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Title of article Modal composition and detrital clinopyroxene geochemistry of lithic sandstones from the New England Fold Belt (east Australia): A Paleozoic forearc terrain

Author(s) P. A. Cawood

see GSA Bulletin v. 94, p. 1199 - 1214

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	Drik Drik Formation						Northcotte Formation						Bog Hole Formation		
Spec. No.	53395	58040	58041	58042	58043	58044	58045	58046	58047	53345	58048	58049	58110	58111	58112
Grid Ref.	190335	126558	181349	171356	184337	179350	140480	164387	122551	199309	169349	183335	207329	189384	175400
% Rock															
Matrix (M)	28	19	48	25	9	12	14	12	8	12	12	12	10	14	20
Framework	72	81	52	75	91	88	86	88	92	88	88	88	90	86	80
Framework															
Quartz (Q)	-	-	-	4	5	3	12	14	20	13	Tr	13	12	1	-
Rock Fragments (R)	57	68	45	54	33	41	31	39	40	18	30	31	38	23	63
Feldspar (F)	15	11	7	17	48	38	38	32	28	46	56	40	39	59	15
Clinopyroxene	-	1	-	1	4	2	-	Tr	Tr	7	-	-	-	2	1
Opaque Oxides	-	3	-	Tr	4	4	5	3	4	4	2	4	1	1	1
% Volcanic Fragments															
Lathwork	22	36	30	18	7	11	6	3	15		20	13	-	-	4
Microlitic	40	50	54	31	2	8	3	-	8		8	17	11	5	50
Felsitic	9	3	8	21	19	17	21	9	18		18	20	28	26	17
Vitrix	29	11	8	30	72	64	70	88	59		54	50	61	69	29
% QFR															
Q	-	-	-	5.3	6.0	3.7	14.8	16.5	22.7	16.9	0.2	15.5	13.5	1.9	-
F	20.8	12.8	13.5	22.7	54.2	46.3	46.9	37.6	31.8	59.7	65.0	47.6	43.8	53.7	19.2
R	79.2	87.2	86.5	72.0	39.8	50.0	38.3	45.9	45.5	23.4	34.8	36.9	42.7	42.6	80.8
% MLQ															
M	32.9	21.8	51.6	30.1	19.1	21.4	24.6	18.5	11.8	27.9	28.3	21.4	16.7	36.8	24.1
L	67.1	78.2	48.4	65.1	70.2	73.2	54.4	60.0	58.8	41.9	70.8	55.4	63.3	60.5	75.9
Q	-	-	-	4.8	10.6	5.4	21.1	21.5	29.4	30.2	0.9	23.2	20.0	2.6	-

Modal point counts of sandstones from Group 2

	Murrawong Creek Formation											Pipeclay Creek Formation						Haedon Formation			
Spec. No.	58024	58025	58026	58027	58028	58029	58030	58031	58032	58033	58034	58035	58036	58037	53327	58038	58039	53331	53333	53329	58109
Grid Ref.	198357	197357	195363	205328	206327	190365	196353	194357	200339	189361	194342	193345	191349	194338	174375	192342	192342	194326	190338	153329	192337
% Total Rock																					
Matrix (M)	8	14	23	16	17	19	14	18	12	19	10	11	14	13	14	12	13	13[1]	10[2]	20[3]	26[4]
Framework	92	86	77	84	83	81	86	82	88	81	90	89	86	87	86	88	87	87	90	80	74
Framework																					
Quartz (Q)	21	9	2	Tr	-	-	Tr	-	-	Tr	-	1	1	Tr	-	Tr	2	-	-	-	-
Rock Fragments (R)	23	62	61	78	76	65	75	70	58	64	60	63	76	66	64	54	47	64[5]	83[6]	56[7]	67[8]
Feldspar (F)	48	13	12	5	7	15	11	10	22	14	19	25	9	17	11	34	24	15	5	19	4
Clinopyroxene	-	2	2	Tr	-	1	-	2	6	Tr	11	-	Tr	3	11	Tr	10	8	2	4	-
Opaque Oxides	Tr	Tr	Tr	Tr	-	-	-	-	2	2	Tr	-	-	1	Tr	-	4	Tr	Tr	1	3
% Volc. Fragments																					
Lathwork		72	50	62	48		69	64	83	65	61	81	63	67	81	66	79	42	48	58	82
Microlitic		20	49	26	44		27	18	12	27	30	8	25	30	15	24	15	57	44	39	14
Felsitic		1	-	6	4		3	10	-	1	-	9	5	-	-	-	2	-	3	1	1
Vitric		7	1	6	4		1	8	5	7	9	2	7	3	4	10	4	1	5	2	3
%QFR																					
Q	22.8	10.7	2.7	0.2	-	-	0.2	-	-	0.5	-	1.1	1.2	0.2	-	0.1	2.7	-	-	-	-
F	52.2	15.5	16.0	6.0	8.4	18.8	12.8	12.5	27.5	17.9	24.1	28.1	10.5	20.4	14.7	38.6	32.9	18.8	5.7	25.3	5.6
R	25.0	73.8	81.3	93.8	91.6	81.2	87.0	87.5	72.5	81.6	75.9	70.8	88.4	79.3	85.3	61.3	64.4	81.3	94.3	74.7	94.4
% MRQ																					
M	15.4	16.5	26.7	17.0	18.3	22.6	15.7	20.5	17.1	20.6	14.3	14.7	15.4	16.4	17.9	18.1	21.0	16.9	10.8	26.3	28.0
R	44.2	72.9	70.9	82.8	81.7	77.4	84.1	79.5	82.9	79.0	85.7	84.0	83.5	83.1	82.1	81.4	75.8	83.1	89.2	73.7	72.0
Q	40.4	10.6	2.3	0.2	-	-	0.2	-	-	0.4	-	1.3	1.1	0.5	-	0.5	3.2	-	-	-	-

Modal point counts of sandstones from Group 1

[1-4]Matrix includes 4,6,13 and 19 percent respectively calcium carbonate and this is excluded from the matrix values shown on Fig 3

[5-8]Rock fragments contain 5,3,4 and 2 percent respectively limestone fragments.

	Wogarda Argillite				Silver Gully Formation							Yarrimie Formation					Baldwin Formation						
Spec. No.	53338	58050	58051	58052	58053	58054	58055	58056	58057	58058	Crook[1]	55439	55436	55425	55419	Crook[1]	55466	55460	55459	55451	55442	Crook[1]	Chappell[2]
Grid. Ref.	169352	180340	174348	174346	173348	164360	158398	127495	119552	130470		823889	810930	820907	807934	2 Anal.	852878	833909	820940	851890	753936		31 Anal.
% Total Rock																							
Matrix (M)	14	12	15	17	11	11	17	17	15	13	11.2	13	11	10	17	18.0	15	11	11	12	13	13.9	21.9
Framework	86	88	85	83	89	89	83	83	85	87	88.8	87	89	90	83	82.0	85	89	89	88	87	86.1	78.1
Framework																							
Quartz (Q)	Tr	-	Tr	-	2	-	1	1	2	2	0.1	17	12	1	Tr	0.6	3	4	-	Tr	1	0.6	0.4
Rock Fragments (R)	56	45	49	67	56	65	64	65	62	49	70.3	33	25	57	43	56.5	53	48	62	53	72	66.4	63.6
Feldspar (F)	28	42	34	14	19	23	12	13	19	32	16.4	37	48	30	34	23.6	29	35	23	31	12	15.9	12.7
Clinopyroxene	-	-	-	-	7	Tr	5	3	2	3	0.7	Tr	3	1	6	Tr	Tr	1	4	2	2	-	1.5
Opague Oxides	2	1	2	2	5	1	1	1	Tr	1	1.4	-	1	1	Tr	Tr	Tr	1	Tr	2	Tr	0.6	0.6
% Volc. Fragments																							
Lathwork	25	66	51	35	41	43	67	79	68	66		21	23	61	24		53	51	45		69		
Microlitic	8	6	16	20	36	20	11	17	15	28		22	39	24	48		22	29	38		23		
Felsitic	13	12	11	1	13	15	2	3	2	4		Tr	1	-	2		2	-	-		Tr		
Vitric	54	16	22	44	10	22	20	1	15	2		57	37	15	26		23	20	17		8		
% QFR																							
Q	0.2	-	0.2	-	2.6	-	1.3	1.3	2.4	2.4	0.1	19.5	14.1	1.1	0.3	0.7	3.5	4.6	-	0.2	1.2	0.7	0.5
F	33.3	48.3	40.9	17.3	24.7	26.1	15.6	16.5	22.9	38.6	18.9	42.5	56.5	34.1	44.0	29.3	34.1	40.2	27.1	36.8	14.1	19.2	16.6
R	66.5	51.7	58.9	82.7	72.7	73.9	83.1	82.3	74.7	59.0	81.0	37.9	29.4	64.8	55.7	70.0	62.4	55.2	72.9	62.9	84.7	80.1	82.9
% MLQ																							
M	19.9	21.1	23.4	20.2	15.9	14.5	20.7	20.5	19.0	20.3	13.7	20.6	22.9	14.7	28.2	24.0	21.1	17.5	15.1	18.4	15.1	17.2	25.5
L	79.8	78.9	76.3	79.8	81.2	85.5	78.0	78.3	78.5	76.6	86.1	52.4	52.1	83.8	71.4	75.0	74.6	76.2	84.9	81.3	83.7	82.1	74.0
Q	0.3	-	0.3	-	2.9	-	1.2	1.2	2.5	3.1	0.1	27.0	25.6	1.5	0.3	0.8	4.2	6.3	-	0.3	1.2	0.7	0.5

Modal point counts of sandstones from Group 3

[1]Crook (1960c)

[2]Chappell (1968)

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P 3

	Wisemans Arm Formation (South of Moonbi Adamellite)										Wisemans Arm Formation (North of Moonbi Adamellite)				Woolomin Formation					
Spec. No.	58059	53358	53363	58060	58061[1]	58062	58063	58064	58065	58066	58067	58068	58069	58070	58071	58072	58073	58074	58075	58076
Grid. Ref.	210342	209351	207355	198363	182416	192424	186458	167503	162494	173153	918837	917869	888898	898884	207404	201397	191454	190506	211436	210410
% Total Rock																				
Matrix (M)	15	11	13	12	14	11	12	11	19	11	13	11	12	15	12	10	12	15	15	12
Framework	85	89	87	88	86	89	88	89	81	89	87	89	88	85	88	90	88	85	85	88
Framework																				
Quartz (Q)	25	15	7	1	12	12	10	9	Tr	15	4	4	3	1	6	2	7	1	8	12
Rock Fragments (R)	33	65	43	68	40	61	62	59	45	33	35	76	59	51	71	67	61	68	67	52
Feldspar (F)	27	7	27	13	23	16	16	19	33	40	45	8	25	31	11	21	20	13	7	23
Clinopyroxene	-	Tr	-	6	Tr	-	-	1	-	-	1	1	1	-	Tr	Tr	Tr	3	2	-
Opaque Oxide	-	2	-	Tr	1	Tr	Tr	1	2	1	2	Tr	-	2	Tr	Tr	-	Tr	1	1
% Volc. Fragments																				
Lathwork	6	20	39	13	6	15	18	34	10	6	34	16	41	35	1	25	25	51	15[2]	2
Microlitic	13	9	42	66	9	9	18	14	46	20	26	28	29	13	23	43	13	12	3	8
Felsitic	4	8	9	7	9	9	5	-	2	4	Tr	7	1	3	3	-	8	-	-	9
Vitric	77	63	10	14	76	67	59	52	42	70	40	49	29	49	73	32	54	37[3]	82[3]	81
%QFR																				
Q	29.4	17.2	9.1	1.2	16.0	13.5	11.4	10.0	0.3	17.0	4.8	4.5	3.4	1.2	6.8	2.2	8.0	1.2	9.8	13.8
F	31.8	8.0	35.1	15.9	30.7	18.0	18.2	21.8	42.2	45.5	53.6	9.1	28.7	37.3	12.5	23.3	22.7	15.9	8.5	26.4
R	38.8	74.7	55.8	82.9	53.3	68.5	70.2	67.8	57.5	37.5	41.7	86.4	67.8	61.4	80.7	74.4	69.3	82.9	81.7	59.8
% MLQ																				
M	20.5	12.1	20.6	14.8	21.2	13.1	14.3	13.9	29.5	18.6	25.0	12.1	16.2	22.4	13.5	12.7	15.0	17.9	16.7	15.8
L	45.2	71.4	68.3	84.0	60.6	72.6	73.8	74.7	70.0	55.9	67.3	83.5	79.7	76.1	79.8	84.8	76.3	81.0	74.4	68.4
Q	34.2	16.5	11.1	1.2	18.2	14.3	11.9	11.4	0.5	25.4	7.7	4.4	4.1	1.5	6.7	2.5	8.8	1.2	8.9	15.8

Modal analyses of sandstones from Group 4

[1] Modal analysis based on 1000pts.
[2] Percentage of volcanic rock fragments determined from a count of only 165pts.
[3] Vitric fragments rich in intersertal chlorite and possibly originally basic in composition.

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SAMPLE	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	Cr_2O_3	TOTAL	Si	Ti	Al	Fe_2+	Mn	Mg	Ca	Na	Cr	TOTAL	ANAL NO.
58025A	51.59	.15	1.28	10.05	.36	14.90	21.82	.23	-	100.38	1.932	.004	.057	.315	.011	.832	.876	.017	-	4.044	3
58025B	51.16	.16	1.34	9.63	.40	14.83	21.63	.31	-	99.46	1.932	.005	.060	.304	.013	.835	.875	.023	-	4.045	3
58025C	51.63	.13	1.44	10.42	.48	14.63	21.70	.33	-	100.76	1.930	.004	.063	.326	.015	.815	.869	.024	-	4.046	3
58077	51.02	.24	2.41	12.55	.35	14.30	18.40	.21	-	99.48	1.929	.007	.107	.397	.011	.806	.745	.015	-	4.018	8
58078	50.32	.23	1.98	12.51	.36	15.58	19.06	.21	-	99.38	1.898	.007	.088	.395	.011	.876	.770	.015	-	4.059	13
58026A	51.22	.12	1.29	10.11	.47	14.48	21.43	.26	-	99.38	1.938	.003	.058	.320	.015	.817	.869	.019	-	4.039	4
58026B	51.05	.17	1.47	10.19	.43	14.41	21.60	.27	.02	99.61	1.929	.005	.066	.322	.014	.812	.875	.020	.001	4.043	2
58026C	50.98	.15	1.21	9.94	.43	14.57	21.46	.29	.02	99.05	1.936	.004	.054	.316	.014	.825	.873	.021	.001	4.043	4
58026D	49.92	.23	2.63	10.76	.28	15.54	19.60	.26	.13	99.35	1.888	.007	.117	.340	.009	.876	.794	.019	.004	4.054	3
58079A	52.62	.18	1.41	11.94	.43	12.35	21.10	.24	-	100.27	1.978	.005	.062	.375	.014	.692	.850	.017	-	3.994	3
58079B	52.82	.11	2.16	9.22	.27	14.98	20.69	.21	.17	100.63	1.951	.003	.094	.285	.008	.824	.819	.015	.005	4.004	3
58079C	51.53	.16	2.11	11.71	.30	13.75	19.93	.22	.06	99.77	1.942	.005	.094	.369	.010	.772	.805	.016	.002	4.014	2
58079D	51.44	.21	2.12	13.50	.35	13.34	19.12	.18	.04	100.30	1.940	.006	.094	.426	.011	.750	.773	.013	.001	4.013	2
58079E	51.55	.16	2.22	13.04	.37	13.71	19.11	.20	.02	100.38	1.938	.005	.098	.410	.012	.768	.770	.015	.001	4.015	3
58079F	51.52	.16	1.97	13.15	.34	14.11	18.78	.20	.04	100.27	1.939	.005	.087	.414	.011	.791	.757	.015	.001	4.020	2
58032A	51.54	.21	1.71	13.31	.37	14.29	19.13	.21	-	100.77	1.934	.006	.076	.418	.012	.799	.769	.015	-	4.029	3
58032B	50.86	.17	2.31	13.39	.36	13.39	19.41	.23	-	100.12	1.925	.005	.103	.424	.012	.755	.787	.017	-	4.027	3
58032C	51.10	.19	1.93	13.82	.34	14.71	17.92	.20	-	100.21	1.928	.005	.086	.436	.011	.827	.724	.015	-	4.031	2
58032D	52.03	.17	1.78	9.92	.29	14.61	21.24	.26	-	100.30	1.942	.005	.078	.310	.009	.813	.849	.019	-	4.024	3
58080A	50.53	.14	1.59	13.25	.39	14.33	19.10	.26	-	99.59	1.924	.004	.071	.422	.013	.813	.779	.019	-	4.046	3
58080B	50.84	.17	1.71	13.07	.32	14.62	19.15	.24	-	100.12	1.922	.005	.076	.413	.010	.824	.776	.018	-	4.044	4
58080C	51.01	.28	1.88	11.86	.47	14.41	20.01	.29	-	100.21	1.922	.008	.083	.374	.015	.809	.808	.021	-	4.039	3
58080D	50.80	.21	1.20	15.42	.53	12.54	19.58	.22	-	100.50	1.938	.006	.054	.492	.017	.713	.800	.016	-	4.037	3
58080E	49.90	.19	1.76	14.89	.39	13.56	18.88	.18	-	99.75	1.912	.005	.080	.477	.013	.774	.775	.013	-	4.050	2

Composition of detrital clinopyroxenes for the Murrawong Creek Formation

The letter after each sample number refers to separate detrital clinopyroxene grains within each sandstone sample. Numbers lacking a letter suffix are samples of igneous clasts from conglomerate horizons. The number of individual microprobe analyses that were averaged to give each detrital grain or igneous rock fragment analysis are listed in the right-hand column.

													NUMBER OF IONS ON THE BASIS OF 6 OXYGENS								
SAMPLE	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	Cr_2O_3	TOTAL	Si	Ti	Al	Fe2+	Mn	Mg	Ca	Na	Cr	Total	Anal No.
58081A	50.82	.36	1.63	12.32	.48	15.20	18.74	.26	-	99.81	1.921	.010	.073	.398	.015	.856	.759	.019		4.042	4
58081B	51.04	.52	1.93	11.03	.26	16.14	19.15	.38	-	100.45	1.906	.014	.085	.345	.008	.898	.766	.028	-	4.051	4
58081C	51.19	.40	1.73	10.48	.50	16.13	19.66	.34	-	100.43	1.912	.011	.076	.327	.016	.898	.787	.025	-	4.051	2
58081D	51.37	.31	1.74	11.68	.36	16.15	18.87	.32	-	100.80	1.915	.009	.076	.364	.011	.897	.754	.023	-	4.050	2
58081E	49.96	.30	3.44	6.62	.12	16.15	22.27	.24	.19	99.29	1.868	.008	.152	.207	.004	.900	.892	.017	.006	4.054	5
58081F	50.59	.50	2.55	10.10	.42	16.09	19.35	.38	.07	100.05	1.892	.014	.112	.316	.013	.897	.775	.028	.002	4.050	2
58082A	50.16	.38	1.88	11.76	.33	15.58	19.44	.32	-	99.85	1.897	.011	.084	.372	.011	.989	.788	.023	-	4.063	4
58082B*	51.45	.21	1.71	6.62	.25	17.33	22.08	.25	-	100.02	1.908	.006	.075	.205	.008	.958	.877	.018	-	4.061	2
58082C	50.71	.48	1.95	10.98	.30	15.99	19.60	.42	-	100.43	1.898	.014	.085	.344	.010	.892	.786	.030	-	4.060	3
58082D	50.81	.43	2.30	9.73	.30	16.18	19.95	.39	-	100.09	1.898	.012	.101	.304	.009	.901	.799	.028	-	4.053	2
58082E	50.52	.25	3.16	7.35	.24	16.29	22.25	.21	.10	100.37	1.873	.007	.138	.228	.008	.900	.884	.015	.003	4.057	3
58034A	51.12	.38	2.43	9.01	.24	16.02	20.37	.33	.18	100.08	1.904	.011	.107	.281	.008	.889	.813	.024	.005	4.041	3
58034B	51.40	.36	2.86	7.66	.21	16.19	21.28	.32	.22	100.50	1.898	.010	.125	.237	.007	.891	.842	.023	.006	4.038	3
58034C	51.13	.44	2.09	10.83	.33	15.70	19.18	.34	.10	100.14	1.913	.012	.092	.339	.010	.876	.769	.025	.003	4.039	4
58034D	51.12	.36	1.77	10.71	.35	15.14	19.94	.30	.03	99.72	1.924	.010	.079	.337	.011	.849	.804	.022	.001	4.037	3
58034E	51.07	.42	1.94	9.83	.28	16.33	19.35	.32	-	99.54	1.915	.012	.086	.308	.009	.912	.777	.023	-	4.042	3
58034F	50.72	.25	3.68	6.03	.13	16.08	22.65	.18	.50	100.22	1.873	.007	.160	.186	.004	.885	.896	.013	.015	4.039	4
58034H	51.78	.41	1.81	11.27	.35	15.77	18.97	.32	-	100.68	1.927	.011	.079	.351	.011	.875	.756	.023	-	4.034	2
58083A	51.22	.37	2.30	10.60	.30	15.06	19.92	.29	.14	100.20	1.916	.010	.101	.332	.010	.839	.798	.021	.004	4.032	3
58083B	52.67	.25	1.67	6.16	.15	16.87	21.96	.21	.22	100.15	1.938	.007	.072	.190	.005	.925	.866	.015	.006	4.023	3
58083C	51.40	.43	2.16	9.96	.31	15.70	19.84	.31	.09	100.21	1.916	.012	.095	.311	.010	.872	.793	.022	.003	4.034	3
58083D	51.69	.33	2.71	6.92	.26	15.85	22.17	.26	.21	100.40	1.908	.009	.118	.214	.008	.872	.877	.019	.006	4.030	3
58084A	51.86	.22	1.33	10.70	.36	14.49	21.62	.31	-	100.89	1.936	.006	.059	.334	.011	0806	.865	.022	-	4.040	3
58084B	51.32	.28	1.87	10.30	.34	14.67	21.29	.33	-	100.40	1.921	.008	.083	.322	.011	.819	.854	0.24	-	4.042	3
58084C	51.14	.24	2.26	9.23	.24	15.04	21.49	.21	-	99.85	1.915	.007	.100	.289	.008	.839	.862	0.14	-	4.036	3
58084D	51.25	.25	1.32	10.53	.38	14.72	21.55	.23	-	100.23	1.927	.007	.059	.331	.012	.825	.868	.017	-	4.045	2
58084E	51.75	.23	1.49	10.34	.36	14.67	21.50	.22	-	100.56	1.934	.006	.066	.323	.011	.817	.861	.016	-	4.035	3
58084F	51.42	.22	1.47	10.46	.36	14.45	21.11	.22	-	99.71	1.938	.006	.065	.330	.011	.812	.853	.016	-	4.031	3

Composition of detrital clinopyroxenes from the Pipeclay Creek Formation

Cawood 83-11.
5

SAMPLE	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	Cr_2O_3	TOTAL	NUMBER OF IONS ON THE BASIS OF 6 OXYGENS Si	Ti	Al	Fe2+	Mn	Mg	Ca	Na	Cr	TOTAL	Anal No.
58085	51.63	.25	1.42	10.85	.40	13.69	21.55	.29	-	100.08	1.994	.007	.063	.342	.013	.768	.870	.021	-	4.028	16
58039A	50.61	.42	3.33	9.61	.25	15.68	20.17	.22	-	100.29	1.884	.012	.146	.299	.008	.870	.805	.016	-	4.039	3
58039B	51.37	.26	1.46	10.91	.39	14.58	21.04	.27	-	100.28	1.930	.007	.065	.343	.012	.816	.847	.020	-	4.040	3
58039C	50.86	.29	1.55	10.89	.38	14.60	20.97	.23	-	99.77	1.922	.008	.069	.344	.012	.822	.849	.017	-	4.044	3
58039D	50.31	.31	1.50	10.86	.36	14.63	21.33	.21	-	99.51	1.911	.009	.067	.345	.012	.828	.868	.015	-	4.055	2
58039E	50.16	.33	1.95	12.19	.42	14.38	20.75	.29	-	100.47	1.896	.009	.087	.385	.013	.810	.840	.021	-	4.062	3
58039F	50.31	.41	1.78	12.60	.40	14.76	19.89	.23	-	100.38	1.901	.012	.079	.398	.013	.831	.805	.017	-	4.056	2
58039G	50.57	.35	1.64	12.28	.43	15.09	19.79	.20	-	100.35	1.907	.010	.073	.387	.014	.848	.800	.015	-	4.054	2

SAMPLE	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	Cr_2O_3	TOTAL	NUMBER OF IONS ON THE BASIS OF 6 OXYGENS Si	Ti	Al	Fe2+	Mn	Mg	Ca	Na	Cr	TOTAL	Anal No.
58086A	51.15	.76	2.62	11.34	.42	13.58	20.49	.32	-	100.68	1.913	.021	.116	.355	.013	.757	.821	.023	-	4.019	2
58086B	50.92	.62	2.98	9.62	.31	14.26	21.38	.29	-	100.38	1.900	.017	.131	.300	.010	.793	.855	.021	-	4.027	3
58086C	50.63	.75	2.34	12.33	.51	13.12	19.90	.32	-	99.90	1.917	.021	.104	.390	.016	.740	.807	.023	-	4.021	3
58086D	50.17	.65	3.19	9.44	.27	14.03	21.15	.33	-	99.23	1.894	.018	.142	.298	.009	.789	.855	.024	-	4.029	3
58086E	49.67	.65	4.27	8.25	.17	14.30	22.39	.28	-	99.98	1.857	.018	.188	.258	.005	.797	.897	.020	-	4.041	3
58086F	50.51	1.02	2.68	9.13	.33	14.82	20.45	.38	.11	99.43	1.898	.029	.119	.287	.011	.830	.823	.028	.003	4.026	2
58086G	50.93	.53	2.57	12.13	.36	15.17	17.91	.36	-	99.96	1.912	.015	.114	.381	.011	.849	.721	.026	-	4.029	3
58087A*	50.41	.30	3.96	5.52	.12	15.97	23.04	.21	.40	99.93	1.865	.008	.173	.171	.004	.881	.913	.015	.012	4.042	4
58087B*	51.25	.30	3.75	4.51	.10	15.98	23.25	.21	.73	100.08	1.884	.008	.162	.139	.003	.875	.916	.015	.021	4.024	3
58087C*	51.93	.21	2.84	4.40	.13	16.56	23.48	.18	.55	100.28	1.904	.006	.123	.135	.004	.905	.922	.013	.016	4.027	5
58087D	49.98	.54	5.00	6.71	.13	14.96	22.78	.26	.15	100.51	1.846	.015	.218	.207	.004	.823	.901	.019	.004	4.038	4
58087E*	49.23	.55	5.39	6.65	.14	14.65	23.04	.22	.10	99.97	1.831	.015	.236	.207	.004	.812	.918	.016	.003	4.042	4
58087F	51.75	.30	2.96	4.43	.12	16.56	23.60	.20	.49	100.41	1.896	.008	.128	.136	.004	.904	.927	.014	.014	4.031	3
58089A	49.84	.66	3.75	8.67	.56	15.08	22.21	.43	-	101.20	1.849	.018	.164	.269	.018	.834	.883	.031	-	4.066	3
58089B	50.71	.49	1.77	11.53	.56	15.26	19.40	.19	-	99.91	1.912	.014	.079	.364	.018	.858	.784	.014	-	4.042	3
58089C	49.71	.56	2.97	9.91	.40	15.69	20.81	.33	-	100.38	1.862	.016	.131	.311	.013	.876	.835	.024	-	4.068	3
58089D	49.32	.61	2.45	11.40	.47	14.99	20.39	.33	-	99.96	1.869	.017	.109	.361	.015	.847	.828	.024	-	4.071	2

*Ti-poor group

Composition of detrital clinopyroxenes from the Drik-Drik Formation

Cawood 83-11
6

SAMPLE	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	Cr_2O_3	TOTAL	NUMBER OF IONS ON THE BASIS OF 6 OXYGENS Si	Ti	Al	Fe2+	Mn	Mg	Ca	Na	Cr	TOTAL	Anal No.
58044A	50.82	.30	1.56	11.50	.83	13.10	20.85	.23	-	99.19	1.939	.009	.070	.367	.027	.745	.852	.017	-	4.026	3
58044B	51.34	.27	1.08	11.41	.77	13.75	20.82	.20	-	99.64	1.947	.008	.048	.362	.025	.777	.846	.015	-	4.028	3
58044C	51.61	.23	1.50	11.71	.74	13.05	20.84	.31	-	99.99	1.951	.007	.067	.370	.024	.735	.844	.023	-	4.020	3
58044D	51.51	.22	1.02	12.48	.80	13.20	21.06	.33	-	100.62	1.946	.006	.045	.394	.026	.743	.852	.024	-	4.037	3
58044E	51.88	.23	1.22	12.40	.78	13.00	21.04	.33	-	100.88	1.951	.007	.054	.390	.025	.729	.848	.024	-	4.027	2
58043A	52.05	.25	1.27	10.29	.50	14.15	21.59	.26	-	100.36	1.949	.007	.056	.322	.016	.790	.866	.019	-	4.025	3
58043B	52.10	.30	1.13	11.49	.85	13.46	20.83	.23	-	100.39	1.959	.008	.050	.361	.027	.754	.839	.017	-	4.016	3
58043C	51.62	.26	1.19	11.36	.89	13.64	21.13	.26	-	100.35	1.945	.007	.053	.358	.028	.766	.853	.019	-	4.030	2
58043D	51.05	.30	1.20	12.20	1.04	13.72	19.90	.29	-	99.70	1.941	.009	.054	.388	.033	.777	.811	.021	-	4.034	2
58043E	51.69	.27	1.16	10.68	.65	14.10	21.32	.31	-	100.18	1.945	.008	.051	.336	.021	.791	.859	.023	-	4.033	2
58043F	50.63	.27	1.01	10.58	.61	13.77	21.40	.29	-	98.56	1.940	.008	.046	.339	.020	.787	.879	.022	-	4.040	1
53345A	51.34	.32	1.25	11.53	.86	14.38	20.19	.27	-	100.14	1.937	.009	.056	.364	.027	.808	.816	.020	-	4.036	3
53345B	50.65	.35	1.87	11.62	.68	14.70	20.80	.29	.07	101.03	1.900	.010	.083	.364	.022	.822	.836	.021	.002	4.059	2
53345C	51.25	.19	1.30	11.35	.71	15.00	20.37	.33	-	100.50	1.926	.005	.058	.357	.023	.840	.820	.024	-	4.052	3
53345D	51.05	.32	1.37	11.32	.78	15.02	20.37	.35	-	100.58	1.918	.009	.061	.356	.025	.841	.820	.026	-	4.055	2
53345E	50.83	.23	1.50	11.01	.68	15.32	20.24	.28	-	100.09	1.915	.007	.067	.347	.022	.860	.817	.020	-	4.055	2

Composition of detrital clinopyroxenes from the Northcotte Formation

SAMPLE	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	K_2O	Cr_2O_3	TOTAL	NUMBER OF IONS ON THE BASIS OF 6 OXYGENS Si	Ti	Al	Fe2+	Mn	Mg	Ca	Na	Cr	TOTAL	Anal No.
58058A	48.91	.42	3.85	8.66	.20	15.75	21.31	.20	-	-	99.30	1.844	.012	.171	.273	.006	.885	.861	.015	-	4.066	3
58058B*	51.35	.21	1.18	8.67	.81	15.75	21.35	.38	-	-	99.70	1.929	.006	.052	.272	.026	.882	.859	.028	-	4.053	3
58058C	50.30	.41	1.80	10.36	.42	15.54	20.31	.27	-	-	99.41	1.903	.012	.080	.328	.013	.876	.823	.020	-	4.055	3
58058D*	52.10	.09	1.00	8.62	.55	15.74	22.11	.32	-	-	100.53	1.939	.003	.044	.268	.017	.873	.882	.023	-	4.048	3
58058E*	51.31	.34	1.33	10.34	.63	15.69	21.07	.25	-	-	100.96	1.914	.010	.058	.323	.020	.872	.842	.018	-	4.057	2
58058F*	50.59	.41	1.51	10.62	.68	15.22	20.10	.28	-	-	99.41	1.916	.012	.067	.336	.022	.859	.816	.021	-	4.049	3
58055A	49.99	.56	3.89	8.10	.14	15.01	22.21	.21	-	-	100.11	1.863	.016	.171	.253	.004	.834	.887	.015	-	4.043	3
58055B	49.03	.78	4.98	8.28	.18	14.78	21.19	.26	-	.27	99.75	1.834	.022	.220	.259	.006	.824	.849	.019	.008	4.040	4
58055C*	51.05	.65	1.72	11.94	.76	14.40	19.41	.32	-	-	100.25	1.923	.018	.076	.376	.024	.808	.783	.023	-	4.033	3
58055D*	50.79	.45	1.38	13.13	.63	14.05	19.13	.23	-	-	99.79	1.930	.013	.062	.417	.020	.796	.770	.017	-	4.034	3
58055E*	50.69	.50	1.30	13.63	.72	13.58	19.32	.20	-	-	99.94	1.930	.014	.058	.434	.023	.771	.788	.015	-	4.034	3
58056A	50.45	.50	2.58	10.21	.32	15.65	19.88	.23	-	-	99.82	1.893	.014	.114	.320	.010	.875	.799	.017	-	4.044	3
58056B	49.27	.64	3.54	8.38	.25	14.91	22.08	.27	-	-	99.44	1.856	.018	.162	.264	.008	.837	.891	.020	-	4.055	2
58056C*	50.40	.28	1.54	12.64	.61	13.72	20.16	.28	-	-	99.63	1.922	.008	.069	.403	.020	.780	.824	.021	-	4.046	2
58056D*	50.25	.34	1.58	13.10	.56	14.59	19.12	.22	-	-	99.76	1.912	.010	.071	.417	.018	.827	.780	.016	-	4.051	3
58056E	50.79	.29	1.98	11.18	.43	15.57	19.77	.21	-	-	100.22	1.907	.008	.088	.351	.014	.871	.795	.015	-	4.049	3
58056F	51.57	.30	2.28	9.23	.28	18.16	18.17	.19	-	.17	100.35	1.904	.008	.099	.285	.009	.999	.719	.014	.005	4.042	3
58056G*	50.78	.30	1.14	11.94	.79	14.13	20.72	.28	-	-	100.08	1.926	.009	.051	.379	.025	.799	.842	.021	-	4.051	2
58057A	51.19	.28	2.62	7.03	.18	16.62	20.68	.22	-	.46	99.28	1.906	.008	.115	.219	.006	.922	.825	.016	.014	4.030	5
58057B*	50.99	.35	1.29	11.59	.91	14.35	19.64	.35	-	-	99.47	1.936	.010	.058	.368	.029	.812	.799	.026	-	4.038	5
58057C	50.90	.63	2.82	9.09	.44	15.36	20.49	.36	-	-	100.09	1.898	.018	.124	.283	.014	.854	.819	.026	-	4.035	3
58057D	51.08	.15	3.56	5.03	.13	17.10	21.36	.17	-	.47	99.05	1.891	.004	.155	.156	.004	.943	.847	.012	.014	4.027	3

*Mn rich group

Composition of detrital clinopyroxenes from the Silver Gully Formation

Cawood 83-11 7'

SAMPLE	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	Cr_2O_3	TOTAL	NUMBER OF IONS ON THE BASIS OF 6 OXYGENS Si	Ti	Al	Fe2+	Mn	Mg	Ca	Na	Cr	TOTAL	Anal No.
58090	51.87	.55	1.82	10.07	.39	15.48	19.77	.36	-	100.31	1.931	.015	.080	.314	.012	.859	.789	.026	-	4.026	8
58092A	51.44	.26	1.19	8.31	.31	15.82	20.96	.45	-	98.74	1.940	.007	.053	.262	.010	.889	.847	.033	-	4.042	2
58092B	52.05	.21	1.29	8.50	.29	16.02	21.55	.45	-	100.36	1.934	.006	.057	.264	.009	.887	.858	.032	-	4.048	2
58092C	51.99	.17	1.25	8.32	.31	15.80	21.54	.36	-	99.74	1.942	.005	.055	.260	.010	.879	.862	.026	-	4.039	2
58092D	51.91	.30	1.42	8.84	.32	15.68	21.09	.42	-	99.98	1.937	.008	.062	.276	.010	.872	.843	.030	-	4.039	2
58093	51.57	.35	1.83	8.68	.30	15.42	20.66	.38	-	99.19	1.935	.010	.081	.272	.010	.862	.831	.028	-	4.028	5
58094	51.54	.33	1.56	8.95	.27	15.75	20.89	.40	-	99.69	1.929	.009	.069	.380	.009	.879	.838	.029	-	4.042	6
58095	51.61	.33	1.43	8.56	.30	15.91	21.12	.38	-	99.64	1.931	.009	.063	.268	.010	.887	.847	.028	-	4.042	6
58096	51.33	.47	2.73	7.19	.24	16.72	20.90	.36	.12	100.06	1.899	.013	.119	.222	.008	.922	.828	.026	.004	4.040	8
58097	51.67	.29	1.80	7.18	.32	16.38	21.26	.45	-	99.35	1.927	.008	.079	.224	.010	.911	.850	.033	-	4.041	6
58098A	51.72	.19	2.71	4.92	.08	18.39	21.03	.28	.58	99.90	1.897	.005	.117	.151	.002	1.005	.826	.020	.017	4.041	3
58098B	49.68	.57	4.64	7.12	.16	16.59	20.97	.34	.29	100.36	1.836	.016	.202	.220	.005	.914	.830	.025	.008	4.055	2
58099A	51.72	.71	2.26	7.61	.26	16.55	20.30	.47	-	99.88	1.916	.020	.099	.236	.008	.914	.806	.034	-	4.032	3
58099B	51.67	.62	2.29	6.66	.24	16.76	20.32	.42	-	98.98	1.923	.017	.100	.207	.008	.929	.810	.030	-	4.025	3
58099C	52.23	.29	1.60	7.30	.37	15.71	21.11	.70	-	99.31	1.948	.008	.070	.228	.012	.873	.844	.051	-	4.034	2
58099D	52.06	.34	2.29	7.82	.29	15.73	20.86	.58	-	99.97	1.930	.009	.100	.242	.009	.869	.829	.042	-	4.031	2
58100A	51.78	.35	1.60	9.86	.44	15.96	19.61	.27	-	99.87	1.935	.010	.070	.308	.014	.889	.785	.020	-	4.030	2
58100B	50.82	.49	2.82	9.18	.40	15.04	20.19	.35	-	99.29	1.909	.014	.125	.288	.013	.842	.812	.025	-	4.028	3
58100C	51.79	.39	2.21	9.52	.44	15.07	20.33	.37	-	100.12	1.930	.011	.097	.297	.014	.837	.812	.027	-	4.024	2
58100D	52.08	.41	2.21	9.41	.33	15.99	19.81	.35	-	100.59	1.926	.011	.096	.291	.010	.881	.785	.025	-	4.027	2

Samples 58090 - 58095 are from the Baldwin Formation. Samples 58096 and 58097 are from the Keepit Conglomerate and the remainder are from the Tulcumba Sandstone and approximately time equivalent units.

Composition of detrital clinopyroxenes from the Baldwin and post-Baldwin Formations.

SAMPLE	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	Cr203	TOTAL	NUMBER OF IONS ON THE BASIS OF 6 OXYGENS Si	Ti	Al	Fe2+	Mn	Mg	Ca	Na	Cr	TOTAL	Anal No.
i Low	TiO_2	Group																			
58106A	51.40	.51	2.58	9.78	.27	15.55	19.91	.22	.04	100.26	1.912	.014	.113	.304	.009	.862	.794	.016	.001	4.025	2
58106B	51.22	.67	2.59	9.21	.27	15.29	20.52	.27	.02	100.06	1.909	.019	.114	.287	.009	.849	.819	.020	.001	4.025	2
58106C	50.38	.58	3.42	10.21	.25	15.21	18.90	.21	.15	99.31	1.892	.016	.151	.321	.008	.851	.761	.015	.004	4.021	2
58106D	51.64	.33	2.73	6.61	.19	16.99	19.93	.19	.36	98.97	1.918	.009	.120	.205	.006	.940	.793	.014	.011	4.015	3
58106E	50.98	.41	3.59	7.56	.21	15.78	20.55	.17	.16	99.41	1.896	.011	.157	.235	.007	.875	.819	.012	.005	4.017	2
58106F	51.51	.54	3.30	7.66	.21	16.23	20.42	.19	.14	100.20	1.900	.015	.143	.236	.007	.892	.807	.014	.004	4.018	2
58107A	52.13	.41	2.32	9.94	.37	15.33	19.17	.25	-	99.92	1.940	.011	.102	.309	.012	.850	.764	.018	-	4.007	1
58107B	51.81	.33	3.19	6.48	.21	15.78	21.82	.24	.54	100.40	1.906	.009	.138	.199	.007	.865	.860	.017	.016	4.017	2
58107C	51.11	.49	1.92	12.66	.66	13.22	19.78	.31	-	100.15	1.932	.014	.086	.400	.021	.745	.801	.023	-	4.022	2
58107D	52.03	.36	1.21	13.36	1.18	13.20	19.33	.30	-	100.97	1.956	.010	.054	.420	.038	.740	.779	.022	-	4.018	3
58074A[1]	51.80	.39	2.03	8.49	.14	16.99	19.07	.16	.15	99.23	1.929	.011	.089	.264	.004	.943	.761	.012	.004	4.019	3
58074C	52.02	.58	1.93	9.06	.28	15.79	20.73	.29	-	100.68	1.925	.016	.084	.280	.009	.871	.822	.021	-	4.027	2
58074D	51.13	.53	2.85	7.98	.12	16.43	21.15	.27	.03	100.49	1.890	.015	.124	.247	.004	.905	.838	.019	.001	4.042	2
58074E[1]	50.32	.58	2.80	9.44	.13	16.49	19.33	.26	.03	99.39	1.886	.016	.124	.296	.004	.921	.776	.019	.001	4.045	2
58074F	52.19	.26	2.18	8.04	.12	18.53	19.42	.15	.08	100.97	1.908	.007	.094	.246	.004	1.010	.761	.011	.002	4.042	2
ii High	TiO_2	Group																			
58107E	48.99	.84	3.92	10.60	.40	14.59	19.40	.32	-	99.06	1.858	.024	.175	.336	.013	.825	.788	.024	-	4.042	2
58074B[1]	49.52	.99	4.23	10.73	.13	14.84	19.54	.27	-	100.26	1.852	.028	.187	.336	.004	.827	.783	.020	-	4.037	2
58108A[1]	49.11	.99	3.90	8.63	.20	15.64	20.91	.43	.03	99.85	1.840	.028	.172	.270	.006	.873	.839	.031	.001	4.062	3
58108B[1]	49.63	.77	3.57	9.00	.21	17.02	19.53	.38	.07	100.19	1.847	.022	.157	.280	.007	.944	.779	.027	.002	4.066	3
58108C	48.75	.92	4.53	8.95	.18	16.70	19.50	.45	.12	100.10	1.818	.026	.199	.279	.006	.928	.779	.033	.004	4.071	2

[1]contain 0.01 percent K_2O

Composition of detrital clinopyroxenes from the Woolomin Formation

Cawood 83-11 8'

SAMPLE	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	Cr_2O_3	TOTAL	NUMBER OF IONS ON THE BASIS OF 6 OXYGENS Si	Ti	Al	Fe2+	Mn	Mg	Ca	Na	Cr	TOTAL	Anal No.
ii High	TiO_2																				
58103A	50.81	.74	2.57	10.10	.26	16.44	18.61	.30	-	99.83	1.897	.021	.113	.315	.008	.915	.745	.022	-	4.036	2
58103C	49.11	1.05	4.18	10.45	.23	15.15	19.70	.38	-	100.25	1.840	.030	.185	.327	.007	.846	.791	.028	-	4.052	2
58103D	48.56	.93	5.00	8.84	.22	15.53	20.15	.42	.05	99.70	1.819	.026	.221	.277	.007	.867	.809	.031	.001	4.059	2
58103H	49.04	.81	4.89	10.18	.22	16.13	17.77	.50	.10	99.64	1.835	.023	.216	.319	.007	.900	.713	.036	.003	4.051	2
58104B	51.02	.71	2.64	7.99	.28	15.53	20.79	.27	.17	99.40	1.906	.020	.116	.250	.009	.865	.832	.020	.005	4.023	3
iii High	MnO	Group																			
58060E	52.21	.21	1.62	12.54	.51	14.34	18.35	.22	-	100.00	1.961	.006	.072	.394	.016	.803	.738	.016	-	4.005	1
58101C	50.39	.28	1.28	15.16	.92	13.08	18.97	.25	-	100.33	1.926	.008	.058	.485	.030	.745	.777	.019	-	4.046	2
58101D	50.66	.40	1.35	14.89	.76	13.91	18.57	.20	-	100.74	1.921	.011	.060	.472	.024	.786	.755	.015	-	4.045	2
58101E	50.15	.43	1.70	15.93	.91	12.73	18.58	.23	-	100.66	1.915	.012	.077	.509	.029	.724	.760	.017	-	4.043	2
58101F	49.62	.30	1.57	15.79	.95	13.01	17.94	.37	-	99.55	1.915	.009	.071	.510	.031	.748	.742	.028	-	4.054	2
58105A[1]	50.06	.41	1.48	12.33	.57	14.94	19.22	.25	.01	99.29	1.910	.012	.067	.393	.018	.849	.786	.018	-	4.055	3
58105B	50.11	.36	1.43	12.58	.71	14.66	19.26	.37	-	99.48	1.912	.010	.064	.401	.023	.834	.787	.027	-	4.059	2
58105C	50.61	.35	.98	13.18	.80	14.54	18.77	.42	-	99.65	1.930	.010	.044	.420	.026	.826	.767	.031	-	4.054	4
58104A	51.12	.34	1.45	11.90	.71	12.63	20.19	.24	-	99.58	1.959	.010	.066	.381	.023	.721	.829	.018	-	4.007	3
58104C	51.53	.55	1.24	12.76	.76	12.85	19.89	.25	.02	99.85	1.955	.016	.055	.405	.024	.727	.809	.018	.001	4.010	2
58069A	51.80	.47	1.81	9.75	.65	15.36	20.49	.33	-	100.66	1.926	.013	.079	.303	.020	.851	.816	.024	-	4.033	2
58069C	52.63	.27	1.08	9.53	.58	14.81	20.71	.34	-	99.95	1.966	.008	.048	.298	.018	.824	.829	.025	-	4.015	2
58069D	51.63	.45	1.41	10.95	1.00	14.83	18.78	.32	-	99.37	1.949	.013	.063	.346	.032	.834	.759	.023	-	4.019	2
58069E	51.66	.40	1.78	8.97	.66	15.24	20.36	.35	-	99.42	1.937	.011	.079	.281	.021	.852	.818	.025	-	4.025	2

[1]contains 0.2 percent K_2O

SAMPLE	SiO_2	TiO_2	Al_2O_3	FeO	MnO	MgO	CaO	Na_2O	K_2O	Cr_2O_3	TOTAL	NUMBER OF IONS ON THE BASIS OF 6 OXYGENS Si	Ti	Al	Fe3+	Fe2+	Mn	Mg	Ca	Na	K	Cr	TOTAL	Anal No.
i Low	MnO	Group																						
58060A	51.90	.21	1.75	10.84	.35	14.65	19.22	.18	-	-	99.10	1.956	.006	.078	-	.342	.011	.823	.776	.013	-	-	4.005	3
58060B	52.56	.18	1.82	7.76	.23	16.61	19.35	.17	-	.23	98.91	1.956	.005	.080	-	.242	.007	.921	.772	.012	-	.007	4.002	2
58060C	52.74	.14	1.73	8.66	.29	15.72	19.68	.20	-	.06	99.22	1.965	.004	.076	-	.270	.009	.873	.786	.014	-	.002	3.999	2
58060D	50.91	.15	1.81	8.76	.27	16.21	19.55	.27	-	.31	98.24	1.927	.004	.081	-	.277	.009	.914	.793	.020	-	.009	4.034	2
58060F	51.95	.25	1.80	11.95	.42	13.79	20.08	.26	-	-	100.50	1.947	.007	.080	-	.374	.013	.770	.806	.019	-	-	4.016	2
58060G	52.78	.17	1.98	8.52	.28	16.63	19.95	.18	-	.20	100.69	1.940	.005	.086	-	.262	.009	.911	.786	.013	-	.006	4.016	2
58101A	50.38	.45	3.18	11.03	.33	16.10	18.73	.21	-	.08	100.49	1.878	.013	.140	-	.344	.010	.895	.748	.015	-	.002	4.046	3
58101B	50.40	.48	3.35	10.26	.34	16.00	19.79	.19	-	.04	100.85	1.871	.013	.147	-	.319	.011	.885	.787	.014	-	.001	4.048	2
58101G	49.83	.41	2.73	10.42	.34	16.77	18.96	.26	-	.03	99.75	1.872	.012	.121	-	.327	.011	.939	.763	.019	-	.001	4.065	2
58102A	51.71	.31	2.11	9.14	.47	15.66	21.21	.27	-	-	100.88	1.915	.009	.092	-	.283	.015	.864	.842	.019	-	-	4.040	1
58102B	50.72	.43	2.37	9.94	.29	15.54	19.84	.20	-	-	99.33	1.909	.012	.105	-	.313	.009	.871	.800	.015	-	-	4.034	2
58102C	50.74	.31	2.24	8.13	.46	15.38	22.64	.34	-	-	100.24	1.896	.009	.099	-	.254	.015	.856	.906	.025	-	-	4.059	2
58103B	51.18	.38	1.57	13.84	.46	14.66	18.57	.21	-	-	100.87	1.924	.011	.070	-	.435	.015	.821	.748	.015	-	-	4.038	2
58103E	51.10	.42	2.07	10.63	.25	17.44	18.60	.24	-	-	100.75	1.896	.012	.091	-	.330	.008	.964	.739	.017	-	-	4.056	2
58103F	50.95	.22	2.64	8.92	.26	17.57	18.86	.21	-	.10	99.73	1.895	.006	.116	-	.278	.008	.974	.752	.015	-	.003	4.047	3
58103G	51.51	.32	2.16	10.20	.26	16.01	19.54	.19	-	-	100.19	1.919	.009	.095	-	.318	.008	.889	.780	.014	-	-	4.031	2
58069B	52.56	.33	1.29	9.94	.46	15.47	20.44	.30	-	-	100.79	1.948	.009	.056	-	.308	.014	.855	.812	.022	-	-	4.025	2

Composition of detrital clinopyroxenes from the Wisemans Arm Formation