APPENDIX 2

Representative chemical analyses and structural formulae (O^2 = 6) of pyroxenes from the Popiel Hill

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	2701	2701	2701	2701	2701	2702	2702	2702	2703	2703	2703	2704	2704	2704	AK3201	AK3201	AK3202	AK3202	AK3202	AK3205	AK3205	AK3205	AK3207	AK3207	AK3212	AK3214	AK3214	AK3214	AK3216	AK3216
SiO_2	56.66	57.49	54.73	57.06	56.41	55.48	53.88	55.95	57.18	55.45	54.81	54.35	56.35	55.52	53.59	55.88	56.64	55.05	54.08	55.81	56.29	54.89	54.64	55.99	55.53	56.58	54.07	54.89	55.32	54.50
TiO_2	0.08	0.03	0.11	0.04	0.05	0.07	0.11	0.07	0.05	0.10	0.08	0.07	0.05	0.11	0.14	0.06	0.08	0.07	0.11	0.06	0.08	0.07	0.08	0.07	0.05	0.06	0.08	0.07	0.05	0.12
Al_2O_3	1.67	0.71	4.04	1.27	1.85	2.56	4.18	1.83	0.83	3.28	3.27	4.00	1.36	2.57	5.13	1.96	1.39	2.82	4.44	1.88	1.48	3.21	3.38	1.55	1.84	1.35	3.94	3.60	2.27	3.47
Cr_2O_3	0.02	0.00	0.12	0.05	0.09	0.06	0.06	0.02	0.04	0.27	0.10	0.22	0.03	0.11	0.30	0.02	0.09	0.02	0.12	0.12	0.08	0.28	0.10	0.04	0.04	0.01	0.13	0.14	0.10	0.09
FeO[1)]	8.66	8.25	9.01	8.37	8.39	9.90	10.44	9.66	9.11	9.74	9.88	9.81	9.34	9.62	9.73	9.08	8.66	9.10	9.49	9.31	8.90	9.63	10.15	9.60	9.70	8.82	9.82	9.52	8.99	9.11
MnO	0.218	0.17	0.23	0.20	0.32	0.34	0.32	0.30	0.22	0.26	0.22	0.27	0.23	0.27	0.23	0.25	0.28	0.28	0.28	0.31	0.30	0.30	0.30	0.35	0.30	0.29	0.27	0.27	0.23	0.26
NiO	0.02	0.06	0.06	0.01	0.01	0.06	0.07	0.03	0.00	0.08	0.02	0.00	0.04	0.10	0.07	0.06	0.08	0.06	0.05	0.03	0.08	0.06	0.03	0.06	0.05	0.08	0.02	0.05	0.04	0.07
MgO	33.46	33.95	32.15	33.79	33.17	31.59	30.83	32.24	32.74	31.16	31.42	31.48	32.91	32.43	30.94	32.70	33.03	32.56	31.43	32.56	32.68	31.76	31.32	32.28	32.18	32.91	31.13	32.07	32.51	32.19
CaO	0.13	0.11	0.13	0.16	0.22	0.17	0.10	0.16	0.11	0.10	0.14	0.08	0.15	0.13	0.10	0.13	0.17	0.15	0.13	0.20	0.17	0.15	0.10	0.12	0.18	0.15	0.15	0.09	0.16	0.12
Na_2O	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.03	0.01	0.00	0.01	0.02	0.00	0.03	0.03	0.01	0.02	0.05	0.02	0.00	0.00	0.01	0.01	0.00	0.01	0.00	0.00	0.00
K_2O	0.00	0.01	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.01	0.01	0.02	0.01	0.02	0.01	0.00	0.00
sum	100.99	100.78	100.57	100.95	100.51	100.24	100.00	100.27	100.29	100.47	99.96	100.29	100.46	100.88	100.23	100.17	100.44	100.12	100.20	100.34	100.09	100.35	100.11	100.07	99.88	100.24	99.65	100.70	99.67	99.93
Si	1.95	1.98	1.90	1.97	1.95	1.94	1.89	1.95	1.99	1.93	1.92	1.89	1.96	1.92	1.87	1.94	1.96	1.91	1.88	1.94	1.96	1.91	1.91	1.96	1.94	1.97	1.90	1.90	1.93	1.90
Ti	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Al	0.07	0.03	0.17	0.05	0.08	0.11	0.17	0.08	0.03	0.13	0.14	0.16	0.06	0.10	0.21	0.08	0.06	0.12	0.18	0.08	0.06	0.13	0.14	0.06	0.08	0.06	0.16	0.15	0.09	0.14
Cr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fe	0.25	0.24	0.26	0.24	0.24	0.29	0.31	0.28	0.27	0.28	0.29	0.29	0.27	0.28	0.28	0.26	0.25	0.26	0.28	0.27	0.26	0.28	0.30	0.28	0.28	0.26	0.29	0.28	0.26	0.27
Mn	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Ni	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mg	1.72	1.74	1.66	1.73	1.71	1.65	1.62	1.68	1.70	1.62	1.64	1.64	1.70	1.67	1.61	1.69	1.71	1.69	1.63	1.69	1.70	1.65	1.63	1.68	1.68	1.70	1.63	1.66	1.69	1.67
Ca	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.01	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.01	0.00
Na	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
K	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mg#	0.87	0.88	0.86	0.88	0.88	0.85	0.84	0.86	0.86	0.85	0.85	0.85	0.86	0.86	0.85	0.87	0.87	0.86	0.86	0.86	0.87	0.85	0.85	0.86	0.86	0.87	0.85	0.86	0.87	0.86

[1)] – total Fe as FeO; 1 – small grain in olivine-orthopyroxene aggregate (green point 1 – Fig. 3A); 2, 3 – small grains in olivine-orthopyroxene-spinel aggregate; 4, 5 – small grains (up to 35 μm) of orthopyroxene II at the edge of amphibole grain (green points 4,5 – Fig. 3D); 6 – irregular grain (30 μm) in amphibole matrix (green point 6 – Fig. 3B); 7, 8 –ca. 40 μm grains in orthopyroxene-amphibole aggregate; 9 – marginal part of orthopyroxene grain in orthopyroxene-olivine aggregate; 10 – grain in orthopyroxene-olivine aggregate; 11 – small grain (80 μm) embedded in serpentine matrix (green point 11 – Fig. 4B); 12 – central part of large grain within orthopyroxene-olivine-amphibole aggregate; 13 – small (40 μm) grain intergrown with olivine; 14 – 90 μm long, crushed grain in serpentine matrix; 15 – marginal part of orthopyroxene grain in olivine-orthopyroxene-amphibole aggregate; 16 – intergrowth in olivine grain; 17 – small (8 μm) grain embedded in serpentine matrix; 18, 19 – ca. 50 μm grains embedded in serpentine matrix; 20 – 50 μm grain with in olivine-orthopyroxene-amphibole aggregate; 21 – marginal part of ca. 70 μm grain; 22 – 120 μm, fractured grain; 23 – central part of 70 μm grain with ragged edges; 24 – 30 μm grain in olivine-orthopyroxene aggregate; 25 – 50 μm grain in olivine-orthopyroxene aggregate, embedded in serpentine matrix; 26 – 70 μm grain in contact with olivine and amphibole; 27 – small grain in orthopyroxene-amphibole aggregate with serpentine veins; 28 – 50 μm, irregular grain embedded in serpentine matrix (green point 28 – Fig. 4C); 29 – small grain (25 μm) in orthopyroxene-amphibole aggregate; 30 – 100 μm grain in serpentine matrix