grains whose chemistries are indicative of a kimberlite or lamproite source. Additional work on these data will be presented in a subsequent report. Initial observations indicate excellent indicators from the northeast corner of the Wapiti map sheet, in the vicinity of 54°N and 118°W, and an another sample site with above average number of indicators from borehole samples NAT97-168 and NAT97-169 just north of 56°N in the Peerless map sheet. Results from this borehole and others drilled in this region are highlighted in GeoNote 98-2 (Pawlowicz et al., 1998).

Chemical data from all the grains picked are included in Table 2 of this report, which shows that that besides the common diamond indicator minerals a number of the grains are nonindicators, for example staurolite.

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References

Dufresne, M.B., Eccles, D.R., McKinsty, D.R., Fenton, M.M., Pawlowicz, J.G. and Edwards, W.A.D. 1996. The diamond potential of Alberta. Alberta Geological Survey, Alberta Energy, Bulletin 63, 158 p.

Pawlowicz, J.G., Dufresne M.B. and Fenton, M.M. 1997. Diamond indicator minerals, auger core holes, Peerless Lake map area 84N. Alberta Geological Survey, Alberta Energy and Utilities Board, Geo-Note 1998-2, 8 p.

Gent, M.R., 1993. Mineralogical and group classification programs. Saskatchewan Energy and Mines, Data File 18.

Quirt, D., 1992a. Garclass a program to classify garnets and pyroxenes using the algorithm of Dawson and Stephens (1975). Saskatchewan Research Council, Publication R-1230-10-E-92.

Quirt, D., 1992b. Minclass a program to classify garnets and pyroxenes using the discriminant functions of Dawson and Stephens (1975) and Stephens and Dawson (1977). Saskatchewan Research Council, Publication R-1230-12-E-92.

Swanson, F.J. and Gent, M.R., 1993. Results of the reconnaissance diamond indicator mineral sampling, Saskatchewan. In Dunne, K.P.E and Grant, B. (eds.), Mid-Continent Diamonds. GAC-MAC Symposium Volume, Edmonton, Alberta, May 17-18, 1993. Mineral Deposits Division, Geological Association of Canada, c/o Mineral Deposits Research Unit, The University of British Columbia, Vancouver, British Columbia, p. 113-119.

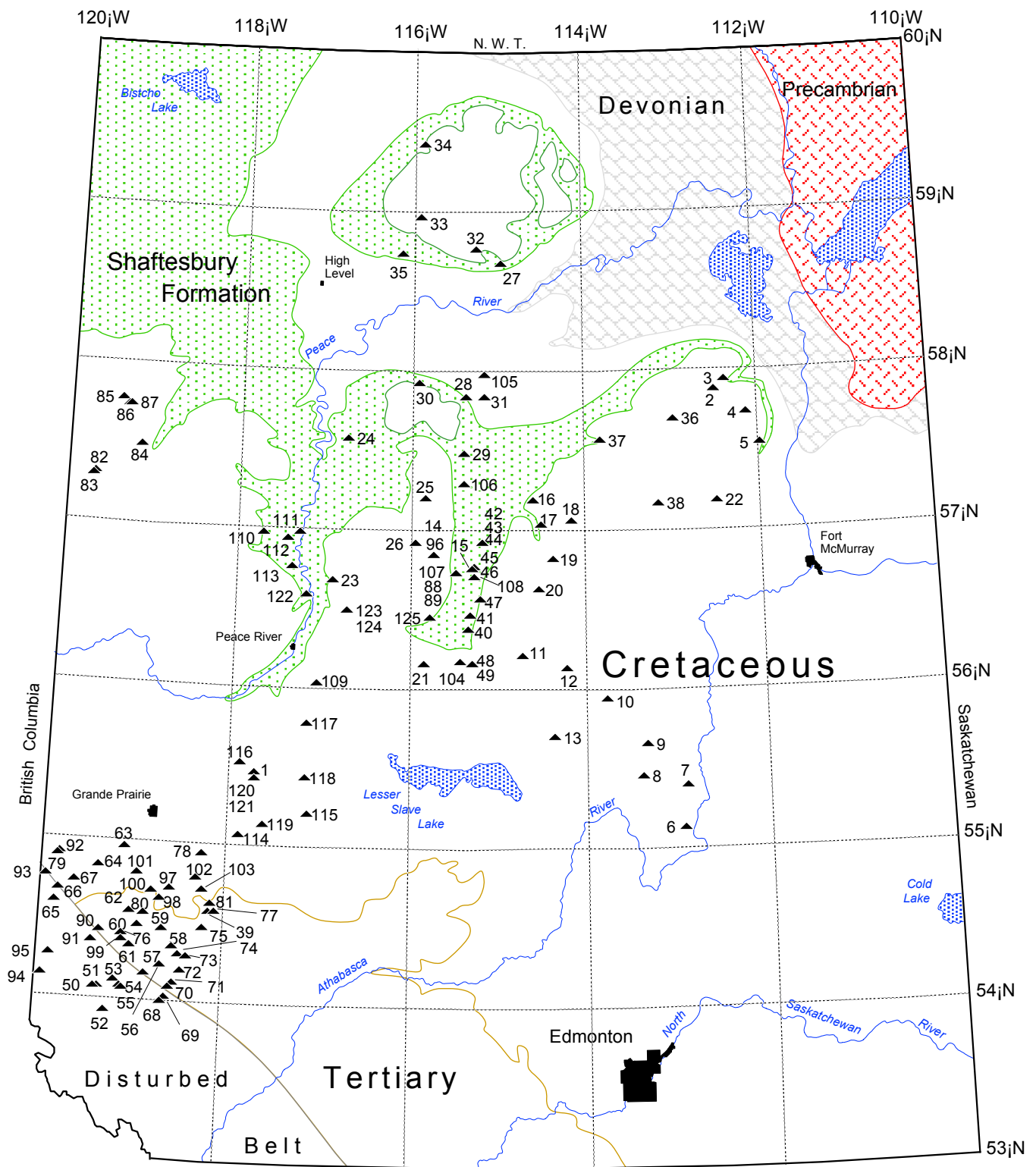


Figure 1. Location of 1995 to 1997 till sample sites for diamond indicators in Northern Alberta. Site number on map refers to line number in table 1.

Table 1. Sample locations. Samples from boreholes are identified in the comments with word borehole or letters BH

Line#	Sample#	Year	Sediment	NTS Map	Location Name	Longitude	Latitude	Sample Depth		Comments
								from	to	
1	NAT95-121	95	till	83N	Mountain Lake	117.726986	55.461643	1.0	1.5	
2	NAT95-122	95	till	84H	Mclvor River	112.482778	57.881389	4.0	4.5	
3	NAT95-123	95	till	84H	Mclvor River	112.369444	57.932778	4.5	5.0	
4	NAT95-124	95	till	84H	Clear Lake	112.131111	57.729722	1.0	1.1	
5	NAT95-125	95	till	74E	Birch Mtns-Pierre R.	111.982222	57.536667	4.0	5.0	
6	NAT95-126	95	till	83P	Calling River	112.946578	55.138726	3.5	4.0	
7	NAT95-127	95	till	83P	Amadou Lake	112.927373	55.400571	2.0	2.5	
8	NAT95-128	95	till	83P	Rock Island Lake	113.407526	55.455118	2.5	3.0	
9	NAT95-129	95	till	83P	Pelican Mountains	113.366510	55.658784	10.0	10.5	
10	NAT95-130	95	till	83P	Wabasca	113.800569	55.946071	3.5	4.0	
11	NAT95-131	95	till	84B	Muskwa Lake	114.733860	56.215773	2.0	2.3	
12	NAT95-132	95	till	84B	Muskwa River	114.245045	56.143063	1.5	1.8	
13	NAT95-133	95	till	83O	Willow River	114.397855	55.714036	1.8	2.0	
14	NAT95-134	95	till	84B	Sawn Lake	115.753433	56.847983	2.0	2.5	
15	NAT95-135	95	till	84B	Red Earth	115.317908	56.764752	14.5	15.0	
16	NAT95-136	95	till	84G	Penny Tower	114.620278	57.186443	2.0	2.3	
17	NAT95-137	95	till	84G	Trout Tower	114.539912	57.037392	2.0	2.3	
18	NAT95-138	95	till	84G	Purless	114.178264	57.059212	3.0	3.5	
19	NAT95-139	95	till	84B	Trout Tower	114.388932	56.819272	3.0	3.5	
20	NAT95-140	95	till	84B	Peerless Lake	114.561457	56.637509	2.5	3.0	
21	NAT95-141	95	till	84B	Utikuma Lake	115.854570	56.157598	1.5	2.0	
22	NAT95-142	95	till	84H	Elles River	112.483889	57.185000	5.0	5.0	
23	NAT95-143	95	till	84C	Little Cadotte	116.896667	56.689722	5.0	5.5	
24	NAT95-144	95	till	84F	Cache Creek	116.771667	57.566944	4.0	4.5	
25	NAT95-145	95	till	84G	Russell Creek	115.852222	57.206389	3.0	3.5	
26	NAT95-146	95	till	84B	Sawn Lake	115.973889	56.926389	1.0	2.0	
27	NAT95-147	95	till	84J	Foggy Tower	114.988328	58.673116	2.5	3.0	
28	NAT95-148	95	till	84G	Wabasca River	115.387500	57.838611	4.0	5.0	
29	NAT95-149	95	till	84G	Wabasca River	115.419722	57.478056	3.5	4.0	
30	NAT95-150	95	till	84G	Buffalo Head Hills	115.953333	57.920278	4.0	4.5	
31	NAT95-151	95	till	84G	Mikkwa River	115.175000	57.844167	2.0	2.5	
32	NAT95-152	95	till	84J	Lawernce River	115.286389	58.763611	3.0	3.5	
33	NAT95-153	95	till	84J	Ponton River	115.961667	58.964167	2.5	3.0	
34	NAT95-154	95	till	84O	Yates River	115.903611	59.426111	5.0	6.0	
35	NAT95-155	95	till	84K	Ponton River	116.170293	58.735294	1.5	1.8	
36	NAT95-156	95	till	84H	Birch River	112.988889	57.693333	2.0	2.5	
37	NAT95-157	95	till	84H	Mikkwa River	113.835833	57.563333	2.5	3.0	
38	NAT95-158	95	till	84H	Duncan River	113.174167	57.163611	8.0	9.0	
39	NAT96-159	96	till	83L	Moose River	118.168241	54.575267	2.0	2.0	
40	NAT97-160	97	till	84B	Red Earth South	115.352967	56.382667	8.7	14.6	BH RE97-2
41	NAT97-161	97	till	84B	Red Earth South	115.333817	56.467033	7.0	13.1	BH RE97-7
42	NAT97-162	97	till	84B	46 Km North of Red Earth	115.203283	56.926133	2.4	10.1	BH RE97-4A
43	NAT97-163	97	till	84B	47 Km North of Red Earth	115.203283	56.926133	18.3	26.8	BH RE97-4B
44	NAT97-164	97	till	84B	Willow Creek Crossing	115.203283	56.926133	42.4	46.6	BH RE97-4C
45	NAT97-165	97	till	84B	24 Km North of Red Earth	115.283600	56.772000	0.9	9.8	BH RE97-3A
46	NAT97-166	97	till	84B	25 Km North of Red Earth	115.283600	56.772000	12.3	24.4	BH RE97-3B
47	NAT97-167	97	till	84B	6 Km East of Red Earth	115.213133	56.576333	2.4	10.1	BH RE97-6
48	NAT97-168	97	till	84B	45 Km South of Red Earth	115.307217	56.163817	13.1	28.7	BH RE97-1A
49	NAT97-169	97	till	84B	45 Km South of Red Earth	115.307217	56.163817	37.3	42.1	BH RE97-1B
50	NAT96-170	96	till	83L	Caw Ridge	119.360977	54.079487	2.0	2.5	
51	NAT96-171	96	till	83L	Beaverdam Creek	119.317378	54.087764	2.0	2.5	
52	NAT96-172	96	till	83L	Beaverdam Road	119.228611	53.940980	2.5	3.0	
53	NAT96-173	96	till	83L	Sheep Creek Road	119.139549	54.125253	1.5	1.8	
54	NAT96-174	96	till	83L	Sheep Creek Road	119.070536	54.091981	1.5	2.0	
55	NAT96-175	96	till	83L	Sheep Creek Road	119.050955	54.085940	3.5	4.0	
56	NAT96-176	96	till	83L	Prairie Creek Road	118.826409	54.176227	1.5	1.8	
57	NAT96-177	96	till	83L	Southview picnic site rd	118.646324	54.228147	1.8	2.0	
58	NAT96-178	96	till	83L	Kakawa River- South	118.539422	54.349903	3.0	3.5	
59	NAT96-179	96	till	83L	Kakawa River- Road North	118.650834	54.463445	2.5	3.0	
60	NAT96-180	96	till	83L	Oil road North of Kakwa R.	118.915042	54.484814	1.5	1.8	
61	NAT96-181	96	till	83L	Logging Rd- Kakawa tower	118.998010	54.348990	1.3	1.5	
62	NAT96-182	96	till	83L	Cutbank River- access rd N	119.004015	54.568491	1.8	2.0	
63	NAT96-183	96	till	83L	Wapiti town tower	119.091954	54.966339	2.0	2.3	
64	NAT96-184	96	till	83L	Pinto Creek, Gully 1 km north	119.375866	54.847095	20.0	21.0	
65	NAT96-185	96	till	83L	Narrowway River Vally	119.829509	54.616762	2.5	3.0	
66	NAT96-186	96	till	83L	Two Lakes Road 107km	119.795167	54.683599	2.0	2.5	
67	NAT96-187	96	till	83L	Two Lakes Road 93 km	119.611723	54.741571	3.0	3.5	

Table 1 continued

Line#	Sample#	Year	Sediment	NTS Map	Location Name	Longitude	Latitude	Sample Depth		Comments
								from	to	
68	NAT96-188	96	till	83L	Hwy 734	118.624068	54.002461	1.8	2.3	
69	NAT96-189	96	till	83L	Hwy 734 forestry trunk road	118.598083	54.032528	0.0	0.5	
70	NAT96-190	96	till	83L	Hwy 734 forestry trunk road	118.545778	54.094889	0.8	1.2	
71	NAT96-191	96	till	83L	Hwy 734 forestry trunk rd	118.516500	54.129667	1.3	1.5	
72	NAT96-192	96	till	83L	Hwy 734 forestry trunk rd	118.424278	54.206250	2.2	2.4	
73	NAT96-193	96	till	83L	Hwy 734 forestry trunk road	118.384500	54.294278	1.7	1.9	
74	NAT96-194	96	till	83L	Smoky R. west of tower 210	118.463900	54.305417	3.0	3.5	
75	NAT96-195	96	till	83L	Campground Hwy 734	118.223667	54.469550	2.0	2.5	
76	NAT96-196	96	till	83L	Kakawa Tower West	119.074500	54.424250	2.4	2.6	
77	NAT96-197	96	till	83L	Next to NABOR'S drill camp	118.090833	54.576417	2.3	2.5	
78	NAT96-198	96	till	83L	Hwy 734	118.257426	54.938170	3.0	3.5	
79	NAT96-199	96	till	83L	Calahoo Cr	119.807417	54.903383	4.0	4.5	
80	NAT96-200	96	till	83L	Cutbank R.	118.859667	54.554000	3.3	3.5	
81	NAT96-201	96	till	83L	Latornell R.	118.135167	54.632167			
82	NAT97-202	97	till	84E	Shell Hamburg-Chinchaga R.	119.681150	57.307750	12.0	12.0	
83	NAT97-203	97	till	84E	Shell Hamburg	119.704805	57.292741	1.0	1.5	
84	NAT97-204	97	till	84E	Chinchaga R.	119.149878	57.493231	1.0	1.5	
85	NAT97-205	97	till	84E	Chinchaga R.	119.413107	57.769363	1.2	1.5	
86	NAT97-206	97	till	84E	Chinchaga R.	119.338834	57.73764	1.0	1.3	
87	NAT97-207	97	till	84E	Chinchaga R.	119.300709	57.736503	0.4	0.7	
88	NAT97-208	97	till	84B	Renaissance Rd- Ashton	115.508017	56.738700	0.6	6.6	BH RE 97-5A
89	NAT97-209	97	till	84B	Renaissance Rd- Red Earth	115.508017	56.738700	10.7	18.3	BH RE 97-5B
90	NAT96-210	96	till	83L	Rock creek Unit 19 till	119.320733	54.437933	1.0	1.2	
91	NAT96-211	96	till	83L	Nose Mountain South	119.393983	54.369200	3.0	3.5	
92	NAT96-212	96	till	83L	Calahoo Road	119.789800	54.922450	2.5	2.8	
93	NAT96-213	96	till	83L	Calahoo Road, south west	119.941967	54.776833	2.5	2.8	
94	NAT96-214	96	till	83L	Mouse Cache Cr	119.930300	54.152883	2.0	2.3	
95	NAT96-215	96	till	83L	Sherman Meadows south	119.846467	54.277833			
96	NAT96-216	96	till	84B	Sawn Lake - resample of 134	115.753950	56.847233			
97	NAT97-217	97	till	83L	10km east of Hwy 40	118.578166	54.721016	1.9	2.0	
98	NAT97-218	97	till	83L	Hwy 40, Elk Creek Crossing	118.685816	54.652816	1.8	2.0	
99	NAT97-219	97	till	83L	Kakwa Fire Tower	119.070150	54.385466	3.5	4.0	
100	NAT97-220	97	till	83L	Gold Creek	118.792833	54.700433	3.0	3.5	
101	NAT97-221	97	till	83L	Bald Mountain Tower road	118.942233	54.805633	1.0	1.5	
102	NAT97-222	97	till	83L	5km from Hwy 734	118.304550	54.793400	2.0	2.5	
103	NAT97-223	97	till	83L	Hwy734	118.242050	54.715566	3.0	3.5	
104	NAT97-224	97	till	84B	Whitefish Tower	115.444633	56.179683	1.5	2.0	
105	NAT97-225	97	till	84G	10km North of Willow Creek	115.175250	57.974950	10.0	10.5	2 samples
106	NAT97-226	97	till	84G	Red Earth	115.405033	57.294400	5.0	5.5	2 samples
107	NAT97-227	97	till	84B	Renaissance Road	115.508017	56.738700	1.2	1.5	loc as RE97-5
108	NAT97-228	97	till	84B	Red Earth north	115.304636	56.713848	1.5	1.5	
109	LEL94-1	94	till	84C	Nampa (site 2)	117.052159	56.037584	36.6	39.6	borehole
110	LEL94-2	94	till	84C	Notikewin	117.720161	56.973909	37.8	41.1	borehole
111	LEL94-4	94	till	84C	Buchanan Creek	117.298613	56.981020	25.3	33.5	borehole
112	LEL94-6	94	till	84C	Manning Site 3	117.434254	56.944689	38.4	42.1	borehole
113	LEL94-7	94	till	84C	Deadwood	117.374646	56.769878	28.7	34.4	borehole
114	SB94-4	94	till	83N	Swan Lake	117.865965	55.069471	35.1	43.4	borehole
115	SB94-9	94	till	83N	Stumpy Lake	117.123366	55.212673	36.6	40.4	borehole
116	SB94-11	94	till	83N	White Mud	117.872646	55.519184	14.5	18.0	borehole
117	SB94-12	94	till	83N	Falher	117.155841	55.779845	18.4	22.4	borehole
118	SB94-14	94	till	83N	Little Smoky R.	117.159642	55.441551	24.2	28.3	borehole
119	SB94-15	94	till	83N	Youngs Point	117.616137	55.142215	13.1	17.1	borehole
120	PR95-3A	95	till	83N	Mountain Lake	117.723489	55.419501	1.0	5.2	BH PR95-3A
121	PR95-3B	95	till	83N	Mountain Lake	117.723489	55.419501	14.6	21.6	BH PR95-3B
122	PR95-7	95	till	84C	Whitewood River	117.202402	56.586613	20.1	23.8	borehole
123	PR95-9A	95	till	84C	Cadotte	116.745888	56.492092	33.0	59.0	BH PR95-9A
124	PR95-9B	95	till	84C	Cadotte	116.745888	56.492092	88.0	108.0	BH PR95-9B
125	PR95-11	95	till	84B	Red Earth	115.799051	56.452099	28.3	32.9	borehole

Table 2. Electron probe data in weight % of indicator grains selected from Northern Alberta till samples for 1995 to 1997. This table contains all data subsequent to AGS Bulletin 63, The Diamond Potential of Alberta.

Sample#	Grain#	Mineral Identification	TiO2 wt%	Cr2O3 wt%	FeO wt%	MgO wt%	CaO wt%	SiO2 wt%	Al2O3 wt%	Na2O wt%	MnO wt%	Total wt%	NiO wt%	ZnO wt%
NAT95-121	5	ALMANDINE	0.06	0.00	30.92	2.39	6.99	37.54	21.61	0.02	0.57	100.10		
NAT95-121	1	CPX_02_DIOPSIDE	0.05	1.06	5.51	14.68	20.22	53.51	1.74	1.91	0.12	98.80		
NAT95-121	2	CPX_02_DIOPSIDE	0.04	0.91	5.28	15.45	18.78	54.66	1.56	1.79	0.08	98.54		
NAT95-121	3	CPX_04_UNKNOOWN	0.14	0.05	8.99	12.18	22.01	51.45	2.64	1.20	0.37	99.03		
NAT95-121	1	STAUROLITE	0.68	0.04	13.37	2.14	0.00	27.99	55.57	0.00	0.10	99.89		
NAT95-121	3	STAUROLITE	0.73	0.03	12.19	1.55	0.00	27.10	55.11	0.00	0.11	96.84		
NAT95-121	4	STAUROLITE	0.57	0.07	12.36	1.91	0.03	27.41	55.26	0.00	0.08	97.70		
NAT95-121	4	UNKNOWN Cpx??	0.03	0.19	8.83	12.72	22.83	52.76	0.47	0.52	0.27	98.62		
NAT95-121	2	UNKNOWN Omphacite??	0.00	0.00	6.76	11.27	0.80	57.94	11.67	6.38	0.10	94.92		
NAT95-122	6	STAUROLITE	0.73	0.07	12.84	1.91	0.02	27.16	56.63	0.00	0.16	99.52		
NAT95-123	6	CPX_01_SUB_CALCIC_DIOPSIDE	0.03	0.16	6.05	19.77	12.23	54.13	3.10	0.59	0.62	96.92		
NAT95-123	8	ILMENITE	59.38	0.01	31.09	0.12	0.13	0.70	0.39	0.00	1.08	92.90		
NAT95-123	7	RUTILE	98.18	0.21	0.09	0.01	0.01	0.00	0.01	0.02	0.00	98.51		
NAT95-123	5	UNKNOWN Cpx??	0.06	0.03	9.45	12.30	21.74	52.45	1.68	0.75	0.90	99.37		
NAT95-124	10	CPX_01_UNKNOOWN	0.09	0.31	8.59	19.08	11.85	55.20	1.54	0.39	0.46	97.58		
NAT95-124	11	CPX_01_UNKNOOWN	0.29	0.20	9.06	16.70	12.20	50.64	6.40	1.03	0.24	96.81		
NAT95-124	7	CPX_02_UNKNOOWN	0.07	0.04	5.92	14.70	23.16	53.73	1.71	0.61	0.36	100.29		
NAT95-124	8	CPX_02_UNKNOOWN	0.00	0.05	6.30	14.64	22.89	53.97	1.28	0.59	0.33	100.05		
NAT95-124	10	RUTILE	97.89	0.20	0.21	0.00	0.01	0.00	0.02	0.00	0.01	98.35		
NAT95-124	12	SPINEL_MAGNETITE-SERIES	0.16	0.03	60.73	0.38	0.28	10.70	4.83	0.01	0.14	77.42		
NAT95-124	9	STAUROLITE	0.67	0.01	13.77	1.63	0.01	27.21	56.41	0.02	0.00	99.73		
NAT95-124	13	STAUROLITE	0.56	0.06	13.90	1.66	0.01	26.48	56.91	0.02	0.23	99.83		
NAT95-124	9	UNKNOWN Amphibole ??	0.36	0.00	15.59	9.49	11.64	41.86	15.99	1.62	0.15	96.83		
NAT95-124	11	UNKNOWN Staurolite?	0.58	0.04	13.73	1.49	0.01	26.04	57.63	0.00	0.21	99.71		
NAT95-125	121	CORUNDUM	0.03	1.46	0.14	0.01	0.01	0.03	104.61	0.00	0.02	106.32		
NAT95-125	14	G_05_MAGNESIAN_ALMANDINE	0.11	0.09	25.07	3.93	9.05	37.66	21.40	0.02	1.12	98.44		
NAT95-125	16	RUTILE	97.16	0.04	0.74	0.01	0.00	0.00	0.00	0.00	0.00	97.94		
NAT95-125	15	UNKNOWN Staurolite?	0.68	0.09	13.10	1.33	0.01	27.74	57.87	0.00	0.01	100.83		
NAT95-125	17	UNKNOWN Staurolite?	0.50	0.07	13.46	1.62	0.00	26.72	57.16	0.01	0.11	99.64		
NAT95-126	25	ALMANDINE	0.03	0.01	32.32	6.00	0.85	38.00	22.28	0.00	0.72	100.21		
NAT95-126	12	CPX_01_UNKNOOWN	0.12	0.29	9.57	17.23	11.78	51.22	4.81	0.84	0.35	96.31		
NAT95-126	13	CPX_02_UNKNOOWN	0.03	0.25	8.04	12.86	21.99	53.20	1.27	1.44	0.22	99.29		
NAT95-126	29	CPX_02_UNKNOOWN	0.38	0.02	4.40	13.42	23.84	52.54	3.21	0.53	0.07	98.41		
NAT95-126	15	GAHNITE SPINEL	0.00	0.02	8.82	2.26	0.00	0.00	52.95	0.00	0.57	64.62		
NAT95-126	126	GROSSULAR	0.30	11.09	0.45	0.23	34.67	37.03	11.40	0.02	0.38	95.57		
NAT95-126	624	G_02_HIGH_TITANIUM_PYROPE	8.12	0.04	8.78	0.00	24.52	34.53	20.16	0.00	0.20	96.36		
NAT95-126	21	G_05_MAGNESIAN_ALMANDINE	0.00	0.04	28.19	8.60	1.09	38.21	22.81	0.00	0.28	99.21		
NAT95-126	127	G_07_FER-MAG_UVAROVITE_GROSSULAR	0.38	14.67	2.46	0.27	33.37	36.83	9.01	0.01	0.55	97.55		
NAT95-126	623	G_11_UVAROVITE_PYROPE	0.77	11.19	6.62	18.02	7.30	40.38	13.66	0.09	0.29	98.32		
NAT95-126	18	RUTILE	95.09	0.04	1.29	0.00	0.03	0.03	0.02	0.00	0.01	96.51		
NAT95-126	20	RUTILE	98.42	0.13	0.13	0.00	0.00	0.02	0.05	0.00	0.00	98.76		
NAT95-126	23	RUTILE	97.80	0.00	0.69	0.01	0.02	0.01	0.00	0.00	0.02	98.54		
NAT95-126	24	RUTILE	97.74	0.15	0.09	0.00	0.01	0.00	0.00	0.00	0.00	97.99		
NAT95-126	14	SPINEL	0.00	0.03	5.35	26.04	0.00	0.00	69.39	0.00	0.02	100.85		
NAT95-126	19	SPINEL	0.01	0.02	4.77	21.14	0.00	0.01	71.45	0.00	0.10	97.53		
NAT95-126	28	SPINEL	0.07	0.12	6.49	22.24	0.01	0.00	70.10	0.00	0.13	99.16		
NAT95-126	22	TOURMALINE	0.25	0.00	8.53	6.63	0.52	34.11	31.78	2.18	0.09	84.09		
NAT95-126	27	UNKNOWN	0.00	0.00	0.00	0.00	1.54	0.47	0.00	0.00	0.00	2.01		
NAT95-126	17	UNKNOWN Cpx??	0.00	0.03	9.42	12.10	22.89	51.98	1.46	0.90	0.29	99.07		
NAT95-126	120	UNKNOWN Ky-Sil-And?	0.01	0.00	0.44	0.47	0.00	30.70	63.03	0.01	0.00	94.66		
NAT95-126	16	UNKNOWN Spinel?	0.00	0.03	14.05	18.29	0.03	0.00	67.99	0.00	0.28	100.68		
NAT95-126	26	UNKNOWN Tourmaline ??	0.57	0.12	8.36	8.84	1.58	36.04	27.62	1.85	0.00	84.97		
NAT95-127	18	AMPHIBOLE	0.44	0.32	7.78	17.67	11.80	45.94	10.26	1.43	0.17	96.10		
NAT95-127	31	RUTILE	97.56	0.19	0.42	0.08	0.00	0.00	0.05	0.03	0.19	98.53		
NAT95-127	32	RUTILE	96.45	0.06	0.70	0.00	0.01	0.01	0.06	0.00	0.02	97.32		
NAT95-127	33	RUTILE	97.03	0.08	0.44	0.01	0.00	0.00	0.02	0.00	0.01	97.58		
NAT95-127	34	RUTILE	95.93	0.14	0.90	0.02	0.02	0.01	0.10	0.04	0.04	97.20		
NAT95-127	30	STAUROLITE	0.54	0.07	12.45	1.74	0.00	27.55	56.21	0.00	0.05	98.59		
NAT95-127	35	STAUROLITE	0.74	0.03	13.89	2.16	0.01	27.93	55.33	0.01	0.12	100.21		
NAT95-129	613	AMPHIBOLE	1.03	0.10	14.35	10.91	11.54	43.00	11.82	1.40	0.28	95.65		
NAT95-129	616	AMPHIBOLE	0.36	0.02	19.25	8.05	11.42	44.95	10.24	1.02	0.38	95.77		
NAT95-129	612	G_01_TITANIAN_PYROPE	0.74	2.58	8.23	20.13	4.78	41.91	21.21	0.06	0.30	99.93		
NAT95-129	614	G_08_FERRO_MAGNESIAN_GROSSULAR	0.04	0.04	12.45	0.01	23.03	36.90	23.33	0.02	0.37	96.19		
NAT95-129	615	G_08_FERRO_MAGNESIAN_GROSSULAR	0.08	0.06	13.75	0.04	22.84	36.73	22.14	0.01	0.02	95.67		
NAT95-129	618	G_08_FERRO_MAGNESIAN_GROSSULAR	0.16	0.01	12.41	0.00	22.43	37.27	23.18	0.01	0.17	95.62		
NAT95-129	625	G_10_LOW_CALCIC_CHROME_PYROPE	0.11	7.96	7.52	18.74	5.94	41.12	17.50	0.02	0.38	99.30		
NAT95-129	37	QUARTZ	0.02	0.06	0.23	0.00	0.02	102.52	0.02	0.00	0.01	102.89		
NAT95-129	39	SPINEL	0.02	0.32	3.07	24.50	0.02	0.00	71.71	0.01	0.07	99.72		
NAT95-129	38	STAUROLITE	0.62	0.02	13.19	1.78	0.01	27.71	54.40	0.00	0.00	97.73		
NAT95-129	36	UNKNOWN	0.00	0.00	0.00	0.00	0.75	2.13	0.00	0.00	0.00	2.88		
NAT95-129	617	UNKNOWN Amphibole ??	0.90	0.00	30.55	1.31	10.70	37.97	10.52	1.35	0.67	95.36		
NAT95-129	19	UNKNOWN Cpx??	0.03	0.07	8.16	13.41	23.12	53.37	0.56	0.73	0.36	99.80		
NAT95-129	40	UNKNOWN Tourmaline ??	0.75	0.10	9.71	8.59	1.27	35.88	26.97	1.90	0.00	85.17		
NAT95-130	21	CPX_01_UNKNOOWN	0.18	0.64	8.81	17.21	11.71	50.14	6.54	0.81	0.24	96.44		
NAT95-130	20	CPX_04_UNKNOOWN	0.44	0.18	10.97	15.49	11.99	48.43	6.63	1.15	0.20	96.03		
NAT95-130	47	G_03_CALCIC_PYROPE_ALMANDINE	0.03	0.00	13.87	14.60	6.90	40.86	23.68	0.01	0.22	100.18		
NAT95-130	43	G_05_MAGNESIAN_ALMANDINE	0.00	0.13	22.98	12.36	1.05	36.78	23.40	0.00	0.29	97.01		
NAT95-130	41	RUTILE	96.61	1.11	0.08	0.02	0.00	0.02	0.03	0.01	0.02	97.90		
NAT95-130	48	RUTILE	97.54	0.15	0.08	0.00	0.00	0.01	0.02	0.00	0.00	97.79		
NAT95-130	42	SPINEL	0.02	0.05	4.03	23.89	0.00	0.00	72.01	0.00	0.16	100.18		
NAT95-130	44	SPINEL	0.00	0.01	4.29	23.89	0.00	0.00	70.90	0.00	0.07	99.16		
NAT95-130	626	UNKNOWN	0.19	6.08	6.66	0.00	0.00	0.00	0.00	0.00	0.36	13.30		
NAT95-130	22	UNKNOWN Cpx??	0.21	0.64	5.32	19.35	12.14	49.45	7.76	1.12	0.13	96.65		
NAT95-130	45	ZIRCON	0.00	0.00	0.06	0.03	0.00	35.84	0.01	0.01	0.07	36.03		
NAT95-130	46	ZIRCON	0.01	0.02	0.00	0.00	0.01	36.03	0.01	0.01	0.00	36.09		
NAT95-131	639	ALMANDINE	0.00	0.05	35.65	3.45	2.04	37.19	21.69	0.00	0.27	100.34		
NAT95-131	23	CPX_01_UNKNOOWN	0.08	0.04	9.12	17.15	12.26	52.16	4.95	0.49	0.23	96.58		
NAT95-131	24	CPX_04_UNKNOOWN	0.46	0.16	10.38	15.63	12.36	50.05	6.37	0.62	0.20	96.54		
NAT95-131	619	G_01_TITANIAN_PYROPE	0.59	2.23	7.02	20.89	4.65	41.92	20.57	0.06				

Table 2 continued.

Sample#	Grain#	Mineral Identification	TiO2 wt%	Cr2O3 wt%	FeO wt%	MgO wt%	CaO wt%	SiO2 wt%	Al2O3 wt%	Na2O wt%	MnO wt%	Total wt%	NiO wt%	ZnO wt%
NAT95-131	620	G_01_TITANIAN_PYROPE	0.59	2.26	7.11	21.08	4.73	41.45	21.13	0.08	0.25	98.69		
NAT95-131	621	G_08_FERRO_MAGNESIAN_GROSSULAR	0.06	0.10	11.05	0.04	22.50	37.00	23.77	0.03	0.10	94.65		
NAT95-131	50	RUTILE	97.22	0.09	0.73	0.00	0.00	0.00	0.01	0.00	0.01	98.06		
NAT95-131	52	RUTILE	98.10	0.11	0.00	0.00	0.00	0.01	0.04	0.00	0.00	98.25		
NAT95-131	49	SPINEL	0.01	0.00	4.89	22.82	0.03	0.00	71.38	0.00	0.27	99.39		
NAT95-131	51	STAUROLITE	0.52	0.07	13.87	1.57	0.02	26.45	55.59	0.00	0.24	98.31		
NAT95-131	25	UNKNOWN Cpx??	0.11	0.00	9.27	12.13	23.71	51.91	1.48	0.49	0.35	99.46		
NAT95-132	26	CPX_02_UNKNOWN	0.02	0.00	8.26	12.68	22.85	52.30	1.58	0.94	0.53	99.16		
NAT95-132	27	GAHNITE SPINEL	0.00	0.03	9.88	2.53	0.01	0.00	53.24	0.00	0.49	66.17		
NAT95-132	54	RUTILE	97.01	0.61	0.28	0.00	0.02	0.01	0.00	0.00	0.07	98.00		
NAT95-132	53	SPINEL	0.07	0.04	4.61	22.82	0.01	0.01	71.43	0.02	0.08	99.09		
NAT95-132	28	UNKNOWN Omphacite??	0.23	0.02	10.86	9.85	19.86	50.22	5.98	2.10	0.29	99.41		
NAT95-133	55	RUTILE	97.43	0.04	0.28	0.00	0.02	0.00	0.02	0.04	0.01	97.85		
NAT95-133	57	RUTILE	97.43	0.07	0.10	0.01	0.00	0.00	0.02	0.00	0.00	97.63		
NAT95-133	56	TOURMALINE	1.26	0.00	8.72	6.90	1.35	34.74	30.36	1.89	0.09	85.31		
NAT95-134	610	ALMANDINE	0.08	0.05	30.58	6.20	2.32	38.31	22.47	0.00	0.45	100.45		
NAT95-134	605	G_09_CHROME_PYROPE	0.14	4.71	7.88	18.94	5.55	39.21	21.26	0.05	0.43	98.17		
NAT95-134	603	G_09_CHROME_PYROPE	0.03	4.29	7.86	18.78	5.28	40.56	20.79	0.00	0.45	98.03		
NAT95-134	604	G_09_CHROME_PYROPE	0.05	5.24	8.18	18.53	5.97	39.10	20.66	0.00	0.39	98.11		
NAT95-134	606	G_09_CHROME_PYROPE	0.00	6.37	8.02	17.15	7.14	40.51	19.05	0.01	0.46	98.73		
NAT95-134	607	G_09_CHROME_PYROPE	0.01	5.67	8.15	17.43	6.99	41.29	19.29	0.02	0.56	99.41		
NAT95-134	608	G_09_CHROME_PYROPE	0.16	6.23	8.30	18.34	5.98	41.30	19.09	0.01	0.43	99.84		
NAT95-134	611	G_09_CHROME_PYROPE	0.02	5.42	7.88	18.72	5.95	41.10	20.50	0.03	0.44	100.06		
NAT95-134	601	G_10_LOW_CALCIIUM_CHROME_PYROPE	0.10	7.93	7.80	17.47	6.99	40.74	18.08	0.00	0.46	99.57		
NAT95-134	609	G_10_LOW_CALCIIUM_CHROME_PYROPE	0.07	8.59	7.88	16.81	7.90	40.62	17.77	0.02	0.47	100.13		
NAT95-134	59	G_09_CHROME_PYROPE	0.07	3.70	8.32	18.92	5.15	40.94	20.77	0.02	0.38	98.30		
NAT95-134	60	G_09_CHROME_PYROPE	0.19	3.56	7.98	18.99	5.01	38.92	21.18	0.03	0.35	96.20		
NAT95-134	61	G_09_CHROME_PYROPE	0.14	3.94	8.04	19.18	4.99	40.95	21.18	0.03	0.36	98.81		
NAT95-134	62	G_09_CHROME_PYROPE	0.15	3.44	8.42	18.93	5.19	41.03	21.84	0.01	0.35	99.36		
NAT95-134	64	G_09_CHROME_PYROPE	0.13	3.11	8.40	19.19	4.76	40.95	21.24	0.01	0.42	98.21		
NAT95-134	65	G_09_CHROME_PYROPE	0.20	3.39	8.09	19.19	4.92	41.61	21.72	0.01	0.39	99.54		
NAT95-134	66	G_09_CHROME_PYROPE	0.16	4.54	8.30	18.48	5.51	41.12	20.72	0.00	0.36	99.19		
NAT95-134	67	G_09_CHROME_PYROPE	0.19	4.07	8.20	19.32	4.91	40.29	21.43	0.04	0.34	98.80		
NAT95-134	70	G_09_CHROME_PYROPE	0.13	3.82	8.31	19.35	5.27	39.73	21.99	0.03	0.49	99.13		
NAT95-134	75	G_09_CHROME_PYROPE	0.07	4.44	6.93	18.51	5.53	40.41	20.72	0.00	0.43	97.04		
NAT95-134	58	G_09_CHROME_PYROPE	0.04	5.25	7.92	18.65	5.62	40.68	20.33	0.01	0.33	98.84		
NAT95-134	63	G_09_CHROME_PYROPE	0.32	5.09	8.01	18.52	5.54	38.69	20.38	0.04	0.60	97.20		
NAT95-134	71	G_09_CHROME_PYROPE	0.03	5.65	7.96	18.60	6.01	41.25	20.63	0.04	0.49	100.67		
NAT95-134	72	G_09_CHROME_PYROPE	0.19	5.68	9.08	17.79	5.82	41.07	19.84	0.01	0.46	99.93		
NAT95-134	73	G_09_CHROME_PYROPE	0.35	4.52	8.31	18.79	5.71	41.37	21.02	0.05	0.42	100.55		
NAT95-134	74	G_09_CHROME_PYROPE	0.05	4.73	7.23	18.92	5.76	41.87	21.39	0.03	0.46	100.45		
NAT95-134	77	G_09_CHROME_PYROPE	0.03	3.83	7.43	19.40	5.11	41.74	21.44	0.04	0.47	99.50		
NAT95-134	79	G_09_CHROME_PYROPE	0.00	3.82	7.24	18.70	5.75	40.84	21.69	0.01	0.49	98.53		
NAT95-134	81	G_09_CHROME_PYROPE	0.25	3.94	8.82	18.14	5.29	40.97	20.68	0.02	0.43	98.55		
NAT95-134	76	G_10_LOW_CALCIIUM_CHROME_PYROPE	0.00	7.41	7.73	16.94	6.95	40.67	18.04	0.03	0.49	98.25		
NAT95-134	78	G_10_LOW_CALCIIUM_CHROME_PYROPE	0.05	8.28	8.14	17.26	6.82	40.98	17.64	0.00	0.35	99.52		
NAT95-134	80	G_10_LOW_CALCIIUM_CHROME_PYROPE	0.13	6.16	7.23	18.70	5.79	39.99	19.46	0.00	0.43	97.90		
NAT95-134	69	G_11_UVAROVITE_PYROPE	0.40	7.36	7.81	17.50	7.03	40.84	18.18	0.02	0.44	99.59		
NAT95-134	68	G_12_KNORRINGITIC_UVAROVITE_PYROPE	0.04	9.77	7.76	15.49	8.46	40.33	16.63	0.01	0.51	99.00		
NAT95-134	83	STAUROLITE	0.65	0.08	13.73	1.96	0.01	27.62	55.49	0.00	0.14	99.68		
NAT95-134	84	STAUROLITE	0.59	0.00	12.27	1.81	0.03	27.85	55.98	0.00	0.21	98.73		
NAT95-134	85	STAUROLITE	0.60	0.07	12.63	1.54	0.03	26.32	56.34	0.00	0.05	97.58		
NAT95-134	82	UNKNOWN	2.79	0.00	0.31	1.95	2.25	21.26	0.32	0.24	0.02	29.27		
NAT95-134	30	G_08_FERRO_MAGNESIAN_GROSSULAR	0.19	0.02	13.01	0.02	22.68	37.38	23.07	0.02	0.09	96.49		
NAT95-134	29	UNKNOWN Omphacite?	0.21	0.05	3.44	8.68	14.16	54.53	12.06	5.85	0.02	99.00		
NAT95-135	88	ALMANDINE	0.04	0.02	30.99	2.09	6.90	36.51	20.46	0.00	0.50	97.51		
NAT95-135	40	CPX_02_UNKNOWN	0.22	0.59	5.31	16.59	22.40	51.57	2.35	0.22	0.15	99.39		
NAT95-135	41	CPX_04_UNKNOWN	0.22	0.01	7.69	12.90	21.32	52.14	2.94	1.88	0.35	99.44		
NAT95-135	86	STAUROLITE	0.66	0.00	12.82	2.02	0.00	27.66	55.98	0.00	0.00	99.14		
NAT95-135	87	STAUROLITE	0.73	0.07	13.34	1.63	0.00	27.48	56.18	0.00	0.31	99.75		
NAT95-136	90	CORUNDUM	0.66	0.03	0.21	0.05	0.01	0.00	105.47	0.00	0.04	106.47		
NAT95-136	32	CPX_01_UNKNOWN	0.15	0.00	11.04	16.62	12.18	51.29	2.54	0.78	0.23	95.05		
NAT95-136	31	CPX_02_UNKNOWN	0.08	0.14	5.59	14.70	22.86	52.80	2.57	0.45	0.33	99.52		
NAT95-136	33	G_08_FERRO_MAGNESIAN_GROSSULAR	0.05	0.00	12.14	0.02	22.79	36.78	24.01	0.00	0.23	96.02		
NAT95-136	92	SPINEL	0.01	0.04	5.79	21.72	0.08	0.00	70.16	0.00	0.04	97.83		
NAT95-136	91	STAUROLITE	0.72	0.02	13.51	1.46	0.01	27.02	55.68	0.00	0.24	98.66		
NAT95-136	89	UNKNOWN Staurolite?	0.57	0.03	13.26	1.74	0.02	26.59	57.60	0.02	0.26	100.10		
NAT95-137	34	CPX_01_UNKNOWN	0.07	0.13	10.18	16.23	12.15	50.28	5.50	0.69	0.33	95.91		
NAT95-137	36	CPX_01_UNKNOWN	0.22	0.16	9.06	17.23	11.94	52.00	5.10	0.65	0.30	96.92		
NAT95-137	35	CPX_02_UNKNOWN	0.04	0.31	7.25	16.22	19.98	53.78	1.60	0.55	0.33	100.07		
NAT95-137	96	RUTILE	98.27	0.06	0.28	0.00	0.02	0.00	0.06	0.02	0.00	98.72		
NAT95-137	95	SPINEL	0.00	0.07	3.86	24.06	0.00	0.01	70.42	0.01	0.10	98.51		
NAT95-137	93	STAUROLITE	0.59	0.02	13.15	2.08	0.00	27.11	55.54	0.01	0.00	98.51		
NAT95-137	97	STAUROLITE	0.73	0.04	12.14	1.85	0.00	27.26	56.55	0.00	0.13	98.70		
NAT95-137	94	UNKNOWN Tourmaline ??	2.20	0.13	12.13	9.37	2.03	35.34	21.78	1.66	0.00	84.64		
NAT95-138	39	CPX_04_UNKNOWN	0.30	0.04	14.07	13.78	11.78	48.00	6.90	0.98	0.30	96.65		
NAT95-138	37	GAHNITE SPINEL	0.00	0.02	8.23	2.28	0.00	0.02	51.85	0.00	0.56	62.96		
NAT95-138	100	KYANITE_SILL_ANDALUSITE	0.02	1.71	0.17	0.02	0.02	36.38	64.92	0.00	0.03	103.27		
NAT95-138	98	RUTILE	96.28	0.55	0.63	0.00	0.00	0.02	0.04	0.01	0.03	97.56		
NAT95-138	102	RUTILE	97.32	0.01	0.36	0.00	0.00	0.00	0.05	0.00	0.00	97.75		
NAT95-138	99	STAUROLITE	0.65	0.03	11.31	2.55	0.03	27.39	55.60	0.00	0.08	97.63		
NAT95-138	38	UNKNOWN Cpx??	0.07	0.00	9.86	11.93	22.19	52.90	0.67	1.27	0.34	99.22		
NAT95-138	101	UNKNOWN Staurolite?	0.61	0.03	13.45	1.65	0.00	25.67	57.00	0.00	0.15	98.58		
NAT95-139	43	CPX_02_UNKNOWN	0.07	0.03	6.88	13.88	22.73	52.37	0.81	0.39	0.24	97.39		
NAT95-139	44	CPX_02_UNKNOWN	0.07	0.07	7.27	14.15	22.43	53.12	1.01	0.80	0.31	99.22		
NAT95-139	42	GAHNITE SPINEL	0.00	0.01	12.13	0.10	0.00	0.00	50.49	0.00	0.37	63.10		
NAT95-139	105	RUTILE	97.68	0.05	0.19	0.00	0.01	0.00	0.01	0.00	0.00	97.95		
NAT95-139	106	RUTILE	97.11	0.12	0.05	0.02	0.00	0.00	0.03	0.00	0.00	97.33		
NAT95-139	107	RUTILE	96.26	0.13	0.13									

Table 2 continued.

Sample#	Grain#	Mineral Identification	TiO2 wt%	Cr2O3 wt%	FeO wt%	MgO wt%	CaO wt%	SiO2 wt%	Al2O3 wt%	Na2O wt%	MnO wt%	Total wt%	NiO wt%	ZnO wt%
NAT95-140	47	CPX_04_UNKNOWN	0.13	0.03	7.41	13.11	22.92	52.38	2.12	0.76	0.15	99.02		
NAT95-140	109	RUTILE	96.42	0.06	0.42	0.00	0.00	0.01	0.13	0.00	0.02	97.07		
NAT95-140	110	RUTILE	97.50	0.03	0.56	0.01	0.00	0.00	0.00	0.02	0.00	98.12		
NAT95-140	111	RUTILE	97.23	0.27	0.12	0.00	0.00	0.00	0.03	0.01	0.00	97.66		
NAT95-140	112	STAUROLITE	0.49	0.00	13.89	1.74	0.01	26.70	56.74	0.01	0.18	99.76		
NAT95-140	45	UNKNOWN Cpx??	0.06	0.08	9.57	12.18	21.88	52.90	1.38	1.23	0.24	99.52		
NAT95-141	50	CPX_02_UNKNOWN	0.06	0.04	6.01	14.31	22.80	52.55	1.99	0.87	0.49	99.12		
NAT95-141	125	CPX_05_CHROME_DIOPSIDE	0.26	1.21	1.80	15.40	21.39	52.98	4.74	1.61	0.05	99.45		
NAT95-141	627	G_11_UVAROVITE_PYROPE	0.24	7.29	8.09	16.70	7.81	39.42	18.51	0.03	0.49	98.58		
NAT95-141	49	QUARTZ	0.00	0.00	0.04	0.00	0.00	100.03	0.16	0.01	0.06	100.31		
NAT95-141	113	RUTILE	96.82	0.10	0.06	0.02	0.00	0.00	0.01	0.02	0.00	97.04		
NAT95-141	114	RUTILE	97.65	0.06	0.69	0.02	0.00	0.00	0.04	0.00	0.00	98.45		
NAT95-141	115	RUTILE	96.46	0.22	0.10	0.00	0.00	0.01	0.01	0.00	0.00	96.80		
NAT95-141	116	RUTILE	97.50	0.16	0.07	0.00	0.00	0.03	0.00	0.00	0.00	97.77		
NAT95-141	628	UNKNOWN	3.14	0.02	0.00	0.00	0.24	9.68	0.05	0.00	0.00	13.15		
NAT95-141	48	UNKNOWN Cpx??	0.16	0.02	9.11	12.49	21.59	51.14	1.27	0.74	0.28	96.81		
NAT95-143	53	CPX_01_UNKNOWN	0.14	0.01	11.74	16.32	12.29	52.89	2.47	0.27	0.27	96.41		
NAT95-143	51	CPX_04_UNKNOWN	0.35	0.03	5.99	14.99	23.68	51.63	1.99	0.38	0.10	99.15		
NAT95-143	54	CPX_04_UNKNOWN	0.11	0.01	9.64	12.90	21.62	50.36	1.69	0.38	0.44	97.14		
NAT95-143	52	G_08_FERRO_MAGNESIAN_GROSSULAR	0.15	0.00	12.65	0.01	21.92	37.24	23.31	0.00	0.34	95.63		
NAT95-143	602	G_09_CHROME_PYROPE	0.00	4.78	7.84	18.46	5.92	41.92	21.17	0.00	0.48	100.57		
NAT95-143	629	G_09_CHROME_PYROPE	0.00	4.13	7.33	19.52	4.99	41.76	21.53	0.04	0.42	99.72		
NAT95-143	117	RUTILE	97.51	0.09	0.37	0.01	0.00	0.02	0.02	0.00	0.01	98.03		
NAT95-143	118	STAUROLITE	0.67	0.03	12.84	1.91	0.00	27.04	55.85	0.00	0.05	98.38		
NAT95-143	119	STAUROLITE	0.60	0.13	13.64	1.70	0.00	25.89	56.11	0.00	0.34	98.42		
NAT95-144	122	ALMANDINE	0.07	0.01	32.29	0.84	7.37	36.85	21.11	0.00	1.41	99.95		
NAT95-144	55	CPX_02_UNKNOWN	0.06	0.19	6.89	13.99	22.14	52.86	1.72	0.44	0.29	98.58		
NAT95-144	120	G_03_CALCIC_PYROPE_ALMANDINE	0.03	0.02	15.25	14.82	5.32	40.37	24.15	0.01	0.30	100.26		
NAT95-144	121	G_08_FERRO_MAGNESIAN_GROSSULAR	0.06	0.04	11.38	0.01	23.75	37.51	24.95	0.00	0.01	97.71		
NAT95-145	123	CPX_05_CHROME_DIOPSIDE	0.21	0.84	2.08	15.83	22.25	52.34	4.67	0.81	0.10	99.14		
NAT95-146	58	CPX_04_UNKNOWN	0.48	0.03	6.59	15.61	21.57	51.05	2.87	0.35	0.22	98.78		
NAT95-146	622	G_01_TITANIAN_PYROPE	0.68	1.94	7.66	20.79	4.34	41.14	21.36	0.07	0.24	98.22		
NAT95-146	125	G_05_MAGNESIAN_ALMANDINE	0.00	0.03	22.67	12.44	1.38	39.97	23.39	0.02	0.19	100.09		
NAT95-146	128	G_05_MAGNESIAN_ALMANDINE	0.08	0.04	25.98	3.89	9.16	37.51	21.32	0.01	1.04	99.02		
NAT95-146	129	G_05_MAGNESIAN_ALMANDINE	0.02	0.10	22.91	12.61	0.98	39.83	22.88	0.02	0.34	99.69		
NAT95-146	56	G_08_FERRO_MAGNESIAN_GROSSULAR	0.08	0.01	12.59	0.01	22.56	37.02	23.71	0.00	0.13	96.10		
NAT95-146	57	G_08_FERRO_MAGNESIAN_GROSSULAR	0.17	0.00	12.55	0.02	21.97	37.40	23.29	0.00	0.19	95.59		
NAT95-146	127	HYDROGROSSULAR	0.96	0.00	5.56	0.11	36.08	36.88	19.19	0.02	0.01	98.80		
NAT95-146	123	RUTILE	98.16	0.03	0.15	0.00	0.00	0.00	0.01	0.01	0.00	98.36		
NAT95-146	126	SPINEL	0.02	0.05	4.85	22.56	0.02	0.02	70.81	0.01	0.02	98.37		
NAT95-146	124	STAUROLITE	0.65	0.08	13.26	1.66	0.00	27.71	56.60	0.00	0.12	100.09		
NAT95-147	501	RUTILE	98.09	0.19	0.28	0.01	0.00	0.00	0.04	0.02	0.02	98.64		
NAT95-148	59	CPX_04_UNKNOWN	0.10	0.01	8.36	12.81	22.15	52.84	1.41	1.01	0.24	98.93		
NAT95-148	503	GROSSULAR	0.27	0.00	4.65	0.06	34.44	38.95	20.88	0.03	0.28	99.57		
NAT95-148	502	RUTILE	97.93	0.17	0.14	0.00	0.00	0.00	0.02	0.04	0.00	98.31		
NAT95-148	504	RUTILE	98.48	0.15	0.23	0.03	0.00	0.00	0.00	0.01	0.00	98.90		
NAT95-148	505	RUTILE	94.13	0.66	1.63	0.00	0.04	0.00	0.02	0.00	0.03	96.52		
NAT95-149	60	CPX_04_UNKNOWN	0.35	0.01	5.35	15.18	23.93	51.41	2.22	0.28	0.08	98.81		
NAT95-149	509	RUTILE	98.10	0.05	0.51	0.01	0.01	0.00	0.02	0.00	0.05	98.75		
NAT95-149	510	RUTILE	96.23	0.20	0.56	0.00	0.02	0.01	0.03	0.00	0.03	97.08		
NAT95-149	512	RUTILE	97.52	0.24	0.56	0.02	0.02	0.00	0.01	0.01	0.00	98.38		
NAT95-149	511	STAUROLITE	0.77	0.05	13.19	1.61	0.01	27.05	56.56	0.01	0.05	99.30		
NAT95-149	61	UNKNOWN Amphibole ??	0.00	0.01	7.88	2.57	19.62	36.69	22.62	0.01	0.16	89.57		
NAT95-150	508	G_03_CALCIC_PYROPE_ALMANDINE	0.02	0.01	13.80	13.88	7.25	40.96	24.03	0.02	0.25	100.22		
NAT95-150	507	STAUROLITE	0.58	0.02	12.95	1.62	0.01	27.51	56.76	0.01	0.07	99.52		
NAT95-150	506	UNKNOWN Staurolite?	0.61	0.05	13.27	1.47	0.00	26.98	57.12	0.00	0.08	99.58		
NAT95-151	62	CPX_02_UNKNOWN	0.05	0.06	7.97	13.40	22.40	53.13	1.20	0.88	0.29	99.38		
NAT95-151	513	STAUROLITE	0.62	0.00	12.25	1.71	0.00	27.69	56.38	0.01	0.19	98.85		
NAT95-151	514	STAUROLITE	0.61	0.05	12.41	1.51	0.00	27.92	56.95	0.00	0.06	99.52		
NAT95-151	515	TOURMALINE	0.03	0.03	12.92	1.47	0.27	33.69	36.15	1.72	0.09	86.39		
NAT95-152	65	CPX_01_UNKNOWN	0.09	0.31	9.57	17.32	12.29	52.63	3.81	0.48	0.31	96.99		
NAT95-152	63	CPX_02_UNKNOWN	0.03	0.10	7.58	13.80	22.79	53.36	0.68	0.71	0.31	99.36		
NAT95-152	64	CPX_02_UNKNOWN	0.08	0.02	7.15	14.02	21.87	52.84	2.02	0.73	0.34	99.08		
NAT95-152	516	SPHENE	36.09	0.06	1.14	0.00	27.78	29.76	1.67	0.00	0.07	96.58		
NAT95-153	66	CPX_02_UNKNOWN	0.13	0.69	5.32	13.84	19.25	54.04	3.12	2.40	0.18	98.97		
NAT95-153	517	G_05_MAGNESIAN_ALMANDINE	0.01	0.02	29.90	7.79	1.16	38.18	22.41	0.00	0.34	99.80		
NAT95-153	518	G_05_MAGNESIAN_ALMANDINE	0.04	0.00	28.57	6.01	0.86	36.24	22.63	0.00	0.72	99.07		
NAT95-154	67	CPX_08_UNKNOWN	0.37	0.04	9.33	10.57	19.65	51.61	4.89	2.06	0.27	98.78		
NAT95-154	68	UNKNOWN Cpx??	0.10	0.06	10.49	12.06	21.44	51.74	1.35	0.37	0.69	98.30		
NAT95-155	70	CPX_04_UNKNOWN	0.30	0.01	8.70	12.08	22.45	51.12	3.08	0.54	0.36	98.65		
NAT95-155	71	CPX_08_UNKNOWN	0.22	0.04	8.71	10.94	19.88	51.02	5.61	1.99	0.27	98.69		
NAT95-155	520	G_05_MAGNESIAN_ALMANDINE	0.07	0.00	25.88	6.13	6.53	37.13	22.83	0.00	0.81	99.39		
NAT95-155	69	G_08_FERRO_MAGNESIAN_GROSSULAR	0.09	0.04	12.60	0.02	23.45	37.55	23.48	0.01	0.14	97.38		
NAT95-155	519	STAUROLITE	0.51	0.04	12.95	2.11	0.00	27.01	56.32	0.00	0.59	99.53		
NAT95-155	521	TOURMALINE	0.01	0.00	10.28	2.89	0.08	36.54	36.43	1.22	0.02	87.48		
NAT95-156	525	CORUNDUM	0.57	0.04	1.52	0.06	0.00	0.00	104.50	0.02	0.00	106.70		
NAT95-156	523	G_05_MAGNESIAN_ALMANDINE	0.04	0.05	29.40	3.54	7.09	37.70	21.54	0.01	0.67	100.04		
NAT95-156	524	RUTILE	98.20	0.28	0.08	0.00	0.02	0.00	0.01	0.00	0.00	98.58		
NAT95-156	526	RUTILE	97.04	0.20	0.83	0.00	0.02	0.00	0.00	0.00	0.00	98.09		
NAT95-156	528	RUTILE	97.25	0.19	0.10	0.01	0.01	0.00	0.02	0.01	0.00	97.59		
NAT95-156	529	RUTILE	98.20	0.26	0.19	0.00	0.00	0.00	0.02	0.01	0.03	98.72		
NAT95-156	527	STAUROLITE	0.48	0.00	13.36	1.77	0.00	27.67	56.95	0.01	0.04	100.27		
NAT95-156	72	UNKNOWN Cpx??	0.14	0.12	8.29	12.86	20.52	53.16	0.77	1.31	0.29	97.46		
NAT95-156	522	UNKNOWN Staurolite?	0.73	0.08	12.54	1.25	0.00	27.41	57.12	0.02	0.23	99.39		
NAT95-157	73	CPX_01_UNKNOWN	0.05	0.13	8.01	18.20	12.21	52.93	4.46	0.56	0.30	97.08		
NAT95-157	74	CPX_01_UNKNOWN	0.08	0.23	7.59	19.26	11.80	53.42	2.68	0.34	0.29	95.72		
NAT95-157	77	CPX_01_UNKNOWN	0.10	0.01	7.92	17.91	12.68	52.14	4.71	0.70	0.25	96.91		
NAT95-157	76	CPX_02_UNKNOWN	0.12	0.12	6.17	12.56	20.04	52.50	4.96	1.96	0.14	98.55		
NAT95-157	75	CPX_04_UNKNOWN	0.59	0.06	10.68	15.60	11.65	49.51	5.94	0.62				

Table 2 continued.

Sample#	Grain#	Mineral Identification	TiO2 wt%	Cr2O3 wt%	FeO wt%	MgO wt%	CaO wt%	SiO2 wt%	Al2O3 wt%	Na2O wt%	MnO wt%	Total wt%	NiO wt%	ZnO wt%
NAT95-158	78	CPX_04_UNKNOWN	0.30	0.06	9.54	11.70	22.26	51.02	2.43	0.47	0.42	98.21		
NAT95-158	534	G_05_MAGNESIAN_ALMANDINE	0.02	0.03	28.75	2.89	4.70	36.65	21.45	0.00	4.55	99.03		
NAT96-159	1	G_03_CALCIC_PYROPE_ALMANDINE	0.09	0.01	22.91	5.66	10.03	37.11	22.18	0.00	0.78	98.77		
NAT96-159	2	G_05_MAGNESIAN_ALMANDINE	0.16	0.04	23.63	7.72	5.94	39.28	21.84	0.00	0.82	99.43		
NAT96-159	3	G_05_MAGNESIAN_ALMANDINE	0.07	0.02	23.93	6.89	7.54	39.20	21.83	0.03	0.46	99.97		
NAT96-159	1	G_08_FERRO_MAGNESIAN_GROSSULAR	0.37	6.68	4.23	0.20	33.39	39.14	15.72	0.02	0.62	100.37		
NAT96-159	2	CPX_01_SUB_CALCIC_DIOPSIDE	0.07	0.13	5.94	20.25	12.43	54.88	2.43	0.40	0.48	97.15		
NAT96-159	1	CPX_04_UNKNOWN	0.27	0.08	6.16	15.05	23.83	50.97	1.49	0.51	0.28	98.63		
NAT97-160	134	UNKNOWN	0.00	0.00	0.00	0.12	1.62	0.43	0.03	0.00	0.00	2.19		
NAT97-160	135	CALCITE	0.00	0.00	0.21	0.00	54.27	0.02	0.00	0.00	0.05	54.57		
NAT97-160	129	ALMANDINE	0.09	0.00	31.06	2.06	7.24	37.11	20.67	0.04	1.03	99.30		
NAT97-160	130	STAUROLITE	0.44	0.09	12.96	1.50	0.00	27.05	55.85	0.01	0.09	97.97		
NAT97-160	131	G_03_CALCIC_PYROPE_ALMANDINE	0.10	0.01	22.81	4.05	12.27	37.78	21.41	0.03	0.81	99.25		
NAT97-160	132	G_06_PYROPE_GROSSULAR_ALMANDINE	0.10	0.00	19.95	0.32	20.26	37.08	20.04	0.00	1.58	99.35		
NAT97-160	20	PICRO_ILMENITE	52.87	0.61	30.97	13.79	0.02	0.08	0.52	n/a	0.21	99.10	0.03	0.01
NAT97-160	133	STAUROLITE	0.68	0.04	12.47	1.85	0.01	27.14	55.31	0.05	0.31	97.86		
NAT97-161	21	PICRO_ILMENITE	54.76	1.04	29.01	15.59	0.01	0.04	0.56	n/a	0.24	101.35	0.10	0.00
NAT97-161	34	SPHENE	36.44	0.01	1.08	0.00	28.65	29.80	1.08	0.00	0.12	97.18		
NAT97-161	126	STAUROLITE	0.69	0.11	13.16	1.38	0.00	27.04	55.26	0.00	0.05	97.69		
NAT97-161	127	STAUROLITE	0.64	0.02	13.18	1.28	0.06	27.79	55.73	0.02	0.07	98.80		
NAT97-161	128	ALMANDINE	0.05	0.02	31.28	2.47	7.22	36.94	20.62	0.02	0.95	99.56		
NAT97-162	35	SPHENE	33.51	0.00	3.06	0.11	25.79	28.74	1.07	0.12	0.17	92.57		
NAT97-162	36	QUARTZ	0.00	0.00	0.32	0.03	0.00	102.15	0.00	0.00	0.00	102.51		
NAT97-162	37	TOURMALINE	0.23	0.01	5.46	7.14	0.49	37.05	33.85	1.59	0.02	85.83		
NAT97-162	38	TOURMALINE	0.24	0.01	8.30	5.76	0.20	35.28	32.69	2.02	0.28	84.77		
NAT97-162	119	STAUROLITE	0.69	0.03	13.29	1.75	0.04	26.54	55.26	0.00	0.08	97.69		
NAT97-162	120	STAUROLITE	0.68	0.08	13.40	1.47	0.00	26.39	55.18	0.09	0.40	97.69		
NAT97-162	121	STAUROLITE	0.63	0.10	11.89	1.31	0.00	26.41	56.95	0.00	0.24	97.53		
NAT97-162	122	STAUROLITE	0.65	0.04	13.67	1.74	0.00	27.70	54.91	0.01	0.17	98.89		
NAT97-162	123	STAUROLITE	0.76	0.06	11.93	1.53	0.00	26.69	53.91	0.00	0.13	95.01		
NAT97-162	124	STAUROLITE	0.69	0.04	12.16	1.95	0.00	26.83	55.62	0.00	0.38	97.65		
NAT97-162	125	STAUROLITE	0.71	0.02	13.10	1.82	0.06	26.88	54.02	0.00	0.07	96.68		
NAT97-163 15		G_09_CHROME_PYROPE	0.10	7.34	8.05	17.63	7.51	40.62	18.06	0.00	0.53	99.84		
NAT97-163	39	G_05_MAGNESIAN_ALMANDINE	0.02	0.01	30.08	3.44	6.25	37.35	20.94	0.01	0.58	98.68		
NAT97-163	40	G_05_MAGNESIAN_ALMANDINE	0.07	0.04	30.46	3.56	6.42	37.35	20.79	0.00	0.42	99.12		
NAT97-163	41	SPHENE	35.33	0.00	1.60	0.02	28.29	29.53	1.36	0.00	0.17	96.29		
NAT97-164	42	UNKNOWN	0.38	0.01	15.64	0.23	28.63	37.07	17.07	0.03	0.74	99.79		
NAT97-164	43	ALMANDINE	0.06	0.00	30.67	1.02	8.69	36.77	20.75	0.00	0.83	98.80		
NAT97-164	44	G_05_MAGNESIAN_ALMANDINE	0.02	0.04	29.42	1.92	7.12	37.07	21.17	0.02	1.85	98.61		
NAT97-165	14	G_10_LOW_CALCICUM_CHROME_PYROPE	0.15	9.12	6.51	19.98	5.11	40.75	16.87	0.04	0.29	98.82		
NAT97-165	45	TOURMALINE	0.29	0.13	6.04	8.68	0.63	36.04	30.74	2.23	0.03	84.80		
NAT97-165	46	RUTILE	96.71	0.23	0.18	0.04	0.05	0.00	0.02	0.01	0.00	97.25		
NAT97-165	47	RUTILE	96.51	0.11	0.66	0.00	0.02	0.01	0.05	0.00	0.00	97.36		
NAT97-166	48	ALMANDINE	0.10	0.02	30.73	1.76	7.58	36.87	20.71	0.02	1.02	98.82		
NAT97-166	49	ALMANDINE	0.03	0.03	31.89	1.06	7.97	36.54	20.67	0.02	0.77	98.98		
NAT97-167	50	ALMANDINE	0.04	0.00	30.84	1.82	6.62	36.80	20.72	0.05	0.92	97.81		
NAT97-167	22	PICRO_CHROMITE	0.30	53.17	25.48	8.07	0.01	0.00	9.62	n/a	0.38	97.21	0.07	0.11
NAT97-167	51	UNKNOWN tourmaline?	0.53	0.07	9.32	9.55	3.14	34.96	25.38	0.95	0.00	83.91		
NAT97-168	8	CPX_05_UNKNOWN high Cr diopside	0.00	2.30	1.72	16.74	21.27	54.82	0.91	1.63	0.05	99.50		
NAT97-168	11	G_10_LOW_CALCICUM_CHROME_PYROPE	0.16	5.86	7.44	19.94	5.14	40.66	19.08	0.00	0.33	98.62		
NAT97-168	12	G_09_CHROME_PYROPE	0.09	4.90	6.91	19.82	5.16	41.46	19.92	0.03	0.37	98.66		
NAT97-168	13	G_09_CHROME_PYROPE	0.15	5.37	7.73	18.95	5.98	40.92	19.27	0.05	0.40	98.80		
NAT97-168	52	STAUROLITE	0.51	0.03	13.18	1.83	0.00	27.15	54.23	0.00	0.07	97.00		
NAT97-168	53	G_05_MAGNESIAN_ALMANDINE	0.01	0.01	30.27	1.15	7.38	36.66	21.21	0.00	2.26	98.96		
NAT97-168	54	UNKNOWN tourmaline?	0.79	0.00	7.11	10.61	2.41	36.52	26.68	1.62	0.02	85.76		
NAT97-168	23	PICRO_CHROMITE	0.15	56.25	26.35	9.56	0.00	0.00	4.19	n/a	0.29	97.09	0.11	0.20
NAT97-168	55	STAUROLITE	0.63	0.04	12.71	2.00	0.00	27.54	53.24	0.00	0.05	96.21		
NAT97-168	56	STAUROLITE	0.69	0.12	12.70	1.63	0.04	27.47	54.77	0.02	0.11	97.57		
NAT97-169	1	G_01_TITANIAN_PYROPE	0.43	4.29	7.25	20.95	4.97	41.39	19.40	0.03	0.24	98.93		
NAT97-169	2	G_09_CHROME_PYROPE	0.19	3.86	7.09	20.66	4.65	42.13	20.65	0.05	0.31	99.60		
NAT97-169	3	G_01_TITANIAN_PYROPE	0.77	3.86	7.45	20.38	5.78	41.49	19.14	0.04	0.27	99.17		
NAT97-169	4	G_10_LOW_CALCICUM_CHROME_PYROPE	0.14	8.60	7.02	18.31	6.49	40.70	16.67	0.00	0.40	98.32		
NAT97-169	5	G_01_TITANIAN_PYROPE	0.44	4.03	7.21	20.43	5.34	41.78	19.76	0.05	0.23	99.26		
NAT97-169	6	G_09_CHROME_PYROPE	0.20	5.46	7.37	19.64	5.43	41.46	19.52	0.02	0.42	99.53		
NAT97-169	7	G_10_LOW_CALCICUM_CHROME_PYROPE	0.05	8.98	6.95	19.12	6.37	40.93	16.81	0.01	0.35	99.57		
NAT97-169	8	G_10_LOW_CALCICUM_CHROME_PYROPE	0.14	7.03	7.35	18.57	6.40	41.10	18.31	0.01	0.38	99.29		
NAT97-169	9	G_09_CHROME_PYROPE	0.04	5.98	7.96	17.79	7.26	41.11	18.88	0.04	0.41	99.44		
NAT97-169	10	G_01_TITANIAN_PYROPE	0.47	4.05	7.08	20.38	5.09	41.86	19.81	0.01	0.26	99.02		
NAT97-169	57	G_05_MAGNESIAN_ALMANDINE	0.03	0.03	28.10	4.21	6.92	37.29	20.93	0.00	0.38	97.88		
NAT97-169	58	STAUROLITE	0.61	0.00	12.68	1.74	0.00	26.21	54.19	0.00	0.19	95.62		
NAT97-169	59	UNKNOWN tourmaline?	0.60	0.06	7.82	9.77	2.01	35.84	27.11	1.55	0.00	84.76		
NAT97-169	60	UNKNOWN tourmaline?	1.56	0.00	9.52	9.55	0.86	35.24	24.39	2.35	0.00	83.48		
NAT97-169	61	TOURMALINE	0.34	0.00	8.49	7.44	0.65	35.85	30.17	2.14	0.07	85.15		
NAT97-169	117	STAUROLITE	0.54	0.02	13.18	2.07	0.05	27.43	54.37	0.01	0.15	97.81		
NAT97-169	118	STAUROLITE	0.66	0.06	12.83	1.80	0.07	27.36	54.26	0.00	0.09	97.10		
NAT97-169	5	PICRO_CHROMITE	0.43	51.86	24.32	10.79	0.02	0.03	10.83	n/a	0.35	98.89	0.05	0.21
NAT97-169	2	PICRO_ILMENITE	50.43	1.01	34.82	12.20	0.06	0.03	0.51	n/a	0.27	99.46	0.07	0.06
NAT97-169	3	PICRO_ILMENITE	51.61	1.09	32.12	14.48	0.10	0.00	0.65	n/a	0.23	100.46	0.13	0.05
NAT97-169	4	PICRO_ILMENITE	51.86	1.07	30.83	14.98	0.02	0.00	0.70	n/a	0.23	99.80	0.11	0.00
NAT97-169	6	PICRO_ILMENITE	50.23	1.10	34.56	11.60	0.00	0.00	0.53	n/a	0.31	98.46	0.12	0.00
NAT97-169	7	PICRO_ILMENITE	50.57	1.00	34.60	11.80	0.04	0.03	0.48	n/a	0.21	98.89	0.11	0.05
NAT97-169	8	PICRO_ILMENITE	50.60	1.01	34.61	12.26	0.03	0.03	0.49	n/a	0.29	99.42	0.07	0.02
NAT96-170	4	CPX_04_UNKNOWN	0.19	0.11	8.53	13.92	22.14	51.82	2.27	0.66	0.22	99.84		
NAT96-170	3	OPX_5_UNKNOWN (Bronzite?)	0.02	1.26	5.05	33.71	1.45	55.18	3.25	0.08	0.12	100.12		
NAT96-173	18	PICRO_CHROMITE	0.46	47.26	25.28	17.80	0.02	0.00	7.52	0.00	0.18	98.80	0.26	0.02
NAT96-173	20	PICRO_CHROMITE	1.53	44.71	22.94	14.43	0.00	0.00	15.01	0.00	0.25	99.09	0.17	0.03
NAT96-173	21	PICRO_CHROMITE	0.26	44.00	20.16	12.98	0.00	0.00	20.10	0.00	0.27	97.96	0.07	0.13
NAT96-173	19	SUB_PICRO_CHROMITE	0.72	34.47	38.16	15.38	0.01	0.00	9.10	0.00	0.21	98.		

Table 2 continued.

Sample#	Grain#	Mineral Identification	TiO2 wt%	Cr2O3 wt%	FeO wt%	MgO wt%	CaO wt%	SiO2 wt%	Al2O3 wt%	Na2O wt%	MnO wt%	Total wt%	NiO wt%	ZnO wt%
NAT96-175	14	PICRO_CHROMITE	2.05	40.66	26.17	13.86	0.02	0.00	15.02	0.00	0.28	98.35	0.23	0.06
NAT96-175	15	SUB_PICRO_CHROMITE	1.79	37.39	33.05	8.41	0.00	0.00	16.22	0.00	0.38	97.61	0.21	0.13
NAT96-175	15	GROSSULAR	0.43	0.00	8.73	0.12	33.95	38.77	17.55	0.03	0.37	99.94		
NAT96-175	16	GROSSULAR	0.31	0.02	5.88	0.08	31.22	38.76	19.53	0.00	3.79	99.59		
NAT96-175	17	GROSSULAR	0.49	0.00	6.28	0.06	34.28	38.31	18.44	0.04	0.78	98.66		
NAT96-175	4	PICRO_CHROMITE	0.02	44.32	18.67	13.41	0.01	0.00	20.78	0.00	0.31	97.79	0.06	0.21
NAT96-175	5	SUB_PICRO_CHROMITE	2.36	36.48	28.14	14.06	0.07	0.07	17.43	0.00	0.22	99.09	0.19	0.07
NAT96-176	18	UNKNOWN (Grossular?)	0.40	0.04	11.67	0.19	28.72	38.65	18.64	0.00	1.00	99.32		
NAT96-177	5	G_08_FERRO_MAGNESIAN_GROSSULAR	0.12	0.00	13.29	0.03	22.25	37.00	24.06	0.00	0.44	97.20		
NAT96-177	6	SUB_PICRO_CHROMITE	0.16	32.77	21.84	15.49	0.00	0.00	27.91	0.00	0.24	98.71	0.17	0.13
NAT96-178	13	PICRO_CHROMITE	1.38	40.54	24.63	13.82	0.01	0.00	17.17	0.00	0.23	98.14	0.25	0.07
NAT96-179	5	PICRO_CHROMITE	1.35	40.27	26.43	12.43	0.00	0.00	16.75	0.00	0.25	97.97	0.12	0.07
NAT96-179	6	PICRO_CHROMITE	0.27	47.25	33.25	8.45	0.01	0.00	7.78	0.00	0.52	97.88	0.12	0.22
NAT96-179	7	PICRO_CHROMITE	0.97	43.31	20.93	16.52	0.00	0.00	16.74	0.00	0.21	98.96	0.24	0.04
NAT96-179	8	PICRO_CHROMITE	1.77	45.96	23.45	13.87	0.00	0.00	12.78	0.00	0.24	98.34	0.19	0.08
NAT96-179	10	PICRO_CHROMITE	1.31	41.81	24.49	14.59	0.00	0.00	16.48	0.00	0.23	99.21	0.23	0.04
NAT96-179	11	PICRO_CHROMITE	0.06	47.19	21.81	11.68	0.01	0.00	17.52	0.00	0.27	98.86	0.06	0.26
NAT96-179	12	PICRO_CHROMITE	1.41	45.59	19.75	16.39	0.00	0.00	15.73	0.00	0.21	99.39	0.22	0.04
NAT96-179	9	SUB_PICRO_CHROMITE	0.44	43.01	34.34	6.12	0.00	0.00	13.56	0.00	0.46	98.41	0.09	0.35
NAT96-179	23	G_06_PYROPE_GROSSULAR_ALMANDINE	0.11	0.02	14.03	10.60	11.25	39.64	23.09	0.05	0.35	99.14		
NAT96-179	24	G_06_PYROPE_GROSSULAR_ALMANDINE	0.21	0.02	15.26	9.31	12.00	39.30	22.46	0.04	0.34	98.94		
NAT96-179	22	GROSSULAR	0.42	0.01	14.16	0.11	31.28	37.92	12.29	0.00	2.57	98.76		
NAT96-180	7	PICRO_CHROMITE	0.03	43.85	17.08	15.67	0.00	0.03	21.77	0.00	0.20	98.86	0.12	0.11
NAT96-181	3	PICRO_CHROMITE	0.15	52.20	23.37	10.66	0.00	0.00	11.08	0.00	0.34	98.03	0.05	0.14
NAT96-181	4	PICRO_CHROMITE	0.21	43.80	20.95	14.23	0.00	0.00	18.62	0.00	0.22	98.25	0.16	0.06
NAT96-181	30	UNKNOWN (Grossular?)	0.34	0.02	12.35	0.05	28.74	38.23	18.54	0.00	1.72	99.98		
NAT96-181	6	G_08_FERRO_MAGNESIAN_GROSSULAR	0.08	0.04	13.11	0.05	22.79	35.90	24.45	0.01	0.21	96.62		
NAT96-181	8	PICRO_CHROMITE	0.03	40.42	24.16	12.55	0.00	0.00	21.92	0.00	0.35	99.77	0.10	0.24
NAT96-182	33	UNKNOWN (Olivine Fo?)	0.01	0.00	8.78	47.04	0.06	39.87	0.00	0.03	0.11	95.89		
NAT96-182	36	UNKNOWN (Olivine Fo?)	0.00	0.10	7.76	48.75	0.19	40.99	0.05	0.00	0.11	97.95		
NAT96-182	7	CPX_02_UNKNOWN	0.24	0.00	5.83	15.49	23.86	49.16	1.76	0.35	0.05	96.75		
NAT96-183	2	CPX_05_CHROME_DIOPSIDE	0.27	1.20	2.58	15.48	21.67	54.67	3.32	1.34	0.08	100.60		
NAT96-184	23	CHROMITE	0.63	46.88	30.52	1.29	0.00	0.00	6.14	0.00	7.26	97.80	0.03	5.03
NAT96-184	22	PICRO_CHROMITE	0.02	63.84	21.89	8.63	0.00	0.00	3.81	0.00	0.38	98.83	0.02	0.17
NAT96-184	24	PICRO_CHROMITE	0.43	48.30	24.98	16.18	0.00	0.00	8.61	0.00	0.21	98.98	0.20	0.03
NAT96-184	9	PICRO_CHROMITE	1.24	46.47	20.06	16.41	0.03	0.05	15.14	0.00	0.20	99.87	0.22	0.05
NAT96-185	26	PICRO_CHROMITE	1.44	43.08	20.56	16.14	0.00	0.00	17.10	0.00	0.20	98.83	0.26	0.05
NAT96-185	25	SUB_PICRO_CHROMITE	3.08	35.98	30.22	13.91	0.01	0.00	15.65	0.00	0.28	99.37	0.19	0.04
NAT96-185	27	SUB_PICRO_CHROMITE	1.39	39.68	20.99	16.24	0.01	0.00	20.29	0.00	0.23	99.12	0.21	0.03
NAT96-186	29	PICRO_CHROMITE	0.31	51.24	26.71	10.33	0.00	0.00	9.87	0.00	0.33	99.06	0.09	0.17
NAT96-186	28	SUB_PICRO_CHROMITE	0.83	34.91	19.98	16.27	0.00	0.00	26.01	0.00	0.20	98.48	0.22	0.06
NAT96-186	46	OLIVINE_Fo_#	0.00	0.00	8.88	48.40	0.07	41.15	0.00	0.00	0.14	98.64		
NAT96-186	10	PICRO_CHROMITE	0.19	40.70	14.28	18.34	0.00	0.01	26.73	0.00	0.19	100.67	0.13	0.09
NAT96-186	11	SUB_PICRO_CHROMITE	0.02	31.44	16.42	17.59	0.03	0.00	34.55	0.00	0.18	100.56	0.13	0.20
NAT96-187	30	PICRO_CHROMITE	0.58	44.97	30.10	13.37	0.01	0.00	8.59	0.00	0.25	98.09	0.18	0.03
NAT96-187	31	SUB_PICRO_CHROMITE	0.47	34.22	19.32	16.21	0.01	0.00	27.85	0.00	0.21	98.52	0.15	0.06
NAT96-187	52	G_03_CALCIC_PYROPE_ALMANDINE	0.08	0.03	14.69	11.38	9.48	40.59	23.37	0.00	0.36	99.98		
NAT96-187	48	G_05_MAGNESIAN_ALMANDINE	0.05	0.01	24.31	10.06	2.70	39.33	21.81	0.04	0.37	98.68		
NAT96-187	51	G_05_MAGNESIAN_ALMANDINE	0.00	0.07	23.55	11.50	1.17	39.88	22.32	0.00	0.40	98.89		
NAT96-187	54	G_05_MAGNESIAN_ALMANDINE	0.03	0.00	24.27	9.86	2.75	39.30	22.63	0.02	0.34	99.19		
NAT96-187	10	CPX_01_UNKNOWN	0.25	0.33	16.25	16.66	7.21	50.55	2.44	0.31	0.67	94.67		
NAT96-187	9	CPX_04_UNKNOWN	0.34	0.00	6.32	14.02	24.14	51.17	2.07	0.40	0.22	98.68		
NAT96-188	57	G_05_MAGNESIAN_ALMANDINE	0.00	0.02	23.32	12.18	0.98	39.80	23.23	0.01	0.36	99.90		
NAT96-188	13	Al-Mg-Cr-Fe_SPINEL	0.06	14.66	11.88	24.51	0.00	0.00	52.81	0.00	0.11	104.48	0.35	0.10
NAT96-188	12	PICRO_CHROMITE	0.02	42.66	22.55	13.68	0.00	0.00	18.54	0.00	0.29	98.01	0.12	0.15
NAT96-189	32	PICRO_CHROMITE	2.03	40.56	26.67	13.52	0.01	0.00	15.80	0.00	0.20	99.10	0.22	0.08
NAT96-189	33	PICRO_CHROMITE	0.04	42.20	25.30	10.86	0.04	0.00	19.87	0.00	0.27	99.24	0.14	0.45
NAT96-189	34	PICRO_CHROMITE	0.03	56.99	21.29	10.46	0.00	0.00	10.03	0.00	0.34	99.40	0.06	0.22
NAT96-192	35	PICRO_CHROMITE	0.30	50.87	25.04	12.22	0.01	0.00	10.26	0.00	0.44	99.50	0.09	0.04
NAT96-194	11	CPX_04_UNKNOWN	0.27	0.16	6.11	15.97	22.56	49.52	3.38	0.32	0.11	98.40		
NAT96-195	36	CHROMITE	0.12	53.28	29.99	4.97	0.00	0.00	9.53	0.00	0.23	98.41	0.05	0.22
NAT96-195	64	G_05_MAGNESIAN_ALMANDINE	0.07	0.08	26.56	9.77	1.36	38.63	22.37	0.02	0.25	99.11		
NAT96-195	65	G_05_MAGNESIAN_ALMANDINE	0.04	0.05	26.43	8.92	2.08	39.16	22.67	0.00	0.22	99.58		
NAT96-196	38	PICRO_CHROMITE	1.12	45.62	24.79	12.48	0.01	0.00	13.74	0.00	0.28	98.36	0.19	0.09
NAT96-196	39	PICRO_CHROMITE	0.12	60.00	21.70	10.18	0.00	0.00	6.71	0.00	0.32	99.24	0.03	0.16
NAT96-196	40	PICRO_CHROMITE	0.29	58.03	19.36	13.33	0.00	0.00	6.32	0.00	0.28	97.83	0.11	0.06
NAT96-196	41	PICRO_CHROMITE	0.19	58.30	20.12	13.16	0.00	0.00	7.68	0.00	0.40	100.11	0.16	0.06
NAT96-196	42	PICRO_CHROMITE	0.56	57.51	19.44	14.01	0.01	0.00	8.00	0.00	0.30	99.98	0.07	0.06
NAT96-196	43	PICRO_CHROMITE	0.27	58.05	23.69	10.55	0.00	0.00	5.99	0.00	0.38	99.17	0.13	0.09
NAT96-196	44	PICRO_CHROMITE	0.45	55.37	20.57	14.37	0.01	0.00	8.05	0.00	0.22	99.24	0.13	0.06
NAT96-196	45	PICRO_CHROMITE	0.43	56.90	21.29	13.59	0.01	0.00	7.06	0.00	0.28	99.77	0.14	0.07
NAT96-196	46	PICRO_CHROMITE	0.72	47.17	25.66	12.10	0.00	0.00	12.20	0.00	0.40	98.44	0.09	0.07
NAT96-196	47	PICRO_CHROMITE	0.23	56.01	18.04	15.07	0.00	0.00	9.91	0.00	0.29	99.77	0.17	0.04
NAT96-196	48	PICRO_CHROMITE	0.09	61.50	17.18	12.30	0.00	0.00	8.99	0.00	0.31	100.57	0.03	0.13
NAT96-196	49	PICRO_CHROMITE	0.84	51.27	22.85	14.12	0.00	0.00	10.12	0.00	0.24	99.70	0.13	0.06
NAT96-196	50	PICRO_CHROMITE	0.75	52.82	22.24	13.92	0.01	0.00	9.35	0.00	0.23	99.58	0.12	0.06
NAT96-196	51	PICRO_CHROMITE	0.22	54.25	20.38	12.77	0.00	0.00	11.24	0.00	0.35	99.37	0.09	0.09
NAT96-196	52	PICRO_CHROMITE	0.60	55.49	20.24	14.19	0.01	0.00	8.40	0.00	0.27	99.41	0.13	0.06
NAT96-196	37	SUB_PICRO_CHROMITE	0.55	37.68	22.99	14.37	0.00	0.00	23.97	0.00	0.26	100.05	0.17	0.07
NAT96-196	12	UNKNOWN (Grossular?)	0.03	0.01	17.30	0.00	22.19	32.41	21.06	0.03	0.08	93.11		
NAT96-196	14	PICRO_CHROMITE	0.21	57.43	23.20	11.49	0.00	0.00	5.36	0.00	0.30	98.15	0.08	0.09
NAT96-196	15	PICRO_CHROMITE	0.31	50.79	21.86	12.47	0.01	0.00	11.54	0.00	0.33	97.53	0.10	0.13
NAT96-196	16	PICRO_CHROMITE	0.32	55.77	17.26	16.23	0.00	0.06	8.67	0.00	0.24	98.73	0.13	0.03
NAT96-196	17	PICRO_CHROMITE	0.60	53.77	20.92	14.11	0.03	0.09	9.14	0.00	0.26	99.08	0.10	0.07
NAT96-196	18</													

Table 2 continued.

Sample#	Grain#	Mineral Identification	TiO2 wt%	Cr2O3 wt%	FeO wt%	MgO wt%	CaO wt%	SiO2 wt%	Al2O3 wt%	Na2O wt%	MnO wt%	Total wt%	NiO wt%	ZnO wt%
NAT96-199	59	CHROMITE	1.97	29.03	27.05	14.72	0.00	0.00	26.22	0.00	0.16	99.45	0.22	0.07
NAT96-199	53	PICRO_CHROMITE	0.08	54.85	25.51	9.73	0.00	0.00	8.76	0.00	0.38	99.55	0.07	0.18
NAT96-199	55	PICRO_CHROMITE	0.21	43.81	26.02	10.43	0.02	0.00	18.09	0.00	0.35	99.27	0.07	0.23
NAT96-199	56	PICRO_CHROMITE	0.43	40.40	24.89	12.80	0.00	0.00	21.11	0.00	0.30	100.21	0.09	0.19
NAT96-199	54	SUB_PICRO_CHROMITE	1.15	37.33	39.79	7.98	0.00	0.00	10.86	0.00	0.45	97.87	0.17	0.11
NAT96-199	57	SUB_PICRO_CHROMITE	0.90	34.55	37.11	14.82	0.09	0.00	9.60	0.00	0.26	97.71	0.26	0.08
NAT96-199	58	SUB_PICRO_CHROMITE	1.76	39.30	25.27	15.10	0.00	0.00	17.93	0.00	0.23	99.94	0.27	0.07
NAT96-199	77	G_03_CALCIC_PYROPE_ALMANDINE	0.25	0.01	22.33	6.46	9.14	38.53	21.67	0.05	0.56	99.01		
NAT96-199	20	PICRO_CHROMITE	0.04	61.20	16.84	13.80	0.01	0.00	6.93	0.00	0.27	99.29	0.07	0.12
NAT96-200	78	G_05_MAGNESIAN_ALMANDINE	0.03	0.08	23.55	7.96	6.14	38.96	22.26	0.02	1.00	99.99		
NAT96-200	81	G_05_MAGNESIAN_ALMANDINE	0.00	0.05	24.51	10.71	1.11	39.23	22.48	0.02	0.33	98.43		
NAT96-201	3	CPX_01_SUB_CHROME_DIOPSIDE	0.20	1.29	2.15	15.56	22.15	52.80	5.48	0.89	0.09	100.60		
NAT96-201	7	G_05_MAGNESIAN_ALMANDINE	0.08	0.00	27.32	8.96	1.64	39.28	22.05	0.00	0.92	100.25		
NAT96-201	60	SUB_PICRO_CHROMITE	0.41	49.95	31.34	7.07	0.00	0.00	8.35	0.00	0.60	98.18	0.09	0.37
NAT96-201	83	G_03_CALCIC_PYROPE_ALMANDINE	0.08	0.03	21.69	7.16	8.29	39.13	22.27	0.02	0.52	99.20		
NAT96-201	85	G_03_CALCIC_PYROPE_ALMANDINE	0.07	0.09	14.83	11.56	9.13	40.08	23.06	0.00	0.32	99.15		
NAT96-201	17	CPX_01_SUB_CALCIC_DIOPSIDE	0.03	0.17	5.64	20.86	12.00	55.17	2.34	0.46	0.39	97.21		
NAT97-203	113	STAUROLITE	0.80	0.03	13.06	1.86	0.01	27.07	53.53	0.00	0.00	96.37		
NAT97-203	62	RUTILE	97.60	0.00	0.27	0.00	0.09	0.00	0.03	0.00	0.00	98.01		
NAT97-203	63	RUTILE	97.61	0.06	0.21	0.04	0.00	0.01	0.00	0.01	0.00	97.96		
NAT97-203	111	STAUROLITE	0.59	0.01	13.37	1.77	0.00	26.67	55.32	0.00	0.02	97.76		
NAT97-203	112	STAUROLITE	0.57	0.03	13.35	1.70	0.00	27.00	54.17	0.00	0.11	96.94		
NAT97-203	114	STAUROLITE	0.44	0.02	13.35	2.13	0.00	26.80	54.54	0.00	0.00	97.29		
NAT97-203	115	STAUROLITE	0.81	0.03	13.03	1.75	0.04	26.86	55.54	0.00	0.08	98.16		
NAT97-203	116	STAUROLITE	0.66	0.06	12.27	1.95	0.04	27.61	55.32	0.00	0.06	97.96		
NAT97-204	18	G_05_MAGNESIAN_ALMANDINE	0.26	0.00	30.17	3.15	4.54	37.02	20.74	0.06	2.64	98.58		
NAT97-204	19	G_03_CALCIC_PYROPE_ALMANDINE	0.11	0.19	20.59	5.36	11.57	38.64	22.18	0.00	0.67	99.30		
NAT97-204	64	G_05_MAGNESIAN_ALMANDINE	0.04	0.07	29.46	2.46	7.53	37.18	21.11	0.01	0.79	98.66		
NAT97-204	65	G_05_MAGNESIAN_ALMANDINE	0.05	0.03	26.18	4.80	7.01	38.13	21.71	0.03	0.69	98.65		
NAT97-204	66	SPHENE	32.02	0.00	2.00	0.10	27.20	29.54	3.47	0.00	0.12	94.45		
NAT97-204	107	G_05_MAGNESIAN_ALMANDINE	0.06	0.02	29.59	3.56	7.12	37.21	21.31	0.00	0.48	99.35		
NAT97-204	108	STAUROLITE	0.71	0.04	13.15	1.92	0.00	27.48	53.82	0.00	0.09	97.22		
NAT97-204	109	STAUROLITE	0.64	0.09	13.02	2.17	0.00	27.44	55.49	0.00	0.10	98.96		
NAT97-204	110	UNKNOWN	0.46	0.00	12.44	0.10	29.72	37.56	14.53	0.00	3.45	98.27		
NAT97-205	17	G_09_CHROME_PYROPE	0.17	4.62	7.73	19.66	5.20	41.69	20.40	0.01	0.47	99.96		
NAT97-205	16	G_03_CALCIC_PYROPE_ALMANDINE	0.22	0.09	21.40	8.03	7.45	39.01	22.18	0.04	0.59	99.00		
NAT97-205	67	RUTILE	97.45	0.05	0.22	0.01	0.00	0.00	0.04	0.00	0.00	97.77		
NAT97-205	103	STAUROLITE	0.77	0.04	13.46	1.76	0.00	27.15	54.95	0.00	0.18	98.31		
NAT97-205	104	UNKNOWN	0.00	0.00	0.00	0.00	0.73	0.97	0.00	0.00	0.00	1.72		
NAT97-205	105	STAUROLITE	0.62	0.00	12.91	2.05	0.00	26.55	55.31	0.02	0.14	97.61		
NAT97-205	106	STAUROLITE	0.56	0.06	12.36	2.01	0.00	27.48	54.68	0.00	0.06	97.21		
NAT97-206	7	UNKNOWN	0.02	0.04	4.32	2.59	22.07	36.76	28.31	0.03	0.06	94.19		
NAT97-206	97	STAUROLITE	0.74	0.00	13.39	1.48	0.02	26.75	54.69	0.00	0.19	97.26		
NAT97-206	98	STAUROLITE	0.53	0.05	13.32	1.74	0.00	27.16	54.79	0.00	0.29	97.88		
NAT97-206	99	STAUROLITE	0.61	0.00	13.54	2.26	0.00	27.11	53.88	0.00	0.27	97.67		
NAT97-206	100	STAUROLITE	0.54	0.01	13.60	1.38	0.02	26.39	56.02	0.01	0.16	98.13		
NAT97-206	101	STAUROLITE	0.46	0.00	13.12	1.42	0.00	26.77	56.08	0.01	0.28	98.13		
NAT97-206	102	STAUROLITE	0.72	0.00	13.30	1.14	0.00	26.84	54.98	0.00	0.44	97.42		
NAT97-207	68	RUTILE	96.87	0.08	0.27	0.00	0.00	0.00	0.03	0.05	0.01	97.32		
NAT97-207	94	STAUROLITE	0.57	0.08	13.88	1.50	0.00	26.29	55.75	0.01	0.35	98.42		
NAT97-207	95	STAUROLITE	0.72	0.05	13.90	1.87	0.00	26.58	54.74	0.00	0.08	97.95		
NAT97-207	96	G_05_MAGNESIAN_ALMANDINE	0.10	0.05	25.38	3.43	10.50	37.47	20.96	0.02	1.70	99.62		
NAT97-208	69	QUARTZ	0.00	0.03	0.32	0.00	0.00	101.54	0.00	0.00	0.00	101.88		
NAT97-209	27	STAUROLITE	0.53	0.00	13.12	1.56	0.00	27.56	54.36	0.00	0.47	97.59		
NAT96-210	61	PICRO_CHROMITE	0.50	50.98	23.26	15.03	0.00	0.00	9.86	0.00	0.27	100.07	0.10	0.06
NAT96-210	62	PICRO_CHROMITE	0.12	51.08	25.32	8.73	0.01	0.00	13.26	0.00	0.43	99.28	0.05	0.27
NAT96-211	63	CHROMITE	0.06	42.20	29.04	5.76	0.00	0.00	20.74	0.00	0.22	99.16	0.10	1.00
NAT96-211	65	PICRO_CHROMITE	0.33	45.18	24.90	9.77	0.00	0.00	16.83	0.00	0.25	97.68	0.12	0.22
NAT96-211	64	SUB_PICRO_CHROMITE	0.75	31.89	17.55	17.54	0.03	0.00	31.49	0.00	0.17	99.75	0.26	0.04
NAT96-212	92	G_05_MAGNESIAN_ALMANDINE	0.01	0.02	26.07	9.63	0.90	39.01	22.59	0.01	0.67	98.91		
NAT96-212	93	UNKNOWN (Grossular?)	0.29	0.04	8.27	0.06	23.38	38.20	27.29	0.01	0.15	97.69		
NAT96-212	19	CPX_02_UNKNOWN	0.03	0.00	5.83	14.95	24.08	53.31	0.85	0.19	0.13	99.36		
NAT96-212	18	CPX_05_UNKNOWN (Bronzite?)	0.16	0.50	5.80	34.83	1.24	56.97	1.50	0.20	0.09	101.30		
NAT96-213	66	PICRO_CHROMITE	1.17	45.81	19.06	16.49	0.00	0.00	15.77	0.00	0.19	98.72	0.22	0.01
NAT96-213	21	SUB_PICRO_CHROMITE	0.23	38.03	21.97	13.52	0.00	0.01	25.78	0.00	0.32	100.36	0.08	0.42
NAT96-216	1	PICRO_CHROMITE	0.08	53.00	20.82	13.08	0.00	0.00	11.45	0.00	0.28	98.98		
NAT96-216	2	PICRO_CHROMITE	0.78	54.97	25.42	10.53	0.00	0.00	5.54	0.00	0.34	97.85		
NAT96-216 102		G_03_CALCIC_PYROPE_ALMANDINE	0.11	0.14	12.15	18.17	3.17	42.04	23.33	0.07	0.52	99.72		
NAT96-216 107		G_03_CALCIC_PYROPE_ALMANDINE	0.17	0.03	22.26	9.41	6.31	39.15	21.93	0.00	0.61	99.87		
NAT96-216 98		G_05_MAGNESIAN_ALMANDINE	0.07	0.09	30.22	2.64	6.74	35.33	20.37	0.00	1.44	96.89		
NAT96-216 106		G_09_CHROME_PYROPE	0.24	3.81	8.22	19.48	4.90	41.75	20.21	0.02	0.47	99.10		
NAT96-216 100		G_09_CHROME_PYROPE	0.00	2.05	10.25	17.80	4.91	39.94	21.25	0.02	0.65	96.87		
NAT96-216 103		G_09_CHROME_PYROPE	0.00	2.08	8.77	18.26	5.62	42.23	22.50	0.01	0.66	100.14		
NAT96-216 104		G_09_CHROME_PYROPE	0.33	3.03	8.33	19.44	4.53	42.46	21.56	0.05	0.49	100.22		
NAT96-216 105		G_09_CHROME_PYROPE	0.01	3.43	8.02	18.84	5.45	41.63	20.76	0.03	0.44	98.61		
NAT96-216 97		G_05_MAGNESIAN_ALMANDINE	0.08	0.00	29.89	2.27	8.00	38.17	21.06	0.00	1.07	100.55		
NAT96-216 99		G_05_MAGNESIAN_ALMANDINE	0.10	0.02	27.63	2.75	8.32	37.30	21.29	0.00	1.82	99.21		
NAT96-216	101	G_09_CHROME_PYROPE	0.04	3.33	8.34	18.64	5.32	41.84	21.22	0.03	0.60	99.35		
NAT96-216	108	G_09_CHROME_PYROPE	0.08	3.52	7.73	19.17	5.13	42.06	21.56	0.03	0.42	99.69		
NAT96-216	109	G_09_CHROME_PYROPE	0.03	4.44	7.64	19.00	5.58	41.63	20.97	0.00	0.46	99.75		
NAT96-216	110	G_09_CHROME_PYROPE	0.11	3.81	7.96	19.10	5.30	42.17	21.02	0.00	0.45	99.92		
NAT96-216	29	G_09_CHROME_PYROPE	0.14	3.83	8.33	19.31	4.60	42.17	20.78	0.03	0.41	99.60		
NAT96-216	10	G_09_CHROME_PYROPE	0.29	4.45	8.37	18.80	5.32	42.41	20.33	0.06	0.43	100.46		
NAT96-216	12	G_09_CHROME_PYROPE	0.01	3.96	7.87	18.94	5.44	42.03	20.99	0.02	0.51	99.79		
NAT96-216	13	G_09_CHROME_PYROPE	0.01	4.62	7.86	18.84	5.70	42.09	20.22	0.03	0.48	99.85		
NAT96-216	14	G_09_CHROME_PYROPE	0.00	4.73	7.28	18.57	5.92	42.27	20.70	0.01	0.48	99.97		
NAT96-216	17	G_09_CHROME_PYROPE	0.00	3.56	7.75	19.05	4.97	42.24	21.39	0.00	0.51	99.49		

Table 2 continued.

Sample#	Grain#	Mineral Identification	TiO2 wt%	Cr2O3 wt%	FeO wt%	MgO wt%	CaO wt%	SiO2 wt%	Al2O3 wt%	Na2O wt%	MnO wt%	Total wt%	NiO wt%	ZnO wt%
NAT96-216	36	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.15	7.01	8.05	17.70	5.92	41.59	17.87	0.04	0.50	98.83		
NAT96-216	37	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.00	6.33	7.71	18.20	5.94	41.14	18.79	0.02	0.56	98.68		
NAT96-216	15	G_11_UVAROVITE_PYROPE	0.24	8.35	8.00	17.32	6.70	41.55	17.10	0.04	0.53	99.85		
NAT96-216	11	G_09_CHROME_PYROPE	0.02	5.98	8.24	17.57	6.50	41.99	19.48	0.00	0.48	100.27		
NAT96-216	18	G_09_CHROME_PYROPE	0.00	4.77	7.63	18.54	5.46	41.86	20.53	0.02	0.48	99.31		
NAT96-216	19	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.21	6.66	8.32	18.32	5.48	39.63	18.71	0.06	0.39	97.77		
NAT96-216	20	G_09_CHROME_PYROPE	0.08	4.78	7.79	18.83	5.12	40.71	20.29	0.04	0.53	98.17		
NAT96-216	23	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.03	6.50	7.79	18.06	5.91	41.71	19.17	0.04	0.47	99.69		
NAT96-216	24	G_09_CHROME_PYROPE	0.00	5.44	7.55	18.14	6.10	41.93	19.79	0.03	0.53	99.51		
NAT96-216	25	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.01	6.56	8.02	17.84	6.40	41.97	18.85	0.01	0.43	100.08		
NAT96-216	26	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.00	5.99	7.54	18.29	5.88	41.54	19.71	0.02	0.47	99.45		
NAT96-216	28	G_09_CHROME_PYROPE	0.07	2.92	7.70	19.17	5.25	42.30	21.83	0.04	0.55	99.85		
NAT96-216	31	G_09_CHROME_PYROPE	0.04	4.89	7.85	18.84	5.53	41.57	20.69	0.02	0.53	99.96		
NAT96-216	33	G_09_CHROME_PYROPE	0.00	3.98	8.01	18.43	5.63	42.29	21.06	0.02	0.49	99.90		
NAT96-216	34	G_09_CHROME_PYROPE	0.00	4.90	7.49	18.54	5.62	42.08	20.26	0.03	0.52	99.44		
NAT96-216	8	G_09_CHROME_PYROPE	0.01	4.54	7.61	18.63	5.46	42.50	20.68	0.02	0.50	99.94		
NAT96-216	9	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.06	6.76	8.19	17.54	6.65	40.50	18.03	0.00	0.41	98.12		
NAT96-216	4	CPX_05_CHROME_DIOPSIDE	0.11	1.51	2.09	16.99	22.19	49.34	0.93	1.27	0.08	94.50		
NAT96-216	6	CPX_02_UNKNOW	0.01	0.22	4.50	15.96	22.84	55.12	0.87	0.79	0.17	100.47		
NAT96-216	7	CPX_05_CHROME_DIOPSIDE	0.27	0.66	1.78	16.27	22.90	54.37	4.76	1.00	0.04	102.04		
NAT96-216	9	CPX_05_CHROME_DIOPSIDE	0.27	0.84	1.64	15.90	22.95	53.05	4.98	1.03	0.10	100.75		
NAT96-216	5	CPX_05_UNKNOW	0.02	2.74	2.09	16.25	21.20	56.04	0.62	1.92	0.03	100.91		
NAT96-216	8	UNKNOWN Omphacite?	0.21	1.53	2.95	20.26	11.02	48.24	9.46	3.12	0.00	97.67		
NAT96-216	38	G_09_CHROME_PYROPE	0.00	2.97	8.23	18.88	5.30	42.48	21.51	0.00	0.56	99.93		
NAT96-216	39	G_09_CHROME_PYROPE	0.01	3.95	7.56	19.16	4.97	42.18	21.05	0.06	0.50	99.45		
NAT96-216	40	G_09_CHROME_PYROPE	0.00	4.12	7.36	19.30	4.86	39.98	20.49	0.04	0.46	96.61		
NAT96-216	41	G_09_CHROME_PYROPE	0.00	2.79	8.38	18.48	5.24	41.62	21.86	0.02	0.62	99.01		
NAT96-216	42	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.11	7.18	7.95	17.27	7.05	41.77	18.41	0.03	0.52	100.29		
NAT96-216	67	G_09_CHROME_PYROPE	0.06	4.96	7.79	18.62	5.53	41.51	20.07	0.03	0.50	99.07		
NAT96-216	48	G_09_CHROME_PYROPE	0.02	5.00	7.68	18.71	5.62	41.90	19.99	0.02	0.46	99.40		
NAT96-216	49	G_09_CHROME_PYROPE	0.04	4.89	7.72	18.83	5.50	41.51	20.08	0.02	0.51	99.10		
NAT96-216	51	G_09_CHROME_PYROPE	0.19	5.64	8.04	18.44	5.64	41.76	19.39	0.04	0.57	99.71		
NAT96-216	52	G_09_CHROME_PYROPE	0.00	3.93	7.97	19.24	5.26	42.34	20.94	0.04	0.57	100.29		
NAT96-216	54	G_09_CHROME_PYROPE	0.03	4.61	7.58	18.84	5.44	40.94	20.24	0.03	0.53	98.24		
NAT96-216	62	G_09_CHROME_PYROPE	0.04	4.96	7.63	18.74	5.53	41.54	20.59	0.04	0.46	99.53		
NAT96-216	66	G_09_CHROME_PYROPE	0.02	4.77	7.87	18.73	5.62	41.40	20.00	0.03	0.52	98.96		
NAT96-216	68	G_09_CHROME_PYROPE	0.05	4.76	7.70	18.88	5.27	41.74	20.02	0.03	0.42	98.86		
NAT96-216	70	G_09_CHROME_PYROPE	0.02	2.79	7.99	18.87	5.02	42.53	21.44	0.00	0.52	99.18		
NAT96-216	69	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.04	7.57	8.06	17.75	6.39	41.12	17.86	0.00	0.31	99.10		
NAT96-216	64	UNKNOWN	0.01	3.66	6.87	0.19	0.00	1.26	0.41	0.00	0.48	12.88		
NAT96-216	65	UNKNOWN G9??	0.03	3.17	9.11	15.08	4.56	31.83	16.90	0.05	0.56	81.29		
NAT96-216	43	G_09_CHROME_PYROPE	0.03	4.66	7.72	18.65	5.58	41.92	20.33	0.01	0.52	99.42		
NAT96-216	44	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.17	6.23	8.69	17.65	5.46	40.67	18.88	0.05	0.51	98.30		
NAT96-216	45	G_09_CHROME_PYROPE	0.04	3.99	7.66	18.77	5.29	40.63	21.18	0.02	0.54	98.14		
NAT96-216	46	G_09_CHROME_PYROPE	0.04	4.77	7.82	18.80	5.58	42.40	20.55	0.03	0.52	100.51		
NAT96-216	47	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.09	8.98	7.37	17.00	7.13	41.45	16.87	0.05	0.58	99.53		
NAT96-216	50	G_09_CHROME_PYROPE	0.02	4.89	7.76	18.83	5.41	41.32	20.74	0.03	0.51	99.50		
NAT96-216	53	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.07	6.99	7.48	18.33	6.23	41.28	18.47	0.00	0.45	99.30		
NAT96-216	55	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.10	6.82	7.71	18.13	6.04	41.40	18.89	0.02	0.46	99.57		
NAT96-216	56	G_09_CHROME_PYROPE	0.00	5.85	7.87	17.56	6.50	40.93	19.52	0.00	0.45	98.69		
NAT96-216	57	G_09_CHROME_PYROPE	0.09	5.92	8.55	17.60	6.53	41.03	19.22	0.01	0.61	99.56		
NAT96-216	58	G_09_CHROME_PYROPE	0.02	4.92	7.40	18.73	5.49	41.61	20.74	0.00	0.46	99.37		
NAT96-216	59	G_09_CHROME_PYROPE	0.00	3.44	7.82	19.33	5.05	40.14	21.66	0.01	0.43	97.88		
NAT96-216	60	G_09_CHROME_PYROPE	0.02	5.09	7.54	18.62	5.58	39.41	20.38	0.01	0.57	97.23		
NAT96-216	61	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.16	7.04	7.96	17.91	6.05	41.49	18.57	0.05	0.49	99.72		
NAT96-216	63	G_09_CHROME_PYROPE	0.01	4.66	7.65	19.02	5.25	41.43	20.69	0.02	0.45	99.17		
NAT96-216	71	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.08	7.88	7.82	17.35	7.09	39.96	17.66	0.02	0.45	98.30		
NAT96-216	73	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.01	8.28	7.82	16.98	6.98	41.68	17.17	0.00	0.51	99.43		
NAT96-216	74	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.01	7.15	7.24	17.98	6.72	42.10	18.44	0.02	0.55	100.19		
NAT96-216	76	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.13	9.27	7.83	16.72	7.41	40.88	16.35	0.05	0.45	99.10		
NAT96-216	79	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.04	8.69	7.51	16.71	7.32	40.74	17.05	0.01	0.55	98.62		
NAT96-216	80	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.06	8.93	7.63	16.62	7.89	40.99	16.85	0.01	0.55	99.53		
NAT96-216	72	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.11	8.87	8.08	16.78	7.52	41.29	16.92	0.00	0.50	100.08		
NAT96-216	75	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.14	7.83	7.66	17.33	6.44	40.62	17.91	0.05	0.46	98.44		
NAT96-216	77	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.04	7.54	7.96	17.31	6.67	40.64	17.95	0.04	0.53	98.68		
NAT96-216	78	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.09	8.71	7.91	16.66	7.54	41.14	17.10	0.02	0.49	99.67		
NAT96-216	82	G_03_CALCIC_PYROPE_ALMANDINE	0.24	3.26	13.75	16.14	4.50	37.48	18.37	0.08	0.39	94.19		
NAT96-216	81	G_09_CHROME_PYROPE	0.02	3.20	8.87	17.40	4.70	40.21	20.32	0.04	0.63	95.39		
NAT96-216	84	G_09_CHROME_PYROPE	0.10	6.76	11.42	15.52	5.66	35.83	15.69	0.04	0.38	91.40		
NAT96-216	85	G_09_CHROME_PYROPE	0.10	4.99	7.83	17.31	6.17	41.59	18.93	0.10	0.42	97.46		
NAT96-216	83	UNKNOWN G1/G2??	2.15	0.04	12.84	14.32	3.32	37.97	15.36	0.08	0.16	86.23		
NAT96-216	86	G_09_CHROME_PYROPE	0.02	2.91	7.85	19.23	4.71	42.09	21.80	0.02	0.46	99.09		
NAT96-216	87	G_09_CHROME_PYROPE	0.09	4.89	7.33	19.01	5.52	42.15	19.64	0.04	0.48	99.15		
NAT96-216	89	G_09_CHROME_PYROPE	0.03	4.97	7.55	18.52	5.83	42.46	20.34	0.01	0.50	100.21		
NAT96-216	90	G_09_CHROME_PYROPE	0.01	4.72	7.39	18.53	6.19	42.39	20.46	0.04	0.52	100.24		
NAT96-216	88	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.03	6.48	7.59	18.77	5.96	42.25	18.75	0.01	0.37	100.15		
NAT96-216	94	G_09_CHROME_PYROPE	0.10	3.09	8.83	19.29	4.72	41.73	21.51	0.01	0.35	99.63		
NAT96-216	96	G_09_CHROME_PYROPE	0.28	4.66	8.36	19.02	5.21	41.68	19.45	0.02	0.37	99.06		
NAT96-216	91	G_10_LOW_CALCILIUM_CHROME_PYROPE	0.04	6.59	7.87	17.91	6.52	40.97	18.70	0.00	0.52	99.11		
NAT96-216	92	G_11_UVAROVITE_PYROPE	0.40	7.11	7.92	18.53	6.18	40.26	18.04	0.08	0.49	99.02		
NAT96-216	93	G_09_CHROME_PYROPE	0.17	4.17	8.33	19.04	4.85	42.30	20.78	0.01	0.42	100.07		
NAT96-216	95	G_09_CHROME_PYROPE	0.25	4.82	8.68	18.85	4.84	41.38	20.26	0.04	0.32	99.43		
NAT97-217 26		G_10_LOW_CALCILIUM_CHROME_PYROPE	0.20	8.22	7.79	17.80	6.75	40.84	17.23	0.04	0.41	99.29		
NAT97-217	70	TOURMALINE	0.41	0.04	6.55	8.52	1.50	35.30	30.81	1.76	0.00	84.90		
NAT97-217	71	ALMANDINE	0.06	0.00	32.52	0.67	8.04	36.41	20.66	0.01	0.82	99.19		
NAT97-218	72	G_03_CALCIC_PYROPE_ALMANDINE	0.15	0.04	22.83	3.25	13.10	37.55	21.02	0.00	0.78	98.72		
NAT97-218	9	PICRO_CHROMITE	1.70	42.64	24.78	12.29	0.00							

Table 2 continued.

Sample#	Grain#	Mineral Identification	TiO2 wt%	Cr2O3 wt%	FeO wt%	MgO wt%	CaO wt%	SiO2 wt%	Al2O3 wt%	Na2O wt%	MnO wt%	Total wt%	NiO wt%	ZnO wt%
NAT97-219	16	PICRO_CHROMITE	0.05	51.53	20.71	11.08	0.05	0.00	15.05	n/a	0.27	98.90	0.03	0.14
NAT97-219	15	SUB_PICRO_CHROMITE	0.01	35.03	18.47	15.31	0.00	0.00	29.80	n/a	0.16	99.06	0.13	0.14
NAT97-220	17	PICRO_CHROMITE	0.02	50.78	18.18	13.64	0.01	0.03	14.98	n/a	0.30	98.14	0.08	0.12
NAT97-220	18	SUB_PICRO_CHROMITE	0.24	37.55	22.95	12.27	0.00	0.00	25.25	n/a	0.26	98.85	0.11	0.21
NAT97-220	19	SUB_PICRO_CHROMITE	0.21	34.38	12.48	19.13	0.00	0.05	32.48	n/a	0.15	99.22	0.22	0.12
NAT97-221	6	CPX_02_UNKNOWN	0.15	0.93	2.61	17.61	21.86	52.51	3.46	0.33	0.09	99.59		
NAT97-222	25	G_10_LOW_CALCIIUM_CHROME_PYROPE	0.07	6.47	8.10	18.27	6.01	41.09	19.24	0.01	0.44	99.68		
NAT97-222	24	G_05_MAGNESIAN_ALMANDINE	0.12	0.17	23.79	7.37	6.68	38.77	21.86	0.00	0.60	99.35		
NAT97-222	75	G_05_MAGNESIAN_ALMANDINE	0.01	0.09	28.02	5.75	5.38	37.26	21.79	0.00	0.34	98.64		
NAT97-222	76	G_05_MAGNESIAN_ALMANDINE	0.00	0.04	25.97	4.94	6.95	37.17	21.54	0.04	2.52	99.16		
NAT97-222	28	G_05_MAGNESIAN_ALMANDINE	0.03	0.00	27.11	5.12	6.48	38.13	21.40	0.00	0.55	98.81		
NAT97-222	29	STAUROLITE	0.62	0.04	12.59	2.19	0.00	27.73	53.82	0.03	0.11	97.12		
NAT97-222	30	STAUROLITE	0.61	0.01	12.74	1.72	0.00	27.40	55.01	0.02	0.30	97.80		
NAT97-223	1	PICRO_ILMENITE	51.51	1.08	31.58	13.52	0.01	0.00	0.54	n/a	0.24	98.56	0.09	0.00
NAT97-223	20	G_03_CALCIC_PYROPE_ALMANDINE	0.15	0.02	16.67	9.08	11.70	39.38	23.12	0.02	0.36	100.50		
NAT97-223	23	G_03_CALCIC_PYROPE_ALMANDINE	0.12	0.04	15.77	9.09	11.19	39.57	21.99	0.02	0.35	98.13		
NAT97-223	5	CPX_02_UNKNOWN	0.12	0.84	3.70	18.03	21.38	53.47	1.06	0.41	0.10	99.12		
NAT97-223	31	STAUROLITE	0.52	0.04	13.04	1.86	0.07	27.30	54.47	0.00	0.21	97.51		
NAT97-223	32	G_05_MAGNESIAN_ALMANDINE	0.00	0.03	23.41	12.20	1.02	39.69	22.68	0.02	0.25	99.29		
NAT97-223	33	STAUROLITE	0.64	0.00	13.38	2.02	0.00	27.42	54.01	0.00	0.17	97.64		
NAT97-224	22	G_03_CALCIC_PYROPE_ALMANDINE	0.23	0.00	18.37	8.92	9.74	38.99	22.31	0.02	0.43	99.00		
NAT97-224	77	UNKNOWN Tourmaline?	0.56	0.08	8.04	8.79	0.63	35.55	28.28	2.35	0.00	84.29		
NAT97-224	78	SPHENE	34.83	0.00	1.30	0.00	26.67	29.14	1.65	0.00	0.14	93.72		
NAT97-224	79	G_05_MAGNESIAN_ALMANDINE	0.02	0.09	28.74	6.11	3.52	37.75	21.68	0.00	1.14	99.05		
NAT97-225	4	CPX_02_DIOPSIDE	0.12	0.94	4.96	14.61	19.93	54.75	1.35	1.96	0.20	98.90		
NAT97-225	21	G_03_CALCIC_PYROPE_ALMANDINE	0.09	0.04	21.70	4.21	12.19	38.48	21.57	0.05	0.65	98.98		
NAT97-225	80	G_05_MAGNESIAN_ALMANDINE	0.04	0.01	29.22	1.99	8.38	37.06	21.55	0.00	1.05	99.30		
NAT97-225	81	TOURMALINE	0.33	0.02	8.96	7.60	0.62	35.53	30.51	2.29	0.06	85.93		
NAT97-225	82	G_05_MAGNESIAN_ALMANDINE	0.08	0.03	30.14	2.52	7.31	36.80	21.12	0.00	0.79	98.79		
NAT97-225	91	STAUROLITE	0.62	0.11	13.31	2.14	0.00	27.22	55.20	0.01	0.13	98.75		
NAT97-226	3	CPX_05_UNKNOWN	0.05	1.07	2.92	16.39	22.23	54.20	2.15	0.93	0.06	100.03		
NAT97-226	2	G_08_FERRO_MAGNESIAN_GROSSULAR	0.06	0.02	14.17	0.00	22.58	37.23	23.78	0.00	0.13	97.97		
NAT97-227	1	CPX_05_UNKNOWN	0.01	1.63	2.36	15.32	21.35	51.89	4.90	1.02	0.08	98.58		
NAT97-227	83	G_05_MAGNESIAN_ALMANDINE	0.08	0.04	29.98	3.07	6.51	37.26	21.06	0.00	0.82	98.82		
NAT97-227	84	ALMANDINE	0.04	0.00	30.92	0.73	8.93	36.09	20.62	0.00	0.77	98.10		
NAT97-227	85	G_05_MAGNESIAN_ALMANDINE	0.04	0.00	30.13	2.02	7.74	37.07	21.29	0.01	0.87	99.18		
NAT97-227	86	ALMANDINE	0.01	0.00	31.91	1.32	8.27	35.98	20.85	0.00	0.65	99.00		
NAT97-227	87	RUTILE	96.86	0.21	0.37	0.00	0.00	0.00	0.02	0.01	0.00	97.47		
NAT97-227	92	STAUROLITE	0.64	0.04	12.54	1.71	0.00	26.51	55.36	0.00	0.31	97.11		
NAT97-228	88	UNKNOWN Tourmaline?	1.03	0.00	10.26	9.79	1.75	35.01	24.40	1.69	0.00	83.94		
NAT97-228	93	G_05_MAGNESIAN_ALMANDINE	0.07	0.00	30.13	3.01	7.85	37.18	21.20	0.00	0.46	99.91		
LEL94-1	80	CPX_01_UNKNOWN	0.10	0.04	8.33	18.59	12.19	54.17	1.98	0.59	0.27	96.44		
LEL94-1	79	CPX_04_UNKNOWN	0.35	0.00	6.11	14.77	23.74	52.14	2.00	0.31	0.10	99.53		
LEL94-1	124	CPX_05_CHROME_DIOPSIDE	0.05	0.92	3.21	16.52	22.41	54.56	1.32	0.68	0.11	99.78		
LEL94-1	555	GROSSULAR	0.43	0.01	7.24	0.08	34.12	38.24	19.37	0.00	0.19	99.68		
LEL94-1	630	G_09_CHROME_PYROPE	0.01	5.04	8.05	18.18	5.98	39.99	20.71	0.03	0.39	98.38		
LEL94-1	631	G_09_CHROME_PYROPE	0.03	5.88	7.82	18.33	6.17	40.09	20.08	0.02	0.39	98.81		
LEL94-1	632	G_10_LOW_CALCIIUM_CHROME_PYROPE	0.00	8.40	9.66	16.78	7.91	40.67	17.63	0.00	0.52	99.87		
LEL94-1	640	G_10_LOW_CALCIIUM_CHROME_PYROPE	0.05	6.74	7.49	18.21	6.65	40.57	19.04	0.02	0.48	99.26		
LEL94-1	550	SPINEL	0.02	0.00	4.93	21.86	0.03	0.00	70.13	0.00	0.06	97.03		
LEL94-1	551	STAUROLITE	0.61	0.05	12.45	2.27	0.00	27.85	54.12	0.00	0.12	97.46		
LEL94-1	552	STAUROLITE	0.60	0.02	12.36	1.41	0.00	27.61	56.41	0.00	0.06	98.47		
LEL94-1	553	STAUROLITE	0.72	0.03	13.44	1.83	0.00	27.09	56.81	0.01	0.11	100.04		
LEL94-1	554	STAUROLITE	0.66	0.03	12.63	1.63	0.00	27.37	56.57	0.00	0.07	98.96		
LEL94-1	81	UNKNOWN Cpx??	0.08	0.00	10.08	11.32	23.24	52.08	0.96	0.56	0.79	99.12		
LEL94-2	83	CPX_02_UNKNOWN	0.02	0.16	6.48	14.21	22.36	53.71	0.63	1.00	0.27	98.84		
LEL94-2	84	CPX_02_UNKNOWN	0.10	0.59	4.73	15.84	22.28	54.19	0.94	0.73	0.12	99.52		
LEL94-2	82	CPX_04_UNKNOWN	0.08	0.12	9.97	14.46	19.34	52.00	2.28	0.40	0.38	99.02		
LEL94-2	560	SPHENE	36.59	0.00	1.21	0.00	27.24	29.40	1.21	0.01	0.11	95.78		
LEL94-2	558	STAUROLITE	0.72	0.01	12.54	1.70	0.00	26.95	55.22	0.00	0.06	97.18		
LEL94-2	559	STAUROLITE	0.73	0.06	12.98	2.01	0.01	27.53	54.51	0.00	0.06	97.90		
LEL94-2	557	TOURMALINE	0.44	0.00	8.98	5.77	0.71	35.23	32.55	1.81	0.07	85.55		
LEL94-2	556	UNKNOWN Staurolite?	0.49	0.00	14.29	1.60	0.00	27.47	57.09	0.01	0.05	101.00		
LEL94-4	131	CPX_05_UNKNOWN	0.00	1.11	4.01	16.07	22.06	53.94	1.10	0.71	0.12	99.13		
LEL94-4	85	CPX_08_UNKNOWN	0.46	0.00	8.80	10.34	19.67	49.00	6.85	2.31	0.21	97.63		
LEL94-4	86	G_08_FERRO_MAGNESIAN_GROSSULAR	0.00	0.00	12.66	0.02	22.90	37.05	23.44	0.01	0.07	96.15		
LEL94-4	87	G_08_FERRO_MAGNESIAN_GROSSULAR	0.02	0.02	12.18	0.01	21.76	36.89	23.77	0.00	0.04	94.69		
LEL94-4	133	QUARTZ	0.00	0.00	0.00	0.00	0.00	100.54	0.01	0.01	0.00	100.56		
LEL94-4	561	SPHENE	34.32	0.01	2.13	0.04	27.40	29.53	2.30	0.10	0.20	96.05		
LEL94-4	562	SPINEL_MAGNETITE-SERIES	0.07	0.05	69.84	0.26	0.15	1.84	0.66	0.00	0.34	73.20		
LEL94-4	563	STAUROLITE	0.67	0.05	13.80	1.84	0.03	27.35	56.56	0.00	0.08	100.41		
LEL94-4	564	STAUROLITE	0.57	0.07	12.82	1.69	0.00	27.51	56.95	0.00	0.17	99.78		
LEL94-4	566	STAUROLITE	0.70	0.02	12.77	2.05	0.02	27.36	55.85	0.00	0.07	98.84		
LEL94-4	565	UNKNOWN	5.36	0.03	0.06	0.00	1.30	15.54	0.38	0.06	0.00	22.75		
LEL94-4	132	UNKNOWN Cpx??	0.10	0.02	30.88	15.17	0.62	50.48	0.73	0.02	0.37	98.40		
LEL94-4	567	UNKNOWN Spodumene??	0.00	0.03	0.57	0.00	0.02	63.41	19.53	2.49	0.00	99.01		
LEL94-6	91	CPX_01_UNKNOWN	0.02	0.12	8.36	18.37	12.57	54.27	2.80	0.33	0.35	97.26		
LEL94-6	88	CPX_04_UNKNOWN	0.54	0.04	11.64	14.70	11.99	48.01	7.52	0.83	0.34	96.02		
LEL94-6	89	G_08_FERRO_MAGNESIAN_GROSSULAR	0.07	0.00	14.01	0.02	21.64	36.59	21.91	0.03	0.44	94.71		
LEL94-6	90	G_08_FERRO_MAGNESIAN_GROSSULAR	0.04	0.02	11.33	0.05	22.97	37.20	24.70	0.01	0.12	96.41		
LEL94-6	92	G_08_FERRO_MAGNESIAN_GROSSULAR	0.01	0.00	13.95	0.01	22.96	37.20	22.70	0.01	0.00	96.84		
LEL94-6	93	G_08_FERRO_MAGNESIAN_GROSSULAR	0.17	0.04	13.06	0.00	22.69	36.78	22.65	0.00	0.09	95.48		
LEL94-6	569	STAUROLITE	0.59	0.04	14.05	1.81	0.00	27.28	56.35	0.00	0.10	100.22		
LEL94-6	571	STAUROLITE	0.65	0.03	12.80	1.54	0.00	27.33	56.34	0.01	0.16	98.86		
LEL94-6	572	STAUROLITE	0.66	0.05	13.86	1.64	0.03	27.54	56.56	0.00	0.05	100.39		
LEL94-6	570	UNKNOWN Staurolite or Spinel??	0.00	0.18	10.24	6.88	0.00	20.11	53.15	0.00	0.03	90.60		
LEL94-6	568	UNKNOWN Staurolite?	0.47	0.00	13.80	1.53	0.00	26.62	57.50	0.00	0.00	99.92		
LEL94-7	573	SPHENE	33.31	0.04	1.72	0.02	27.45	30.02	2.67	0.01	0.07	95.30		

Table 2 continued.

Sample#	Grain#	Mineral Identification	TiO2 wt%	Cr2O3 wt%	FeO wt%	MgO wt%	CaO wt%	SiO2 wt%	Al2O3 wt%	Na2O wt%	MnO wt%	Total wt%	NiO wt%	ZnO wt%
SB94-9	544	STAUROLITE	0.63	0.00	13.07	1.97	0.00	27.80	56.13	0.00	0.01	99.61		
SB94-9	543	TOURMALINE	0.00	0.00	10.86	0.39	0.10	35.55	37.73	1.17	1.00	86.80		
SB94-11&12	111	CPX_02_UNKNOWN	0.05	0.05	6.59	14.07	23.65	53.39	0.87	0.58	0.32	99.57		
SB94-11&12	112	CPX_02_UNKNOWN	0.06	0.11	6.26	14.19	22.42	53.66	1.11	0.72	0.31	98.84		
SB94-11&12	115	CPX_02_UNKNOWN	0.02	0.15	5.31	15.04	23.50	53.40	1.00	0.45	0.36	99.24		
SB94-11&12	113	CPX_04_UNKNOWN	0.29	0.00	9.71	12.04	21.94	50.25	3.75	0.63	0.47	99.07		
SB94-11&12	128	CPX_05_CHROME_DIOPSIDE	0.12	1.24	2.15	15.74	20.92	52.43	5.39	1.21	0.07	99.27		
SB94-11&12	535	GAHNITE SPINEL	0.00	0.00	9.06	0.05	0.00	0.00	49.65	0.00	0.25	59.02		
SB94-11&12	114	G_06_PYROPE_GROSSULAR_ALMANDINE	0.05	0.00	16.50	0.00	22.51	35.31	20.33	0.02	0.16	94.89		
SB94-11&12	638	G_10_LOW_CALCIIUM_CHROME_PYROPE	0.14	8.45	8.21	16.76	7.50	40.11	17.33	0.00	0.49	98.99		
SB94-11&12	538	STAUROLITE	0.64	0.02	13.32	1.97	0.00	27.02	56.73	0.00	0.05	99.75		
SB94-11&12	537	UNKNOWN	2.77	0.01	0.54	0.02	0.92	4.06	1.07	0.04	0.00	9.44		
SB94-11&12	536	UNKNOWN Staurolite?	0.70	0.12	13.38	1.81	0.00	27.06	57.67	0.00	0.00	100.74		
SB94-15	116	CPX_01_UNKNOWN	0.04	0.21	9.77	17.60	12.16	52.50	2.71	0.33	0.26	95.60		
SB94-15	118	CPX_01_UNKNOWN	0.10	0.22	8.60	17.73	12.02	53.17	4.06	0.43	0.24	96.57		
SB94-15	547	G_03_CALCIC_PYROPE_ALMANDINE	0.07	0.00	22.06	7.33	8.92	39.20	22.40	0.01	0.43	100.42		
SB94-15	548	G_03_CALCIC_PYROPE_ALMANDINE	0.06	0.00	19.16	10.23	7.23	39.29	23.13	0.00	0.24	99.34		
SB94-15	546	G_05_MAGNESIAN_ALMANDINE	0.01	0.02	26.75	10.01	0.87	39.00	23.19	0.00	0.41	100.26		
SB94-15	119	G_08_FERRO_MAGNESIAN_GROSSULAR	0.09	0.00	9.36	2.59	21.96	36.96	21.00	0.06	0.05	92.06		
SB94-15	117	SPINEL	0.01	0.04	7.25	24.42	0.00	0.03	70.73	0.00	0.16	102.65		
SB94-15	545	STAUROLITE	0.78	0.00	12.85	2.07	0.00	27.21	56.46	0.01	0.02	99.40		
SB94-15	549	TOURMALINE	0.06	0.00	12.72	1.31	0.07	35.30	34.97	1.57	0.27	86.27		
PR95-3A	574	ALMANDINE	0.05	0.15	30.81	4.47	4.26	36.63	22.21	0.02	0.98	99.58		
PR95-3A	99	CPX_02_DIOPSIDE	0.10	1.36	3.01	18.98	17.63	54.04	1.90	0.99	0.16	98.19		
PR95-3A	129	CPX_02_DIOPSIDE	0.20	1.33	3.00	19.99	18.15	53.75	1.86	0.73	0.06	99.08		
PR95-3A	96	CPX_02_UNKNOWN	0.04	0.12	6.28	14.38	23.46	53.68	0.97	0.55	0.24	99.72		
PR95-3A	98	CPX_02_UNKNOWN	0.07	0.29	5.54	14.72	23.08	53.60	0.57	0.88	0.24	98.99		
PR95-3A	95	CPX_05_UNKNOWN	0.04	0.05	2.48	17.41	24.94	54.50	0.41	0.04	0.10	99.98		
PR95-3A	633	G_09_CHROME_PYROPE	0.34	5.88	7.70	19.68	5.29	41.05	19.95	0.02	0.38	100.29		
PR95-3A	634	G_09_CHROME_PYROPE	0.02	3.20	7.92	18.61	5.54	39.81	22.30	0.02	0.57	97.98		
PR95-3A	576	RUTILE	97.22	0.10	0.53	0.02	0.00	0.00	0.07	0.00	0.00	97.96		
PR95-3A	575	STAUROLITE	0.52	0.01	13.42	1.98	0.00	27.08	56.20	0.00	0.13	99.34		
PR95-3A	578	STAUROLITE	0.64	0.07	13.76	2.06	0.02	27.55	54.17	0.00	0.00	98.28		
PR95-3A	94	UNKNOWN Cpx??	0.06	0.00	8.77	12.96	23.11	52.06	1.01	0.51	0.34	98.81		
PR95-3A	97	UNKNOWN Cpx??	0.03	0.00	8.21	13.14	22.34	52.97	0.54	1.12	0.26	98.61		
PR95-3A	577	UNKNOWN Omphacite??	0.02	0.00	11.38	11.04	1.15	56.63	9.08	5.91	0.31	95.53		
PR95-3B	100	CPX_02_UNKNOWN	0.00	0.28	4.60	15.91	22.61	53.75	1.70	0.59	0.18	99.62		
PR95-3B	101	CPX_04_UNKNOWN	0.08	0.03	9.00	12.42	22.84	51.95	1.60	0.91	0.28	99.10		
PR95-3B	579	G_05_MAGNESIAN_ALMANDINE	0.00	0.03	29.86	7.79	1.16	38.26	22.38	0.00	0.34	99.81		
PR95-3B	635	G_09_CHROME_PYROPE	0.06	4.54	8.20	18.37	6.25	39.73	21.21	0.01	0.45	98.82		
PR95-3B	580	UNKNOWN Tourmaline ??	1.11	0.19	11.81	9.52	2.07	34.93	23.57	1.57	0.01	84.78		
PR95-7	581	ALMANDINE	0.00	0.00	32.23	2.87	0.52	35.01	22.13	0.02	5.15	97.93		
PR95-7	103	CPX_02_UNKNOWN	0.09	0.20	6.22	13.80	22.68	53.29	1.38	1.17	0.13	98.95		
PR95-7	102	CPX_04_UNKNOWN	0.34	0.03	6.63	13.70	23.87	50.02	2.75	0.46	0.16	97.95		
PR95-7	582	G_05_MAGNESIAN_ALMANDINE	0.01	0.07	24.09	11.58	1.27	38.86	23.45	0.02	0.32	99.68		
PR95-7	584	SPHENE	35.02	0.01	1.74	0.04	27.25	28.20	1.90	0.03	0.15	94.32		
PR95-7	583	STAUROLITE	0.73	0.00	12.31	1.45	0.01	26.28	56.33	0.00	0.07	97.18		
PR95-9	104	CPX_02_UNKNOWN	0.07	0.06	7.89	12.82	22.70	52.96	1.37	0.60	0.32	98.78		
PR95-9B	585	G_05_MAGNESIAN_ALMANDINE	0.03	0.02	30.38	7.57	1.02	38.17	22.30	0.00	0.42	99.91		
PR95-9B	586	STAUROLITE	0.53	0.05	13.59	2.09	0.00	27.37	56.21	0.00	0.02	99.87		
PR95-9B	587	STAUROLITE	0.75	0.03	13.18	1.86	0.02	27.54	55.02	0.01	0.00	98.40		
PR95-9B	588	UNKNOWN	0.00	0.00	0.00	0.00	0.56	0.41	0.00	0.00	0.00	0.98		
PR95-11	589	ALMANDINE	0.01	0.00	34.54	2.92	4.00	37.33	21.06	0.00	0.41	100.27		
PR95-11	592	ALMANDINE	0.08	0.10	31.20	4.49	4.66	37.91	22.07	0.00	0.35	100.85		
PR95-11	596	ALMANDINE	0.00	0.06	33.27	5.20	0.97	37.18	21.29	0.03	1.01	99.02		
PR95-11	591	CORUNDUM	0.33	0.02	1.32	0.07	0.00	0.01	104.02	0.00	0.05	105.81		
PR95-11	105	CPX_02_UNKNOWN	0.12	0.09	5.37	15.33	22.45	53.06	1.87	0.66	0.17	99.13		
PR95-11	598	G_05_MAGNESIAN_ALMANDINE	0.06	0.04	27.14	5.07	7.41	37.97	21.90	0.01	0.59	100.21		
PR95-11	599	G_05_MAGNESIAN_ALMANDINE	0.04	0.01	26.45	4.45	8.20	37.84	22.04	0.00	0.82	99.87		
PR95-11	600	G_05_MAGNESIAN_ALMANDINE	0.03	0.16	23.92	10.75	2.68	38.10	23.31	0.02	0.34	99.31		
PR95-11	107	G_08_FERRO_MAGNESIAN_GROSSULAR	0.02	0.00	13.73	0.00	22.43	36.19	22.67	0.01	0.06	95.11		
PR95-11	637	G_09_CHROME_PYROPE	0.32	3.49	7.16	20.35	4.70	42.18	20.45	0.03	0.25	98.93		
PR95-11	636	G_11_UVAROVITE_PYROPE	0.75	6.52	8.52	17.97	5.93	40.30	18.26	0.07	0.34	98.66		
PR95-11	106	SPINEL	0.00	0.11	5.79	24.54	0.02	0.00	70.08	0.00	0.08	100.62		
PR95-11	108	SPINEL	0.04	0.05	4.30	26.49	0.00	0.00	71.16	0.00	0.08	102.13		
PR95-11	597	SPINEL	0.04	0.07	2.82	24.23	0.00	0.03	72.76	0.00	0.07	100.02		
PR95-11	590	STAUROLITE	0.75	0.03	13.57	1.71	0.00	27.06	55.76	0.00	0.12	99.00		
PR95-11	594	STAUROLITE	0.76	0.05	13.94	1.85	0.00	26.83	55.80	0.01	0.09	99.32		
PR95-11	595	STAUROLITE	0.52	0.00	13.40	1.86	0.03	27.12	55.72	0.00	0.07	98.72		
PR95-11	593	UNKNOWN Tourmaline ??	0.60	0.03	11.58	9.74	2.90	34.53	23.64	1.11	0.00	84.15		