



RELATIONSHIP OF THERMAL EVOLUTION TO
TECTONIC PROCESSES IN A PROTEROZOIC FOLD BELT:
HALLS CREEK MOBILE ZONE, EAST KIMBERLEY, WEST AUSTRALIA.

by

ROSEMARY ALLEN B.Sc.(Hons).

Department of Geology and Geophysics

University of Adelaide.

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Garnet Biotite Geothermometry

(Programme - R. Lawrence)

Sample Name: K498/807

Gross.	Garnet Composition		Specs.
	Pyrope	Alman.	
4.55459E-02	.236437	.699267	1.87542E-02

X-Ti:	Biotite Composition		
	X-Al:	X-Fe:	X-Mg:
2.44349E-02	.109545	.203169	.662476

Corrections of Indares and Martignole (1985)
 Model A: biotite: -35.6378 garnet: 25.0932
 Model B: biotite: -38.6388 garnet: 31.8445

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	424.711	414.168	397.917 °C
6	430.984	420.441	404.19 °C
8	437.257	426.715	410.463 °C
10	443.53	432.988	416.736 °C
12	449.803	439.261	423.009 °C

Sample Name: K499/807

Gross.	Garnet Composition		Specs.
	Pyrope	Alman.	
6.12729E-02	.143196	.77302	2.25118E-02

X-Ti:	Biotite Composition		
	X-Al:	X-Fe:	X-Mg:
5.09257E-02	.100708	.354373	.490994

Corrections of Indares and Martignole (1985)
 Model A: biotite: -70.7302 garnet: 37.0285
 Model B: biotite: -93.0343 garnet: 45.268

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	488.179	454.477	435.412 °C
6	495.022	461.321	442.256 °C
8	501.866	468.164	449.1 °C
10	508.71	475.008	455.943 °C
12	515.553	481.852	462.787 °C

Sample Name: K498/807

Gross.	Garnet Composition		Specs.
	Pyrope	Alman.	
4.55459E-02	.236437	.699267	1.87542E-02

X-Ti:	Biotite Composition		
	X-Al:	X-Fe:	X-Mg:
5.09257E-02	.100708	.354373	.490994

Corrections of Indares and Martignole (1985)
 Model A: biotite: -90.1431 garnet: 35.0478
 Model B: biotite: -124.941 garnet: 44.2758

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	677.136	642.341	616.471 °C
6	705.958	650.763	625.193 °C
8	714.58	659.485	633.915 °C
10	723.202	668.207	642.637 °C
12	732.024	676.929	651.359 °C

Sample Name: K498/800 X

Gross.	Garnet Composition		Spess.
	Pyrope	Alman.	
4.77538E-02	.134809	.803995	1.36439E-02

X-Ti:	Biotite Composition		
	X-Al:	X-Fe:	X-Mg:
.060632	.118645	.474627	.348285

Corrections of Indares and Martignole (1985)

Model A: biotite: -104.02	garnet: 35.8038
Model B: biotite: -143.132	garnet: 41.1773

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	671.892	607.674	569.927 °C
6	630.387	612.169	578.432 °C
8	688.882	620.664	586.927 °C
10	697.377	628.159	595.432 °C
12	705.872	637.654	603.927 °C

Sample Name: K498/811

Gross.	Garnet Composition		Spess.
	Pyrope	Alman.	
3.61606E-02	.152978	.789531	2.10296E-02

X-Ti:	Biotite Composition		
	X-Al:	X-Fe:	X-Mg:
4.26623E-02	.104284	.33671	.516343

Corrections of Indares and Martignole (1985)

Model A: biotite: -60.7394	garnet: 21.2829
Model B: biotite: -86.7872	garnet: 30.4661

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	473.585	434.128	417.294 °C
6	480.297	440.841	424.006 °C
8	487.01	447.553	430.718 °C
10	493.722	454.266	437.431 °C
12	500.435	460.978	444.143 °C

Sample Name: K498/811

Gross.	Garnet Composition		Spess.
	Pyrope	Alman.	
3.74034E-02	.178654	.75977	2.41379E-02

X-Ti:	Biotite Composition		
	X-Al:	X-Fe:	X-Mg:
4.99314E-02	9.25925E-02	.333316	.523

Corrections of Indares and Martignole (1985)

Model A: biotite: -71.5262	garnet: 23.4503
Model B: biotite: -97.521	garnet: 34.6935

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	520.774	472.698	457.947 °C
6	527.911	479.835	465.083 °C
8	535.048	486.972	472.22 °C
10	542.184	494.108	479.357 °C
12	549.321	501.245	486.493 °C

Sample Name: #498/660 X

Garnet Composition
 Gross. Pyrope Alm. Spess.
 .265152 .462676 .269002 3.14117E-03

Biotite Composition
 X-Ti: X-Al: X-Fe: X-Mg:
 5.88817E-02 .140873 .46254 .337683

Corrections of Indares and Martignole (1985)
 Model A: biotite: 3119.85 garnet: -1601.4
 Model B: biotite: 4457.37 garnet: -3413.86

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	-28707.5	-27189.1	-29663.5 °C
6	-28963.1	-27444.7	-29919.1 °C
8	-29218.7	-27700.3	-30174.7 °C
10	-29474.3	-27955.9	-30430.3 °C
12	-29729.9	-28211.5	-30685.9 °C

Sample Name: #498/660 X

Garnet Composition
 Gross. Pyrope Alm. Spess.
 4.31409E-02 .130463 .309423 1.13729E-02

Biotite Composition
 X-Ti: X-Al: X-Fe: X-Mg:
 5.88817E-02 .140873 .46254 .337683

Corrections of Indares and Martignole (1985)
 Model A: biotite: -101.809 garnet: 30.8609
 Model B: biotite: -143.472 garnet: 39.8844

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	654.739	588.311	548.882 °C
6	653.08	597.182	557.193 °C
8	671.421	605.493	565.504 °C
10	679.762	613.804	573.814 °C
12	688.103	622.173	582.115 °C

Sample Name: #498/660 X

Garnet Composition
 Gross. Pyrope Alm. Spess.
 5.29253E-02 .138974 .79748 1.06211E-02

Biotite Composition
 X-Ti: X-Al: X-Fe: X-Mg:
 5.78629E-02 .118649 .466079 .337409

Corrections of Indares and Martignole (1985)
 Model A: biotite: -99.282 garnet: 39.8231
 Model B: biotite: -137.779 garnet: 42.3792

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	666.539	606.83	571.139 °C
6	675.036	615.277	579.636 °C
8	683.483	623.723	588.083 °C
10	691.931	632.172	596.531 °C
12	700.378	640.619	604.978 °C

Sample Name: K498/104 X

Garnet Composition
 Gross. Pyrope Alm. Spess.
 .141497 4.76014E-02 .804005 6.89429E-02

Biotite Composition
 X-Ti: X-Al: X-Fe: X-Mg:
 5.34069E-02 .120281 .650048 .171325

Corrections of Indares and Martignole (1985)
 Model A: biotite: -92.8654 garnet: 108.362
 Model B: biotite: -131.367 garnet: 98.4614

P (kb)	T (F&S '78)	(Model A)	(Model B)
4	661.801	677.638	628.925 °C
6	670.235	686.012	637.329 °C
8	678.64	694.417	645.734 °C
10	687.044	702.822	654.139 °C
12	695.449	711.226	662.543 °C

Sample Name: K498/768

Garnet Composition
 Gross. Pyrope Alm. Spess.
 2.93387E-02 .197146 .760072 1.29439E-02

Biotite Composition
 X-Ti: X-Al: X-Fe: X-Mg:
 6.17414E-02 9.74494E-02 .411258 .426496

Corrections of Indares and Martignole (1985)
 Model A: biotite: -107.23 garnet: 21.8086
 Model B: biotite: -142.421 garnet: 19.5182

P (kb)	T (F&S '78)	(Model A)	(Model B)
4	705.848	621.424	592.939 °C
6	714.645	630.224	601.739 °C
8	723.446	639.025	610.54 °C
10	732.246	647.825	619.34 °C
12	741.046	656.625	628.14 °C

Sample Name: K498/768

Garnet Composition
 Gross. Pyrope Alm. Spess.
 .037638 .110238 .837404 1.47206E-02

Biotite Composition
 X-Ti: X-Al: X-Fe: X-Mg:
 .070847 9.24838E-02 .408734 .39685

Corrections of Indares and Martignole (1985)
 Model A: biotite: -97.018 garnet: 20.3143
 Model B: biotite: -125.361 garnet: 19.1732

P (kb)	T (F&S '78)	(Model A)	(Model B)
4	512.003	438.329	413.847 °C
6	519.091	445.387	422.905 °C
8	526.149	452.445	429.963 °C
10	533.207	459.503	437.021 °C
12	540.265	466.561	444.079 °C

Sample Name: K498/70 X

Garnet Composition
Gross. Pyrope Alm. Spess.
4.80882E-02 .197863 .74019 1.38387E-02

Biotite Composition
X-Ti: X-Al: X-Fe: X-Mg:
4.33233E-02 .141706 .414909 .40006

Corrections of Indares and Martignole (1985)
Model A: biotite: -97.4734 garnet: 39.3656
Model B: biotite: -133.881 garnet: 48.2901

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	757.067	708.959	668.776 °C
6	766.328	718.22	678.037 °C
8	775.589	727.481	687.298 °C
10	784.85	736.742	696.559 °C
12	794.11	746.002	705.819 °C

Sample Name: K498/70 X

Garnet Composition
Gross. Pyrope Alm. Spess.
.046331 .190794 .751663 1.10070E-02

Biotite Composition
X-Ti: X-Al: X-Fe: X-Mg:
2.99804E-02 .237394 .40205 .309682

Corrections of Indares and Martignole (1985)
Model A: biotite: -83.7468 garnet: 41.6117
Model B: biotite: -168.344 garnet: 45.9092

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	851.164	807.029	728.729 °C
6	861.27	817.135	738.836 °C
8	871.377	827.242	748.943 °C
10	881.484	837.348	759.049 °C
12	891.59	847.455	769.156 °C

Sample Name: K498/104 X

Garnet Composition
Gross. Pyrope Alm. Spess.
.1459 4.49433E-02 .800771 8.38504E-03

Biotite Composition
X-Ti: X-Al: X-Fe: X-Mg:
7.34979E-02 3.86982E-02 .638798 .178464

Corrections of Indares and Martignole (1985)
Model A: biotite: -115.014 garnet: 107.673
Model B: biotite: -147.082 garnet: 98.8549

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	629.71	622.568	581.480 °C
6	637.826	630.684	589.599 °C
8	645.942	638.8	597.718 °C
10	654.058	646.916	605.831 °C
12	662.174	655.032	613.947 °C

Sample Name: K498/111 X

	Garnet Composition			
Gross.	Pyrope	Alman.	Spess.	
7.51455E-02	.124786	.793978	1.60904E-02	

	Biotite Composition			
X-Ti:	X-Al:	X-Fe:	X-Mg:	
4.62547E-02	.158411	.483733	.311072	

Corrections of Indares and Martignole (1985)
 Model A: biotite: -89.2906 garnet: 58.8197
 Model B: biotite: -137.807 garnet: 65.2315

P (kb)	T (F&S'78)	(Model A)	(Model B)	
4	703.442	672.971	638.867	°C
6	712.231	681.75	637.646	°C
8	721	690.519	646.425	°C
10	729.778	699.307	655.203	°C
12	738.557	708.086	663.982	°C

Sample Name: K498/111 X

	Garnet Composition			
Gross.	Pyrope	Alman.	Spess.	
.063287	.133035	.790093	1.35832E-02	

	Biotite Composition			
X-Ti:	X-Al:	X-Fe:	X-Mg:	
4.92026E-02	.16479	.484796	.299448	

Corrections of Indares and Martignole (1985)
 Model A: biotite: -98.9682 garnet: 51.6702
 Model B: biotite: -151.957 garnet: 58.7468

P (kb)	T (F&S'78)	(Model A)	(Model B)	
4	748.732	701.424	652.612	°C
6	757.908	710.61	661.698	°C
8	767.093	719.796	670.883	°C
10	776.279	728.981	680.069	°C
12	785.465	738.167	689.255	°C

Sample Name: K498/111 X

	Garnet Composition			
Gross.	Pyrope	Alman.	Spess.	
.063287	.133035	.790093	1.35832E-02	

	Biotite Composition			
X-Ti:	X-Al:	X-Fe:	X-Mg:	
.043433	.152537	.482279	.320361	

Corrections of Indares and Martignole (1985)
 Model A: biotite: -85.1806 garnet: 49.8868
 Model B: biotite: -132.237 garnet: 53.8654

P (kb)	T (F&S'78)	(Model A)	(Model B)	
4	714.335	678.941	635.863	°C
6	723.11	687.817	644.739	°C
8	731.986	696.692	653.614	°C
10	740.862	705.568	662.49	°C
12	749.737	714.444	671.366	°C

Sample Name: K498/106 X

Garnet Composition
 Gross. Pyrope Almandine Spess.
 6.17344E-02 8.10061E-02 .803323 4.73624E-03

Biotite Composition
 X-Ti: X-Al: X-Fe: X-Mg:
 5.37347E-02 .16181 .550604 .253145

Corrections of Indares and Martignole (1985)
 Model A: biotite: -96.9829 garnet: 43.978
 Model B: biotite: -145.336 garnet: 44.0636

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	661.377	610.372	560.074 °C
6	669.778	618.773	568.475 °C
8	678.178	627.173	576.876 °C
10	686.579	635.574	585.276 °C
12	694.979	643.974	593.677 °C

Sample Name: K498/106 X

Garnet Composition
 Gross. Pyrope Almandine Spess.
 5.73607E-02 8.60411E-02 .862619 3.77378E-03

Biotite Composition
 X-Ti: X-Al: X-Fe: X-Mg:
 6.00005E-02 .144726 .575153 .218678

Corrections of Indares and Martignole (1985)
 Model A: biotite: -112.883 garnet: 46.1045
 Model B: biotite: -161.531 garnet: 43.9004

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	733.343	668.343	617.694 °C
6	744.41	677.631	626.769 °C
8	753.476	686.697	635.825 °C
10	762.541	695.762	644.89 °C
12	771.607	704.828	653.956 °C

Sample Name: K498/111 X

Garnet Composition
 Gross. Pyrope Almandine Spess.
 7.45203E-02 .107961 .799364 .017654

Biotite Composition
 X-Ti: X-Al: X-Fe: X-Mg:
 5.51335E-02 .206255 .447827 .289362

Corrections of Indares and Martignole (1985)
 Model A: biotite: -100.473 garnet: 53.9998
 Model B: biotite: -158.331 garnet: 59.2657

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	632.371	586.397	533.805 °C
6	641.615	594.542	541.95 °C
8	649.159	602.686	550.094 °C
10	657.304	610.83	558.238 °C
12	665.448	618.975	566.383 °C

Sample Name: K498/69 X

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
.083045	.147765	.73653	.03246
	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
4.67788E-02	.133628	.444837	.372478

Corrections of Indares and Martignole (1985)
 Model A: biotite: -86.1195 garnet: 64.2396
 Model B: biotite: -127.777 garnet: 78.9219

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	689.663	657.683	640.808 °C
6	698.318	676.338	649.463 °C
8	706.973	684.993	658.118 °C
10	715.628	693.648	666.773 °C
12	724.283	702.303	675.428 °C

Sample Name: K498/768

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
3.36106E-02	.147255	.804992	1.41431E-02
	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
7.34636E-02	.123454	.411754	.390611

Corrections of Indares and Martignole (1985)
 Model A: biotite: -114.908 garnet: 20.2312
 Model B: biotite: -154.134 garnet: 29.6925

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	603.013	511.337	478.572 °C
6	610.689	519.212	486.448 °C
8	618.765	527.088	494.324 °C
10	626.641	534.964	502.2 °C
12	634.517	542.84	510.076 °C

Sample Name: K498/8 X

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
5.54156E-02	.126616	.796306	2.16625E-02
	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
.028082	.150821	.472054	.349044

Corrections of Indares and Martignole (1985)
 Model A: biotite: -56.4241 garnet: 40.4132
 Model B: biotite: -97.4432 garnet: 50.1792

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	644.207	628.196	596.941 °C
6	652.453	636.442	605.187 °C
8	660.699	644.688	613.434 °C
10	668.946	652.935	621.68 °C
12	677.192	661.181	629.926 °C

Sample Name: 498/749

Gross.	Garnet Composition		Spess.
	Pyrope	Alman.	
3.45778E-02	.214428	.730146	2.08471E-02

X-Ti:	Biotite Composition		
	X-Al:	X-Fe:	X-Mg:
5.80517E-02	.12637	.406362	.408308

Corrections of Indares and Martignole (1985):
Model A: biotite: -112.938 garnet: 28.9152
Model B: biotite: -108.313 garnet: 41.3374

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	784.121	700.098	667.193 °C
6	793.624	709.602	676.699 °C
8	803.128	719.106	686.203 °C
10	812.632	728.61	695.707 °C
12	822.136	738.114	705.211 °C

Sample Name: 498/749

Gross.	Garnet Composition		Spess.
	Pyrope	Alman.	
4.28305E-02	.178263	.761131	1.77785E-02

X-Ti:	Biotite Composition		
	X-Al:	X-Fe:	X-Mg:
6.50084E-02	.11471	.422718	.396584

Corrections of Indares and Martignole (1985):
Model A: biotite: -114.372 garnet: 33.2758
Model B: biotite: -104.642 garnet: 42.1688

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	707.238	626.193	594.313 °C
6	716.102	635.006	603.628 °C
8	724.915	643.819	612.442 °C
10	733.728	652.632	621.255 °C
12	742.541	661.446	630.068 °C

Sample Name: x498/121 X

Gross.	Garnet Composition		
	Pyrope	Alman.	Spess.
7.464e9E-02	.2384	.676026	.010928

X-Ti:	Biotite Composition		
	X-Al:	X-Fe:	X-Mg:
2.55468E-02	.162478	.362144	.449639

Corrections of Indares and Martignole (1985)

Model A: biotite: -61.2194	garnet: 62.4681
Model B: biotite: -110.642	garnet: 63.3054

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	769.262	770.511	721.926 °C
6	778.632	779.881	731.296 °C
8	788.003	789.252	740.666 °C
10	797.373	798.622	750.037 °C
12	806.743	807.992	759.407 °C

Sample Name: x498/121 X

Gross.	Garnet Composition		
	Pyrope	Alman.	Spess.
8.03408E-02	.218306	.690162	1.11909E-02

X-Ti:	Biotite Composition		
	X-Al:	X-Fe:	X-Mg:
2.60035E-02	8.48128E-02	.457931	.430746

Corrections of Indares and Martignole (1985)

Model A: biotite: -57.8862	garnet: 73.6624
Model B: biotite: -88.3413	garnet: 73.522

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	857.324	879.1	848.804 °C
6	873.84	889.316	859.02 °C
8	880.756	899.532	869.236 °C
10	893.972	909.748	879.452 °C
12	904.188	919.964	889.668 °C

Sample Name: x498.749

Gross.	Garnet Composition		
	Pyrope	Alman.	Spess.
4.16946E-02	.158706	.778801	2.10988E-02

X-Ti:	Biotite Composition		
	X-Al:	X-Fe:	X-Mg:
6.71737E-02	.124777	.420908	.386249

Corrections of Indares and Martignole (1985)

Model A: biotite: -112.678	garnet: 30.675
Model B: biotite: -153.672	garnet: 41.42

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	656.337	674.335	644.065 °C
6	664.693	682.69	652.44 °C
8	673.048	691.045	660.796 °C
10	681.403	699.401	669.151 °C
12	689.759	707.756	677.506 °C

Sample Name: K498/734d

	Garnet Composition			
Gross.	Pyrope	Alman.	Spess.	
.119447	.197762	.607634	1.51766E-02	

	Biotite Composition			
X-Ti:	X-Al:	X-Fe:	X-Mg:	
5.41763E-02	8.48074E-02	.744738	.51570	

Corrections of Indares and Martignole (1985)

Model A: biotite: -88.0491	gr. net: 88.8218
Model B: biotite: -112.848	gr. net: 81.6059

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	612.686	613.438	584.447 °C
6	670.649	621.401	592.41 °C
8	628.612	629.364	600.373 °C
10	686.574	637.327	608.336 °C
12	644.537	645.29	616.298 °C

Sample Name: K498/734d

	Garnet Composition			
Gross.	Pyrope	Alman.	Spess.	
.116784	.201109	.606939	1.51688E-02	

	Biotite Composition			
X-Ti:	X-Al:	X-Fe:	X-Mg:	
3.17371E-02	7.92814E-02	.319944	.569037	

Corrections of Indares and Martignole (1985)

Model A: biotite: -49.5125	garnet: 78.5637
Model B: biotite: -71.3563	garnet: 77.9139

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	553.91	557.951	562.467 °C
6	556.389	598.44	572.949 °C
8	577.359	602.92	590.428 °C
10	581.348	610.399	587.906 °C
12	588.827	617.879	598.387 °C

Sample Name: K498/121 X

	Garnet Composition			
Gross.	Pyrope	Alman.	Spess.	
5.89903E-02	.25029	.674887	5.83336E-03	

	Biotite Composition			
X-Ti:	X-Al:	X-Fe:	X-Mg:	
3.51409E-02	.149833	.324445	.490381	

Corrections of Indares and Martignole (1985)

Model A: biotite: -71.9899	garnet: 46.566
Model B: biotite: -117.141	garnet: 46.584

P (kb)	T (F&S'78)	(Model A)	(Model B)
4	717.101	691.677	648.514 °C
6	726.003	700.579	654.416 °C
8	734.904	709.48	660.317 °C
10	743.806	718.382	672.219 °C
12	752.707	727.283	681.12 °C

Sample Name: #498/1393B

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
2.68404E-02	.1038	.83780	1.18757E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
5.17272E-02	.133215	.418069	.396909

Corrections of Indares and Martignole (1985)

Model A. For biotite: -78.4453	For garnet: 17.0022
Model B. For biotite: -113.755	For garnet: 22.124

Correction for non-ideal Fe and Mg mixing according to the model of Ganguly and Saxena (1984): -52.6706

P (kb)	T (°C/78)	(Model A)	(Model B)	Non-ideal Fe/Mg
3	528.414	466.971	436.783	497.867 °C
4	532.033	470.59	440.402	501.486 °C
5	535.652	474.209	444.021	505.105 °C
6	539.271	477.828	447.639	508.724 °C
7	542.889	481.446	451.258	512.343 °C

Sample Name: #498/1393B

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
2.80621E-02	.105949	.833278	1.27103E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
5.35264E-02	.140307	.372916	.433657

Corrections of Indares and Martignole (1985)

Model A. For biotite: -76.1526	For garnet: 15.6296
Model B. For biotite: -110.803	For garnet: 21.8005

Correction for non-ideal Fe and Mg mixing according to the model of Ganguly and Saxena (1984): -52.3099

P (kb)	T (°C/78)	(Model A)	(Model B)	Non-ideal Fe/Mg
3	476.895	417.372	337.861	446.185 °C
4	480.281	420.758	391.247	449.572 °C
5	483.668	424.145	394.634	452.958 °C
6	487.054	427.531	398.02	456.345 °C
7	490.44	430.917	401.406	459.731 °C

Sample Name: K498/815A

	Garnet Composition			
Gross.	Pyrope	Alman.	Spess.	
3.42774E-02	.162858	.784074	1.88285E-02	

	Biotite Composition			
X-Ti:	X-Al:	X-Fe:	X-Mg:	
6.09035E-02	.102559	.411806	.424377	

Corrections of Indares and Martignole (1985)
 Model A. For biotite: -97.0537 For garnet: 24.1404
 Model B. For biotite: -130.228 For garnet: 33.6312
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -114.448

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	615.289	542.378	518.596	534.475 °C
4	619.301	546.389	522.707	538.487 °C
5	623.312	550.4	526.718	542.498 °C
6	627.323	554.412	530.729	546.509 °C
7	631.334	558.427	534.74	550.52 °C

Sample Name: K498/815A

	Garnet Composition			
Gross.	Pyrope	Alman.	Spess.	
3.31771E-02	.141724	.80202	2.30797E-02	

	Biotite Composition			
X-Ti:	X-Al:	X-Fe:	X-Mg:	
4.24995E-03	.17993	.330306	.484664	

Corrections of Indares and Martignole (1985)
 Model A. For biotite: -19.4865 For garnet: 19.1725
 Model B. For biotite: -55.1634 For garnet: 29.2991
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -74.067

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	457.43	457.116	431.566	412.66 °C
4	460.728	460.414	434.864	415.959 °C
5	464.027	463.713	438.163	419.257 °C
6	467.325	467.011	441.461	422.555 °C
7	470.624	470.31	444.759	425.854 °C

Sample Name: K498/815A

	Garnet Composition			
Gross.	Pyrope	Alman.	Spess.	
3.38507E-02	.180647	.76932	1.51823E-02	

	Biotite Composition			
X-Ti:	X-Al:	X-Fe:	X-Mg:	
8.20032E-03	.177576	.247376	.566164	

Corrections of Indares and Martignole (1985)
 Model A. For biotite: -22.6836 For garnet: 18.5317
 Model B. For biotite: -36.5 For garnet: 24.6926
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -104.483

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	419.158	415.006	387.351	339.368 °C
4	422.284	418.132	390.477	342.494 °C
5	425.41	421.258	393.602	345.619 °C
6	428.535	424.383	396.728	348.745 °C
7	431.661	427.509	399.854	351.871 °C

Garnet Biotite Geothermometry

Sample Name: k498/830

Gross.	Garnet Composition		
	Pyrope	Alman.	Spess.
4.83403E-02	.101515	.813084	3.70609E-02

X-Ti:	Biotite Composition		
	X-Al:	X-Fe:	X-Mg:
7.03321E-02	.067448	.487604	.37364

Corrections of Indares and Martignole (1985)

Model A. For biotite: -98.3087	For garnet: 31.3584
Model B. For biotite: -122.352	For garnet: 49.6538

Correction for non-ideal Fe and Mg mixing
according to the model of Ganguly and Saxena (1984): -48.8533

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	542.482	475.532	469.736	543.283 °C
4	546.155	479.214	473.469	546.967 °C
5	549.847	482.897	477.151	550.65 °C
6	553.53	486.579	480.833	554.332 °C
7	557.212	490.262	484.516	558.015 °C

Sample Name: k498/830

Gross.	Garnet Composition		
	Pyrope	Alman.	Spess.
.054617	.158275	.758242	2.88667E-02

X-Ti:	Biotite Composition		
	X-Al:	X-Fe:	X-Mg:
5.52275E-02	8.11827E-02	.360562	.503028

Corrections of Indares and Martignole (1985)

Model A. For biotite: -77.1994	For garnet: 34.35
Model B. For biotite: -101.442	For garnet: 46.999

Correction for non-ideal Fe and Mg mixing
according to the model of Ganguly and Saxena (1984): -110.287

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	516.559	473.709	462.115	453.269 °C
4	520.124	477.275	465.88	456.835 °C
5	523.689	480.84	469.245	460.4 °C
6	527.255	484.405	472.811	463.966 °C
7	530.82	487.971	476.376	467.531 °C

Sample Name: k498/815A

Gross.	Garnet Composition		
	Pyrope	Alman.	Spess.
3.53635E-02	.175344	.773084	1.62083E-02

X-Ti:	Biotite Composition		
	X-Al:	X-Fe:	X-Mg:
4.27017E-03	.175858	.245962	.573569

Corrections of Indares and Martignole (1985)

Model A. For biotite: -17.8533	For garnet: 19.0319
Model B. For biotite: -50.3539	For garnet: 25.0153

Correction for non-ideal Fe and Mg mixing
according to the model of Ganguly and Saxena (1984): -93.4915

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	407.278	409.445	381.939	333.802 °C
4	410.35	411.517	385.011	336.874 °C
5	413.422	414.589	388.083	339.946 °C
6	416.494	417.661	391.156	343.018 °C
7	419.566	420.733	394.228	346.09 °C

Sample Name: 1498/608

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
.037363	.143142	.803886	1.36094E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
5.05563E-02	.146353	.344803	.457388

Corrections of Indares and Martignole (1985)

Model A. For biotite: -73.9624 For garnet: 22.4644

Model B. For biotite: -109.924 For garnet: 28.6615

Correction for non-ideal Fe and Mg mixing

according to the model of Ganguly and Saxena (1984): -77.0431

P (kb)	T (F&S '78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	485.842	434.344	404.58	437.46 °C
4	489.269	437.771	408.607	440.887 °C
5	492.695	441.197	411.433	444.314 °C
6	496.122	444.624	414.86	447.74 °C
7	499.549	448.051	418.287	451.167 °C

Sample Name: 1498/608

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
3.71559E-02	.154928	.794123	1.48935E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
5.03254E-02	.151884	.316432	.480652

Corrections of Indares and Martignole (1985)

Model A. For biotite: -72.8265 For garnet: 21.9418

Model B. For biotite: -109.228 For garnet: 27.5603

Correction for non-ideal Fe and Mg mixing

according to the model of Ganguly and Saxena (1984): -86.511

P (kb)	T (F&S '78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	472.491	421.607	390.824	413.541 °C
4	475.858	424.975	394.191	416.907 °C
5	479.224	428.34	397.557	420.274 °C
6	482.591	431.706	400.923	423.64 °C
7	485.957	435.072	404.29	427.007 °C

Sample Name: 1498/830

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
4.86423E-02	.16675	.75329	3.13177E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
6.97289E-02	8.81351E-02	.503453	.336724

Corrections of Indares and Martignole (1985)

Model A. For biotite: -136.686 For garnet: 43.6393

Model B. For biotite: -175.853 For garnet: 63.946

Correction for non-ideal Fe and Mg mixing

according to the model of Ganguly and Saxena (1984): -167.272

P (kb)	T (F&S '78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	848.686	755.639	736.776	743.36 °C
4	853.751	760.704	741.641	750.425 °C
5	858.816	765.769	746.506	755.49 °C
6	863.881	770.834	751.371	760.555 °C
7	868.946	775.899	756.236	765.62 °C

Sample Name: k498/680B

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
4.02702E-02	.137086	.303353	1.70897E-01

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
.054401	.155634	.343417	.445308

Corrections of Indares and Martignole (1985)
 Model A. For biotite: -79.2553 For garnet: 24.1829
 Model B. For biotite: -117.3 For garnet: 30.9736
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -74.4567

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	484.325	429.248	397.798	440.841 °C
4	487.744	432.668	401.218	444.261 °C
5	491.164	436.088	404.638	447.681 °C
6	494.584	439.508	408.058	451.101 °C
7	498.004	442.928	411.478	454.521 °C

Sample Name: k498/680B

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
3.92911E-02	.139107	.307725	1.38773E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
5.07298E-02	.179632	.330453	.439185

Corrections of Indares and Martignole (1985)
 Model A. For biotite: -75.986 For garnet: 23.3381
 Model B. For biotite: -118.17 For garnet: 29.4085
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -71.905

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	476.372	423.724	386.59	432.876 °C
4	479.756	427.108	389.974	436.26 °C
5	483.14	430.492	393.358	439.644 °C
6	486.524	433.876	396.742	443.028 °C
7	489.908	437.26	400.126	446.412 °C

Sample Name: k498/680B

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
.039281	.139314	.304261	1.71438E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
2.89729E-02	.170021	.267474	.512318

Corrections of Indares and Martignole (1985)
 Model A. For biotite: -44.446 For garnet: 21.1559
 Model B. For biotite: -78.5966 For garnet: 27.3634
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -65.7253

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	407.133	380.843	355.9	367.772 °C
4	410.205	386.915	358.972	370.843 °C
5	413.276	389.986	362.043	373.914 °C
6	416.347	393.057	365.114	376.986 °C
7	419.419	396.129	368.186	380.057 °C

Sample Name: 498/810

Gross.	Garnet Composition		Spess.
	Pyrope	Alman.	
3.14774E-02	.182941	.761212	2.43896E-02

X-Ti:	Biotite Composition		X-Mg:
	X-Al:	X-Fe:	
6.40879E-02	.116813	.382925	.476124

Corrections of Indares and Martignole (1985)

Model A. For biotite: -105.017

For garnet: 22.0582

Model B. For biotite: -142.768

For garnet: 36.0624

Correction for non-ideal Fe and Mg mixing

according to the model of Ganguly and Saxena (1984): -142.055

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe/Mg
3	532.672	550.244	523.966	526.379 °C
4	626.762	554.334	520.56	530.469 °C
5	640.852	558.423	524.146	534.558 °C
6	644.941	562.513	528.235	538.648 °C
7	649.031	566.603	532.325	542.738 °C

Sample Name: 498/784B

Gross.	Garnet Composition		Spess.
	Pyrope	Alman.	
.038112	.213829	.733378	1.46811E-02

X-Ti:	Biotite Composition		X-Mg:
	X-Al:	X-Fe:	
.04025	.139175	.260925	.55965

Corrections of Indares and Martignole (1985)

Model A. For biotite: -51.2516

For garnet: 21.3783

Model B. For biotite: -94.7436

For garnet: 27.7

Correction for non-ideal Fe and Mg mixing

according to the model of Ganguly and Saxena (1984): -150.173

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe/Mg
3	491.253	452.48	424.809	369.379 °C
4	495.307	455.924	428.263	372.832 °C
5	499.761	459.368	431.717	376.286 °C
6	502.215	462.812	435.171	379.74 °C
7	505.669	466.256	438.625	383.194 °C

Garnet Biotite Geothermometry using various of parameters

Garnet Biotite Geothermometry using various of parameters

Sample Name: 498/784B

Gross.	Garnet Composition		Spess.
	Pyrope	Alman.	
3.57322E-02	.238938	.709801	1.55235E-02

X-Ti:	Biotite Composition		X-Mg:
	X-Al:	X-Fe:	
4.48549E-02	.113661	.216183	.600332

Corrections of Indares and Martignole (1985)

Model A. For biotite: -64.0035

For garnet: 20.7099

Model B. For biotite: -96.498

For garnet: 26.7572

Correction for non-ideal Fe and Mg mixing

according to the model of Ganguly and Saxena (1984): -164.411

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe/Mg
3	439.077	415.733	389.356	321.422 °C
4	462.382	419.689	392.642	324.728 °C
5	465.633	423.378	395.948	328.034 °C
6	468.774	427.001	399.253	331.34 °C
7	472.3	429.666	402.559	334.646 °C

Sample Name: k498/1382

Garnet Composition
 Gross. Pyrope Almandine Spess.
 4.39184E-02 .155592 .734041 .066449

Biotite Composition
 X-Ti: X-Al: X-Fe: X-Mg:
 .027455 .14026 .290264 .541158

Corrections of Indares and Martignole (1985)
 Model A. For biotite: -42.7037 For garnet: 24.9503
 Model B. For biotite: -72.7841 For garnet: 56.3512
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -106.244

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	443.205	425.452	426.792	391.377 °C
4	446.44	428.686	430.017	394.557 °C
5	449.674	431.92	433.251	397.791 °C
6	452.908	435.155	436.485	401.025 °C
7	456.142	438.389	439.719	404.259 °C

Sample Name: k498/810

Garnet Composition
 Gross. Pyrope Almandine Spess.
 2.96036E-02 .129321 .800301 3.07744E-02

Biotite Composition
 X-Ti: X-Al: X-Fe: X-Mg:
 5.62718E-02 .122832 .372137 .448582

Corrections of Indares and Martignole (1985)
 Model A. For biotite: -81.0821 For garnet: 18.2405
 Model B. For biotite: -113.827 For garnet: 33.5478
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -79.2134

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	506.274	443.436	425.995	461.609 °C
4	509.793	446.955	429.214	465.128 °C
5	513.312	450.474	433.033	468.647 °C
6	516.831	453.993	436.852	472.166 °C
7	520.35	457.512	440.071	475.685 °C

k498/810

Almandine

X-Ti: X-Al: X-Fe: X-Mg:
 .06051 .122693 .364302 .43214

Corrections of Indares and Martignole (1985)
 Model A. For biotite: -85.9592 For garnet: 20.4161
 Model B. For biotite: -119.049 For garnet: 33.9498
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -80.1752

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	502.459	438.916	417.36	456.233 °C
4	505.961	440.418	420.862	459.735 °C
5	509.463	443.92	424.363	463.237 °C
6	512.965	447.422	427.865	466.738 °C
7	516.467	450.923	431.367	470.24 °C

Sample Name: 1490/1382

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
.029233	.142388	.811135	1.724423E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
6.697378E-02	8.320815E-02	.432836	.116983

Corrections of Indares and Martignole (1985)

Model A. For biotite: -99.6127

For garnet: 19.7138

Model B. For biotite: -127.867

For garnet: 28.2404

Correction for non-ideal Fe and Mg mixing

according to the model of Ganguly and Saxena (1984): -82.4639

P (kb)	T (F&S '78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	579.201	499.303	478.574	524.978 °C
4	583.05	503.151	479.423	528.826 °C
5	585.898	506.999	487.271	532.574 °C
6	590.746	510.847	491.119	536.523 °C
7	594.594	514.696	494.967	540.371 °C

Sample Name: 1493/1382

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
4.47274E-02	.152791	.738818	6.366318E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
2.94313E-02	.13083	.298788	.539574

Corrections of Indares and Martignole (1985)

Model A. For biotite: -44.3437

For garnet: 25.4782

Model B. For biotite: -72.9167

For garnet: 35.4873

Correction for non-ideal Fe and Mg mixing

according to the model of Ganguly and Saxena (1984): -194.985

P (kb)	T (F&S '78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	444.96	426.095	427.531	395.462 °C
4	448.203	429.337	430.773	398.705 °C
5	451.445	432.579	434.015	401.947 °C
6	454.687	435.822	437.258	405.189 °C
7	457.929	439.064	440.5	408.431 °C

Sample Name: 1498/1382

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
4.34783E-02	.158327	.73749	6.07023E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
2.69488E-02	.132488	.289743	.556477

Corrections of Indares and Martignole (1985)

Model A. For biotite: -41.4207

For garnet: 24.6458

Model B. For biotite: -69.8935

For garnet: 33.0933

Correction for non-ideal Fe and Mg mixing

according to the model of Ganguly and Saxena (1984): -108.183

P (kb)	T (F&S '78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	441.722	424.947	424.922	386.632 °C
4	444.949	428.174	428.149	389.859 °C
5	448.177	431.402	431.377	393.087 °C
6	451.404	434.629	434.604	396.315 °C
7	454.632	437.857	437.832	399.543 °C

Sample Name: 178/680A

Gross. Garnet Composition
 Pyrope Alsan. Spess.
 3.55563E-02 .184977 .755557 1.39503E-02

Biotite Composition
 X-Ti: X-Al: X-Fe: X-Mg:
 3.37299E-02 .137975 .306177 .522118

Corrections of Indares and Martignole (1985)
 Model A. For biotite: -53.7486 For garnet: 21.7918
 Model B. For biotite: -86.562 For garnet: 27.3128
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -120.926

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	500.763	468.806	441.514	407.15 °C
4	504.257	472.3	445.008	410.644 °C
5	507.751	475.794	448.502	414.138 °C
6	511.245	479.288	451.996	417.632 °C
7	514.739	482.783	455.49	421.126 °C

Sample Name: 178/721

Gross. Garnet Composition
 Pyrope Alsan. Spess.
 3.88675E-02 .178254 .76579 1.70883E-02

Biotite Composition
 X-Ti: X-Al: X-Fe: X-Mg:
 7.21078E-02 7.60184E-02 .433541 .417975

Corrections of Indares and Martignole (1985)
 Model A. For biotite: -119.511 For garnet: 29.4721
 Model B. For biotite: -150.328 For garnet: 38.3429
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -145.191

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	689.084	398.265	576.098	581.235 °C
4	692.423	602.605	580.438	585.576 °C
5	695.763	606.944	584.778	589.915 °C
6	701.103	611.284	589.118	594.255 °C
7	705.443	615.624	593.458	598.595 °C

Sample Name: 178/723

Gross. Garnet Composition
 Pyrope Alsan. Spess.
 2.92845E-02 .167055 .788186 1.54742E-02

Biotite Composition
 X-Ti: X-Al: X-Fe: X-Mg:
 6.55497E-02 8.1725E-02 .412432 .43936

Corrections of Indares and Martignole (1985)
 Model A. For biotite: -101.103 For garnet: 20.4799
 Model B. For biotite: 129.85 For garnet: 28.1937
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -114.714

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	610.464	529.841	508.808	523.944 °C
4	614.453	533.83	512.797	527.933 °C
5	618.443	537.82	516.786	531.922 °C
6	622.432	541.819	520.776	535.912 °C
7	626.422	545.798	524.765	539.901 °C

Sample Name: k498/813A

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
4.53807E-02	.233605	.693312	2.77322E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
4.41487E-02	9.16493E-02	.330246	.533782

Corrections of Indares and Martignole (1985)

Model A. For biotite: -73.0866	For garnet: 32.5209
Model B. For biotite: -101.645	For garnet: 45.9495

Correction for non-ideal Fe and Mg mixing according to the model of Ganguly and Saxena (1984): -206.972

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	628.01	587.451	573.314	467.988 °C
4	632.079	591.519	577.383	472.057 °C
5	636.147	595.588	581.452	476.125 °C
6	640.216	599.656	585.521	480.194 °C
7	644.285	603.725	589.589	484.262 °C

Sample Name: k498/1384

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
.109163	8.51893E-02	.743798	6.16391E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
7.66166E-02	1.42236E-02	.525724	.382906

Corrections of Indares and Martignole (1985)

Model A. For biotite: -100.388	For garnet: 71.1008
Model B. For biotite: -113.47	For garnet: 98.0943

Correction for non-ideal Fe and Mg mixing according to the model of Ganguly and Saxena (1984): -68.3316

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	531.452	502.165	516.077	561.015 °C
4	535.085	505.797	519.709	564.648 °C
5	538.718	509.43	523.342	568.281 °C
6	542.35	513.063	526.975	571.913 °C
7	545.983	516.695	530.607	575.546 °C

Sample Name: k499/690A

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
3.23178E-02	.179431	.773776	1.44757E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
3.20478E-02	.164842	.262827	.540284

Corrections of Indares and Martignole (1985)

Model A. For biotite: -49.8035	For garnet: 18.2563
Model B. For biotite: -85.0368	For garnet: 23.8328

Correction for non-ideal Fe and Mg mixing according to the model of Ganguly and Saxena (1984): -105.394

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	441.31	409.763	380.106	359.749 °C
4	444.535	412.989	383.332	362.975 °C
5	447.762	416.214	386.557	366.2 °C
6	450.987	419.44	389.783	369.426 °C
7	454.213	422.665	393.009	372.652 °C

Sample Name: k498/813A

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
4.14724E-02	.257495	.671386	2.96469E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
5.25013E-02	9.33022E-02	.356309	.497013

Corrections of Indares and Martignole (1985)
 Model A. For biotite: -96.7451 For garnet: 33.7292
 Model B. For biotite: -130.963 For garnet: 51.7856
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -261.788

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	748.345	685.329	669.171	538.348 °C
4	752.957	689.941	673.782	542.96 °C
5	757.568	694.553	678.394	547.572 °C
6	762.18	699.164	683.006	552.184 °C
7	766.792	703.776	687.618	556.796 °C

Sample Name: k498/813A

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
4.58501E-02	.225234	.701158	2.77778E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
.041753	.108012	.275462	.574241

Corrections of Indares and Martignole (1985)
 Model A. For biotite: -63.1317 For garnet: 29.0882
 Model B. For biotite: -91.6283 For garnet: 41.9104
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -175.643

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	525.339	491.296	475.621	391.606 °C
4	528.944	494.901	479.226	395.211 °C
5	532.549	498.506	482.831	398.816 °C
6	536.154	502.111	486.436	402.421 °C
7	539.759	505.716	490.041	406.026 °C

Sample Name: k498/813A

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
4.95232E-02	.239083	.683955	2.74385E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
5.09307E-02	.08569	.267037	.595819

Corrections of Indares and Martignole (1985)
 Model A. For biotite: -73.3951 For garnet: 31.632
 Model B. For biotite: -98.4637 For garnet: 44.0829
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -191.347

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	530.348	488.505	477.962	393.084 °C
4	533.976	492.233	479.59	396.712 °C
5	537.604	495.86	483.218	399.34 °C
6	541.231	499.488	486.845	399.967 °C
7	544.859	503.115	490.473	397.595 °C

Sample Name: k498/1380

Gross.	Garnet Composition		
	Pyrope	Alman.	Spess.
5.06223E-02	.113185	.793157	.041036

X-Ti:	Biotite Composition		
	X-Al:	X-Fe:	X-Mg:
.040002	.153495	.401243	.40526

Corrections of Indares and Martignole (1985)

Model A. For biotite: -52.7615	For garnet: 31.0975
Model B. For biotite: -99.3093	For garnet: 50.474
Correction for non-ideal Fe and Mg mixing according to the model of Ganguly and Saxena (1984): -62.3834	

P (kb)	T (F&S '78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	499.325	467.552	450.291	487.417 °C
4	502.814	471.15	453.778	490.904 °C
5	506.301	474.537	457.266	494.392 °C
6	509.789	478.125	460.754	497.879 °C
7	513.277	481.513	464.241	501.357 °C

Sample Name: k498/1412B

Gross.	Garnet Composition		
	Pyrope	Alman.	Spess.
3.80196E-02	.13535	.813789	1.28422E-02

X-Ti:	Biotite Composition		
	X-Al:	X-Fe:	X-Mg:
1.82264E-02	.208444	.29332	.479499

Corrections of Indares and Martignole (1985)

Model A. For biotite: -36.1019	For garnet: 20.7781
Model B. For biotite: -75.5531	For garnet: 25.0331
Correction for non-ideal Fe and Mg mixing according to the model of Ganguly and Saxena (1984): -61.5463	

P (kb)	T (F&S '78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	417.267	401.943	365.647	380.653 °C
4	420.384	405.06	368.764	383.771 °C
5	423.501	408.177	371.881	386.888 °C
6	426.618	411.294	374.998	390.005 °C
7	429.735	414.411	378.115	393.122 °C

Sample Name: k498/1412B

Gross.	Garnet Composition		
	Pyrope	Alman.	Spess.
3.30893E-02	.21134	.745427	.010143

X-Ti:	Biotite Composition		
	X-Al:	X-Fe:	X-Mg:
2.40797E-02	.133021	.356366	.484019

Corrections of Indares and Martignole (1985)

Model A. For biotite: -51.0373	For garnet: 23.6476
Model B. For biotite: -86.9514	For garnet: 27.7889
Correction for non-ideal Fe and Mg mixing according to the model of Ganguly and Saxena (1984): -158.291	

P (kb)	T (F&S '78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	628.525	601.133	569.362	488.022 °C
4	632.596	605.206	573.433	492.093 °C
5	636.667	609.277	577.504	496.164 °C
6	640.738	613.348	581.575	500.235 °C
7	644.809	617.419	585.646	504.306 °C

Sample Name: k498/366

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
8.51311E-02	.102722	.755291	5.62562E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
3.07321E-02	.137776	.396064	.434392

Corrections of Indares and Martignole (1985)

Model A. For biotite: -47.559	For garnet: 50.382
Model B. For biotite: -78.5534	For garnet: 74.3655

Correction for non-ideal Fe and Mg mixing according to the model of Ganguly and Saxena (1984): -69.4533

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	464.559	467.382	460.481	469.582 °C
4	468	470.713	463.812	472.913 °C
5	471.331	474.044	467.144	476.245 °C
6	474.563	477.376	470.475	479.576 °C
7	477.994	480.707	473.806	482.907 °C

Sample Name: k498/366

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
8.56578E-02	.104975	.75409	5.59786E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
.041201	.111657	.40975	.436348

Corrections of Indares and Martignole (1985)

Model A. For biotite: -59.0668	For garnet: 51.811
Model B. For biotite: -86.5634	For garnet: 75.3376

Correction for non-ideal Fe and Mg mixing according to the model of Ganguly and Saxena (1984): -73.0659

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	478.696	471.44	467.57	481.158 °C
4	482.091	474.835	471.065	484.562 °C
5	485.485	478.229	474.459	487.957 °C
6	488.88	481.624	477.854	491.351 °C
7	492.274	485.018	481.248	494.746 °C

Sample Name: k499/1380

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
6.97218E-02	.103273	.792962	3.40426E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
3.30056E-02	.142003	.409977	.414841

Corrections of Indares and Martignole (1985)

Model A. For biotite: -51.3928	For garnet: 41.6548
Model B. For biotite: -83.8142	For garnet: 55.3103

Correction for non-ideal Fe and Mg mixing according to the model of Ganguly and Saxena (1984): -54.7072

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	474.584	464.846	446.08	475.187 °C
4	477.959	468.221	449.456	478.563 °C
5	481.335	471.597	452.832	481.938 °C
6	484.711	474.973	456.207	485.314 °C
7	488.087	478.349	459.583	488.69 °C

Sample Name: k498/784D

	Garnet Composition			
Gross.	Pyrope	Alman.		Spess.
.116784	.201109	.668939		1.51688E-02

	Biotite Composition			
X-Ti:	X-Al:	X-Fe:		X-Mg:
3.17371E-02	7.92814E-02	.319944		.569037

Corrections of Indares and Martignole (1985)

Model A. For biotite: -49.5135	For garnet: 76.5637
Model B. For biotite: -71.3563	For garnet: 77.9159

Correction for non-ideal Fe and Mg mixing according to the model of Ganguly and Saxena (1984): -183.438

P (kb)	T (F&S '78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	555.17	584.221	561.729	449.448 °C
4	558.91	587.961	565.469	453.188 °C
5	562.649	591.701	569.209	456.927 °C
6	566.389	595.44	572.949	460.667 °C
7	570.129	599.18	576.688	464.407 °C

Garnet Biotite Geothermometry using various of parameters

Sample Name: k498/784D

	Garnet Composition			
Gross.	Pyrope	Alman.		Spess.
.119447	.197762	.667654		1.51366E-02

	Biotite Composition			
X-Ti:	X-Al:	X-Fe:		X-Mg:
5.41763E-02	8.48074E-02	.344758		.51573

Corrections of Indares and Martignole (1985)

Model A. For biotite: -85.0691	For garnet: 82.9215
Model B. For biotite: -112.845	For garnet: 84.6039

Correction for non-ideal Fe and Mg mixing according to the model of Ganguly and Saxena (1984): -193.116

P (kb)	T (F&S '78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	608.704	609.457	580.465	500.195 °C
4	612.686	613.438	584.417	504.176 °C
5	616.667	617.42	588.428	508.157 °C
6	620.649	621.401	592.41	512.139 °C
7	624.63	625.383	596.391	516.12 °C

Sample Name: 1498/366

	Garnet Composition			
Gross.	Pyrope	Alman.		Spess.
6.54673E-02	.103615	.75962		7.12977E-02

	Biotite Composition			
X-Ti:	X-Al:	X-Fe:		X-Mg:
3.59455E-02	.148421	.391581		.423706

Corrections of Indares and Martignole (1985)

Model A. For biotite: -55.0514	For garnet: 38.7781
Model B. For biotite: -88.8658	For garnet: 72.3695

Correction for non-ideal Fe and Mg mixing according to the model of Ganguly and Saxena (1984): -63.8646

P (kb)	T (F&S '78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	459.134	452.86	452.637	473.638 °C
4	472.485	466.212	465.989	475.99 °C
5	475.836	469.563	469.34	479.341 °C
6	479.187	472.914	472.691	482.692 °C
7	482.539	476.265	476.043	486.044 °C

Sample Name: K498/1327A

Gross.	Garnet Composition		Spess.
	Pyrope	Alman.	
8.62871E-02	7.97113E-02	.817161	1.68404E-02

X-Ti:	Biotite Composition		
	X-Al:	X-Fe:	X-Mg:
3.04533E-02	.112907	.45822	.398418

Corrections of Indares and Martignole (1985)

Model A. For biotite: -43.7997	For garnet: 49.3351
Model B. For biotite: -68.8738	For garnet: 52.4277
Correction for non-ideal Fe and Mg mixing according to the model of Ganguly and Saxena (1984): -26.5129	

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	439.99	445.526	423.544	465.905 °C
4	443.21	448.745	426.764	469.125 °C
5	446.43	451.965	429.983	472.344 °C
6	449.649	455.185	433.203	475.564 °C
7	452.869	458.405	436.423	478.784 °C

Sample Name: K498/1327A

Gross.	Garnet Composition		Spess.
	Pyrope	Alman.	
6.55523E-02	8.88568E-02	.815962	.031629

X-Ti:	Biotite Composition		
	X-Al:	X-Fe:	X-Mg:
3.06595E-02	.140428	.439189	.388617

Corrections of Indares and Martignole (1985)

Model A. For biotite: -47.312	For garnet: 78.192
Model B. For biotite: -68.8738	For garnet: 50.594
Correction for non-ideal Fe and Mg mixing according to the model of Ganguly and Saxena (1984): -32.5084	

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	457.158	448.038	429.36	475.143 °C
4	460.455	451.335	432.657	478.44 °C
5	463.752	454.632	435.955	481.738 °C
6	467.049	457.929	439.252	485.035 °C
7	470.347	461.226	442.549	488.332 °C

Sample Name: k498/660 X

	Garnet Composition			
Gross.	Pyrope	Alman.		Spess.
4.87409E-02	.130463	.309423		1.13729E-02

	Biotite Composition			
X-Ti:	X-Al:	X-Fe:		X-Mg:
5.88817E-02	.140895	.46254		.337683

Corrections of Indares and Martignole (1985)
 Model A. For biotite: -101.809 For garnet: 35.8809
 Model B. For biotite: -145.472 For garnet: 39.5844
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -30.9278

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	650.569	584.641	544.681	609.226 °C
4	654.739	588.811	548.852	613.396 °C
5	658.91	592.982	553.022	617.566 °C
6	663.08	597.152	557.193	621.737 °C
7	667.251	601.323	561.363	625.907 °C

Sample Name: k498/660 X

	Garnet Composition			
Gross.	Pyrope	Alman.		Spess.
5.29253E-02	.138974	.79748		1.06211E-02

	Biotite Composition			
X-Ti:	X-Al:	X-Fe:		X-Mg:
5.78629E-02	.118649	.466079		.357409

Corrections of Indares and Martignole (1985)
 Model A. For biotite: -99.282 For garnet: 39.5231
 Model B. For biotite: -137.779 For garnet: 42.3792
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -95.1083

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	662.365	602.606	566.965	609.636 °C
4	666.539	606.83	571.189	613.859 °C
5	670.812	611.054	575.412	618.083 °C
6	675.036	615.277	579.636	622.307 °C
7	679.26	619.501	583.86	626.531 °C

Sample Name: k498/660 X

	Garnet Composition			
Gross.	Pyrope	Alman.		Spess.
4.77533E-02	.134609	.83993		1.36439E-02

	Biotite Composition			
X-Ti:	X-Al:	X-Fe:		X-Mg:
.060632	.118545	.474637		.345285

Corrections of Indares and Martignole (1985)
 Model A. For biotite: -104.02 For garnet: 35.8028
 Model B. For biotite: -143.132 For garnet: 41.1773
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -38.6778

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	667.644	599.426	565.689	620.143 °C
4	671.892	603.674	569.937	624.391 °C
5	676.139	607.921	574.184	628.639 °C
6	680.387	612.169	578.432	632.886 °C
7	684.634	616.416	582.679	637.134 °C

Sample Name: k498/811

Gross. Garnet Composition
Pyrope Almandine Spess.
3.26142E-02 .205386 .74193 2.00702E-02

Biotite Composition
X-Ti: X-Al: X-Fe: X-Mg:
4.53941E-02 .117816 .27339 .562676

Corrections of Indares and Martignole (1985)

Model A. For biotite: -65.5522 For garnet: 19.598
Model B. For biotite: -95.124 For garnet: 28.5261

Correction for non-ideal Fe and Mg mixing
according to the model of Ganguly and Saxena (1984): -139.97

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	486.389	440.434	419.771	374.945 °C
4	439.818	443.863	420.22	378.374 °C
5	493.247	447.293	426.649	381.803 °C
6	496.676	450.722	430.078	385.232 °C
7	500.105	454.151	433.507	388.661 °C

Sample Name: k498/811

Gross. Garnet Composition
Pyrope Almandine Spess.
3.47454E-02 9.35269E-02 .846264 2.54641E-02

Biotite Composition
X-Ti: X-Al: X-Fe: X-Mg:
4.77726E-02 .11122 .362407 .477376

Corrections of Indares and Martignole (1985)

Model A. For biotite: -57.8658 For garnet: 17.842
Model B. For biotite: -82.2402 For garnet: 27.8812

Correction for non-ideal Fe and Mg mixing
according to the model of Ganguly and Saxena (1984): -21.5772

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	376.435	336.412	322.076	382.739 °C
4	379.368	339.344	325.009	385.672 °C
5	382.301	342.277	327.942	388.605 °C
6	385.234	345.21	330.875	391.538 °C
7	388.166	348.143	333.807	394.47 °C

Sample Name: k498/660 X

Gross. Garnet Composition
Pyrope Almandine Spess.
5.06351E-02 .123069 .813594 1.27017E-02

Biotite Composition
X-Ti: X-Al: X-Fe: X-Mg:
5.15884E-02 .136731 .436301 .375028

Corrections of Indares and Martignole (1985)

Model A. For biotite: -82.4009 For garnet: 33.8898
Model B. For biotite: -120.201 For garnet: 37.9526

Correction for non-ideal Fe and Mg mixing
according to the model of Ganguly and Saxena (1984): -66.2529

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	567.421	518.91	485.173	539.121 °C
4	571.216	522.705	488.968	542.916 °C
5	575.011	526.5	492.763	546.711 °C
6	578.806	530.295	496.558	550.506 °C
7	582.601	534.09	500.353	554.301 °C

Sample Name: k498/811

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
3.57203E-02	.190283	.75419	.019807

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
6.28439E-02	8.60507E-02	.28271	.56752

Corrections of Indares and Martignole (1983)
 Model A. For biotite: -81.9662 For garnet: 20.9678
 Model B. For biotite: -106.813 For garnet: 29.3515
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -123.492

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	468.353	407.355	391.092	374.212 °C
4	471.701	410.702	394.44	377.56 °C
5	475.049	414.05	397.788	380.908 °C
6	478.396	417.398	401.135	384.256 °C
7	481.744	420.746	404.483	387.603 °C

Sample Name: k498/811

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
3.61606E-02	.152975	.789535	2.13298E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
4.36623E-02	.104284	.33671	.515343

Corrections of Indares and Martignole (1983)
 Model A. For biotite: -60.7394 For garnet: 21.2829
 Model B. For biotite: -86.7572 For garnet: 30.4661
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -87.5382

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	470.228	430.772	413.937	413.156 °C
4	473.585	434.128	417.294	416.513 °C
5	476.941	437.484	420.65	419.869 °C
6	480.297	440.841	424.006	423.225 °C
7	483.653	444.197	427.362	426.581 °C

Sample Name: k498/811

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
3.74384E-02	.178654	.75977	2.41379E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
4.99314E-02	9.25925E-02	.333516	.523

Corrections of Indares and Martignole (1983)
 Model A. For biotite: -71.5262 For garnet: 23.4503
 Model B. For biotite: -97.521 For garnet: 34.6935
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -122.261

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
3	517.206	467.13	454.378	429.638 °C
4	520.774	472.698	457.947	433.206 °C
5	524.343	478.267	461.515	436.775 °C
6	527.911	479.835	465.083	440.343 °C
7	531.479	481.403	468.652	443.912 °C

Sample Name: K498/372

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
.219143	3.01321E-02	.686433	6.42926E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
6.89506E-02	7.31972E-02	.645966	.209001

Corrections of Indares and Martignole (1985)
 Model A. For biotite: -90.5245 For garnet: 139.215
 Model B. For biotite: -114.085 For garnet: 153.947
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -49.2558

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal FeMg	FeMg
4	492.205	540.795	532.067	596.896	°C
6	499.085	547.675	538.947	603.776	°C
8	505.965	554.555	545.827	610.656	°C
10	512.845	561.435	552.706	617.536	°C
12	519.724	568.315	559.586	624.416	°C

Sample Name: K498/372

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
.242862	2.83967E-02	.670182	5.88659E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
6.65379E-02	.108499	.620546	.20335

Corrections of Indares and Martignole (1985)
 Model A. For biotite: -89.0848 For garnet: 152.507
 Model B. For biotite: -118.924 For garnet: 160.921
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -54.2487

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal FeMg	FeMg
3	475.74	539.160	517.737	582.412	°C
4	479.121	542.543	521.119	585.794	°C
5	482.503	545.925	524.499	589.175	°C
6	485.884	549.306	527.88	592.556	°C
7	489.265	552.687	531.261	595.937	°C

Sample Name: K498/372

	Garnet Composition		
Gross.	Pyrope	Alman.	Spess.
.118013	3.68792E-02	.810195	3.49123E-02

	Biotite Composition		
X-Ti:	X-Al:	X-Fe:	X-Mg:
7.17562E-02	9.06875E-02	.630727	.205919

Corrections of Indares and Martignole (1985)
 Model A. For biotite: -96.724 For garnet: 73.5881
 Model B. For biotite: -124.391 For garnet: 83.8633
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): 1.19213

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal FeMg	FeMg
3	476.305	473.17	455.795	581.381	°C
4	499.779	476.644	459.269	584.855	°C
5	503.253	480.118	462.743	588.329	°C
6	506.727	483.592	466.217	591.803	°C
7	510.201	487.066	469.691	595.277	°C

Garnet Biotite Geothermometry
 Sample Name: K498/372

Garnet Composition
 Gross. Pyrope Almandine Spess.
 .219608 3.20262E-02 .678431 6.99346E-02

Biotite Composition
 X-Ti: X-Al: X-Fe: X-Mg:
 6.71952E-02 .100223 .61309 .217897

Corrections of Indares and Martignole (1985)
 Model A. For biotite: -90.0552 For garnet: 138.403
 Model B. For biotite: -118.59 For garnet: 156.07
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -53.7633

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
4	486.394	534.741	523.874	588.501 °C
6	493.221	541.569	530.702	595.328 °C
8	500.049	548.397	537.529	602.156 °C
10	506.877	555.224	544.357	608.983 °C
12	513.704	562.052	551.185	615.811 °C

Garnet Biotite Geothermometry

Sample Name: K498/372

Garnet Composition
 Gross. Pyrope Almandine Spess.
 .163475 2.81906E-02 .784281 2.40339E-02

Biotite Composition
 X-Ti: X-Al: X-Fe: X-Mg:
 6.16319E-02 .113245 .614017 .209867

Corrections of Indares and Martignole (1985)
 Model A. For biotite: -77.8837 For garnet: 93.5624
 Model B. For biotite: -106.023 For garnet: 93.3037
 Correction for non-ideal Fe and Mg mixing
 according to the model of Ganguly and Saxena (1984): -3.22529

P (kb)	T (F&S'78)	(Model A)	(Model B)	Non-ideal Fe&Mg
4	427.945	443.324	415.226	518.024 °C
6	434.348	449.626	421.528	524.326 °C
8	440.751	455.927	427.831	530.628 °C
10	446.852	462.231	434.133	536.931 °C
12	453.154	468.533	440.435	543.233 °C

STAUR BREAKDOWN

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/360		56.28	1.84	17.76	16.84	.23	2.60	.93	.87	2.61					.13	98.90
GT	181	37.43	.08	21.14	34.08	2.58	2.60	2.98	.02	.02	.05	0.00		.04		
	184	37.43	.07	18.73	34.40	2.48	2.69	3.08	.11	.03	.05	.19		.01		
	AVERAGE	37.43	.07	20.44	34.23	2.48	2.65	3.03	.07	.03	.05	.10		.03		
BIO	178	35.78	1.81	18.88	17.80	.02	10.81	0.00	.18	8.98	.05	.05		.83		
	182	35.74	1.58	18.81	18.14	.05	11.16	0.00	.22	8.58	.12	0.00		.18		
	183	35.44	2.07	18.11	18.54	.05	11.08	0.00	.18	8.87	.08	.13		.08		
	AVERAGE	35.66	1.81	18.83	18.16	.04	11.02	0.00	.19	8.88	.09	.06		.10		
STAUR	186	30.57	.48	51.58	12.81	.18	1.38	0.00	.05	.05	.10		.11	0.00		
	188	32.54	.38	51.14	11.98	.20	1.32	.01	.03	.03	.08		.15	0.00		
	170	28.45	.33	52.18	12.81	.15	1.34	.02	.01	.01	.07		.23	.05		
	171	27.84	.35	51.75	13.87	.15	1.82	0.00	0.00	0.00	.06		.08	0.00		
	174	28.58	.44	51.72	14.10	.03	1.65	.02	.02	.01	.03		.22	.02		
	178	27.68	.52	51.81	13.43	.18	1.03	.02	.04	0.00	.18		.18	.08		
	AVERAGE	29.28	.46	51.70	13.15	.16	1.57	.01	.03	.02	.08		.16	.03		
K498/33		62.17	.58	17.33	11.77	.12	2.10	.68	1.35	3.12					.15	99.38
GT	14	38.54	0.00	20.50	36.85	.38	2.15	2.83	.05	.85	.10	.11		0.00		
	15	38.50	0.00	20.82	37.11	2.24	2.35	1.05	.03	.03	.08	.15		0.00		
	16	38.75	0.00	20.89	36.78	1.82	2.28	1.26	.01	.01	.07	.23		.05		
	17	37.32	0.00	20.87	36.80	.26	1.85	3.52	0.00	0.00	.08	.08		0.00		
	18	38.82	0.00	20.58	37.47	1.42	2.25	1.34	.02	.01	.03	.22		.02		
	19	35.87	0.00	20.23	38.82	.28	1.60	2.83	.23	0.00	.16	.17		.09		
	20	38.58	0.00	20.46	37.48	.34	2.02	2.38	0.00	0.00	0.00	0.00		0.00		
	21	35.85	0.00	20.25	38.23	.34	1.58	3.08	0.00	0.00	0.00	0.00		0.00		
	22	38.54	0.00	20.54	35.81	.74	1.80	3.71	0.00	0.00	0.00	0.00		0.00		
	23	38.53	0.00	20.33	37.04	1.37	2.11	1.35	0.00	0.00	0.00	0.00		0.00		
	24	38.78	0.00	20.61	37.32	1.88	2.29	1.08	0.00	0.00	0.00	0.00		0.00		
	25	38.36	0.00	20.46	38.71	2.28	2.29	.39	0.00	0.00	0.00	0.00		0.00		
	28	38.52	0.00	20.50	38.33	2.50	2.38	1.08	0.00	0.00	0.00	0.00		0.00		
	834	38.88	.17	20.88	38.81	.27	1.81	3.18	.04	0.00	0.00	.07		.05		
	835	38.88	.08	20.73	38.71	2.44	2.23	1.05	.07	0.00	0.00	0.00		0.00		
	836	38.53	.05	20.86	37.53	.71	1.86	1.82	.03	.01	.03	0.00		.07		
	838	38.38	.08	20.88	37.30	.32	1.80	2.78	.03	.02	.01	.11		.03		
	843	38.84	0.00	20.58	38.48	3.60	2.22	1.30	.03	.03	.02	0.00		0.00		
	844	38.55	.01	20.83	38.98	1.84	2.10	1.52	0.00	.01	.01	.20		0.00		
	AVERAGE	36.56	.02	20.58	36.88	1.31	2.07	2.01	.03	.01	.03	.07		.02		
BIO	837	34.51	1.47	18.21	20.14	.08	9.85	0.00	.14	8.88	.12	0.00		0.00		
	838	34.77	1.48	18.19	20.20	.03	10.07	0.00	.20	8.92	.03	.11		.08		
	AVERAGE	34.64	1.48	18.20	20.17	.05	9.88	0.00	.17	8.90	.08	.06		.04		
STAUR	831	28.21	.45	51.11	14.03	.02	1.47	.01	.08	.02	.01		.30	.06		
	832	27.12	.44	52.88	14.54	.05	1.38	.02	.28	.04	0.00		.52	.16		
	833	27.20	.48	52.74	14.47	0.00	1.58	0.00	.03	0.00	.02		.61	0.00		
	841	27.38	.42	52.45	14.68	.04	1.56	.02	.13	.02	0.00		.72	0.00		
	842	27.50	.51	52.28	14.40	.01	1.38	.02	.02	0.00	.03		.58	.14		
	AVERAGE	27.68	.48	52.25	14.42	.02	1.47	.01	.11	.02	.01		.54	.08		
FIB	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		

SAMPLE	AL	NORMALISED FE	OXIDES MG	K
K498/360	25.13	53.74	14.78	6.35
GT	18.87	71.28	9.81	.04
BIO	15.46	33.99	36.74	13.81
STAUR	57.85	33.81	7.21	.03
K498/33	30.05	46.02	14.83	8.30
GT	18.33	74.25	7.41	.01
BIO	15.28	38.22	33.83	12.88
STAUR	57.60	35.85	8.52	.03
FIB	100.00	0.00	0.00	0.00

MUSCOVITE PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	A	F-M
A	= K498/360	.081	.216
B	= GT	.188	.121
C	= BIO	.580	.518
D	= STAUR	.589	.178
E	= K498/33	.034	.241
F	= GT	.183	.081
G	= BIO	.480	.488
H	= STAUR	.578	.154
I	= FIB	1.000	0.000

13.08.21.0000188 LINES PRINTED ON LP07.

MUSCOVITE PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	A	F-M
A	= K498/386	.081	.216
B	= OT	.188	.121
C	= BIO	-.580	.519
D	= STAUR	.588	.178
E	= K498/33	.034	.241
F	= OT	.183	.591
G	= BIO	-.480	.488
H	= STAUR	.578	.154
I	= FIB	1.000	0.000

13.08.21.0000188 LINES PRINTED ON LP07.

K LOSS

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K4987804		62.21	1.26	20.14	12.47	.11	3.75	.48	.12	.07					.01	100.67
GT	42	37.42	0.00	21.39	34.07	.44	4.97	1.84	0.00	.03	.06	0.00		.08		
	45	37.79	0.00	21.05	34.18	.41	5.24	1.27	.03	0.00	.05	.10		0.00		
	47	38.12	.09	21.22	34.35	.39	4.88	1.42	.03	0.00	.10	.07				
	51	37.40	.04	21.27	34.03	.41	5.13	1.31	0.00	0.00	.06	.04		0.00		
	53	37.85	.08	20.98	33.37	.35	5.59	1.62	.02	.01	.05	.09				
	56	37.99	.08	21.29	34.02	.45	5.13	1.60	.02	.01	.02	.03				
	AVERAGE	37.76	.05	21.20	34.00	.41	5.16	1.51	.02	.01	.06	.06				
CORD	43	49.27	.07	32.11	4.25	.05	10.54	.05	.07	0.00	.02	0.00		0.00		
	44	46.52	.04	32.94	4.63	.03	10.69	.01	.06	.02	.03	.01				
	48	48.72	.04	32.42	5.34	.03	10.01	.01	.08	.02	0.00	0.00				
	54	49.27	0.00	32.71	4.73	.04	10.51	.01	.12	.01	0.00	.08				
	55	49.71	0.00	32.74	4.62	.02	10.50	.02	.09	.20	.04	0.00				
	58	41.20	0.00	32.19	8.18	.05	8.44	.04	.12	0.00	.03	.04				
	59	48.67	0.00	32.20	8.16	.07	8.12	.01	.18	0.00	.03	.04				
	AVERAGE	49.05	.02	32.49	5.70	.04	9.83	.02	.10	.04	.02	.05				
BIO	52	36.15	1.20	16.22	12.55	.06	15.02	0.00	.24	8.35	.08	.09		.22		
K49877848		71.99	.75	13.14	7.77	.14	1.76	2.18	2.35	.33					.03	100.44
GT	114	38.36	.08	21.43	31.84	.55	5.53	1.15	0.00	.01	.04	.01		0.00		
	117	38.11	.04	21.41	32.24	.74	5.55	1.21	.05	0.00	.03	.06				
	118	38.16	.01	21.32	32.45	.64	5.81	1.24	.04	0.00	.03	.10				
	120	38.45	.13	21.69	32.98	.65	5.44	1.25	.01	.03	.15	.11				
	123	38.68	.07	22.11	31.00	.64	6.93	1.23	.03	0.00	.05	.05				
	AVERAGE	38.34	.07	21.47	32.10	.66	5.93	1.22	.03	.01	.07	.07				
CORD	115	49.56	0.00	32.76	4.41	.01	10.28	0.00	.13	0.00	.02	0.00				
	116	49.35	.07	33.10	4.35	.05	9.91	0.00	.15	.01	0.00	.05				
	119	49.43	.03	33.06	3.83	.04	10.58	0.00	.09	.02	.02	0.00				
	122	49.62	0.00	32.78	4.16	.07	10.40	.01	.12	.01	.03	.06				
	AVERAGE	49.48	.03	32.93	4.19	.05	10.32	.00	.12	.01	.02	.03				
BIO	121	36.78	2.03	16.02	11.86	0.00	14.27	0.00	.25	9.29	.25	.16		.13		
	125	35.08	2.29	16.80	9.94	0.00	15.48	0.00	.15	9.62	.07	.10		0.00		
	AVERAGE	37.93	2.16	17.41	10.90	0.00	14.88	0.00	.22	9.18	.17	.13		.07		

SAMPLE	AL	NORMALISED FE	OXIDES MG	K
K4987804	31.74	44.32	23.75	.19
GT	17.87	64.65	17.47	.01
CORD	38.20	15.18	46.57	.07
BIO	15.03	23.34	49.78	11.85
K49877848	34.31	45.75	18.45	1.48
GT	18.24	61.50	24.75	.01
CORD	39.28	11.28	49.44	.02
BIO	14.92	20.92	50.86	13.40

K-FELDSPAR PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	A	F=M
A	= K4987804	.317	.349
B	= GT	.179	.213
C	= CORD	.382	.754
D	= BIO	.042	.581
E	= K49877848	.338	.286
F	= GT	.162	.246
G	= CORD	.393	.814
H	= BIO	.019	.709

13.37.24.0000137 LINES PRINTED ON LP06.

ST BREAKDOWN

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/14128		58.39	1.06	19.39	12.19	.09	3.19	1.51	2.15	2.02						100.07
GT	236	37.51	0.00	20.90	35.74	.55	3.33	1.30	.01	.02	.06	.20		.08		
	240	36.13	.08	20.90	36.49	.54	3.33	1.26	.03	.01	0.00	.03		.09		
	241	37.16	.01	21.37	33.41	.45	5.31	1.15	.02	.01	.02	0.00		0.00		
	AVERAGE	36.93	.03	21.04	35.21	.51	3.99	1.24	.02	.01	.03	.08		.06		
STAIR	215	27.58	.56	53.11	12.45	.02	1.85	0.00	.09	0.00	.44		2.29	0.00		
	218	33.19	.57	45.66	13.62	.05	3.20	.04	.07	.78	.09		1.55	0.00		
	217	26.76	.58	54.31	12.69	.05	1.84	.02	.06	0.00	.11		2.46	0.00		
	218	27.01	.43	53.36	13.17	.04	1.60	.03	.07	.03	.18		2.01	.07		
	AVERAGE	28.64	.53	51.62	12.99	.04	2.12	.02	.07	.20	.21		2.09	.02		
BID	238	35.89	.95	21.53	13.72	.02	12.58	0.00	.27	7.33	.07	.06		.05		
	242	34.70	1.31	18.63	16.09	.02	12.26	0.00	.23	9.38	.11	.05		.16		
	AVERAGE	35.30	1.13	20.07	14.91	.02	12.42	0.00	.25	8.36	.09	.07		.11		
CHLOR	235	25.36	.04	22.93	19.50	.01	16.20	.02	.03	.19	.05	.03		.08		
	239	24.82	.08	23.47	21.15	.02	17.31	.05	0.00	.05	.06	.16		0.00		
	AVERAGE	25.09	.06	23.20	20.33	.02	17.75	.04	.02	.08	.06	.10		.03		
PLAG	243	59.89	0.00	23.56	.12	.02	0.00	5.49	5.48	.04	0.00	.01		1.05		
	234	61.13	.05	23.72	.06	.02	.02	5.56	5.60	.05	.01	.05		0.00		
	AVERAGE	60.51	.03	23.64	.09	.02	.01	5.53	5.54	.05	.01	.06		0.00		
K498/1382		56.53	1.74	19.15	17.01	.18	2.38	.70	.52	1.34						100.77
GT	63	37.40	.02	21.58	33.27	2.85	3.31	1.48	.03	.02	.05	.01		.08		
	69	37.51	.03	20.96	33.94	2.89	3.54	1.61	.01	.01	.08	0.00		0.00		
	72	37.24	.07	20.84	33.50	2.73	4.04	1.54	0.00	0.00	.08	.07		0.00		
	76	36.61	.16	21.04	33.43	2.99	3.98	1.56	.04	0.00	0.00	.05		0.00		
	AVERAGE	37.24	.07	21.21	33.55	2.89	3.94	1.55	.02	.01	.05	.01		.02		
CHL	66	26.06	.08	22.87	15.73	.09	20.45	0.00	.03	.01	0.00	.33		.05		
	73	25.56	.05	23.30	16.53	.05	20.28	.04	.02	.07	.02	.15		.12		
	AVERAGE	25.81	.09	23.09	16.13	.07	20.37	.02	.03	.04	.01	.24		.12		
BID	68	36.11	1.50	18.28	13.71	.06	13.88	0.00	.23	9.09	0.00	.12		.22		
	74	36.98	1.41	18.70	13.62	.02	14.51	0.00	.27	9.04	.04	.13		.15		
	85	36.71	1.41	18.09	13.34	.04	13.35	0.00	.25	9.54	.08	0.00		.12		
	AVERAGE	36.60	1.44	18.36	13.56	.04	14.11	0.00	.25	9.22	.04	.08		.16		
AND	70	37.80	0.00	57.85	.58	0.00	0.00	0.00	0.00	.02	.02	0.00		.01		
STAIR	94	27.31	.42	52.61	13.44	.12	2.26	.01	.02	.01	.06		.59	0.00		
	85	27.53	.39	52.47	12.80	.14	2.21	0.00	.08	.02	.04		.86	0.00		
	AVERAGE	27.42	.41	52.54	13.12	.13	2.24	.01	.05	.02	.05		.78	0.00		

SAMPLE	AL	NORMALISED FE	OXIDES MG	K
K498/14128	30.70	43.52	20.29	5.50
GT	18.06	58.16	13.76	.02
STAIR	57.50	32.61	9.50	.39
BID	17.02	28.48	42.30	12.16
CHLOR	16.51	32.62	50.77	.05
PLAG	98.86	.85	.17	.32
K498/1382	27.60	55.25	13.75	3.32
GT	16.74	57.18	14.07	.01
CHL	16.33	25.73	57.88	.05
BID	15.11	25.16	46.67	13.06
AND	97.58	2.39	0.00	.06
STAIR	57.65	32.46	9.85	.03

AL2O3 PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	K	F-M
A	= K498/14128	.079	.313
B	= GT	.000	.160
C	= STAIR	.009	.228
D	= BID	.147	.598
E	= CHLOR	.001	.609
F	= PLAG	.241	.165
G	= K498/1382	.046	.200
H	= GT	.000	.173
I	= CHL	.001	.592
J	= BID	.154	.650
K	= AND	.023	0.000
L	= STAIR	.001	.233

13,10,12,000015T LINES PRINTED ON LP06.

I	=	CHL	.001	.192
J	=	STO	.154	.650
K	=	AND	.023	0.000
L	=	STAIR	.001	.233

13.10.12.0000157 LINES PRINTED ON LP08.

***** SGJAPKJ //// END OF LIST ////

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K4987368		56.29	1.64	17.76	16.84	.23	2.60	.93	.67	2.61					.13	88.90
GT	181	37.43	.08	21.14	34.06	2.59	2.60	2.99	.02	.02	.05	0.00		.04		
	184	37.43	.07	19.73	34.40	2.48	2.59	3.08	.11	.63	.09	.19		.01		
	AVERAGE	37.43	.07	20.44	34.23	2.49	2.65	3.03	.07	.03	.05	.19		.03		
BIO	178	35.79	1.81	18.98	17.60	.02	10.81	0.00	.16	9.58	.05	.05		.09		
	182	35.74	1.58	19.81	18.14	.05	11.16	0.00	.22	9.58	.12	3.00		.16		
	AVERAGE	35.44	2.07	18.21	18.54	.05	11.08	0.00	.18	9.87	.09	.13		.08		
STAUR	166	30.57	.40	51.59	12.81	.15	1.38	0.00	.05	.05	.10		.11	0.00		
	169	32.54	.38	51.14	11.86	.20	1.32	.01	.03	.03	.08		.10	0.00		
	170	28.45	.33	52.10	12.81	.15	1.34	.02	.01	.01	.07		.23	0.00		
	171	27.94	.35	51.70	13.87	.15	1.82	0.00	0.00	0.00	.08		.08	0.00		
	174	28.59	.44	51.72	14.10	.09	1.65	.02	.02	.01	.03		.22	0.00		
	AVERAGE	29.29	.40	51.70	13.15	.16	1.57	.01	.03	.02	.05		.16	0.00		
K498733		62.17	.08	17.33	11.77	.12	2.10	.66	1.35	3.12					.15	88.38
GT	14	36.54	0.00	20.50	36.95	.38	2.15	2.83	.05	.05	.10	.11		0.00		
	15	36.50	0.00	20.62	37.11	2.24	2.35	1.05	.03	.03	.08	.15		0.00		
	16	36.75	0.00	20.69	36.79	1.92	2.28	1.26	.01	.01	.67	.23		0.00		
	17	37.32	0.00	20.87	36.80	.20	1.95	3.52	0.00	0.00	.74	.08		0.00		
	18	36.82	0.00	20.56	37.47	1.42	2.20	1.34	.02	.01	.03	.22		0.00		
	19	35.67	0.00	20.13	38.82	.28	1.60	2.83	.23	0.00	.18	.18		0.00		
	20	36.56	0.00	20.46	37.48	.34	2.02	2.38	0.00	0.00	0.00	0.00		0.00		
	21	35.80	0.00	20.25	38.23	.34	1.58	3.08	0.00	0.00	0.00	0.00		0.00		
	22	36.54	0.00	20.54	35.81	.74	1.80	3.71	0.00	0.00	0.00	0.00		0.00		
	23	36.53	0.00	20.33	37.04	1.37	2.11	1.35	0.00	0.00	0.00	0.00		0.00		
	24	36.78	0.00	20.61	37.32	1.85	2.29	1.09	0.00	0.00	0.00	0.00		0.00		
	25	36.36	0.00	20.45	38.71	2.26	2.29	.89	0.00	0.00	0.00	0.00		0.00		
	26	36.52	0.00	20.50	36.33	2.50	2.36	1.09	0.00	0.00	0.00	0.00		0.00		
	934	36.86	.17	20.89	36.81	.27	1.91	3.16	.04	0.00	0.00	.07		0.00		
	935	36.68	.09	20.73	36.71	2.44	2.23	1.05	.07	0.00	0.00	0.00		0.00		
	936	36.83	.05	20.88	37.53	.73	1.98	1.82	.03	.01	.03	0.00		0.00		
	938	36.38	.09	20.88	37.30	.32	1.80	2.78	.03	.02	.01	.11		0.00		
	943	35.84	0.00	20.59	34.48	3.60	2.22	1.30	.03	.03	.02	0.00		0.00		
	944	36.55	.01	20.83	36.98	1.64	2.10	1.52	0.00	.01	.01	.20		0.00		
	AVERAGE	36.56	.02	20.59	36.99	1.31	2.07	2.01	.03	.01	.03	.07		0.00		
BIO	937	34.51	1.47	18.21	20.14	.08	9.85	0.00	.14	8.88	.12	0.00		0.00		
	938	34.77	1.49	18.19	20.20	.03	10.07	0.00	.20	8.92	.03	.11		.04		
	AVERAGE	34.64	1.48	18.20	20.17	.05	9.96	0.00	.17	8.90	.04	.08		.04		
STAUR	931	28.21	.45	51.11	14.03	.02	1.47	.01	.08	.02	.01		.37	.06		
	932	27.12	.44	52.86	14.54	.05	1.39	.02	.26	.04	0.00		.52	.10		
	933	27.20	.46	52.78	14.47	0.00	1.56	0.00	.03	0.00	.02		.61	0.00		
	941	27.38	.42	52.45	14.66	.04	1.56	.02	.13	.02	0.00		.72	0.00		
	AVERAGE	27.50	.45	52.28	14.40	.01	1.38	.02	.02	0.00	.03		.58	.14		
FIB	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00			

MUSCOVITE PROJECTION
RATIOS OF PLUTTED OXIDES

SYMBOL	SAMPLE	A	F-M
A	K4987368	.234	.216
B	GT	.255	.121
C	BIO	-.313	.519
D	STAUR	.695	.176
E	K498733	.246	.241
F	GT	.263	.091
G	BIO	-.248	.468
H	STAUR	.683	.154
I	FIB	1.000	0.000

DATE 21/09/17 15.54.49.

COMPOSITION VALUES ARE OXIDES OF ELEMENTS

K LOSS

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K4987304		62.71	1.26	20.14	12.47	.11	3.75	.48	.12	.07					.01	100.67

K LOSS

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL	
K498/804		62.21	1.26	20.14	12.47	.11	3.75	.48	.12	.07						.01 100.62	
GT	42	37.42	0.00	21.39	34.07	.44	4.97	1.84	0.00	.03	.08	0.00		.05			
	45	37.79	0.00	21.05	34.18	.41	5.24	1.27	.03	0.00	.05	.10		0.00			
	47	38.12	.09	21.22	34.35	.39	4.88	1.42	.03	0.00	.10	.07		.02			
	51	37.40	.04	21.27	34.03	.41	5.13	1.31	0.00	0.00	.08	.04		0.00			
	53	37.88	.08	20.98	33.37	.35	5.09	1.62	.02	.01	.05	.09		.03			
	56	37.88	.08	21.28	34.02	.45	5.13	1.80	.02	.01	.02	.03		.03			
	AVERAGE		37.76	.05	21.20	34.00	.41	5.18	1.51	.02	.01	.08	.05		.02		
CORD	43	49.27	.07	32.11	4.25	.05	10.54	.05	.07	0.00	.02	0.00		0.00			
	44	49.52	.04	32.84	4.83	.03	10.69	.01	.05	.02	.03	.01		.01			
	48	48.72	.04	32.42	5.34	.03	10.01	.01	.08	.02	0.00	0.00		0.00			
	54	49.27	0.00	32.71	4.73	.04	10.51	.01	.12	.01	0.00	.08		0.00			
	55	49.71	0.00	32.24	4.82	.02	10.50	.02	.09	.20	.04	0.00		.04			
	58	48.20	0.00	32.19	6.18	.05	8.44	.04	.12	0.00	.03	.04		.05			
	AVERAGE		49.05	.02	32.40	5.70	.04	9.83	.02	.10	.04	.02	.05		.02		
BID	52	36.15	1.20	18.22	12.55	.05	15.02	0.00	.24	1.35	.08	.09		.22			
K498/7848		71.98	.75	13.14	7.77	.14	1.75	2.18	2.35	.33						.03 100.44	
GT	114	38.36	.08	21.43	31.84	.65	5.53	1.15	0.00	.01	.04	.01		0.00			
	117	38.11	.04	21.41	32.24	.74	5.55	1.21	.05	0.00	.03	.06		.02			
	118	38.10	.01	21.32	32.46	.64	5.81	1.24	.04	0.00	.08	.10		0.00			
	120	38.45	.13	21.89	32.98	.65	5.44	1.28	.01	.03	.15	.11		0.00			
	123	38.68	.07	22.11	31.00	.64	6.83	1.23	.03	0.00	.05	.05		.07			
	AVERAGE		38.34	.07	21.47	32.10	.66	5.83	1.22	.03	.01	.07	.07		.02		
	CORD	115	49.56	0.00	32.76	4.41	.01	10.28	0.00	.13	0.00	.02	0.00		.02		
116		49.36	.07	33.10	4.35	.06	9.91	0.00	.15	.01	0.00	.05		0.00			
119		49.43	.03	33.08	3.83	.04	10.68	0.00	.08	.02	.02	0.00		.18			
122		49.62	0.00	32.78	4.15	.07	10.40	.01	.12	.01	.03	.06		.07			
AVERAGE			49.48	.03	32.93	4.19	.05	10.31	.00	.12	.01	.02	.03		.07		
BID	121	36.78	2.03	18.02	11.86	0.00	14.27	0.00	.29	9.25	.26	.16		.13			
	125	39.08	2.29	18.80	9.94	0.00	15.48	0.00	.15	9.62	.37	.10		0.00			
	AVERAGE		37.93	2.16	17.41	10.90	0.00	14.88	0.00	.22	9.15	.17	.13		.07		

K-FELDSPAR PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	A	F-M
A	= K498/804	.425	.349
B	= GT	.257	.213
C	= CORD	.495	.754
D	= BID	.141	.681
E	= K498/7848	.452	.288
F	= GT	.262	.246
G	= CORD	.507	.814
H	= BID	.124	.709

ST BREAKDOWN

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/14128		58.39	1.06	19.39	12.19	.09	3.19	1.51	2.15	2.02					.08	104.67
GT	236	37.51	0.00	20.90	35.74	.55	3.33	1.30	.01	.02	.06	.20		.08		
	240	36.13	.08	20.90	36.49	.54	3.33	1.26	.03	.01	0.00	.03		.09		
	241	37.16	.01	21.32	33.41	.45	5.31	1.15	.02	.01	.02	0.00		0.00		
	AVERAGE	36.93	.03	21.04	35.21	.51	3.99	1.24	.07	.01	.03	.08		.08		
STAIR	215	27.58	.75	53.21	17.45	.02	1.85	0.09	.09	0.00	.44		2.29	0.00		
	216	33.19	.57	45.68	13.62	.05	3.20	.04	.07	.78	.08		1.55	0.00		
	217	26.76	.55	54.31	12.65	.05	1.84	.02	.65	0.00	.11		2.46	0.00		
	218	27.01	.43	53.36	13.17	.04	1.60	.03	.07	.33	.18		2.01	.07		
	AVERAGE	28.64	.53	51.82	12.98	.04	2.12	.02	.07	.20	.21		2.08	.02		
BIO	238	35.89	.95	21.53	13.72	.02	12.58	0.00	.27	7.33	.07	.06		.05		
	242	34.70	1.31	18.63	16.09	.02	12.26	0.00	.23	9.38	.11	.05		.18		
	AVERAGE	35.30	1.13	20.08	14.91	.02	12.42	0.00	.25	8.36	.09	.06		.11		
CHLOR	235	25.36	.04	22.83	18.50	.01	18.20	.02	.02	.10	.05	.03		.08		
	238	24.82	.08	23.47	21.15	.02	17.31	.05	0.00	.15	.06	.15		0.00		
	AVERAGE	25.09	.06	23.20	20.33	.02	17.76	.04	.02	.08	.06	.10		.03		
PLAG	243	56.88	0.00	23.56	.12	.02	0.00	5.49	8.48	.04	0.00	.05		0.00		
	234	61.13	.05	23.72	.08	.02	.02	5.56	8.80	.05	.01	.05		0.00		
	AVERAGE	59.51	.03	23.64	.09	.02	.02	5.53	8.54	.05	.01	.06		0.00		
K498/1382		56.63	1.74	19.15	17.01	.18	2.38	.70	.82	1.34					.13	85.77
GT	63	37.40	.02	21.58	33.27	2.95	3.81	1.48	.03	.02	.05	.08		.08		
	69	37.01	.03	20.96	33.96	2.89	3.94	1.61	.01	.01	.08	0.00		0.00		
	75	37.24	.07	20.84	33.50	2.73	4.04	1.54	0.00	3.00	.04	.07		0.00		
	76	36.81	.16	21.04	33.43	2.89	3.88	1.56	.04	3.00	0.00	.09		0.00		
	AVERAGE	37.24	.07	21.11	33.55	2.89	3.94	1.57	.02	.01	.05	.05		.02		
CHL	66	26.06	.08	22.87	15.73	.09	20.45	0.00	.03	.01	0.00	.33		.01		
	73	25.56	.09	23.30	16.53	.05	20.25	.04	.02	.07	.02	.15		.14		
	AVERAGE	25.81	.09	23.09	16.13	.07	20.37	.02	.02	.04	.01	.24		.13		
BIO	68	36.11	1.59	18.28	13.71	.06	13.88	0.00	.23	9.05	0.00	.12		.22		
	74	36.85	1.41	18.70	13.62	.02	14.51	0.00	.27	9.04	.04	.13		.15		
	96	36.71	1.41	18.09	13.34	.04	13.95	0.00	.25	9.54	.08	0.00		.12		
	AVERAGE	36.60	1.44	18.35	13.56	.04	14.11	0.00	.25	9.22	.04	.08		.16		
AND	70	37.80	0.00	60.85	.56	0.00	0.00	0.00	0.00	.02	.02	0.00		.01		
STAIR	84	27.31	.42	52.51	13.44	.12	2.25	.01	.02	.01	.56		.55	0.00		
	85	27.53	.39	52.47	12.80	.14	2.21	0.00	.08	.02	.04		.85	0.00		
	AVERAGE	27.42	.41	52.54	13.12	.13	2.24	.01	.05	.02	.03		.70	0.00		

AL2O3/IO3 PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	K	F-M
A	= K498/14128	.079	.313
B	= GT	.000	.168
C	= STAIR	.009	.226
D	= BIO	.147	.598
E	= CHLOR	.001	.609
F	= PLAG	.241	.165
G	= K498/1382	.046	.200
H	= GT	.000	.173
I	= CHL	.001	.652
J	= BIO	.154	.650
K	= AND	.023	0.000
L	= STAIR	.001	.233

15.56.16.0000356 LINES PRINTED ON LP06.

SOJAPKJ //// END OF LIST ////

CORKWOOD(2)

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/774D		58.49	1.11	18.87	11.44	.17	3.80	7.28	.81	.97					.08	100.26
HBE	53	47.30	.72	10.40	15.42	.05	11.71	11.22	.85	.46	.10	.12		0.00		
GT	67	37.34	.10	20.33	30.10	.83	4.97	5.44	.04	0.00	.04	.09		0.00		
	74	37.85	.03	20.73	30.77	.59	5.20	4.21	0.00	.01	.02	0.00		.07		
	78	38.05	0.00	20.76	30.56	.58	5.08	4.27	.03	.02	.02	0.00		0.00		
AVERAGE		37.75	.04	20.61	30.48	.73	5.08	4.54	.02	.01	.03	.03		.02		
BIO	76	35.38	1.62	16.46	14.66	0.00	14.63	0.00	.16	8.97	.15	.14		.38		
	77	36.32	2.70	16.64	15.47	.02	12.98	0.00	.15	8.61	.16	.28		.22		
AVERAGE		36.35	2.16	16.55	15.07	.01	13.81	0.00	.16	9.29	.17	.21		.30		
AMPH1	69	52.45	.01	1.54	22.34	.16	18.08	1.14	.10	.03	.11	.02		0.00		
	71	53.72	.21	1.66	21.33	.15	18.95	.19	.08	.01	0.00	.11		.01		
AVERAGE		53.09	.11	1.60	21.84	.16	18.52	.67	.10	.02	.06	.07		.01		
AMPH2	70	44.09	.58	12.01	15.62	.07	11.03	10.84	1.03	.56	.32	.07		0.00		
K498/811		49.99	1.38	19.77	17.81	.35	4.67	1.86	1.37	2.24					.02	99.48
GT	132	38.57	.05	21.43	33.90	.88	4.80	1.25	.03	0.00	0.00	0.00		0.00		
	133	38.64	0.00	21.92	34.60	1.01	4.32	1.20	.01	.01	0.00	.02		0.00		
	136	37.40	.01	21.98	35.84	.96	3.89	1.26	0.00	.02	.11	0.00		0.00		
	139	37.05	.04	21.16	34.50	1.08	4.55	1.33	.03	0.00	0.00	0.00		.17		
	140	37.68	.05	21.77	33.55	.89	6.21	1.15	.02	0.00	0.00	.03		.05		
	143	37.56	0.00	21.31	35.56	1.07	3.93	1.46	.07	.02	.07	0.00		.08		
AVERAGE		37.63	.03	21.59	34.66	.98	4.45	1.28	.03	.01	.03	.01		.05		
BIO	131	36.56	2.32	17.97	12.99	.04	14.62	0.00	.42	9.88	.07	0.00		.18		
	137	35.61	2.23	18.38	15.42	0.99	13.23	0.00	.16	9.83	.12	.11		.24		
	138	35.10	2.49	17.71	14.85	.04	13.16	0.00	.14	9.49	.16	.13		.40		
	141	36.93	2.37	18.70	12.75	.02	14.72	0.00	.20	8.76	.10	.10		.44		
	142	35.57	2.38	18.03	16.32	.05	12.06	0.00	.16	9.81	.15	.04		.29		
AVERAGE		35.95	2.35	18.16	14.49	.03	13.56	0.00	.22	9.75	.12	.08		.31		
PLAG	130	57.19	.06	25.64	.01	.04	0.00	8.07	6.81	.10	.05	.01		.05		
K498/813A		62.06	1.14	14.30	11.48	.21	3.64	2.57	2.03	1.96					.01	99.46
GT	254	38.32	.10	21.72	30.87	1.34	6.64	1.49	.03	0.00	0.00	.06		.04		
	257	37.82	.10	21.93	31.88	1.25	5.74	1.63	.02	.03	.05	0.00		.08		
	263	38.39	.18	20.98	30.98	1.23	5.07	1.75	.07	0.00	.02	.01		0.00		
	267	37.40	.06	21.49	32.14	1.27	6.08	1.64	.08	0.00	.02	.03		.08		
AVERAGE		37.98	.11	21.53	31.47	1.27	6.13	1.63	.05	.01	.02	.03		.05		
BIO	255	35.75	2.84	17.75	16.13	.04	12.62	0.00	.12	9.64	.13	0.00		.43		
	256	36.77	2.14	17.60	12.71	.04	14.88	0.00	.16	9.88	.06	.08		.13		
	264	36.39	2.62	17.93	12.35	.02	15.46	0.00	.30	9.53	0.00	.09		.51		
	266	35.36	2.22	17.48	14.90	.01	13.51	0.00	.18	9.67	.02	.15		.50		
AVERAGE		36.07	2.41	17.74	14.02	.03	14.11	0.00	.19	9.68	.05	.08		.39		
K498/800		70.24	.34	14.80	4.48	.06	.65	4.33	3.25	.50					.10	99.45
GT	274	37.39	.07	20.06	30.67	2.82	3.67	4.60	.01	.02	0.00	.03		.08		
	275	37.00	0.00	19.52	29.98	2.28	4.41	4.66	0.00	.01	.02	.08		.03		
AVERAGE		37.20	.04	19.84	30.33	2.55	4.04	4.63	.01	.02	.01	.06		.06		
PLAG	276	58.02	.06	24.88	.18	.05	.03	7.49	7.34	.33	.02	0.00		.11		
	273	57.73	.01	25.37	.01	0.00	0.00	7.35	7.54	.23	.02	0.00		0.00		
AVERAGE		57.88	.04	25.13	.10	.03	.02	7.42	7.44	.28	.02	0.00		.06		
BIO	271	34.43	3.57	18.30	20.91	.08	8.51	0.00	.03	9.84	.02	.09		.05		
HBE	272	41.63	.98	10.68	20.47	.22	8.65	11.04	.68	1.08	.03	.10		.04		
	270	41.71	.99	11.15	18.81	.26	8.61	10.94	1.08	1.15	0.00	0.00		.01		
AVERAGE		41.67	.99	10.92	20.14	.24	8.63	10.99	.98	1.12	.02	.05		.03		
OPX	268	48.90	.14	1.27	33.65	1.01	14.18	.66	.07	0.00	.02	0.00		0.00		
	269	49.51	.09	1.13	32.37	.98	14.40	.70	0.00	0.00	0.00	.01		.06		
AVERAGE		49.21	.12	1.20	33.01	1.00	14.30	.68	.04	0.00	.01	.01		.03		
K498/723		52.40	1.95	16.92	17.78	.23	3.54	2.02	2.75	1.85					.08	99.52
GT	298	37.45	.04	20.98	34.05	.75	4.45	1.35	.12	.03	.02	.07		.11		
	302	37.77	.06	20.95	35.54	.89	4.23	1.03	.01	.02	.08	.03		.15		
	306	36.93	0.00	20.77	36.51	.77	3.60	1.82	.05	0.00	.06	0.00		.05		
AVERAGE		37.38	.03	20.90	35.37	.74	4.09	1.13	.06	.02	.05	.03		.10		
BIO	299	35.04	3.48	16.62	16.81	.01	10.18	0.00	.25	10.42	.18	.12		.07		
	303	35.11	3.21	17.23	18.19	.04	10.87	0.00	.13	10.09	.15	.02		.09		
	307	35.34	3.24	16.56	18.85	0.00	10.19	0.00	.11	10.21	.17	.15		.09		
AVERAGE		35.16	3.31	16.80	18.52	.02	10.41	0.00	.16	10.24	.17	.10		.08		
K498/860		NO WHOLE ROCK ANALYSIS														
GT	35	36.11	0.00	22.31	30.37	.54	7.35	1.35	.25	10.42	.19	.12		.07		
	37	38.41	0.00	21.67	31.13	.61	7.62	1.37	.13	10.09	.15	.02		.05		

BID	288	35.04	3.44	16.62	18.81	.01	10.18	0.00	.25	10.42	.18	.12	.07
	303	35.11	3.21	17.23	18.19	.04	10.87	0.00	.13	10.09	.15	.02	.08
	307	35.34	3.24	16.56	18.85	0.00	10.18	0.00	.11	10.21	.17	.15	.08
AVERAGE		35.16	3.31	16.80	18.62	.02	10.41	0.00	.16	10.24	.17	.10	.08

K498/960	NO	WHOLE	ROCK	ANALYSIS									
GT	36	36.11	0.00	22.31	30.37	.54	7.35	1.35	.25	10.42	.18	.12	.07
	37	38.41	0.00	21.67	31.13	.61	7.63	1.37	.13	10.09	.15	.02	.05
	38	38.60	0.00	21.60	30.75	.60	7.63	1.42	.11	10.21	.17	.15	.08
	39	38.47	0.00	21.63	30.96	.53	7.73	1.35	0.00	0.00	0.00	0.00	0.00
	40	37.97	0.00	21.05	33.22	.52	6.48	1.55	0.00	0.00	0.00	0.00	0.00
	41	38.05	0.00	21.40	32.56	.49	6.57	1.57	0.00	0.00	0.00	0.00	0.00
	42	38.20	0.00	21.45	31.37	.57	7.81	1.28	0.00	0.00	0.00	0.00	0.00
	43	37.65	0.00	21.27	30.88	.52	7.80	1.25	0.00	0.00	0.00	0.00	0.00
	44	38.29	0.00	21.08	29.87	.57	7.53	1.25	0.00	0.00	0.00	0.00	0.00
	45	38.15	0.00	21.49	30.75	.56	7.88	1.17	0.00	0.62	3.00	9.00	0.00
	46	37.83	0.00	21.33	30.80	.59	7.84	1.19	0.00	0.00	0.00	0.00	0.00
AVERAGE		38.17	0.00	21.48	31.15	.55	7.51	1.36	.04	2.79	.05	.03	.02

CORD	90	48.38	0.00	32.01	7.12	0.00	10.39	.28	0.00	3.00	0.00	0.00	0.00
	91	47.44	0.00	35.67	3.30	0.00	8.51	0.00	0.00	0.00	0.00	0.00	0.00
	92	49.34	0.00	32.47	3.53	0.00	11.03	0.00	.20	0.00	0.00	0.00	0.00
AVERAGE		48.59	0.00	33.38	4.65	0.00	10.31	.09	.07	0.60	0.00	0.00	0.00

PLAG	93	57.05	0.00	26.90	.22	0.00	0.00	9.79	6.40	.09	0.00	0.00	0.00
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SAMPLE	AL	NORMALISED FE	OXIDES MG	K
K498/784D	54.98	53.33	8.86	2.83
HBE	27.38	40.59	30.82	1.21
GT	36.68	54.25	9.05	.02
BID	30.25	27.54	25.23	16.98
AMPH1	3.81	52.03	44.11	.05
AMPH2	30.47	40.13	27.98	1.42
K498/811	44.44	40.03	10.50	5.03
GT	35.57	57.09	7.33	.01
BID	32.45	25.89	24.23	17.43
PLAG	98.57	.04	0.00	.39
K498/813A	45.57	36.58	11.60	6.25
GT	36.41	53.21	10.37	.01
BID	31.94	25.24	25.40	17.42
K498/800	72.44	21.93	3.18	2.45
GT	38.58	65.93	7.45	.03
PLAG	98.47	.37	.06	1.10
BID	29.34	37.63	15.32	17.71
HBE	26.75	49.36	21.15	2.74
OPX	2.47	68.05	29.47	0.00
K498/723	42.21	44.35	8.83	4.61
GT	34.62	58.58	6.78	.03
BID	29.97	31.20	18.57	18.28
GT	34.13	48.50	11.53	4.44
CORD	69.05	9.62	21.33	0.00
PLAG	98.86	.81	0.00	.33

K-FELDSPAR PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	A	F-M
A	= K498/784D	.553	.210
B	= HBE	.268	.432
C	= GT	.367	.143
D	= BID	.201	.478
E	= AMPH1	.038	.459
F	= AMPH2	.299	.411
G	= K498/811	.438	.288
H	= GT	.356	.114
I	= BID	.231	.483
J	= PLAG	1.000	0.000
K	= K498/813A	.449	.241
L	= GT	.364	.163
M	= BID	.223	.502
N	= K498/800	.736	.127
O	= GT	.366	.113
P	= PLAG	.996	.136
Q	= BID	.180	.288
R	= HBE	.254	.300
S	= OPX	.025	.302
T	= K498/723	.414	.166
U	= GT	.346	.104
V	= BID	.184	.359
W	= GT	.326	.194
X	= CORD	.691	.689
Y	= PLAG	.992	0.000

15.32.37.0000280 LINES PRINTED ON LF06.

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SGJAPKJ //// END OF LIST ////

CORKWOOD

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZK	RA	P	TOTAL
K486/807		51.95	.84	19.44	13.81	.20	4.80	3.28	2.03	1.08					.03	99.66
GT	23	37.67	.06	20.80	33.07	.92	4.47	2.22	0.00	0.00	.10	.17		.01		
	27	37.62	.03	21.16	32.47	.90	5.32	1.60	0.00	.01	.09	.08		0.00		
	28	36.99	.03	20.91	35.26	.90	4.05	2.03	.02	0.00	0.00	.03		0.00		
	29	37.78	0.00	21.27	31.27	.85	6.13	1.60	0.00	0.00	.10	.11		.02		
	31	38.06	0.00	21.17	31.53	.83	5.22	1.74	.03	.01	.02	.05		0.00		
	34	38.43	0.00	21.67	31.94	.85	6.05	1.81	.01	.01	.02	.08		.06		
	35	38.33	.02	21.06	32.88	.89	5.67	1.67	.04	.01	.02	0.00		.03		
	39	38.25	.05	20.95	34.33	.88	3.57	2.12	.01	.02	.05	.04		.04		
	AVERAGE	37.69	.02	21.12	32.82	.89	5.18	1.82	.01	.01	.05	.07		.03		
BIO	24	35.07	2.78	17.08	17.17	.04	11.75	0.00	.12	9.48	.09	.07		.34		
	37	36.28	2.55	17.28	15.95	0.00	12.40	0.00	.16	9.63	.21	.15		0.00		
	38	37.90	1.30	17.86	9.72	.05	17.77	0.00	.32	9.01	.14	.07		.03		
	AVERAGE	36.42	2.21	17.41	14.28	.03	13.97	0.00	.20	9.37	.19	.10		.12		
K486/804		62.21	1.26	20.14	12.47	.11	3.75	.48	.12	.07					.01	100.62
GT	76	37.66	0.00	26.58	29.91	.34	5.13	1.14	.12	9.48	.04	.07		.34		
	77	36.19	0.00	21.29	33.72	.41	8.15	1.22	.16	9.53	.21	.15		0.00		
	78	37.80	0.00	21.28	33.35	.33	5.86	1.23	.32	8.01	.14	.07		.03		
	79	37.63	0.00	21.14	33.47	.32	5.68	1.23	0.00	0.00	0.00	0.00		0.00		
	80	37.22	0.00	21.05	32.83	.37	5.96	1.41	.25	0.00	0.00	0.00		0.00		
	81	37.25	0.00	22.80	31.58	.36	5.85	1.28	0.00	0.00	0.00	0.00		0.00		
	82	37.05	0.00	21.09	33.87	.26	5.83	1.24	0.00	0.00	0.00	0.00		0.00		
	42	37.42	0.00	21.39	34.07	.44	4.97	1.84	0.00	.03	.06	0.00		.05		
	45	37.79	0.00	21.05	34.18	.41	5.24	1.27	.03	0.00	.05	.10		0.00		
	47	36.12	.09	21.22	34.35	.39	4.83	1.42	.03	0.00	.10	.07		.02		
	51	37.40	.01	21.27	34.03	.41	5.13	1.31	0.00	0.00	.06	.04		0.00		
	53	37.65	.08	20.98	33.37	.35	5.59	1.62	.02	.01	.05	.09		.03		
	56	37.89	.08	21.29	34.02	.45	5.13	1.60	.02	.01	.02	.03		.03		
	AVERAGE	37.69	.02	21.73	33.27	.37	5.91	1.37	.07	2.17	.04	.05		.04		
CORD	83	46.27	.23	35.18	5.17	0.00	6.26	0.00	0.00	.45	0.00	0.00		0.00		
	84	47.82	0.00	32.20	5.86	0.00	9.16	0.00	.21	0.00	0.00	0.00		0.00		
	43	49.27	.07	32.11	4.25	.05	10.54	.05	.07	0.00	.02	0.00		0.00		
	44	49.52	.04	32.84	4.63	.03	10.69	.01	.06	.02	.03	.01		.06		
	48	48.72	.04	32.42	5.34	.03	10.81	.01	.06	.02	0.00	0.00		0.00		
	54	49.27	0.00	32.71	4.73	.04	10.51	.01	.12	.01	0.00	.02		0.00		
	55	49.71	0.00	32.24	4.62	.02	10.90	.02	.09	.20	.04	0.00		.04		
	58	48.20	0.00	32.19	8.18	.05	8.44	.04	.12	0.00	.03	.04		.05		
	59	48.67	0.00	32.20	8.16	.07	8.12	.01	.18	0.00	0.00	.22		0.00		
	AVERAGE	48.62	.04	33.02	5.77	.03	9.35	.02	.10	.06	.01	.04		.02		
BIO	52	36.15	1.20	16.22	12.55	.05	15.02	0.00	.24	8.35	.05	.08		.22		
K486/810		45.75	1.36	23.84	14.25	.20	4.65	3.10	3.32	3.38					.05	99.99
GT	108	37.82	.05	21.09	35.89	1.36	3.51	1.04	.03	0.00	0.00	0.00		0.00		
	111	37.65	0.00	21.31	34.88	1.22	3.45	1.14	.02	.02	0.00	.18		0.00		
	112	37.82	0.00	20.39	33.56	1.06	4.53	1.08	.05	.01	.02	.07		0.00		
	AVERAGE	37.75	.02	21.13	34.78	1.21	3.83	1.09	.03	.01	.01	.08		0.00		
BIO	109	35.67	2.76	18.01	16.53	.01	11.18	0.00	.09	10.24	.02	.18		0.00		
	110	35.35	2.95	17.87	15.99	.01	11.14	0.00	.06	9.88	.02	.18		.18		
	113	34.77	3.10	17.94	16.67	0.00	10.65	0.00	.10	10.26	.07	.07		.74		
	AVERAGE	35.28	2.94	17.94	16.40	.01	10.99	0.00	.08	10.13	.04	.14		.14		
K486/784B		71.99	.75	13.14	7.77	.14	1.76	2.18	2.35	.33					.03	100.44
GT	114	38.35	.08	21.43	31.84	.65	5.55	1.15	0.00	.01	.04	.01		0.00		
	117	38.11	.04	21.41	32.24	.74	5.95	1.21	.05	0.00	.03	.06		0.00		
	118	38.10	.01	21.32	32.48	.64	5.81	1.24	.04	0.00	.09	.10		0.00		
	120	38.45	.13	21.09	32.98	.65	5.44	1.26	.01	.03	.15	.11		0.00		
	123	38.68	.07	22.11	31.00	.64	6.93	1.23	.03	0.00	.05	.05		.07		
	AVERAGE	38.34	.07	21.47	32.10	.66	5.83	1.22	.03	.01	.07	.07		.02		
CORD	115	48.50	0.00	32.76	4.41	.01	10.28	0.00	.13	0.00	.02	0.00		.07		
	116	48.36	.07	33.10	4.35	.06	9.91	0.00	.15	.01	0.00	.01		0.00		
	119	49.43	.03	33.08	3.83	.04	10.65	0.00	.06	.02	.02	0.00		.18		
	122	49.62	0.00	32.78	4.16	.07	10.40	.01	.12	.01	.03	.06		.07		
	AVERAGE	48.48	.03	32.93	4.19	.05	10.32	.00	.12	.01	.02	.03		.07		
BIO	121	36.78	2.03	18.02	11.86	0.00	14.27	0.00	.28	9.29	.26	.18		.13		
	126	39.08	2.28	16.80	9.94	0.00	15.46	0.00	.15	9.02	.07	.10		0.00		
	AVERAGE	37.93	2.16	17.41	10.90	0.00	14.88	0.00	.22	9.18	.17	.13		.07		
K486/830		61.16	1.29	15.05	12.51	.20	2.05	2.70	2.70	1.88					.03	95.78
GT	142	37.85	.02	20.55	33.89	1.39	4.21	1.71	.02	0.00	0.00	0.00		.04		
	146	37.73	.08	21.05	34.78	1.41	2.98	2.33	.01	0.00	.06	.01		0.00		
	148	37.78	.12	21.25	32.44	1.29	4.08	2.35	0.00	0.00	.08	.02		.20		
	161	38.35	.04	21.27	31.75	1.25	4.82	2.41	.03	0.00	.07	.02		.13		
	156	36.43	0.00	20.76	36.89	1.56	2.58	1.71	.01	.01	.04	.05		0.00		
	159	37.76	.01	21.07	33.29	1.26	3.74	2.50	.03	0.00	0.00	.03		.05		
	AVERAGE	37.65	.05	20.96	33.84	1.38	3.74	2.17	.02	.00	.04	.02		.07		
BIO	143	38.25	1.31	16.77	20.87	.04	8.05	0.00	.06	9.35	.03	.13		.25		

GT	142	37.85	.02	20.85	33.83	1.39	4.21	1.71	.02	0.00	0.00	0.00	.04
	146	37.73	.08	21.05	34.78	1.61	2.98	2.33	.01	0.00	.06	.01	0.00
	148	37.78	.12	21.28	32.44	1.28	4.08	2.35	0.00	0.00	.08	.02	.26
	161	38.35	.04	21.27	31.75	1.25	4.82	2.41	.03	0.00	.07	.02	.13
	165	36.43	0.00	20.26	36.89	1.56	2.58	1.71	.01	.01	.04	.15	0.00
	158	37.76	.01	21.07	33.29	1.26	3.74	2.50	.03	0.00	0.00	.03	.05
	AVERAGE	37.65	.05	20.98	33.84	1.38	3.74	2.17	.02	.00	.04	.02	.07
BT	144	34.25	3.31	16.77	21.47	.08	8.05	0.00	.06	9.86	.03	.19	.20
	165	34.49	3.35	16.15	20.88	.04	8.98	0.00	0.00	9.85	.07	.05	.17
	168	35.65	2.72	16.59	16.00	0.00	12.52	0.00	.13	9.98	.18	0.00	.16
	AVERAGE	34.80	3.13	16.50	19.45	.04	9.85	0.00	.05	9.90	.09	.08	.20
K-98/815A	NO WHOLE ROCK ANALYSIS												
GT	180	37.19	.08	20.58	35.05	.72	4.46	1.25	.04	0.00	.09	.04	0.00
	183	36.45	.02	20.52	35.80	.85	4.17	1.22	0.00	0.00	.04	.05	.05
	185	35.82	.04	20.73	37.70	.84	3.53	1.13	.03	0.00	.02	.07	.02
	180	37.50	.10	20.16	35.86	1.02	3.56	1.16	0.00	.01	.01	.13	.07
	194	37.47	.05	20.60	34.61	.72	4.56	1.19	0.00	0.00	.02	0.00	.11
	AVERAGE	36.49	.06	20.52	35.80	.83	4.06	1.19	.01	.00	.04	.05	.05
BT0	181	37.31	.22	18.33	11.40	.01	14.97	0.00	.09	10.40	.09	.07	.04
	182	34.72	2.96	17.61	18.01	.02	10.41	0.00	.05	10.41	.04	0.00	.17
	185	34.25	1.72	17.87	16.35	0.00	12.09	0.00	.10	10.30	.05	.07	.13
	182	35.75	.22	19.60	15.30	.04	12.60	0.00	.06	10.24	.05	.13	.20
	193	37.56	.43	18.81	11.61	.03	14.91	0.00	.03	10.06	.03	.08	.04
	AVERAGE	35.92	1.11	18.44	14.54	.02	13.00	0.00	.07	10.28	.05	.07	.12

SAMPLE	AL	NORMALISED OXIDES		K
		FE	MG	
K498/807	47.15	33.50	11.88	7.47
GT	35.72	55.50	8.77	.01
BID	31.63	25.95	25.39	17.03
K498/804	55.28	34.23	10.29	.19
GT	34.66	53.09	8.79	3.46
CORD	68.47	11.97	19.41	.19
BID	33.65	23.18	27.74	15.42
K498/810	51.80	30.83	10.06	7.31
GT	35.30	58.21	6.42	.02
BID	32.36	29.57	19.82	18.26
K498/7848	57.13	33.78	7.65	1.43
GT	36.08	53.54	9.97	.01
CORD	69.41	8.83	21.75	.02
BID	33.16	20.83	20.41	17.49
K498/830	47.79	33.73	6.51	5.87
GT	35.63	57.79	6.58	.00
BID	29.63	34.92	17.69	17.77
GT	33.98	59.30	5.72	.00
BID	32.78	25.85	23.10	12.27

MUSCOVITE PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	A	F=M
A	= K498/807	.353	.262
B	= GT	.357	.136
C	= BID	-.610	.495
D	= K498/804	.551	.231
E	= GT	.282	.142
F	= CORD	.684	.810
G	= BID	-.323	.545
H	= K498/810	.422	.248
I	= GT	.353	.089
J	= BID	-.832	.401
K	= K498/7848	.560	.185
L	= GT	.361	.156
M	= CORD	.694	.711
N	= BID	-.840	.577
O	= K498/830	.393	.141
P	= GT	.358	.099
Q	= BID	-.819	.336
R	= GT	.340	.102
S	= BID	-.819	.472

08.55.13.0000280 LINES PRINTED ON LP06.

STAU BREAKDOWN

SAMPLE	PROBE NO	ST	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/366		56.29	1.64	17.76	16.64	.23	2.60	.93	.87	2.61					.13	99.90
GT	181	37.43	.06	21.14	34.08	2.50	2.60	2.99	.02	.02	.04	0.00		.04		
	184	37.43	.07	19.73	34.40	2.48	2.69	3.06	.11	.03	.05	.19		.01		
	AVERAGE	37.43	.07	20.44	34.23	2.49	2.65	3.03	.07	.03	.05	.10		.03		
BID	171	35.79	1.81	18.68	17.80	.02	10.81	0.00	.16	9.58	.05	.65		.03		
	182	35.74	1.56	18.81	18.14	.05	11.16	0.00	.22	9.58	.12	0.00		.14		
	183	35.44	2.07	18.11	18.94	.05	11.08	0.00	.18	9.47	.04	.13		.04		
	AVERAGE	35.66	1.81	18.63	18.10	.04	11.0	0.00	.19	9.58	.09	.08		.06		
STAU	168	30.57	.40	51.59	12.61	.16	1.38	0.00	.05	.05	.10		.11	0.00		
	169	32.54	.38	51.14	11.99	.20	1.32	.01	.03	.03	.08		.10	0.00		
	170	28.45	.33	52.16	12.81	.15	1.34	.02	.01	.01	.07		.23	0.00		
	171	27.94	.35	51.75	13.97	.15	1.82	0.00	0.00	0.00	.06		.08	0.00		
	174	28.59	.44	51.72	14.10	.09	1.65	.02	.02	.01	.03		.22	0.00		
	179	27.66	.52	51.81	13.43	.19	1.83	.02	.04	0.00	.16		.18	0.00		
	AVERAGE	29.29	.40	51.70	13.15	.16	1.57	.01	.03	.02	.08		.16	0.00		
K498/33		62.17	.58	17.33	11.77	.12	2.10	.64	1.35	3.12					.15	98.31
GT	14	36.54	0.00	20.50	36.95	.38	2.15	2.83	.65	.05	.14	.11		6.60		
	15	36.50	0.00	20.62	37.11	2.24	2.35	1.05	.03	.03	.08	.15		0.00		
	16	36.75	0.00	20.89	36.75	1.92	2.28	1.28	.01	.01	.07	.23		.05		
	17	37.32	0.00	20.87	36.80	.25	1.95	3.52	0.00	0.00	.08	.08		0.00		
	18	36.92	0.00	20.56	37.47	1.42	2.25	1.34	.02	.01	.03	.22		.02		
	19	35.67	0.00	20.23	36.82	.28	1.60	2.83	.23	0.00	.18	.18		.09		
	20	36.56	0.00	20.46	37.88	.34	2.02	2.38	0.00	0.00	0.00	0.00		0.00		
	21	36.95	0.00	20.25	38.22	.34	1.58	3.06	0.00	0.00	0.00	0.00		0.00		
	22	36.74	0.00	20.54	36.91	.74	1.50	3.71	0.00	0.00	0.00	0.00		0.00		
	23	36.53	0.00	20.33	37.14	1.37	2.11	1.35	0.00	0.00	0.00	0.00		0.00		
	24	36.78	0.00	20.61	37.32	1.36	2.28	1.08	0.00	0.00	0.00	0.00		0.00		
	25	36.36	0.00	20.46	36.71	2.25	2.28	.99	0.00	0.00	0.00	0.00		0.00		
	26	36.52	0.00	20.50	36.33	2.50	2.36	1.08	0.00	0.00	0.00	0.00		0.00		
	934	36.66	.17	20.89	36.81	.27	1.91	3.16	.04	0.00	0.00	.07		.05		
	935	36.66	.09	20.73	36.71	2.44	2.23	1.05	.07	0.00	0.00	0.00		0.00		
	936	36.53	.05	20.66	37.53	.71	1.96	1.82	.03	.01	.03	.00		.07		
	939	36.31	.06	20.88	37.30	.32	1.80	2.78	.03	.02	.01	.11		.03		
	943	36.81	0.00	20.59	34.43	3.60	2.22	1.30	.03	.03	.02	0.00		0.00		
	944	36.55	.01	21.83	36.98	1.84	2.10	1.52	0.00	.01	.01	.20		0.00		
	AVERAGE	36.58	.02	20.59	36.66	1.31	2.07	2.01	.03	.01	.03	.07		.04		
BID	937	34.51	1.47	18.21	20.14	.06	9.80	0.00	.14	8.88	.12	0.00		0.00		
	938	34.77	1.49	18.19	20.20	.03	10.07	0.00	.20	8.92	.03	.11		.08		
	AVERAGE	34.64	1.48	18.20	20.17	.05	9.96	0.00	.17	8.90	.08	.06		.04		
STAU	931	28.21	.45	51.11	14.03	.02	1.47	.01	.06	.02	.01		.30	.06		
	932	27.12	.44	52.66	14.54	.05	1.39	.02	.28	.04	0.00		.52	.10		
	933	27.20	.45	52.74	14.47	0.00	1.56	0.05	.03	0.00	.02		.61	0.00		
	941	27.38	.42	52.45	14.66	.04	1.56	.02	.13	.02	0.00		.72	0.00		
	942	27.50	.51	52.26	14.40	.01	1.38	.02	.02	0.00	.03		.56	.14		
	AVERAGE	27.68	.46	52.25	14.42	.02	1.47	.01	.11	.02	.01		.54	.06		
FIB		0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		

SAMPLE	AL	NORMALISED FE	OXIDES MG	K
K498/366	34.75	46.70	10.68	9.53
GT	28.99	64.15	8.83	.04
BID	22.52	31.10	33.67	12.66
STAU	69.53	20.10	5.35	.72
K498/33	40.57	38.10	12.43	7.90
GT	28.20	67.02	8.08	.01
BID	22.29	35.06	30.85	11.80
STAU	68.34	26.77	4.87	.02
FIB	100.00	0.00	0.00	0.00

MUSCOWITE PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	A	F-M
A	= K498/366	.234	.216
B	= GT	.269	.121
C	= BID	-.313	.019
D	= STAU	.695	.176
E	= K498/33	.246	.241
F	= GT	.283	.091
G	= BID	-.248	.468
H	= STAU	.683	.184
I	= FIB	1.000	0.000

L	=	STAU	.525	.175
E	=	K498733	.246	.241
F	=	GT	.263	.091
G	=	BIO	-.248	.458
H	=	STAU	.523	.154
I	=	FIB	1.000	0.000

12.40.11.0000168 LINES PRINTED ON LPO5.

DATE 79/11/04 13.35.18.

COMPOSITION VALUEE ARE OXIDES OF ELEMENTS

WHITE ROCK

SAMPLE	PRDRE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/1309 GT	6	37.36	.01	20.74	34.10	1.27	3.33	2.65	0.00	0.00	0.00	0.00				.07
	10	37.38	.05	20.78	34.18	1.25	3.77	2.67	.02	.02	.06	.14				.05
	11	37.57	.11	20.67	35.03	1.29	3.36	2.50	.03	0.00	0.00	0.00				0.60
	12	37.41	0.00	20.47	34.30	1.39	3.77	2.68	.08	.01	.04	0.00				.25
K498/1317 GT	870	37.03	.09	19.96	28.63	1.27	.66	10.88	.02	.02	.17	0.00				.08
	18	36.16	.14	20.22	29.72	1.17	.87	10.09	.04	0.00	.18	.03				.03
	19	36.69	.04	20.18	29.40	.99	.48	11.25	.07	0.00	.17	.03				.03
K498/1382 GT	63	37.40	.02	21.58	33.27	2.85	3.81	1.48	.03	.02	.05	.08				.08
	69	37.51	.03	20.96	33.98	2.79	3.94	1.61	.01	.01	.08	0.00				0.00
	75	37.24	.07	20.84	33.50	2.73	4.04	1.54	0.00	0.00	.08	.07				0.00
	76	36.82	.16	21.04	33.43	2.99	3.98	1.56	.04	0.00	0.00	.06				0.00
K498/1383 GT	80	36.89	.05	21.31	36.77	.93	3.92	.80	.02	.01	0.00	.03				.07
	82	37.43	0.00	21.44	36.77	.97	4.00	.51	.09	.02	.01	0.00				.11
	83	37.18	.12	20.96	36.51	.89	4.15	.33	.04	.01	.06	.03				.02
	85	37.27	0.00	21.32	36.23	.89	4.21	.34	.02	0.00	0.00	.13				.01
	86	37.20	.02	20.87	36.89	.90	3.89	.86	.05	.02	.02	.03				0.00
K498/1388 GT	129	37.37	.05	21.12	35.25	.74	3.42	1.38	.08	0.00	.06	0.00				0.00
	132	37.35	.01	21.06	35.94	.61	3.47	1.37	.04	0.00	.01	.04				.15
	133	37.46	.05	21.08	36.11	.76	3.51	1.38	.02	0.00	.03	.10				.10
	136	36.96	0.00	21.06	35.83	.69	3.58	1.30	.04	.01	.06	.01				0.00
	137	37.10	.07	21.23	34.83	.63	3.79	1.27	.03	0.00	0.00	.12				.06
K498/1393B GT	196	36.89	0.00	20.69	37.12	.64	3.07	1.01	.02	.01	.01	0.00				0.00
	202	36.68	.01	20.47	37.84	.53	3.14	.95	0.00	0.00	.05	.12				.10
	206	37.34	.01	20.23	37.21	.56	3.15	.98	.02	0.00	.09	0.00				0.00
K498/1385C GT	211	36.77	.06	20.44	31.61	.51	1.91	7.82	.03	0.00	.02	0.00				.02
	215	37.60	0.00	20.19	30.99	.44	2.05	7.97	.03	0.00	.07	.04				0.00

SAMPLE	FE	NORMALISED OXIDES		
		MN	MG	CA
GT	82.14	3.10	8.49	6.27
GT	59.92	2.74	1.59	25.70
GT	80.01	6.85	9.40	3.69
GT	86.91	2.17	9.57	1.35
GT	81.45	1.67	8.63	3.25
GT	88.68	1.97	7.42	2.33
GT	75.21	1.14	4.74	16.91

COORDINATES OF PLOTTED OXIDES		X	Y	X1	Y1
SYMBOL	SAMPLE				
A =	GT	17.903	2.557	10.223	14.764
B =	GT	16.725	4.726	7.589	12.595
C =	GT	17.312	2.268	10.571	15.052
D =	GT	16.474	1.891	10.822	15.430
E =	GT	18.478	2.059	10.538	15.262
F =	GT	18.751	1.668	10.509	15.632
G =	GT	17.407	4.097	8.583	13.224

12.04.53.0000130 LINES PRINTED ON LP07.

SGJAPKJ //// END OF LIST ////

WHITE ROCK

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498768		56.70	.67	23.47	9.33	.12	2.58	.33	.73	5.95					.11	100.03
GT	1	37.80	0.00	21.20	37.18	.42	2.21	1.71	0.00	0.00	0.00	0.00		0.00		
	2	37.88	0.00	21.23	37.27	.43	2.50	1.80	0.00	0.00	0.00	0.00		0.00		
	3	37.72	0.00	20.85	35.47	2.18	2.34	1.70	0.00	0.00	0.00	0.00		0.00		
	4	37.51	0.00	20.76	35.77	1.80	2.54	1.68	0.00	0.00	0.00	0.00		0.00		
	5	37.28	0.00	21.13	38.02	.48	2.41	1.67	0.00	0.00	0.00	0.00		0.00		
	6	37.28	0.00	20.73	36.61	1.01	2.38	2.06	0.00	0.00	0.00	0.00		0.00		
	7	37.23	0.00	20.74	36.22	91.92	2.53	1.69	0.00	0.00	0.00	0.00		0.00		
	8	36.73	0.00	20.62	37.28	.64	2.53	1.62	0.00	0.00	0.00	0.00		0.00		
	9	36.86	0.00	20.53	36.62	.92	2.42	2.01	0.00	0.00	0.00	0.00		0.00		
	10	37.07	0.00	20.88	36.36	1.45	2.29	1.80	0.00	0.00	0.00	0.00		0.00		
	11	37.08	0.00	20.61	36.13	2.02	2.36	1.72	0.00	0.00	0.00	0.00		0.00		
	12	36.70	0.00	20.59	36.07	2.04	2.09	1.66	0.00	0.00	0.00	0.00		0.00		
	928	37.53	0.00	21.29	36.64	1.71	2.33	1.72	.03	0.00	.01	0.00		.07		
	928	36.67	0.00	20.88	36.18	1.77	2.38	1.67	.01	0.00	.05	.05		.05		
	1089	37.23	0.00	20.88	36.98	.98	2.22	2.03	.04	0.00	.05	.18		.01		
	AVERAGE	37.24	0.00	20.87	36.58	7.32	2.37	1.77	.01	0.00	.01	.02		.01		
BIO	924	35.86	1.38	18.60	18.40	.04	10.56	0.00	.33	8.60	.08	.09		.15		
	925	34.39	1.70	18.87	17.20	0.00	11.12	0.00	.21	8.74	.22	.06		0.00		
	AVERAGE	35.03	1.54	19.24	17.80	.02	10.84	0.00	.27	8.67	.16	.08		.08		
STAUR	927	27.63	.55	53.03	14.28	.03	1.30	0.00	.07	.01	.12		.72	0.00		
	1068	28.14	.29	53.30	13.50	.01	1.34	.01	.03	.04	.06		0.00	.06		
	AVERAGE	27.89	.42	53.21	13.89	.05	1.32	.01	.05	.03	.09		.36	.03		
FIB	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		
K498733		62.17	.58	17.33	11.77	.12	2.10	.68	1.35	3.12					.15	99.38
GT	13	37.10	0.00	20.88	37.49	.34	2.08	2.51	0.00	0.00	0.00	0.00		0.00		
	14	36.54	0.00	20.50	36.95	.38	2.15	2.83	0.00	0.00	0.00	0.00		0.00		
	15	36.50	0.00	20.62	37.11	2.24	2.35	1.95	0.00	0.00	0.00	0.00		0.00		
	16	36.75	0.00	20.69	36.79	1.92	2.27	1.26	0.00	0.00	0.00	0.00		0.00		
	17	37.32	0.00	20.87	36.80	.28	1.85	3.52	0.00	0.00	0.00	0.00		0.00		
	18	36.82	0.00	20.56	37.47	1.42	2.25	1.34	0.00	0.00	0.00	0.00		0.00		
	19	35.67	0.00	20.23	38.82	.28	1.80	2.83	.23	0.00	0.00	0.00		0.00		
	20	36.56	0.00	20.48	37.49	.34	2.02	2.38	0.00	0.00	0.00	0.00		0.00		
	21	35.95	0.00	20.25	38.23	.34	1.58	3.07	0.00	0.00	0.00	0.00		0.00		
	22	36.54	0.00	20.54	35.91	.74	1.80	3.71	0.00	0.00	0.00	0.00		0.00		
	23	36.53	0.00	20.33	37.04	1.37	2.11	1.35	0.00	0.00	0.00	0.00		0.00		
	24	36.78	0.00	20.61	37.32	1.66	2.28	1.08	0.00	0.00	0.00	0.00		0.00		
	25	36.36	0.00	20.46	36.71	2.26	2.28	.98	0.00	0.00	0.00	0.00		0.00		
	26	36.52	0.00	20.50	36.33	2.90	2.36	1.09	0.00	0.00	0.00	0.00		0.00		
	934	36.66	.17	20.89	36.81	.27	1.91	3.18	.04	0.00	0.00	.07		.05		
	935	36.63	.09	20.73	36.71	2.44	2.23	1.05	.07	0.00	0.00	0.00		0.00		
	936	36.53	.05	20.66	37.53	.71	1.86	1.82	.03	.01	.03	0.00		.07		
	938	36.38	.09	20.88	37.30	.32	1.90	2.78	.03	.02	.01	.11		.03		
	943	36.84	0.00	20.59	34.49	3.60	2.22	1.30	.03	.03	.02	0.00		0.00		
	944	36.55	.01	20.83	36.98	1.64	2.10	1.52	0.00	.01	.01	.20		0.00		
	AVERAGE	36.56	.02	20.60	37.02	1.26	2.07	2.03	.02	.00	.00	.02		.01		
BIO	937	34.51	1.47	18.21	20.14	.06	8.85	0.00	.14	8.88	.12	0.00		0.00		
	938	34.77	1.49	18.19	20.20	.03	10.07	0.00	.20	8.92	.03	.11		.08		
	AVERAGE	34.64	1.48	18.20	20.17	.05	8.96	0.00	.17	8.90	.08	.06		.04		
STAUR	931	29.21	.45	51.11	14.03	.02	1.47	.01	.08	.02	.01		.30	.06		
	932	27.12	.44	52.66	14.54	.05	1.39	.02	.28	.04	0.00		.52	.10		
	933	27.20	.46	52.74	14.47	0.00	1.56	0.00	.03	0.00	.02		.61	0.00		
	941	27.38	.42	52.45	14.88	.04	1.56	.02	.13	.02	0.00		.72	0.00		
	942	27.50	.51	52.28	14.40	.01	1.38	.02	.02	0.00	.03		.58	.14		
	AVERAGE	27.68	.46	52.25	14.42	.02	1.47	.01	.11	.02	.01		.54	.08		
FIB	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		
K4987139		59.49	1.52	18.28	13.14	.18	3.38	.82	1.26	1.91					.17	100.14
GT	56	37.75	0.00	20.58	35.31	1.04	4.17	.73	0.00	0.00	0.00	0.00		0.00		
	60	36.91	0.00	20.55	34.77	.88	4.87	.76	0.00	0.00	0.00	0.00		0.00		
	61	40.66	.35	19.55	32.79	.83	4.34	.71	0.00	0.00	0.00	0.00		0.00		
	62	39.05	.37	19.96	33.35	.89	4.41	.76	0.00	0.00	0.00	0.00		0.00		
	63	38.53	.38	20.19	33.70	.80	4.53	.77	0.00	0.00	0.00	0.00		0.00		
	64	37.07	0.00	20.90	34.98	.94	4.49	.70	0.00	0.00	0.00	0.00		0.00		
	65	37.71	0.00	21.00	34.18	.88	5.26	.75	0.00	0.00	0.00	0.00		0.00		
	66	37.06	0.00	20.99	34.03	.84	5.36	.81	0.00	0.00	0.00	0.00		0.00		
	67	36.81	0.00	21.01	34.57	1.22	4.50	.77	0.00	0.00	0.00	0.00		0.00		
	68	35.57	1.39	20.41	34.22	.83	5.82	.70	0.00	0.00	0.00	0.00		0.00		
	69	35.13	2.81	18.81	35.75	.61	4.86	.55	0.00	0.00	0.00	0.00		0.00		
	70	38.52	0.00	20.57	33.71	.96	5.35	.78	0.00	0.00	0.00	0.00		0.00		
	71	37.24	0.00	20.85	34.24	.90	5.59	.83	.26	0.00	0.00	0.00		0.00		
	72	37.09	0.00	20.94	35.01	.92	4.74	.77	0.00	0.00	0.00	0.00		0.00		
	73	37.07	0.00	20.82	35.45	.97	4.53	.76	0.00	0.00	0.00	0.00		0.00		
	74	37.03	0.00	20.87	35.15	91.00	4.57	.79	0.00	0.00	0.00	0.00		0.00		
	75	38.10	0.00	20.61	33.43	.87	5.33	.82	0.00	0.00	0.00	0.00		0.00		
	955	37.76	.02	20.61	34.26	1.00	4.05	.78	.04	.03	.04	.04		0.00		
	959	37.14	.06	20.74	33.06	.92	4.87	.87	.07	0.00	.08	0.00		0.00		
	963	37.36	.08	20.68	34.93	.97	3.85	.79	.03	0.00	.10	.04		.05		

74	37.03	0.00	20.87	35.15	31.00	4.57	.79	0.00	0.00	0.00	0.00	0.00	0.00
75	38.10	0.00	20.81	33.43	.87	5.33	.82	0.00	0.00	0.00	0.00	0.00	0.00
955	37.76	.02	20.81	34.26	1.00	4.05	.78	.04	.03	.04	.04	0.00	0.00
959	37.14	.06	20.74	33.06	.92	4.97	.87	.07	0.00	.08	0.00	0.00	0.00
963	37.36	.08	20.88	34.93	.97	3.85	.79	.03	0.00	.10	.04	.05	.05
964	37.43	.04	20.94	35.06	.99	3.88	.78	.05	0.00	.09	.04	.05	.05
965	37.48	.07	20.79	34.24	.93	3.84	.82	.03	0.00	.10	.09	.16	.16
967	37.67	.06	20.78	32.64	.85	5.04	.73	.04	0.00	.01	.03	.06	.06
968	37.48	.03	20.98	34.46	1.04	4.00	.76	.03	.01	.02	.05	0.00	0.00
AVERAGE	37.53	.24	20.64	34.30	4.58	4.68	.77	.02	.00	.02	.01	.01	.01
BIO	969	36.08	1.91	18.44	15.27	0.00	11.73	0.00	.31	9.69	.01	.05	.06
PLAG	957	62.41	.02	21.79	.27	0.00	.04	4.00	9.54	.10	.01	.03	.05
K490/135		51.61	1.26	16.54	17.26	.32	1.45	6.70	3.18	.82			.51 39.65
GT	989	37.02	.35	19.73	31.89	.86	1.39	8.32	.03	.87	.08	0.00	.12
	993	37.36	.03	20.41	32.14	1.37	1.65	7.06	0.00	0.00	0.00	0.00	.07
	995	37.55	.08	20.31	33.23	2.14	1.25	6.21	.06	0.00	.03	0.00	.11
	996	37.43	.13	20.48	31.20	1.74	1.43	7.48	0.00	.04	0.00	.07	.08
	1000	36.91	.98	20.32	32.04	1.65	1.53	6.67	.02	0.00	.04	.02	.03
AVERAGE	37.25	.13	20.25	32.06	1.55	1.45	6.75	.02	.18	.03	.02	.08	.08
BIO	992	34.90	2.98	18.19	26.20	0.00	5.93	0.00	.06	9.66	0.00	0.00	.22
HBE	994	39.60	1.04	13.45	24.43	.05	4.96	11.39	1.57	1.34	.08	.04	0.00
	998	38.18	.69	15.95	24.36	.08	1.81	10.12	1.25	2.23	.03	.02	.09
AVERAGE	38.89	.87	14.70	24.40	.07	3.19	10.75	1.41	1.79	.06	.03	.05	.05
K492/72		37.15	1.57	34.85	16.44	.14	4.79	.39	.15	4.08			.05 99.64
GT	1002	37.61	.03	21.44	34.47	.50	4.62	1.44	.04	0.00	.03	.08	0.00
	1005	37.33	.01	20.92	33.37	.45	4.92	1.70	.02	0.00	.08	.13	.11
	1008	37.22	0.00	21.05	35.04	.60	4.16	1.64	.04	.01	.03	.11	0.00
	1009	37.63	.08	21.11	33.37	.62	5.01	1.69	0.00	0.00	.10	.20	.03
	1010	37.65	.02	21.16	34.38	.52	4.43	1.44	0.00	.03	.01	.01	.02
	1011	37.79	.12	21.12	33.88	.49	4.63	1.64	.02	0.00	.03	.07	0.00
AVERAGE	37.57	.04	21.13	34.00	.55	4.66	1.58	.02	.01	.05	.10	.03	.03
BIO	1007	35.11	2.14	18.52	18.43	0.00	9.97	0.00	.38	8.91	.12	.12	.05
	1012	34.67	1.50	22.85	18.16	.03	7.85	0.00	.10	7.49	.04	.10	.26
AVERAGE	34.89	1.82	20.69	18.30	.02	8.91	0.00	.24	8.20	.08	.11	.16	.16
SILL	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
K496/53		68.35	.63	17.15	6.17	.08	1.93	.16	.33	5.46			.12 100.38
GT	1017	37.07	.08	21.04	35.43	2.93	1.53	2.50	.03	.02	0.00	.12	0.00
	1020	36.34	0.00	20.85	35.70	2.02	1.46	3.36	.03	.02	0.00	.05	0.00
	1021	37.21	.12	20.65	36.55	2.24	1.41	2.66	.02	0.00	.01	.02	.01
AVERAGE	36.67	.07	20.85	35.89	2.40	1.47	2.84	.03	.01	.00	.06	.06	.00
BIO	1018	35.16	1.67	18.16	21.54	0.00	7.48	0.00	.14	8.95	.09	.08	.95
	1019	35.08	1.72	18.11	21.97	.10	7.91	0.00	.22	9.32	.02	.08	0.00
	1022	34.71	1.74	18.34	22.04	.05	7.93	0.00	.21	8.95	.11	.09	0.00
AVERAGE	34.98	1.71	18.20	21.85	.05	7.74	0.00	.18	9.07	.07	.08	.02	.02

SAMPLE	NORMALISED OXIDES			
	AL	FE	MG	K
K492/66	56.79	22.57	6.24	14.40
GT	34.88	61.16	3.98	0.00
BIO	34.02	31.48	19.17	15.33
STAU	77.74	20.29	1.93	.04
FIB	100.00	0.00	0.00	0.00
K498/33	50.50	34.29	6.12	9.09
GT	34.51	62.01	3.47	.01
BIO	31.80	35.24	17.40	15.55
STAU	76.66	21.16	2.18	.02
FIB	100.00	0.00	0.00	0.00
K498/139	49.80	35.79	9.21	5.20
GT	34.61	57.53	7.88	.00
BIO	33.45	27.70	21.28	17.58
PLAG	98.15	1.22	.18	.45
K498/135	45.86	47.85	4.02	2.27
GT	37.54	59.43	2.69	.34
BIO	27.92	49.19	10.23	16.66
HBE	33.36	55.36	7.23	4.95
K498/73	57.93	27.33	7.96	6.78
GT	35.29	56.92	7.78	.01
BIO	36.88	32.62	15.80	14.62
SILL	100.00	0.00	0.00	0.00
K496/53	55.85	20.09	6.28	17.78
GT	35.81	61.60	2.52	.02
BIO	32.01	38.42	13.61	15.96

K498/55	20.88	8.28	1.78
GT	35.81	61.85	2.52
BIO	32.01	38.42	13.61
			15.96

MUSCOVITE PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	A	F-M
A	= K498/58	.321	.217
B	= GT	.348	.061
C	= BIO	-.310	.378
D	= STAUR	.777	.087
E	= FIB	1.000	0.000
F	= K498/33	.365	.151
G	= GT	.345	.053
H	= BIO	-.393	.331
I	= STAUR	.767	.093
J	= FIB	1.000	0.000
K	= K498/139	.432	.205
L	= GT	.346	.120
M	= BIO	-.648	.434
N	= PLAG	.986	.129
O	= K498/135	.429	.077
P	= GT	.370	.043
Q	= BIO	-.661	.165
R	= HBE	.253	.115
S	= K498/73	.516	.228
T	= GT	.353	.120
U	= BIO	-.168	.328
V	= SILL	1.000	0.000
W	= K498/53	.087	.238
X	= GT	.358	.039
Y	= BIO	-.438	.262

DATE 81/03/07 17.57.12.

COMPOSITION VALUES ARE OXIDES OF ELEMENTS

WHITE ROCK

DATE 11/03/07 17.57.12.

COMPOSITION VALUES ARE OXIDES OF ELEMENTS

WHITE ROCK

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/139		59.49	1.52	18.28	13.14	.18	3.38	.82	1.26	1.91					.17	100.14
GT	955	37.76	.02	20.61	34.26	1.00	4.05	.79	.04	.03	.04	.04		0.00		
	959	37.14	.06	20.74	33.06	.92	4.97	.87	.07	0.00	.08	0.00		0.00		
	963	37.36	.06	20.68	34.93	.97	3.85	.79	.03	0.00	.10	.04		.05		
	964	37.43	.04	20.94	35.06	.99	3.89	.76	.05	0.00	.09	.04		.05		
	965	37.48	.07	20.79	34.24	.83	3.84	.82	.03	0.00	.10	.09		.18		
	967	37.67	.06	20.78	32.64	.85	5.04	.83	.04	0.00	.01	.03		.08		
	968	37.48	.03	20.98	34.46	1.04	4.00	.78	.03	.01	.02	.08		0.00		
	AVERAGE	37.47	.05	20.79	34.09	.96	4.23	.80	.04	.01	.08	.04		.05		
BIO	969	35.09	1.91	18.44	15.27	0.00	11.73	0.00	.31	9.89	.01	.05		.08		
PLAG	957	62.41	.02	21.79	.27	0.00	.04	4.00	8.54	.10	.01	.03		.05		
K498/135		51.61	1.26	16.54	17.26	.32	1.45	6.70	3.19	.82					.51	99.65
GT	989	37.02	.35	19.73	31.69	.88	1.39	6.32	.03	.87	.08	0.00		.12		
	993	37.36	.03	20.41	32.14	1.37	1.65	7.36	0.00	0.00	0.00	0.00		.07		
	995	37.55	.06	20.31	33.23	2.14	1.25	6.21	.06	0.00	.03	0.00		.11		
	996	37.43	.13	20.48	31.20	1.74	1.43	7.48	0.00	.04	0.00	.07		.08		
	1000	36.91	.01	20.32	32.04	1.65	1.53	6.67	.02	0.00	.04	.02		.03		
	AVERAGE	37.25	.13	20.25	32.06	1.55	1.45	6.75	.02	.18	.03	.02		.06		
BIO	992	34.90	2.99	16.19	26.20	0.00	5.93	0.00	.06	9.66	0.00	0.00		.22		
HBE	954	39.60	1.04	13.45	24.43	.05	4.56	11.39	1.57	1.34	.09	.04		0.00		
	958	38.18	.69	15.95	24.36	.08	1.81	10.12	1.25	2.23	.03	.02		.08		
	AVERAGE	38.89	.87	14.70	24.40	.07	3.19	10.76	1.41	1.79	.06	.03		.05		
K498/73		37.15	1.57	34.85	16.44	.14	4.79	.39	.15	4.08					.05	99.64
GT	1002	37.61	.03	21.44	34.47	.60	4.82	1.44	.04	0.00	.03	.08		0.00		
	1005	37.33	.01	20.92	33.37	.45	4.92	1.70	.02	0.00	.08	.13		.11		
	1008	37.22	0.00	21.05	35.04	.60	4.16	1.64	.04	.01	.03	.11		0.00		
	1009	37.83	.08	21.11	33.37	.62	5.01	1.69	0.00	0.00	.10	.20		.03		
	1010	37.65	.02	21.16	34.38	.52	4.43	1.44	0.00	.03	.01	.01		.02		
	1011	37.79	.12	21.12	33.89	.49	4.83	1.64	.02	0.00	.03	.07		0.00		
	AVERAGE	37.57	.04	21.13	34.09	.55	4.66	1.59	.02	.01	.05	.10		.03		
BIO	1007	35.11	2.14	18.52	18.43	0.00	9.97	0.00	.39	8.91	.12	.12		.05		
	1012	34.67	1.50	22.85	18.16	.03	7.85	0.00	.10	7.49	.04	.10		.26		
	AVERAGE	34.89	1.82	20.69	18.30	.02	8.91	0.00	.24	6.20	.08	.11		.16		
SILL	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		

SAMPLE	NORMALISED OXIDES			
	AL	FE	MG	K
K498/139	43.80	35.79	9.21	5.20
GT	35.16	57.67	7.16	.01
BIO	33.45	27.70	21.28	17.58
PLAG	98.15	1.22	.18	.45
K498/135	45.85	47.85	4.02	2.27
GT	37.54	59.43	2.69	.34
BIO	27.92	45.19	10.23	16.66
HBE	33.36	55.36	7.23	4.05
K498/73	57.93	27.33	7.96	6.78
GT	35.29	56.92	7.78	.01
BIO	36.88	32.62	15.89	14.62
SILL	100.00	0.00	0.00	0.00

K-FELDSPAR PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	A	F-M
A	K498/139	.490	.205
B	GT	.352	.110
C	BIO	.245	.434
D	PLAG	.988	.129
E	K498/135	.457	.077
F	GT	.375	.043
G	BIO	.169	.185
H	HBE	.319	.115
I	K498/73	.592	.228
J	GT	.353	.120
K	BIO	.315	.328

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SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/1468																
NO WHOLE ROCK ANALYSIS																
GT	4770	37.46	0.00	21.61	33.40	.24	5.81	1.05	0.00	0.00	.13	0.00				0.00
	4771	37.12	0.00	21.79	33.14	.22	5.85	.92	0.00	0.00	0.00	0.00				0.00
	4772	37.40	0.00	21.82	33.18	.17	5.75	.80	0.00	0.00	0.00	0.00				0.00
	4773	37.07	0.00	21.67	33.21	.13	5.89	1.03	0.00	0.00	0.00	0.00				0.00
	4774	36.87	0.00	21.61	34.58	.13	5.85	1.10	0.00	0.00	0.00	0.00				0.00
	4775	36.56	0.00	21.47	34.72	.13	5.87	1.03	0.00	0.00	0.00	0.00				0.00
	4779	37.01	0.00	21.40	37.36	.15	4.38	1.02	0.00	0.00	0.00	0.00				0.00
	4780	36.54	0.00	21.59	35.88	.22	5.23	1.09	0.00	0.00	0.00	0.00				0.00
	4784	37.42	0.00	21.78	34.90	.20	5.74	1.09	0.00	0.00	0.00	0.00				0.00
	AVERAGE	37.05	0.00	21.64	34.49	.18	5.04	1.01	0.00	0.00	.01	0.00				0.00
BIO																
	4776	36.25	2.80	18.13	13.50	0.00	13.91	.05	.11	8.81	.29	0.00				0.00
	4778	35.56	3.14	18.01	16.97	0.00	11.44	0.00	.07	8.59	.25	0.00				0.00
	4781	35.38	3.51	17.59	17.00	0.00	10.95	0.00	.07	8.67	.27	0.00				0.00
	4783	35.82	3.19	18.19	16.68	0.00	11.51	0.00	.11	8.95	.24	0.00				0.00
	AVERAGE	35.70	3.15	18.06	16.04	0.00	11.35	.02	.09	8.75	.27	0.00				0.00
K498/1029A																
NO WHOLE ROCK ANALYSIS																
GT	4806	36.63	0.00	20.84	37.32	1.48	2.31	1.00	.11	8.81	.29	0.00				0.00
	4810	36.38	0.00	20.91	37.04	1.42	2.25	1.39	.07	8.59	.29	0.00				0.00
	4811	36.75	0.00	20.84	37.29	1.39	2.47	1.38	.07	8.67	.27	0.00				0.00
	AVERAGE	36.58	0.00	20.85	37.22	1.43	2.34	1.42	.06	8.59	.28	0.00				0.00
BIO																
	4808	35.72	1.98	19.21	20.15	0.00	9.35	.07	.21	8.55	0.00	0.00				0.00
	4809	35.38	2.18	18.61	20.98	0.00	9.25	0.00	.21	8.15	0.00	0.00				0.00
	4811	35.04	1.89	18.28	20.27	0.00	8.84	0.00	.15	8.19	0.00	0.00				0.00
	AVERAGE	35.38	2.01	18.70	20.31	0.00	9.49	.02	.19	8.10	0.00	0.00				0.00
K498/1002B																
NO WHOLE ROCK ANALYSIS																
GT	4896	36.22	0.00	21.74	31.19	1.32	5.31	1.57	.21	8.85	0.00	0.00				0.00
	4904	37.75	0.00	21.80	31.62	1.30	5.12	1.44	.21	8.29	0.00	0.00				0.00
	4908	37.53	0.00	21.78	31.86	1.41	5.87	1.57	0.00	.03	0.00	0.00				0.00
	4811	36.46	0.00	21.35	31.88	1.48	6.37	1.52	0.00	0.00	0.00	0.00				0.00
	AVERAGE	36.01	0.00	21.67	31.54	1.38	5.43	1.55	.11	4.53	0.00	0.00				0.00
BIO																
	4900	37.37	1.18	19.82	9.30	0.00	17.73	0.00	.14	8.77	0.00	0.00				0.00
	4901	37.83	1.49	18.97	10.56	0.00	17.15	0.00	.21	8.52	0.00	0.00				0.00
	AVERAGE	37.60	1.33	19.40	9.92	0.00	17.45	0.00	.18	8.65	0.00	0.00				0.00
CORD																
	4898	49.93	0.00	33.67	3.35	0.00	11.23	0.00	.11	0.00	0.00	0.00				0.00
	4903	48.58	0.00	33.14	3.48	0.00	11.17	0.00	.12	0.00	0.00	0.00				0.00
	4910	49.43	0.00	33.68	3.50	0.00	11.08	0.00	.13	0.00	0.00	0.00				0.00
	AVERAGE	49.65	0.00	33.63	3.44	0.00	11.16	0.00	.12	0.00	0.00	0.00				0.00
K498/1011C																
NO WHOLE ROCK ANALYSIS																
GT	4933	38.22	0.00	21.53	31.48	3.40	5.34	1.34	.11	0.00	0.00	0.00				0.00
	4934	37.83	0.00	21.75	29.44	3.34	5.48	1.37	.12	0.00	0.00	0.00				0.00
	4935	37.22	0.00	21.88	30.74	3.45	5.58	1.59	.13	0.00	0.00	0.00				0.00
	4936	37.48	0.00	21.42	30.94	3.17	5.81	1.30	0.00	0.00	0.00	0.00				0.00
	AVERAGE	37.66	0.00	21.64	30.65	3.34	5.78	1.40	.09	0.00	0.00	0.00				0.00
CORD																
	4932	49.25	0.00	33.41	3.59	.05	11.27	0.00	.07	0.00	0.00	0.00				0.00
	4935	49.30	0.00	33.85	4.08	.11	11.10	0.00	0.00	0.00	0.00	0.00				0.00
	4937	49.02	0.00	33.78	4.48	.13	10.69	0.00	0.00	0.00	0.00	0.00				0.00
	AVERAGE	49.19	0.00	33.71	4.05	.11	11.02	0.00	.02	0.00	0.00	0.00				0.00
K498/1175A																
NO WHOLE ROCK ANALYSIS																
GT	4848	36.54	0.00	21.18	37.81	1.14	1.90	1.87	.07	0.00	0.00	0.00				0.00
	4857	36.31	0.00	20.99	37.82	.82	2.50	1.87	0.00	0.00	0.00	0.00				0.00
	4950	36.57	0.00	20.80	38.22	.94	2.13	1.89	0.00	0.00	0.00	0.00				0.00
	AVERAGE	36.47	0.00	20.98	38.02	.97	2.16	1.88	.02	0.00	0.00	0.00				0.00
BIO																
	4849	34.89	2.91	18.41	20.36	0.00	9.18	0.00	.11	8.39	0.00	0.00				0.00
	4859	34.81	1.19	19.59	17.49	0.00	11.03	.05	.08	8.31	0.00	0.00				0.00
	4856	34.75	1.33	19.30	17.78	0.00	10.72	0.00	.06	8.53	0.00	0.00				0.00
	4959	34.97	2.77	18.82	20.36	0.00	8.85	0.00	.12	8.25	.12	0.00				0.00
	AVERAGE	34.85	2.05	19.00	18.98	0.00	9.95	.01	.09	8.37	.03	0.00				0.00
70289																
NO WHOLE ROCK ANALYSIS																
GT	4865	37.24	0.00	21.13	35.94	1.09	3.81	1.51	.11	8.39	0.00	0.00				0.00
	4868	37.37	0.00	21.30	35.73	1.08	3.91	1.52	.08	8.31	0.00	0.00				0.00
	4871	37.00	0.00	21.37	36.00	1.11	3.63	2.08	0.00	0.00	.19	0.00				0.00
	AVERAGE	37.20	0.00	21.27	35.89	1.09	3.78	1.77	.06	8.23	.03	0.00				0.00
BIO																
	4866	36.84	.94	19.45	14.75	0.00	13.28	.03	0.00	8.58	0.00	0.00				0.00
	4867	30.07	1.73	19.02	15.22	0.00	13.25	0.00	0.00	8.82	.08	0.00				0.00
	4870	35.80	1.59	19.33	16.79	0.00	12.24	.55	.32	8.70	.08	0.00				0.00
	AVERAGE	36.24	1.42	19.27	15.59	0.00	12.92	.03	.11	8.73	.08	0.00				0.00

SAMPLE	AL	FE	MG	K
GT	34.21	55.47	9.72	0.00
BIO	32.54	29.26	21.81	10.38
CI	38.54	55.80	11.29	11.77

SAMPLE	NORMALISED OXIDES			
	AL	FE	MG	K
GT	31.81	55.47	9.72	0.00
BIO	32.84	29.26	21.81	15.88
GT	30.19	53.87	3.38	12.57
BIO	32.44	35.25	16.47	15.80
GT	33.73	49.10	10.11	7.06
BIO	34.97	17.99	31.45	15.59
CORD	68.73	7.13	23.14	0.00
GT	37.26	52.78	3.85	0.00
CORD	69.10	8.30	22.59	0.00
GT	34.30	52.16	3.56	0.00
BIO	33.16	33.13	17.36	15.36
GT	31.68	53.48	5.63	3.28
BIO	34.09	27.52	22.87	15.45

K-FELDSPAR PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	A	F-M
A	GT	.342	.149
B	BIO	.249	.427
C	GT	.235	.059
D	BIO	.244	.318
E	GT	.311	.171
F	BIO	.282	.636
G	CORD	.697	.759
H	GT	.273	.158
I	CORD	.691	.731
J	GT	.342	.054
K	BIO	.250	.344
L	GT	.275	.080
M	BIO	.270	.453

CDRKWDD13)

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	TOTAL
K49871029A		NO WHOLE ROCK ANALYSIS													
GT	4806	36.65	0.00	20.84	37.32	1.48	2.31	1.50	0.00	0.00	0.00	0.00		0.00	
	4810	36.36	0.00	20.81	37.04	1.42	2.25	1.39	0.00	0.00	0.00	0.00		0.00	
	4811	36.78	0.00	20.84	37.28	1.38	2.47	1.38	0.00	0.00	0.00	0.00		0.00	
	AVERAGE	36.58	0.00	20.85	37.22	1.43	2.34	1.42	0.00	0.00	0.00	0.00		0.00	
BIO		NO WHOLE ROCK ANALYSIS													
	4808	35.72	1.86	19.21	20.15	0.00	3.35	.07	.21	6.95	0.00	0.00		0.00	
	4809	35.38	2.18	18.81	20.48	0.00	3.28	0.00	.21	9.15	0.00	0.00		0.00	
	4811	35.04	1.89	18.29	20.27	0.00	3.84	0.00	.15	9.19	0.00	0.00		0.00	
	AVERAGE	35.38	2.01	18.70	20.30	0.00	3.49	.02	.19	9.10	0.00	0.00		0.00	
76201		NO WHOLE ROCK ANALYSIS													
GT	4872	37.23	0.00	20.90	36.90	.27	2.49	3.41	0.00	0.00	.03	0.00		0.00	
	4875	36.87	.13	21.17	35.92	.22	2.30	4.22	.21	9.15	0.00	0.00		0.00	
	4878	37.05	0.00	20.53	35.86	.12	2.71	3.78	.15	9.18	0.00	0.00		0.00	
	AVERAGE	37.06	.04	21.00	36.25	.20	2.51	3.80	.12	9.11	.03	0.00		0.00	
BIO		NO WHOLE ROCK ANALYSIS													
	4873	36.70	2.36	17.60	18.50	0.00	9.85	.25	.58	8.39	.12	0.00		0.00	
	4877	34.83	2.49	17.86	19.25	0.00	10.24	0.00	.18	8.05	.09	0.00		0.00	
	4878	35.57	2.48	18.13	19.51	0.00	9.57	0.00	.20	9.00	0.00	0.00		0.00	
	AVERAGE	35.73	2.44	17.86	19.23	0.00	9.82	.09	.31	8.81	.07	0.00		0.00	
76256		NO WHOLE ROCK ANALYSIS													
GT	4823	36.63	0.00	20.89	37.83	.52	2.73	2.17	.55	8.39	.12	0.00		0.00	
	4824	37.12	0.00	21.08	34.88	0.00	2.47	5.11	.18	9.05	.09	0.00		0.00	
	4830	36.71	0.00	21.15	35.27	.48	2.85	1.75	.20	8.05	0.00	0.00		0.00	
	4831	36.95	0.00	21.08	37.85	.47	2.64	2.16	0.00	0.00	0.00	0.00		0.00	
	4832	37.33	0.00	21.12	37.54	.52	2.80	2.34	0.00	0.00	0.00	0.00		0.00	
	4833	37.06	0.00	21.22	34.57	0.39	2.35	3.40	0.07	0.00	.11	0.00		0.00	
	AVERAGE	37.06	0.00	21.06	36.82	.34	2.62	3.15	.18	8.41	.03	0.00		0.00	
BIO		NO WHOLE ROCK ANALYSIS													
	4826	37.13	1.24	20.25	15.32	0.00	11.08	.03	.35	8.39	0.00	0.00		0.00	
	4827	36.15	1.29	18.42	18.87	0.00	12.50	0.00	.24	8.54	0.00	0.00		0.00	
	4828	36.73	1.38	18.44	17.53	0.00	12.38	0.00	.25	8.56	0.00	0.00		0.00	
	4829	35.81	1.39	17.90	17.73	0.00	12.12	0.00	.24	8.48	0.00	0.00		0.00	
	4834	36.56	1.25	19.04	18.56	0.00	12.54	0.00	.25	8.58	0.00	0.00		0.00	
	4835	36.31	1.41	18.71	18.48	0.00	11.49	0.00	.31	8.77	0.00	0.00		0.00	
	4836	36.09	1.41	18.71	17.29	0.00	11.93	0.00	.27	8.84	0.00	0.00		0.00	
	AVERAGE	36.37	1.34	18.70	17.13	0.00	12.01	.01	.28	8.62	0.00	0.00		0.00	

SAMPLE	AL	NORMALISED FE	OXIDES MG	K
GT	34.53	61.75	3.48	0.00
BIO	32.48	35.25	15.97	15.80
GT	31.87	55.04	3.81	0.28
BIO	32.11	34.39	17.85	15.84
GT	32.44	55.73	4.04	5.79
BIO	33.24	30.25	21.23	15.25

F-FELDSPAR PROJECTION
RATIOS OF PLOTTED OXIDES
SYMBOL SAMPLE A F-W

A	=	GT	.345	.055
B	=	BIO	.244	.916
C	=	GT	.277	.065
D	=	BIO	.231	.339
E	=	GT	.297	.065
F	=	BIO	.259	.412

18.51.08.0000318 LINES PRINTED ON LF06.

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	GA	P	TOTAL
K498714128		54.38	1.06	18.35	12.18	.09	3.18	1.51	2.15	2.02						.08 100.07
GT	235	37.51	0.00	20.80	35.74	.55	3.33	1.30	.01	.02	.08	.20		.08		
	240	36.13	.08	20.90	36.49	.54	3.33	1.26	.03	.03	0.10	.13		.09		
	241	37.16	.01	21.32	33.41	.45	5.31	1.16	.02	.01	.02	0.00		0.00		
	AVERAGE	36.93	.03	21.04	35.21	.51	3.99	1.24	.02	.01	.08	.08		.08		
STAIR	215	27.56	.56	53.11	12.45	.02	1.85	3.00	.28	0.40	.44		2.28	0.00		
	216	33.19	.57	45.88	13.82	.05	3.20	.94	.07	.75	.08		1.55	0.00		
	217	25.78	.56	34.31	12.89	.05	1.84	.02	.08	0.00	.11		2.46	0.00		
	218	27.01	.43	53.16	13.17	.04	1.85	.63	.07	.03	.14		2.01	.07		
AVERAGE	28.54	.53	51.62	12.98	.04	2.17	.02	.07	.20	.21		2.08	.02			
BIO	231	35.88	.55	21.53	13.72	.02	12.58	3.80	.22	7.33	.07	.08		.08		
	242	34.70	1.31	18.63	16.09	.02	12.28	0.30	.23	3.36	.11	.08		.18		
	AVERAGE	35.30	1.13	20.08	14.91	.02	12.42	2.50	.23	5.35	.09	.08		.13		
CHLOR	235	25.38	.04	22.03	19.50	.01	18.20	.02	.03	.10	.08	.03		.08		
	238	24.82	.08	23.47	21.15	.02	17.31	.05	0.00	.00	.08	.16		0.00		
	AVERAGE	25.09	.06	23.20	20.33	.02	17.76	.04	.02	.08	.08	.10		.08		
PLAC	243	55.88	0.00	23.56	.12	.02	0.00	3.48	3.48	.04	0.00	.08		0.00		
	234	61.18	.05	23.72	.08	.02	.02	3.55	3.80	.05	.01	.05		0.00		
	AVERAGE	58.51	.03	23.64	.09	.02	.01	3.53	3.74	.05	.01	.06		0.00		

SAMPLE	AL	NORMALIZED FE	OXIDES Mg	K
K498714128	52.75	33.13	3.57	5.43
GT	34.93	58.44	3.62	.02
STAIR	77.13	18.40	3.17	.30
BIO	35.01	28.73	22.27	14.88
CHLOR	37.81	32.13	28.34	.12
PLAC	99.35	.38	.04	.19

AL2SiO5 PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	K	F-M
A	= K498714128	.155	.257
B	= GT	.000	.102
C	= STAIR	.013	.141
D	= BIO	.234	.455
E	= CHLOR	.002	.466
F	= PLAC	.310	.100

09.15.26.0000108 LINES PRINTED ON LPDS.

WHITEROCK 2

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K49871382		56.63	1.74	19.15	17.02	.78	2.38	.70	.52	1.34					.13	88.77
GT	63	37.40	.02	21.58	33.27	2.95	3.81	1.48	.03	.02	.05	.08		.08		
	69	37.51	.03	20.98	33.98	2.88	3.94	1.51	.01	.01	.04	0.00		0.00		
	75	37.24	.07	20.84	33.50	2.73	4.04	1.54	0.00	0.00	.08	.07		0.00		
	76	36.71	.18	21.04	33.93	2.98	3.98	1.51	.04	0.00	0.00	.08		0.00		
	AVERAGE	37.24	.07	21.11	33.55	2.86	3.94	1.55	.02	.01	.05	.08		0.00		
CHL	68	26.08	.08	22.87	15.73	.09	20.40	0.00	.03	.01	0.00	.33		.05		
	73	25.58	.09	23.30	16.53	.05	20.28	.04	.02	.07	.02	.19		.18		
	AVERAGE	25.82	.09	23.08	16.13	.07	20.37	.02	.03	.04	.01	.24		.12		
BIO	65	36.11	1.00	18.28	13.71	.06	13.88	0.00	.23	0.09	0.00	.12		.22		
	74	35.89	1.41	18.70	13.62	.02	14.51	0.00	.27	0.04	.04	.13		.15		
	88	36.71	1.41	18.09	13.34	.04	13.95	0.00	.25	0.04	.08	0.00		.12		
	AVERAGE	36.60	1.44	18.36	13.56	.04	14.11	0.00	.21	0.22	.04	.08		.15		
AND	70	37.80	0.00	80.85	.66	0.00	0.00	0.00	0.00	.02	.02	0.00		.05		
STAUR	64	27.31	.42	52.61	13.44	.12	2.28	.01	.02	.01	.04		.63	0.00		
	61	27.53	.39	52.47	12.80	.14	2.21	0.00	.08	.02	.04		.55	0.00		
	AVERAGE	27.42	.41	52.54	13.12	.13	2.24	.01	.05	.02	.05		.78	0.00		

SAMPLE	AL	NORMALISED FE	OXIDES MG	K
K49871382	48.02	42.10	5.97	3.36
GT	30.02	57.14	6.73	.01
CHL	36.72	27.05	34.18	.07
BIO	33.22	24.54	25.34	16.69
AND	33.89	1.07	0.00	.03
STAUR	77.37	19.32	3.19	.02

AL2O3:SiO2 PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	K	F-M
A	= K49871382	.085	.123
B	= GT	.000	.105
C	= CHL	.001	.508
D	= BIO	.050	.510
E	= AND	.029	0.000
F	= STAUR	.001	.146

09.15.24.0000102 LINES PRINTED ON LP06.

WHITEROCK(13)

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/660		57.32	3.23	21.23	18.41	.26	2.58	1.67	1.39	2.07					.10	89.96
GT	5	38.20	.11	21.23	32.38	2.51	2.57	3.84	.04	0.00	.08	.08		.08		
	12	36.88	.11	20.84	36.89	.51	3.34	1.73	.03	.01	.08	.01		0.00		
	15	37.43	0.00	26.81	35.93	.47	3.51	1.88	.04	.02	.06	.14		.07		
	AVERAGE	37.44	.07	26.89	35.07	1.16	3.14	2.41	.04	.01	.07	.07		.04		
BIO	8	36.16	2.58	18.55	19.57	.02	8.48	0.00	.17	8.43	.18	.08		0.00		
	10	35.99	2.90	18.18	20.45	0.00	8.38	0.00	.28	8.99	.07	.07		.17		
	13	35.08	3.81	17.22	20.95	.08	8.77	0.00	.13	8.14	.09	.11		.16		
	14	35.10	2.82	17.78	20.43	0.00	8.79	0.00	.25	8.05	.03	.16		.04		
	AVERAGE	35.59	3.03	17.93	20.38	.02	8.68	0.00	.21	8.15	.06	.11		.09		
K498/1415B		58.42	.65	22.28	8.99	.08	2.82	.60	.81	5.03					.10	89.84
GT	19	37.32	0.00	21.36	37.01	.74	2.12	1.65	.05	0.00	0.00	0.00		.02		
	20	37.88	.02	21.10	36.53	1.05	2.20	1.64	.02	0.00	0.00	.06		.10		
	24	37.24	.03	26.27	37.38	1.07	2.40	1.78	.02	0.00	.11	.03		0.00		
	AVERAGE	37.48	.02	20.91	36.98	.95	2.24	1.69	.03	0.00	.04	.03		.04		
K498/1327A		65.11	.74	17.90	7.88	.08	2.07	.29	.65	5.36					.10	89.88
GT	29	36.24	.08	20.08	36.52	1.95	2.38	1.73	.05	0.00	0.00	0.00		.03		
	32	36.61	.01	20.71	36.58	1.40	2.18	2.28	0.00	.01	.09	0.00		.01		
	35	36.59	.03	18.97	36.73	1.21	2.13	2.39	.01	.02	.07	0.00		.07		
	AVERAGE	36.48	.04	20.25	36.61	1.52	2.23	2.14	.02	.01	.05	0.00		.04		
BIO	33	34.98	1.53	18.57	19.72	.05	8.79	0.00	.20	8.27	.03	.07		0.00		
	34	37.87	1.35	22.35	18.00	.01	7.78	0.00	.41	8.30	.09	.04		0.00		
	AVERAGE	36.48	1.44	20.46	17.86	.03	8.79	0.00	.31	8.29	.06	.06		0.00		
STAIR	196	27.82	.38	51.56	14.32	.04	1.39	.01	.02	0.00	.12		1.48	.04		
	197	27.59	.49	51.18	14.08	.01	1.48	0.00	.09	0.00	.07		1.39	0.00		
	AVERAGE	27.71	.44	51.37	14.20	.03	1.44	.01	.06	0.00	.10		1.44	.02		
K498/608		59.95	1.39	17.34	13.25	.17	2.24	.51	.42	4.37					.05	89.73
GT	27	38.25	0.00	22.83	34.24	.55	2.13	1.15	1.29	0.00	.12	1.48		.04		
	28	36.80	0.00	26.85	38.30	.78	2.32	1.86	.09	0.00	.07	1.39		0.00		
	29	36.88	0.00	26.81	37.53	1.11	2.23	2.33	0.00	0.00	0.00	0.00		0.00		
	30	36.11	0.00	26.24	38.61	.57	2.36	.88	0.00	0.00	0.00	0.00		0.00		
	31	36.59	0.00	26.56	38.83	.69	2.38	1.09	0.00	0.00	0.00	0.00		0.00		
	32	36.58	0.00	26.59	38.10	.78	2.21	1.93	0.00	0.00	0.00	0.00		0.00		
	33	37.04	0.00	20.74	37.96	.97	2.21	2.14	0.00	0.00	0.00	0.00		0.00		
	34	36.49	0.00	20.56	37.81	1.44	2.27	2.44	0.00	0.00	0.00	0.00		0.00		
	35	36.67	0.00	26.36	36.58	2.11	2.12	2.33	0.00	0.00	0.00	0.00		0.00		
	318	36.90	.10	21.26	36.72	1.25	2.19	2.16	.08	.01	.02	.06		0.00		
	319	36.63	.08	20.48	35.70	1.15	2.08	2.28	0.00	0.00	.05	.08		.14		
	320	36.77	.07	20.25	37.12	.80	2.35	2.22	0.00	.01	.01	.03		0.00		
	AVERAGE	36.82	.02	26.77	37.19	1.00	2.24	1.90	.12	.00	.02	.25		.02		
BIO	40	37.74	1.35	18.16	16.11	0.00	10.68	0.00	.14	8.37	.08	.05		.07		
K498/372		65.25	1.54	11.42	13.00	.11	1.80	2.88	.16	3.57					.12	89.87
GT	118	36.20	.18	21.14	30.87	3.12	.81	7.75	.02	.03	.27	.06		0.00		
	121	34.56	0.00	18.90	36.84	1.11	.74	5.98	.15	.03	.09	.03		0.00		
	122	36.88	.04	20.27	31.40	2.91	.77	7.83	.01	0.00	.05	.04		0.00		
	125	36.59	.05	26.48	30.35	2.82	.72	8.58	.01	.02	.12	0.00		0.00		
	127	36.39	.17	26.59	36.20	1.54	.92	4.12	0.00	.09	.07	.06		0.00		
	AVERAGE	36.12	.09	26.48	33.05	2.26	.79	8.85	.04	.03	.12	.04		0.00		
BIO	119	32.53	3.14	17.91	25.82	.08	5.15	0.00	.09	8.84	.09	.13		.01		
	120	33.11	2.89	17.60	25.86	.05	4.96	0.00	.32	8.60	.07	0.00		0.00		
	124	32.82	3.10	17.59	25.96	.05	4.77	0.00	.13	8.74	.18	.15		0.00		
	128	32.42	3.36	17.71	28.44	.03	4.85	0.00	.10	8.65	.18	.01		.04		
	AVERAGE	32.72	3.12	17.70	26.02	.05	4.83	0.00	.16	8.71	.13	.07		.01		

SAMPLE	AL	NORMALISED FE	OXIDES MG	K
K498/660	38.25	48.46	7.84	5.45
GT	35.35	55.32	5.31	.02
BIO	31.84	36.18	15.72	18.25
K498/1416B	56.93	22.99	7.21	12.88
GT	34.76	61.50	3.73	0.00
K498/1327A	54.23	23.27	6.27	16.24
GT	34.27	61.94	3.77	.02
BIO	36.28	31.67	15.58	18.47
STAIR	76.57	21.19	2.14	0.00
K498/608	46.61	35.62	6.02	11.75
GT	34.51	61.78	3.72	.00
BIO	34.06	36.21	26.03	15.70
K498/372	38.34	43.84	6.04	11.88
GT	37.67	60.81	1.46	.05

GT	34.27	61.84	3.77	.02
BIO	36.28	31.67	15.58	16.47
STAU	78.67	21.19	2.14	0.00
K498/608	46.61	35.62	6.02	11.75
GT	34.51	61.78	3.72	.00
BIO	34.08	36.21	26.03	15.76
K498/372	38.34	43.84	6.04	11.88
GT	37.67	60.81	1.46	.06
BIO	30.33	44.58	8.45	16.64

MUSCOVITE PROJECTON
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	A	F-M
A	= K498/660	.280	.138
B	= GT	.353	.082
C	= BIO	-.483	.363
D	= K498/1416B	.378	.239
E	= GT	.348	.057
F	= K498/1327A	.157	.212
G	= GT	.342	.057
H	= BIO	-.384	.330
I	= STAU	.767	.092
J	= K498/608	.215	.145
K	= GT	.345	.057
L	= BIO	-.350	.389
M	= K498/372	.046	.122
N	= GT	.376	.023
O	= BIO	-.585	.159

WHITEROCK (3)

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	F	TOTAL
K498/366		56.29	1.64	17.76	16.84	.23	2.60	.93	.87	2.61					.17	99.90
GT	181	37.43	.06	21.14	34.06	2.50	2.80	2.99	.02	.02	.05	0.00		.04		
	184	37.43	.07	19.73	34.40	2.48	2.89	3.06	.11	.03	.05	.19		.01		
	AVERAGE	37.43	.07	20.44	34.23	2.49	2.85	3.03	.07	.03	.05	.10		.03		
BIO	171	35.79	1.81	18.98	17.80	.02	10.81	0.00	.16	9.58	.05	.05		.03		
	182	35.74	1.56	18.81	18.14	.05	11.16	0.00	.22	9.58	.12	0.00		.18		
	183	35.44	2.07	18.11	18.54	.05	11.08	0.00	.18	9.87	.09	.13		.08		
	AVERAGE	35.66	1.81	18.63	18.16	.04	11.02	0.00	.19	9.68	.08	.06		.10		
STAUR	168	30.57	.40	51.59	12.61	.16	1.38	0.00	.05	.03	.10		.11	0.00		
	189	32.54	.38	51.14	11.99	.20	1.32	.01	.03	.03	.08		.15	0.00		
	170	28.45	.33	52.18	12.81	.15	1.34	.02	.01	.01	.07		.23	.05		
	171	27.94	.35	51.75	13.97	.15	1.62	0.00	0.00	0.00	.06		.06	0.00		
	174	28.59	.44	51.72	14.10	.08	1.65	.04	.02	.01	.03		.22	.02		
	178	27.66	.52	51.81	13.43	.19	1.83	.02	.07	0.00	.16		.14	.05		
	AVERAGE	29.29	.40	51.70	13.15	.16	1.57	.01	.03	.02	.08		.16	.03		
K498/1337		54.50	2.23	20.57	17.55	.21	2.39	.51	.34	1.26					.12	99.62
GT	188	38.17	.05	20.78	33.91	2.16	4.35	1.43	.03	.01	.08	0.00		0.00		
STAUR	185	28.20	.21	50.15	13.33	.10	2.56	.01	.04	0.00	.07		.55	.01		
	190	28.69	.35	52.87	13.22	.07	2.56	.02	.02	.01	.02		.75	0.00		
	193	28.45	.29	51.67	12.86	.11	2.53	.02	.03	.01	.03		.64	.02		
	AVERAGE	28.45	.28	51.60	13.14	.09	2.55	.02	.03	.01	.04		.65	.01		
PLAG	186	60.71	.01	23.30	0.00	.02	.03	6.14	8.43	.04	0.00	0.00		.01		
	194	59.96	0.00	24.61	0.00	.05	.03	6.41	7.97	.01	.10	.07		0.00		
	AVERAGE	60.34	.01	23.96	0.00	.04	.03	6.28	8.20	.03	.05	.04		.03		
CHLOR	191	26.15	.06	23.24	16.55	.03	21.53	.02	.04	.01	.02	.08		0.00		
	192	25.85	.06	23.33	16.45	.06	21.37	.03	0.00	.03	.05	.05		0.00		
	AVERAGE	26.00	.06	23.29	16.50	.05	21.45	.03	.02	.02	.04	.07		0.00		
K498/1380		57.71	1.42	19.41	13.71	.20	2.70	1.07	.87	2.83					.15	100.07
GT	210	37.68	0.00	20.70	38.30	1.54	2.65	2.46	.03	.02	.05	.03		0.00		
	211	37.87	.01	19.54	38.80	1.92	2.98	1.97	0.00	0.00	0.00	.10		.07		
	213	38.72	.04	19.89	36.09	1.84	2.88	1.80	.05	0.00	.05	.17		.12		
	AVERAGE	38.09	.02	20.04	38.40	1.77	2.83	2.09	.03	.01	.03	.10		.08		
BIO	209	35.81	1.66	18.36	18.53	0.00	10.52	0.00	.22	9.90	.10	.13		0.00		
	214	36.18	2.04	19.42	18.40	0.00	10.43	0.00	.31	9.92	.03	0.00		.11		
	AVERAGE	36.00	1.85	18.89	18.47	0.00	10.48	0.00	.27	9.91	.07	.07		.06		
STAUR	201	27.50	.62	52.58	14.58	.04	1.59	.04	.05	0.00	.10		.94	0.00		
	205	28.54	.34	52.46	13.83	.02	1.65	.01	.08	.02	.10		1.00	.10		
	206	26.56	.45	51.75	13.81	.04	1.60	.01	.04	0.00	.09		1.07	0.00		
	AVERAGE	27.53	.47	52.26	14.07	.03	1.63	.02	.06	.01	.10		1.00	.03		
PLAG	202	59.41	.02	25.33	.10	0.00	.02	7.62	7.35	.03	0.00	.28		.09		
	208	59.44	0.00	25.55	.06	0.00	.04	7.75	7.39	.02	.02	0.00		0.00		
	AVERAGE	59.43	.01	25.44	.08	0.00	.03	7.69	7.37	.03	.01	.14		.05		

SAMPLE	AL	NORMALISED FE	OXIDES MG	K
K498/366	44.61	42.30	6.53	6.56
GT	35.64	58.70	4.61	.04
BIO	32.41	31.59	19.16	16.83
STAUR	77.81	19.79	2.37	.03
K498/1337	48.25	42.02	5.72	3.02
GT	35.19	57.43	7.37	.02
STAUR	76.88	19.82	3.79	.01
PLAG	99.77	0.00	.12	.10
CHLOR	38.01	26.94	35.02	.03
K498/1380	50.22	35.47	6.88	7.32
GT	33.81	61.40	4.77	.01
BIO	32.72	31.98	18.14	17.16
STAUR	76.80	20.70	2.39	.01
PLAG	99.47	.31	.12	.10

MUSCOVITE PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	A	F=H
A	= K498/366	.338	.134
B	= GT	.356	.072
C	= BIO	.554	.378
D	= STAUR	.778	.187
E	= K498/1337	.487	.120

SYMBOL	SAMPLE	A	F-M
A	= K498/366	.338	.134
B	= GT	.356	.072
C	= BIO	-.554	.378
D	= STAUR	.778	.107
E	= K498/1337	.457	.120
F	= GT	.352	.114
G	= STAUR	.767	.163
H	= PLAG	.998	1.000
I	= CHLOP	.380	.565
J	= K498/1380	.400	.165
K	= GT	.338	.072
L	= BIO	-.588	.362
M	= STAUR	.768	.104
N	= PLAG	.996	.273

WHITEROCK (3)

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/1412B		58.39	1.06	19.39	12.18	.09	3.19	1.51	2.15	2.02					.08	100.07
GT	238	37.51	0.00	20.80	35.74	.55	3.33	1.30	.01	.02	.05	.20		.08		
	240	36.13	.02	20.80	36.49	.54	3.33	1.26	.03	.01	0.00	.03		.09		
	241	37.16	.01	21.32	33.41	.45	5.31	1.16	.02	.01	.02	0.00		0.00		
	AVERAGE	36.83	.03	21.04	35.21	.51	3.99	1.24	.02	.01	.03	.06		.06		
STAU	215	27.58	.56	53.11	12.45	.02	1.85	0.00	.08	0.00	.44		2.28	0.00		
	218	33.18	.57	45.88	13.62	.05	3.20	.04	.07	.78	.09		1.55	0.00		
	217	26.78	.56	54.31	12.69	.05	1.84	.02	.08	0.00	.11		2.46	0.00		
	218	27.01	.43	53.38	13.17	.04	1.60	.03	.07	.03	.18		2.01	.07		
	AVERAGE	28.54	.53	51.62	12.98	.04	2.12	.02	.07	.20	.21		2.08	.02		
BIO	238	35.89	.85	21.53	13.72	.02	12.58	0.00	.27	7.33	.07	.06		.05		
	242	34.70	1.31	16.63	16.09	.02	12.26	0.00	.23	8.38	.11	.05		.15		
	AVERAGE	35.30	1.13	20.08	14.91	.02	12.42	0.00	.25	8.36	.09	.06		.11		
CHLOR	235	25.36	.04	22.93	19.50	.31	18.20	.02	.03	.10	.05	.03		.06		
	239	24.82	.08	23.47	21.15	.02	17.31	.05	0.00	.05	.06	.18		0.00		
	AVERAGE	25.09	.06	23.20	20.33	.02	17.76	.04	.02	.08	.06	.10		.03		
PLAG	243	59.89	0.00	23.56	.12	.02	0.00	5.49	8.48	.04	0.00	.06		0.00		
	234	61.13	.05	23.72	.06	.02	.02	5.56	8.60	.05	.01	.05		0.00		
	AVERAGE	60.51	.03	23.64	.09	.02	.01	5.53	8.54	.05	.01	.06		0.00		
K498/1384		72.31	.21	14.44	3.63	.08	.52	4.05	3.57	.56					.06	99.43
GT	277	37.16	.02	20.80	30.58	1.98	4.61	3.74	.05	.01	.04	.08		.13		
	279	36.51	.05	20.98	33.28	2.73	2.14	3.81	.02	0.00	0.00	.11		.08		
	284	39.13	.05	20.19	30.13	2.35	4.31	3.88	0.00	.02	.04	0.00		.03		
	AVERAGE	37.73	.04	20.66	31.32	2.35	3.69	3.81	.03	.01	.03	.06		.06		
BIO	280	33.76	3.65	15.41	22.52	.02	9.26	0.00	.01	9.45	0.00	.01		.59		
PLAG	278	58.30	.04	25.11	.11	.04	0.00	7.62	7.22	.32	.02	0.00		0.00		
CPX	281	48.35	.09	1.54	32.44	.75	14.00	.49	.05	.02	0.00	.09		.01		
	285	51.60	.19	1.48	32.01	.87	13.94	.47	.05	0.00	0.00	0.00		0.00		
	AVERAGE	49.98	.14	1.51	32.23	.82	13.97	.46	.05	.01	0.00	.05		.03		
K498/680A		61.98	1.35	15.43	12.72	.15	3.48	1.71	1.42	1.47					.03	99.74
GT	288	37.71	.06	21.25	34.44	.64	4.48	1.12	.01	.03	0.00	0.00		.11		
	291	38.09	.04	21.13	35.33	.57	4.71	1.23	.05	.02	.05	.03		.10		
	292	37.77	.04	21.33	33.65	.60	4.56	1.22	.02	0.00	.01	0.00		0.00		
	295	37.21	.08	20.81	34.56	.57	4.07	1.24	.03	.03	.08	0.00		0.00		
	AVERAGE	37.70	.05	21.13	34.50	.60	4.46	1.20	.03	.02	.04	.01		.05		
BIO	289	37.17	1.66	15.27	12.21	0.00	14.09	0.00	.40	9.74	.02	.01		.41		
	290	36.42	1.71	15.19	13.93	0.00	13.43	0.00	.29	9.82	.07	.02		.57		
	293	36.08	1.71	15.36	13.93	0.00	13.33	0.00	.34	9.52	.10	.25		.41		
	294	36.15	1.82	15.47	13.41	.02	13.28	0.00	.30	9.67	.12	.11		.36		
	AVERAGE	36.46	1.73	15.82	13.37	.01	13.54	0.00	.33	9.69	.08	.10		.44		

SAMPLE	AL	NORMALISED FE	OXIDES MG	K
K498/1412B	52.70	33.13	8.67	5.49
GT	34.92	58.44	8.62	.02
STAU	77.13	18.40	3.17	.30
BIO	36.01	26.70	22.27	14.98
CHLOR	37.81	33.13	28.94	.12
PLAG	59.39	.38	.04	.19
K498/1384	75.40	18.96	2.72	2.92
GT	37.10	58.26	8.82	.02
BIO	27.24	39.80	16.26	16.70
PLAG	98.32	.43	0.00	1.25
CPX	3.16	67.54	29.28	.02
K498/680A	46.62	38.43	10.51	4.44
GT	35.16	57.40	7.41	.03
BIO	33.97	24.13	24.42	17.48

MUSCOVITE PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	A	F-M
A	= K498/1412B	.464	.207
B	= GT	.349	.102
C	= STAU	.772	.141
D	= BIO	-.223	.455
E	= CHLOR	.378	.466
F	= PLAG	.996	.100
G	= K498/1384	.755	.125
H	= GT	.371	.105
I	= BIO	-.669	.290

C	=	STAIR	.772	.141
D	=	BIO	.223	.455
E	=	CHLDR	.378	.466
F	=	PLAG	.886	.100
G	=	K498/1384	.755	.125
H	=	GT	.371	.105
I	=	BIO	.648	.280
J	=	PLAG	.885	0.000
K	=	CPX	.031	.302
L	=	K498/680A	.405	.215
M	=	GT	.351	.114
N	=	BIO	.614	.503

08.55.27.0000473 LINES PRINTED ON LP07.

SGJAPKJ //// END OF LIST ////

DATE 79/11/04 13.38.00.

COMPOSITION VALUES ARE OXIDES OF ELEMENTS

CORKWOOD

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/7807																
GT	23	37.67	.06	20.80	33.07	.82	4.47	2.22	0.00	0.00	.10	.17		.01		
	27	37.62	.03	21.16	32.47	.80	5.32	1.60	0.00	.01	.08	.03		0.00		
	28	36.89	.03	20.91	35.26	.90	4.05	2.03	.02	0.00	0.00	.03		0.00		
	29	37.78	0.00	21.27	31.27	.85	6.13	1.60	0.00	0.00	.10	.11		.06		
	31	36.06	0.00	21.17	31.53	.83	6.22	1.74	.03	.01	.02	.05		0.00		
	34	36.43	0.00	21.67	31.84	.85	5.05	1.61	.01	.01	.02	.09		.06		
	35	38.33	.02	21.06	32.68	.89	5.67	1.67	.04	.01	.02	0.00		.03		
	39	38.25	.05	20.95	34.33	.99	3.57	2.12	.01	.02	.05	.04		.04		
K498/7804																
GT	42	37.42	0.00	21.39	34.07	.44	4.87	1.84	0.00	.03	.06	0.00		.05		
	45	37.79	0.00	21.05	34.16	.41	5.24	1.27	.03	0.00	.05	.19		0.00		
	47	38.12	.09	21.22	34.35	.39	4.88	1.42	.03	0.00	.10	.07		.02		
	51	37.40	.04	21.27	34.03	.41	5.13	1.31	0.00	0.00	.06	.04		0.00		
	53	37.85	.08	20.88	33.37	.35	5.59	1.62	.02	.01	.05	.09		.03		
	56	37.99	.06	21.29	34.02	.45	5.13	1.60	.02	.01	.02	.03		.03		
K498/7810																
GT	108	37.82	.05	21.09	35.89	1.36	3.51	1.04	.03	0.00	0.00	0.00		0.00		
	111	37.65	0.00	21.31	34.89	1.22	3.46	1.14	.02	.02	0.00	.18		0.00		
	112	37.82	0.00	20.99	33.56	1.06	4.53	1.08	.05	.01	.02	.07		0.00		
K498/7849																
GT	114	38.36	.08	21.43	31.84	.65	3.53	1.15	0.00	.01	.04	.01		0.00		
	117	38.11	.04	21.41	32.24	.74	5.95	1.21	.05	0.00	.03	.06		.02		
	118	38.10	.01	21.32	32.66	.64	5.81	1.24	.04	0.00	.09	.19		0.00		
	120	38.45	.13	21.09	32.96	.65	5.44	1.26	.01	.03	.15	.11		0.00		
	123	37.68	.07	22.11	31.00	.64	6.93	1.23	.03	0.00	.05	.05		.07		
K498/830																
GT	142	37.86	.02	20.95	33.89	1.39	4.21	1.71	.02	0.00	0.00	0.00		.02		
	146	37.73	.08	21.05	34.78	1.41	2.98	2.33	.01	0.00	.06	.01		0.00		
	148	37.78	.12	21.28	32.44	1.28	4.08	2.35	0.00	0.00	.06	.02		.20		
	161	38.35	.04	21.27	31.75	1.25	4.82	2.41	.03	0.00	.07	.02		.13		
	166	36.43	0.00	20.26	36.89	1.66	2.58	1.71	.01	.01	.04	.05		0.00		
	159	37.76	.01	21.07	33.28	1.26	3.74	2.90	.03	0.00	0.00	.03		.05		
K498/7815A																
GT	180	37.18	.08	20.58	35.05	.72	4.46	1.25	.04	0.00	.09	.04		0.00		
	183	36.45	.02	20.52	35.80	.85	4.17	1.22	0.00	0.00	.04	.06		.05		
	185	35.82	.04	20.73	37.70	.84	3.53	1.13	.03	0.00	.02	.07		.02		
	190	37.50	.10	20.16	35.86	1.02	3.56	1.16	0.00	.01	.01	.13		.07		
	184	37.47	.05	20.60	34.61	.72	4.56	1.19	0.00	0.00	.02	0.00		.11		

SAMPLE	FE	NORMALISED OXIDES			
		MN	MG	CA	
GT	80.80	2.19	12.73	4.48	
GT	82.78	.99	12.55	3.68	
GT	85.01	2.97	9.37	2.68	
GT	80.42	1.66	14.86	3.05	
GT	82.30	3.35	9.08	5.27	
GT	85.48	1.98	9.68	2.84	

COORDINATES OF PLOTTED OXIDES		OXIDES			
SYMBOL	SAMPLE	X	Y	X1	Y1
A	= GT	17.841	2.981	10.825	14.338
B	= GT	18.176	2.811	10.888	14.510
C	= GT	18.204	2.083	10.671	15.238
D	= GT	17.878	3.102	11.161	14.218
E	= GT	17.895	2.487	10.381	14.834
F	= GT	18.351	2.170	10.684	15.151

12.05.02.0000140 LINES PRINTED ON LP07.

WHITE ROCK

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/68		56.70	.67	23.47	9.33	.12	2.58	.33	.75	5.95					.11	100.03
GT	926	37.53	0.00	21.29	36.64	1.71	2.33	1.72	.03	0.00	.01	0.00		.07		
	928	36.67	0.00	20.88	36.18	1.77	2.36	1.67	.01	0.00	.05	.05		.05		
	1069	37.23	0.00	20.88	36.98	.86	2.22	2.03	.04	0.00	.05	.19		.01		
PIC	924	35.66	1.38	19.60	18.40	.04	10.56	0.00	.33	8.60	.09	.09		.11		
	925	34.39	1.70	18.87	17.20	0.00	11.12	0.00	.21	8.74	.22	.66		0.00		
STAUP	927	27.63	.55	53.03	14.28	.08	1.30	0.00	.07	.01	.12		.72	0.00		
	1068	28.14	.29	53.39	13.50	.01	1.34	.01	.03	.04	.06		0.00	.06		
FIB	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		
K498/33		62.17	.58	17.33	11.77	.12	2.10	.68	1.35	3.12					.15	99.36
GT	934	36.66	.17	20.89	36.91	.27	1.91	3.16	.04	0.00	0.00	.07		.05		
	935	36.68	.08	20.73	36.71	2.44	2.23	1.05	.07	0.00	0.00	0.00		0.00		
	936	36.53	.05	20.66	37.53	.71	1.86	1.82	.03	.01	.03	0.00		.07		
	939	36.38	.08	20.86	37.30	.32	1.90	2.78	.03	.02	.01	.11		.03		
	943	36.84	0.00	20.59	34.49	3.60	2.22	1.30	.03	.03	.02	0.00		0.00		
	944	36.55	.01	20.83	36.98	1.84	2.10	1.52	0.00	.01	.01	.20		0.00		
PIC	937	34.51	1.47	18.21	20.14	.06	9.85	0.00	.14	8.88	.12	0.00		0.00		
	938	34.77	1.49	18.19	20.20	.03	10.07	0.00	.20	8.92	.03	.11		.06		
STAUP	931	29.21	.45	51.11	14.03	.02	1.47	.01	.08	.02	.01		.30	.06		
	932	27.12	.44	52.66	14.54	.05	1.35	.02	.28	.04	0.00		.52	.10		
	933	27.20	.46	52.74	14.47	0.00	1.56	0.00	.03	0.00	.02		.61	0.00		
	941	27.38	.42	52.45	14.66	.04	1.56	.02	.13	.02	0.00		.72	0.00		
	942	27.50	.51	52.28	14.40	.01	1.38	.02	.02	0.00	.03		.56	.14		
FIB	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		
K498/139		59.49	1.52	18.28	13.14	.16	3.38	.82	1.26	1.91					.17	100.14
GT	955	37.76	.02	20.61	34.26	1.00	4.05	.79	.04	.03	.04	.04		0.00		
	959	37.14	.06	20.74	33.06	.92	4.97	.87	.07	0.00	.08	0.00		0.00		
	973	37.36	.08	20.68	34.93	.97	3.85	.79	.03	0.00	.10	.04		.05		
	964	37.43	.04	20.94	35.06	.99	3.89	.76	.05	0.00	.09	.04		.05		
	965	37.48	.07	20.79	34.24	.93	3.84	.82	.03	0.00	.10	.09		.16		
	967	37.67	.06	20.78	32.64	.85	5.04	.83	.04	0.00	.01	.03		.06		
	968	37.48	.03	20.58	34.46	1.04	4.00	.78	.03	.01	.02	.06		0.00		
PIC	969	36.09	1.91	18.44	15.27	0.00	11.73	0.00	.31	9.69	.01	.05		.08		
FLAG	957	62.41	.02	21.79	.27	0.00	.04	4.00	6.54	.10	.01	.03		.05		
K498/135		51.61	1.26	18.54	17.26	.32	1.45	6.70	3.19	.82					.51	99.65
GT	989	37.02	.35	19.73	31.69	.86	1.39	6.32	.03	.87	.08	0.00		.12		
	992	37.36	.03	20.41	32.14	1.37	1.65	7.06	0.00	0.00	0.00	0.00		.07		
	995	37.55	.06	20.31	33.23	2.14	1.25	6.21	.06	0.00	.03	0.00		.11		
	996	37.43	.13	20.48	31.20	1.74	1.43	7.48	0.00	.04	0.00	.07		.08		
	1000	36.91	.08	20.32	32.04	1.65	1.53	6.67	.02	0.00	.04	.02		.03		
PIC	992	34.90	2.95	18.19	26.20	0.00	8.93	0.00	.06	9.66	0.00	0.00		.22		

HRT	104	38.80	1.04	23.43	24.43	.07	4.08	11.33	1.57	1.34	.05	.04	
	988	38.18	.68	18.95	24.38	.08	3.81	10.12	1.25	2.23	.03	.02	.08
K498/73		37.15	1.57	34.25	18.44	.14	4.78	.38	.15	4.08			.05 38.64
GT	1002	37.61	.03	21.44	34.47	.60	4.82	1.44	.04	0.00	.03	.08	0.00
	1005	37.33	.01	20.82	33.37	.48	4.82	1.70	.02	0.00	.08	.13	.11
	1008	37.22	0.00	21.05	35.04	.60	4.18	1.64	.04	.01	.03	.11	0.00
	1009	37.87	.08	21.11	33.37	.62	5.01	1.88	0.00	0.00	.10	.20	.03
	1010	37.85	.02	21.16	34.38	.52	4.43	1.44	0.00	.03	.01	.01	.02
	1011	37.78	.12	21.12	33.28	.48	4.83	1.64	.02	0.00	.03	.07	0.00
BIO	1007	35.11	2.14	18.52	18.43	0.00	8.87	0.00	.38	8.91	.12	.12	.05
	1012	34.67	1.50	22.85	18.18	.03	7.85	0.00	.10	7.48	.04	.10	.28
FILL	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
K498/53		68.35	.63	17.15	6.17	.06	1.83	.16	.33	5.46			.12 100.38
GT	1017	37.07	.00	21.04	35.43	2.93	1.53	2.50	.03	.02	0.00	.12	0.00
	1020	38.34	0.00	20.85	35.70	2.02	1.46	3.38	.03	.02	0.00	.05	0.00
	1021	37.21	.12	20.85	36.55	2.24	1.41	2.66	.02	0.00	.01	.02	.01
BIO	1018	35.16	1.87	18.18	21.54	0.00	7.48	0.00	.14	8.95	.08	.08	.05
	1019	35.08	1.72	18.11	21.97	.10	7.91	0.00	.22	9.32	.02	.08	0.00
	1022	34.71	1.74	18.34	22.04	.05	7.83	0.00	.21	8.95	.11	.09	0.00

SAMPLE	NORMALISED OXIDES			
	AL	FE	MG	K
K498/68	58.78	22.57	6.24	14.40
GT	35.07	61.07	3.85	0.00
BIO	34.02	31.48	19.17	15.33
STAIR	77.74	20.29	1.93	.04
FIB	100.00	0.00	0.00	0.00
K498/33	50.50	34.28	6.12	9.09
GT	34.51	61.62	3.45	.02
BIO	31.80	35.24	17.40	15.55
STAIR	76.66	21.16	2.16	.02
FIB	100.00	0.00	0.00	0.00
K498/139	49.80	35.78	9.21	5.20
GT	35.16	57.67	7.16	.01
BIO	33.45	27.70	21.28	17.58
PLAG	98.15	1.22	.18	.45
K498/135	45.86	47.85	4.02	2.27
GT	37.54	58.43	2.89	.34
BIO	27.92	45.19	10.23	16.66
HRT	33.36	55.36	7.23	4.05
K498/73	57.53	27.33	7.86	6.78
GT	35.28	58.92	7.78	.01
BIO	26.88	30.82	15.89	14.62
FILL	100.00	0.00	0.00	0.00
K498/53	55.65	20.08	6.28	17.78
GT	35.81	61.85	2.52	.02
BIO	32.01	38.42	13.61	15.98

MUSCOVITE PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	A	F=M
A	= K498/68	.321	.217
B	= GT	.351	.059
C	= BIO	.310	.378

D	=	STAUF	.777	.007
E	=	FIB	1.000	0.000
F	=	K498/33	.365	.151
G	=	GT	.348	.053
H	=	BIC	-.393	.331
I	=	STAUF	.767	.093
J	=	FIB	1.000	0.000
K	=	K498/139	.432	.205
L	=	GT	.251	.110
M	=	BIC	-.849	.434
N	=	PLAG	.986	.129
O	=	K498/135	.428	.077
P	=	GT	.070	.043
Q	=	BIC	-.661	.185
R	=	HBE	.253	.115
S	=	K498/73	.516	.226
T	=	GT	.353	.120
U	=	BIC	-.168	.328
V	=	STLL	1.000	0.000
W	=	K498/53	.087	.238
X	=	GT	.358	.038
Y	=	BIC	-.438	.262

WHITE ROCK

SAMPLE	PROB NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/130		59.49	1.52	18.28	13.14	.18	3.38	.82	1.28	1.91						.17 100.14
GT	955	37.78	.02	20.61	34.28	1.00	4.05	.79	.04	.03	.04	.04		0.00		
	959	37.14	.06	20.74	33.06	.92	4.57	.87	.07	0.00	.08	0.00		0.00		
	963	37.36	.08	20.68	34.93	.97	3.85	.79	.03	0.00	.10	.04		.05		
	964	37.43	.04	20.94	35.06	.99	3.89	.78	.05	0.00	.05	.04		.05		
	965	37.48	.07	20.79	34.24	.93	3.84	.82	.03	0.00	.10	.09		.16		
	967	37.67	.06	20.78	32.84	.85	5.04	.83	.04	0.00	.01	.03		.06		
	968	37.47	.03	20.98	34.46	1.04	4.00	.76	.03	.01	.02	.06		0.00		
BIO	969	36.05	1.91	18.44	15.27	0.00	11.73	0.00	.31	8.89	.01	.05		.08		
PLAG	957	62.41	.02	21.79	.27	0.00	.04	4.00	9.54	.10	.01	.03		.05		
K498/135		51.61	1.26	16.54	17.26	.32	1.45	6.70	3.19	.82						.51 99.65
GT	989	37.02	.35	16.73	31.69	.46	1.39	6.32	.03	.87	.08	0.00		.12		
	993	37.36	.03	20.41	32.14	1.37	1.65	7.06	0.00	0.00	0.00	0.00		.07		
	995	37.55	.06	20.31	33.23	2.14	1.25	6.21	.06	0.00	.03	0.00		.11		
	996	37.43	.13	20.48	31.20	1.74	1.43	7.48	0.00	.04	0.00	.07		.08		
	1000	36.91	.08	20.32	32.04	1.65	1.53	6.67	.02	0.00	.04	.02		.03		
BIO	952	34.90	2.99	18.19	26.20	0.00	5.53	0.00	.06	9.66	0.00	0.00		.22		
HRE	994	39.60	1.04	13.45	24.43	.05	4.56	11.39	1.57	1.34	.09	.04		0.00		
	998	38.18	.69	15.95	24.36	.08	1.81	10.12	1.25	2.23	.03	.02		.06		
K498/73		37.15	1.57	34.85	16.44	.14	4.79	.35	.15	4.08						.05 99.64
GT	1002	37.61	.03	21.44	34.47	.60	4.62	1.44	.04	0.00	.03	.08		0.00		
	1005	37.33	.01	20.92	33.37	.45	4.52	1.70	.02	0.00	.08	.13		.11		
	1008	37.22	0.00	21.05	35.04	.60	4.16	1.64	.04	.71	.03	.11		0.00		
	1009	37.83	.08	21.11	33.37	.82	5.01	1.89	0.00	0.00	.10	.20		.03		
	1010	37.65	.02	21.16	34.38	.52	4.43	1.44	0.00	.03	.01	.01		.02		
	1011	17.79	.12	21.32	33.89	.49	4.83	1.64	.02	0.00	.03	.07		0.00		
BIO	1007	35.11	2.14	18.52	17.43	0.00	9.97	0.00	.38	8.91	.12	.12		.05		
	1012	34.67	1.56	22.85	18.16	.03	7.85	0.00	.10	7.49	.04	.10		.26		
SILL	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		

SAMPLE	NORMALISED OXIDES			
	AL	FE	MG	K
K498/130	49.80	35.79	9.21	5.20
GT	35.16	57.67	7.16	.01
BIO	33.45	27.70	21.28	17.58
PLAG	98.15	1.22	.38	.41
K498/135	45.86	47.85	4.02	2.27
GT	37.54	59.43	2.89	.34
BIO	27.62	45.19	10.23	16.66
HRE	33.36	55.36	7.23	4.05
K498/73	57.93	27.33	7.96	8.78
GT	35.25	56.92	7.78	.01
BIO	36.18	32.62	15.85	14.82
SILL	100.00	0.00	0.00	0.00

K-FELDSPAR PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	A	F-H
A	= K498/139	.498	.205
B	= GT	.352	.110
C	= BIC	.245	.434
D	= PLAG	.986	.128
E	= K498/135	.457	.077
F	= GT	.375	.042
G	= BIC	.169	.185
H	= HBE	.219	.115
I	= K498/73	.592	.228
J	= GT	.353	.120
K	= BIC	.315	.328
L	= SILL	1.000	0.000

DATE 79/08/14 23.45.35.

COMPOSITION VALUES ARE OXIDES OF ELEMENTS

BLACK ROCK

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/78		66.56	.50	18.35	6.40	.06	1.73	.24	.56	5.37					.06	99.84
GT	864	37.33	.06	20.87	35.82	.73	2.75	2.45	.07	0.00	.01	0.00		.02		
	865	37.85	0.00	20.31	35.58	1.08	2.82	1.95	.04	0.00	.08	.01		0.00		
	868	37.60	.03	20.69	35.96	.90	2.68	1.90	0.00	.01	.02	.07		.06		
	870	37.01	.28	20.65	35.30	.84	3.12	1.90	.04	.09	.05	0.00		.12		
	1037	37.90	.08	20.82	36.56	.82	2.86	1.95	.03	.02	.02	0.00		.08		
RIO	1036	35.78	1.42	18.67	21.43	0.00	8.66	0.00	.07	9.30	0.00	.06		.03		
K498/111		57.05	1.42	18.11	14.94	.15	3.19	.48	.08	3.35					.13	99.98
GT	973	37.40	.07	20.87	34.82	.76	2.64	2.53	.03	.01	.05	0.00		.06		
	984	38.00	.08	20.82	36.11	.63	3.08	2.01	.06	.01	.14	0.00		0.00		
	986	37.59	.03	21.25	35.87	.61	3.39	2.24	.12	.02	.04	.04		0.00		
	987	37.38	.06	20.59	35.40	.64	2.78	2.54	.04	.01	.07	.01		0.00		
RIO	972	35.19	2.69	20.37	19.85	.07	7.12	0.00	.16	8.65	.23	.13		0.00		
	985	35.45	2.41	18.78	21.34	.07	7.40	0.00	.15	9.26	.11	0.00		.06		
	988	34.59	2.17	15.89	21.68	.06	8.08	0.00	.18	8.44	.20	.06		.01		
SILL	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		
K498/104		65.42	1.10	10.74	15.48	.05	1.82	.88	.97	3.37					.09	100.03
GT	1026	37.24	.02	20.46	37.70	.35	1.22	3.68	.03	.01	.12	.06		.10		
	1033	37.19	.01	20.43	36.23	.31	1.21	4.98	.04	.01	.07	.15		0.00		
RIO	1027	33.68	3.41	16.49	27.53	.02	4.18	0.00	.07	9.50	.22	.15		.12		
	1031	33.59	2.89	16.76	27.73	0.00	3.96	0.00	.11	9.29	.19	.12		.26		
	1032	33.52	2.50	17.30	27.43	.08	4.06	0.00	.09	9.57	.11	.07		0.00		
K498/106		55.63	2.03	16.34	20.12	.12	1.51	1.14	.17	2.83					.25	99.94
GT	1038	37.32	.10	20.67	36.93	.21	2.08	2.20	.05	0.00	0.00	.17		0.00		
	1041	37.15	0.00	21.06	36.24	.19	2.03	2.09	.02	0.00	.02	.11		.08		
	1042	36.87	.09	20.71	37.63	.18	2.14	1.99	0.00	.03	.02	0.00		.04		
RIO	1039	34.82	2.22	18.46	22.84	0.00	6.25	0.00	.06	9.19	.15	.04		0.00		
	1040	33.61	2.55	18.86	23.48	.03	5.57	0.00	.07	9.30	.04	.22		0.00		
	1043	33.90	2.86	18.50	24.59	.05	5.25	0.00	.13	9.52	.05	.13		.10		
K498/121		64.31	1.10	13.70	13.21	.10	4.64	.64	.12	1.75					.08	99.65
GT	1058	38.44	0.00	21.45	30.96	.27	6.70	2.11	.03	.01	.09	.16		.01		
	1061	38.83	.07	21.60	30.94	.50	6.12	2.67	.03	0.00	.11	.02		.07		
	1065	38.83	.03	21.70	31.87	.51	5.66	2.89	.05	.02	.04	.13		.10		
RIO	1059	36.92	1.79	18.53	14.90	0.00	12.64	0.00	.14	9.66	.04	.01		.08		
	1060	39.08	1.32	17.09	16.76	.01	11.68	0.00	.10	7.85	.03	.06		.03		
	1064	35.32	1.36	18.57	21.57	.03	11.38	0.00	.11	8.68	.07	0.00		.01		
STAMP	1057	28.21	.79	52.98	12.74	0.00	2.44	.02	.05	.03	.19		.04	0.00		
	1062	29.11	.78	53.72	12.50	.02	1.37	.03	.01	.01	.08		0.00	0.00		
	1063	28.24	.87	54.38	12.74	.03	1.52	.01	.03	.02	.18		.04	0.00		
	1066	27.80	.38	53.15	13.94	0.00	1.39	.02	.02	0.00	.02		0.00	.01		
K498/100		35.87	.87	16.87	33.29	1.14	5.34	2.44	.12	1.36					.15	99.60

GT	894	38.38	.01	21.06	33.26	1.30	4.25	2.87	.07	0.00	0.00	.06	0.00
	895	38.02	.03	21.32	33.09	1.44	3.82	3.06	0.00	.01	.08	.04	0.00
	898	37.86	.10	21.07	33.62	1.45	3.78	2.89	0.00	0.00	0.00	.08	0.00
BIO	891	34.98	1.99	16.76	23.80	.24	7.36	0.60	.08	8.88	.13	.14	.20
	892	35.04	2.28	17.25	23.50	.06	7.34	0.60	.17	8.98	.08	0.00	0.00
	893	35.07	1.85	17.06	23.77	.17	7.08	0.60	.08	8.11	.12	.17	.08
	901	36.01	2.31	17.81	19.74	.10	8.27	0.70	.26	8.97	.04	0.00	0.00
CHL	896	23.56	.03	21.54	33.66	.11	8.58	.25	.03	.02	.02	.05	.22
	897	23.56	.25	21.22	34.54	.66	5.54	.46	0.00	.81	.03	0.00	.08
	898	25.35	0.00	21.00	28.18	.14	13.27	.04	0.00	.04	0.00	0.00	.01

SAMPLE	AL	NORMALISED OXIDES		
		FE	MC	K
K498/8	57.81	20.09	5.43	16.86
GT	34.80	60.36	4.78	.04
BIO	32.03	36.76	15.25	15.85
K498/111	47.08	36.81	7.86	8.25
GT	35.15	59.83	5.00	.02
BIO	34.60	36.72	13.24	15.44
SILL	100.00	0.00	0.00	0.00
K498/104	34.19	49.28	5.79	10.73
GT	34.87	63.04	2.07	.02
BIO	29.09	47.58	7.02	16.32
K498/10E	40.25	48.56	3.72	6.48
GT	33.59	62.60	3.40	.02
BIO	32.49	41.27	9.84	16.30
K498/121	41.14	39.67	13.83	5.28
GT	38.58	52.87	10.44	.02
BIO	32.01	31.44	21.08	15.47
STAUR	78.49	19.02	2.46	.02
K498/69	33.04	55.81	8.97	2.18
GT	36.18	57.00	6.82	.01
BIO	30.32	40.09	13.71	15.87
CHL	33.82	51.13	14.53	.51

MUSCOVITE PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	A	F-M
A	= K498/8	.216	.213
B	= GT	.347	.074
C	= BIO	-.438	.283
D	= K498/111	.333	.178
E	= GT	.351	.077
F	= BIO	-.307	.265
G	= SILL	1.000	0.000
H	= K498/104	.035	.105
I	= GT	.348	.032
J	= BIO	-.572	.128
K	= K498/10E	.281	.070
L	= GT	.340	.052
M	= BIO	-.472	.184
N	= K498/121	.321	.260
O	= GT	.365	.185
P	= BIO	-.378	.401
Q	= STAUR	.785	.115
R	= K498/69	.280	.138
S	= GT	.362	.107
T	= BIO	-.474	.258

BLACK ROCK

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/111		57.09	1.42	19.11	14.94	.15	3.19	.49	.08	3.35					.13	99.98
GT	873	37.40	.07	20.87	34.82	.78	2.64	2.53	.03	.01	.05	0.00		.06		
	884	38.00	.08	20.82	36.11	.63	3.08	2.01	.08	.01	.14	0.00		0.00		
	986	37.59	.03	21.25	35.87	.61	3.38	2.24	.12	.02	.04	.04		0.00		
	987	37.38	.06	20.59	35.40	.64	2.78	2.54	.04	.01	.07	.01		0.00		
RIO	872	35.19	2.69	20.37	19.65	.07	7.19	0.00	.18	8.65	.23	.13		0.00		
	985	35.45	2.41	18.78	21.34	.07	7.40	0.00	.15	9.28	.11	0.00		.06		
	918	34.59	2.17	19.89	21.68	.06	8.08	0.00	.18	8.44	.20	.06		.01		
STLL	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		
K498/104		65.42	1.10	10.74	15.48	.05	1.82	.89	.97	3.37					.09	100.00
GT	1028	37.24	.02	20.46	37.70	.35	1.22	3.68	.03	.01	.12	.08		.10		
	1033	37.19	.01	20.43	36.23	.31	1.21	4.98	.04	.01	.07	.15		0.00		
RIO	1027	33.68	3.41	16.49	27.53	.02	4.18	0.00	.07	9.50	.22	.15		.12		
	1031	33.59	2.89	16.76	27.73	0.00	3.96	0.00	.11	9.29	.19	.12		.26		
	1032	33.52	2.50	17.30	27.43	.08	4.08	0.00	.09	9.57	.11	.07		0.00		
K498/121		64.31	1.10	13.70	13.21	.10	4.64	.84	.12	1.75					.06	99.65
GT	1058	38.44	0.00	21.45	30.86	.27	6.70	2.11	.03	.01	.09	.16		.01		
	1061	38.83	.07	21.50	30.94	.50	6.12	2.67	.03	0.00	.11	.02		.07		
	1065	38.83	.03	21.70	31.87	.51	5.66	2.89	.05	.02	.04	.07		0.00		
RIO	1059	36.92	1.75	18.53	14.90	0.00	12.64	0.00	.14	9.66	.04	.01		.08		
	1060	39.08	1.32	17.09	16.76	.01	11.68	0.00	.10	7.85	.03	.08		.03		
	1064	35.72	1.36	18.57	21.57	.03	11.38	0.00	.11	8.68	.07	0.00		.01		
STAUP	1057	28.21	.79	52.98	12.74	0.00	2.44	.02	.05	.03	.19		.04	0.00		
	1062	29.11	.78	53.72	12.50	.02	1.37	.03	.01	.01	.08		0.00	0.00		
	1063	28.24	.87	54.36	12.74	.03	1.52	.01	.03	.02	.18		.04	0.00		
	1066	27.80	.38	53.15	13.94	0.00	1.38	.02	.02	0.00	.02		0.00	.01		

NORMALISED OXIDES

SAMPLE	AL	FE	MG	K
K498/111	47.68	36.81	7.88	8.25
GT	35.15	59.83	5.00	.02
RIO	34.60	36.72	13.24	15.44
STLL	100.00	0.00	0.00	0.00
K498/104	34.18	49.28	5.79	10.73
GT	34.87	63.04	2.07	.02
RIO	29.09	47.56	7.02	16.32
K498/121	41.14	39.67	13.93	5.28
GT	36.88	52.97	10.44	.02
RIO	32.01	31.44	21.08	15.47
STAUP	78.49	19.02	2.46	.02

K-FELDSPAR PROJECTION
RATIOS OF PLOTTED OXIDES
SYMBOL SAMPLE A F-M

A	=	K498/111	.485	.176
F	=	GT	.351	.077
C	=	BIO	.277	.265
D	=	SILL	1.000	0.000
E	=	K498/104	.289	.105
F	=	GT	.349	.032
G	=	BIO	.180	.129
H	=	K498/121	.401	.260
I	=	GT	.388	.185
J	=	BIO	.239	.401
K	=	STAUF	.785	.115

09.16.10.000024 LINES PRINTED ON LP07.

SGJAPKJ //// END OF LIST ////

DATE 75/05/09 13.10.38.

COMPOSITION VALUES ARE OXIDES OF ELEMENTS

WHITE ROCK

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K492/701		58.70	.87	23.47	8.33	.12	2.58	.33	.75	5.85						100.00
CT	828	37.53	0.00	21.29	36.54	1.71	2.22	1.72	.03	0.00	.01	0.00		.07		
	828	31.57	0.00	20.88	36.12	1.77	2.38	1.67	.01	0.00	.01	.00		.01		
	1085	37.23	0.00	20.88	36.98	.98	2.22	2.03	.04	0.00	.05	.19		.01		
PTO	824	35.88	1.38	18.80	18.40	.04	10.88	0.00	.33	8.80	.08	.08		.15		
	825	34.39	1.70	18.87	17.26	0.00	11.17	0.00	.21	8.74	.22	.05		0.00		
STAMP	827	27.83	.55	53.03	14.28	.08	1.30	0.00	.07	.01	.12		.72	0.00		
	1088	28.14	.29	51.39	13.80	.07	1.34	.01	.03	.04	.06		0.00	.01		
FIB	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		
K492/703		62.77	.58	17.33	11.77	.12	2.10	.58	1.35	3.12						100.00
CT	934	36.88	.17	20.88	36.81	.27	1.81	3.18	.04	0.00	0.00	.07		.05		
	935	36.88	.08	20.73	36.71	2.44	2.23	1.05	.07	0.00	0.00	0.00		0.00		
	936	36.83	.05	20.88	37.53	.71	1.88	1.82	.03	.01	.03	0.00		.07		
	939	36.38	.09	20.88	37.30	.32	1.80	2.78	.03	.02	.01	.11		.03		
	943	36.84	0.00	20.88	34.49	2.80	2.22	1.30	.03	.03	.02	0.00		0.00		
	944	36.55	.01	20.88	36.98	1.64	2.10	1.82	0.00	.01	.01	.22		0.00		
PIC	937	34.51	1.47	18.21	20.14	.08	8.85	0.00	.14	8.88	.12	0.00		0.00		
	938	34.77	1.48	18.19	20.20	.03	10.07	0.00	.20	8.92	.03	.11		.08		
STAMP	931	29.21	.45	51.11	14.03	.02	1.47	.01	.08	.02	.01		.30	.08		
	932	27.12	.44	52.88	14.04	.05	1.38	.02	.28	.04	0.00		.32	.10		
	933	27.20	.46	52.74	14.47	0.00	1.58	0.00	.03	0.00	.02		.81	0.00		
	941	27.38	.42	52.45	14.68	.04	1.58	.02	.13	.02	0.00		.72	0.00		
	942	27.50	.51	52.08	14.40	.01	1.38	.02	.02	0.00	.03		.88	.14		
FIB	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		
K492/705		59.49	1.52	18.28	13.14	.18	3.38	.82	1.26	1.81						100.00
CT	865	37.78	.02	20.81	34.28	1.00	4.05	.79	.04	.03	.04	.04		0.00		
	866	37.14	.05	20.75	33.05	.82	4.17	.87	.07	0.00	.08	0.00		0.00		
	863	37.38	.03	20.88	34.83	.87	3.85	.75	.03	0.00	.10	.04		.01		
	864	37.43	.04	20.84	35.05	.88	3.88	.75	.05	0.00	.08	.04		.05		
	861	37.48	.07	20.79	34.24	.93	3.84	.82	.03	0.00	.10	.09		.16		
	867	37.87	.08	20.78	32.84	.81	5.04	.83	.04	0.00	.01	.03		.08		
	868	37.48	.03	20.98	34.46	1.04	4.00	.76	.03	.01	.02	.05		0.00		
BTO	869	36.08	1.81	18.44	18.27	0.00	11.73	0.00	.31	8.88	.01	.08		.01		
	871	35.18	1.30	32.79	11.06	.07	7.82	0.00	.17	8.81	.08	0.00		.07		
PLAC	867	62.41	.02	21.79	.27	0.00	.04	4.00	8.54	.10	.01	.02		.08		
K492/707		51.61	1.26	18.54	17.28	.32	1.48	8.70	3.18	.82						100.00
CT	889	37.02	.35	18.73	31.69	.88	1.38	6.32	.03	.87	.08	0.00		.12		
	893	37.88	.03	20.41	32.14	1.37	1.65	7.05	0.00	0.00	0.00	0.00		.07		
	895	37.55	.05	20.31	33.23	2.14	1.25	6.21	.08	0.00	.03	0.00		.11		
	896	37.43	.13	20.48	31.20	1.74	1.43	7.48	0.00	.04	0.00	.07		.08		
	1000	36.81	.05	20.32	32.04	1.65	1.53	6.87	.02	0.00	.04	.02		.03		

FTO	997	30.22	7.64	14.64	28.07	.10	5.14	0.00	.06	8.11	.03	.12	.35
HBF	994	39.60	1.04	13.45	24.43	.05	4.55	11.39	1.57	1.34	.08	.74	0.00
	998	38.18	.69	15.55	24.36	.08	5.41	10.12	1.25	2.23	.03	.02	.08
K498/73		37.15	1.57	34.85	17.44	.14	4.75	.39	.15	4.08			.00 55.84
GT	1002	37.71	.03	21.44	34.47	.60	4.62	1.44	.04	0.00	.03	.08	0.00
	1005	37.33	.01	20.92	33.37	.45	4.52	1.70	.02	0.00	.08	.13	.11
	1008	37.22	0.00	21.05	38.04	.80	4.10	1.64	.04	.01	.03	.11	0.00
	1009	37.83	.08	21.11	33.37	.82	5.01	1.63	0.00	0.00	.10	.20	.03
	1010	37.65	.02	21.15	34.38	.52	4.43	1.44	0.00	.03	.01	.01	.02
	1011	37.75	.12	21.12	33.89	.49	4.73	1.64	.02	0.00	.03	.07	0.00
BIO	1007	35.11	2.14	17.52	18.43	0.00	9.57	0.00	.39	8.91	.12	.12	.05
	1012	34.67	1.50	22.85	18.18	.03	7.85	0.00	.10	7.49	.04	.10	.26
STLL	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00
K498/53		66.35	.83	17.15	6.17	.08	1.63	.17	.33	5.46			.12 100.38
GT	1017	37.07	.08	21.04	35.43	2.83	1.53	2.50	.03	.02	0.00	.12	0.00
	1020	36.34	0.00	20.75	35.70	2.02	1.48	3.36	.03	.02	0.00	.05	0.00
	1021	37.21	.17	20.65	36.55	2.24	1.41	2.66	.02	0.00	.01	.02	.01
BIO	1018	35.15	1.37	18.15	21.84	0.00	7.48	0.00	.14	8.55	.06	.08	.05
	1016	35.08	1.72	18.11	21.97	.10	7.51	0.00	.22	8.32	.02	.05	0.00
	1022	34.71	1.74	18.34	22.04	.05	7.83	0.00	.21	8.55	.11	.08	0.00

SAMPLE	NORMALIZED OXIDES			
	AL	FE	MG	M
K498/68	55.79	22.57	6.24	14.40
GT	35.07	61.07	3.81	0.00
BIO	34.02	31.48	19.17	15.33
STALF	77.74	20.28	1.53	.04
FTB	100.00	0.00	0.00	0.00
K498/33	50.50	34.25	6.12	8.09
GT	34.81	61.62	3.45	.02
BIO	31.80	35.24	17.40	15.55
STAUP	76.66	21.14	2.38	.02
FTB	100.00	0.00	0.00	0.00
K498/130	45.70	35.78	6.21	5.20
GT	35.16	57.67	7.15	.01
BIO	45.05	23.17	17.28	14.51
PLAG	92.15	1.22	.18	.45
K498/135	45.88	47.85	4.02	2.27
GT	37.54	58.43	2.69	.34
FTO	27.06	47.63	8.72	15.60
HBF	33.36	65.36	7.23	4.05
K498/73	57.93	27.33	7.96	6.78
GT	35.29	58.92	7.72	.01
BIO	36.88	32.62	15.89	14.62
STLL	100.00	0.00	0.00	0.00
K498/53	65.75	20.09	6.28	17.78
GT	35.21	61.65	2.52	.02
BIO	32.01	38.42	13.61	15.98

MUSCOVITE PROJECTION
RATIOS OF PLOTTED OXIDES
SYMBOL SAMPLE A F-M

A	=	K498/71	.337	.217
B	=	GT	.381	.088
C	=	RIO	-.310	.378
D	=	STAUP	.777	.087
E	=	FTR	1.000	0.000
F	=	K498/33	.365	.151
G	=	GT	.349	.059
H	=	RIO	-.393	.331
I	=	STAUP	.767	.093
J	=	FTR	1.000	0.000
K	=	K498/139	.432	.205
L	=	GT	.351	.110
M	=	RIO	.036	.427
N	=	FLAG	.588	.120
O	=	K498/135	.429	.077
P	=	GT	.370	.043
Q	=	RIO	-.524	.189
R	=	HRE	.253	.115
S	=	K498/73	.516	.228
T	=	GT	.353	.120
U	=	BTC	-.182	.324
V	=	STLL	1.000	0.000
W	=	K498/53	.087	.238
X	=	GT	.352	.036
Y	=	RIO	-.438	.262

DATE 79/08/08 13.15.49.

COMPOSITION VALUES ARE OXIDES OF ELEMENTS

WHITE ROCK

SAMPLE	PROBE NO	SI	Ti	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	TOTAL
K498/139		49.46	1.52	11.28	13.14	.38	3.38	.82	1.26	1.91					.17 100.14
GT	855	37.78	.02	20.81	34.26	1.00	4.05	.75	.04	.03	.04	.04		0.00	
	856	37.14	.08	20.74	33.96	.52	4.97	.87	.07	0.00	.08	0.00		0.00	
	863	37.38	.08	20.88	34.93	.87	3.85	.75	.03	0.00	.10	.04		.01	
	864	37.43	.04	20.54	35.08	.55	3.88	.76	.05	0.00	.09	.04		.05	
	865	37.48	.07	20.79	34.24	.53	3.84	.82	.03	0.00	.10	.08		.18	
	867	37.67	.06	20.78	32.84	.85	5.04	.83	.04	0.00	.01	.03		.08	
	868	37.48	.03	20.58	34.48	1.04	4.00	.78	.03	.01	.02	.08		0.00	
BID	869	36.08	1.81	18.44	15.27	0.00	11.73	0.00	.31	8.89	.01	.25		.08	
	871	36.18	1.30	32.79	11.08	.07	7.92	0.00	.17	8.81	.06	0.00		.07	
FLAG	867	62.41	.02	21.75	.27	0.00	.04	4.00	8.54	.10	.01	.03		.00	
K498/135		51.81	1.28	18.54	17.26	.32	1.45	6.70	3.15	.82					.11 95.85
GT	895	37.02	.35	19.73	31.85	.88	1.35	6.32	.03	.87	.04	0.00		.12	
	893	37.36	.03	20.41	32.14	1.37	1.85	7.06	0.00	0.00	0.00	0.00		.07	
	890	37.55	.05	20.31	33.23	2.14	1.25	6.71	.08	0.00	.03	0.00		.11	
	888	37.43	.13	20.48	31.20	1.74	1.43	7.48	0.00	.04	0.00	.07		.08	
	1000	36.81	.08	20.32	32.04	1.85	1.53	6.67	.02	0.00	.04	.02		.03	
BID	862	34.50	2.89	18.18	26.20	0.00	5.53	0.00	.06	8.88	0.00	0.00		.22	
	867	30.22	7.64	14.84	28.07	.10	5.14	0.00	.06	8.11	.03	.12		.20	
HBT	894	38.60	1.04	13.48	24.43	.05	4.58	11.35	1.57	1.34	.05	.04		0.00	
	888	38.18	.63	15.95	24.36	.08	1.81	10.12	1.25	2.23	.03	.02		.09	
K498/73		37.15	1.57	34.85	11.44	.14	4.75	.39	.15	4.08					.01 95.84
GT	1002	37.61	.03	21.44	34.47	.50	4.82	1.44	.04	0.00	.03	.08		0.00	
	1006	37.33	.01	20.82	33.37	.55	4.82	1.70	.02	0.00	.08	.13		.11	
	1008	37.22	0.00	21.05	35.04	.50	4.16	1.84	.04	.01	.03	.11		0.10	
	1005	37.83	.06	21.11	33.37	.82	5.01	1.65	0.00	0.00	.10	.25		.03	
	1010	37.65	.02	21.10	34.34	.52	4.43	1.44	0.00	.03	.01	.01		.02	
	1011	37.79	.12	21.12	33.88	.45	4.83	1.84	.02	0.00	.03	.07		0.00	
BID	1007	35.11	2.14	18.52	18.43	0.00	9.97	0.00	.32	8.81	.12	.12		.05	
	1012	34.67	1.50	22.85	18.18	.03	7.85	0.00	.10	7.48	.04	.10		.24	
SILL	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	

SAMPLE	AL	NORMALISED OXIDES		
		FE	MG	K
K498/139	49.80	35.78	9.21	5.20
GT	35.18	57.67	7.18	.01
BID	45.05	23.17	17.28	14.51
FLAG	67.15	1.22	.18	.85
K498/135	45.28	47.85	4.02	2.27
GT	37.14	55.43	2.55	.34
BID	27.01	47.83	8.72	15.60
HBT	38.96	55.34	7.23	4.05
K498/73	57.53	27.33	7.98	6.78

GT	35.05	51.52	7.78	.01
BTD	36.88	32.62	15.89	14.62
STLL	100.00	0.00	0.00	0.00

K-FELDSPAR PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	A	F-W
A	K498/135	.488	.205
B	GT	.352	.110
C	BTD	.430	.427
D	PLAG	.086	.125
E	K498/135	.457	.077
F	GT	.375	.043
G	BTD	.187	.165
H	HFE	.316	.115
I	K498/73	.582	.226
J	GT	.353	.120
K	BTD	.215	.328
L	STLL	1.000	0.000

13.42.57.0000317 LINES PRINTED ON LF07.

SGJAPKJ //// END OF LIST ////

DATE 80/12/03 12.07.53.

COMPOSITION VALUES ARE OXIDES OF ELEMENTS

CORKWOOD(2)

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/784D		58.4	1.11	18.87	11.44	.17	3.04	7.28	.81	.87						.00 100.28
HBE	53	47.30	.72	10.40	15.42	.05	11.71	11.22	.85	.46	.10	.12		0.00		
GT	67	37.34	.10	20.33	30.10	.83	4.97	5.44	.04	0.00	.04	.08		0.00		
	74	37.85	.03	20.73	30.77	.68	5.20	4.21	0.00	.01	.02	0.00		0.00		
	78	38.05	0.00	20.78	30.56	.68	5.08	4.27	.03	.07	.02	0.00		0.00		
	AVERAGE	37.75	.04	20.81	30.48	.73	5.02	4.64	.02	.01	.03	.03		.02		
BIO	76	35.38	1.82	18.48	14.88	0.00	14.83	0.00	.18	8.97	.15	.14		.38		
	77	36.32	2.70	16.64	15.47	.02	12.98	0.00	.15	5.61	.18	.28		.22		
	AVERAGE	36.35	2.16	18.55	15.07	.01	13.81	0.00	.16	5.28	.17	.21		.30		
AMPH	69	52.45	.01	1.54	22.34	.16	18.08	1.14	.10	.03	.11	.02		0.00		
	70	44.09	.68	12.01	15.82	.07	11.03	10.84	1.03	.56	.32	.07		0.00		
	71	53.72	.21	1.65	21.33	.15	18.95	.19	.09	.01	0.00	.11		.01		
	AVERAGE	50.09	.30	5.07	18.73	.13	16.02	4.05	.41	.20	.14	.07		.00		
K498/737																
PLAG	58	58.30	.12	23.25	.01	.04	.01	7.34	7.56	.13	0.00	.18		.08		
	62	53.04	.09	25.86	0.00	.04	0.00	7.69	7.40	.10	.02	.04		.03		
	AVERAGE	56.17	.11	25.46	.01	.04	.01	7.52	7.48	.12	.01	.10		.05		
K498/782																
OPX	80	53.11	.10	1.26	23.41	.70	21.25	.54	.02	0.00	.04	.05		.04		
	81	51.88	.02	1.38	23.81	.55	21.68	.51	.05	.02	.05	.10		.10		
	83	52.58	.13	1.31	23.48	.84	21.58	.42	.04	0.00	.03	0.00		.10		
	87	51.95	.08	1.28	24.38	.70	21.84	.80	.00	0.03	.05	.04		0.00		
	AVERAGE	52.38	.08	1.31	23.77	.67	21.54	.51	.05	.01	.04	.05		.08		
HBE	82	45.50	1.04	8.15	13.14	.17	12.96	11.14	1.18	.60	0.00	.05		0.00		
	88	45.02	1.32	10.38	13.07	.19	13.28	11.34	1.30	.73	.07	.08		.08		
	AVERAGE	45.26	1.17	9.89	13.11	.18	13.12	11.24	1.25	.67	.04	.04		.04		
PLAG	84	49.85	.10	31.38	.07	0.00	.03	14.87	3.08	.05	.05	.05		.04		
K498/826																
GT	92	37.19	.09	20.15	25.83	5.08	3.32	7.47	.02	0.00	0.00	0.00		0.00		
	94	35.94	.12	18.74	23.74	5.87	2.37	5.06	0.00	.01	.04	.07		.14		
	97	35.70	.10	19.99	23.83	5.92	2.38	8.21	.03	.01	.08	.08		0.00		
	AVERAGE	36.94	.10	19.98	23.43	5.08	2.69	5.58	.02	.01	.04	.05		.05		
PLAG	99	45.87	.12	32.84	.35	.02	.05	18.45	2.13	.05	0.00	.11		0.00		
	98	44.88	0.00	31.98	.18	.03	0.00	17.79	1.47	.03	.52	.07		.07		
	AVERAGE	45.87	.06	32.40	.26	.03	.03	17.08	1.80	.04	.02	.09		.04		
DIOP	93	50.03	.12	2.24	13.43	.88	10.85	21.34	.38	.01	.05	0.00		.01		
	95	43.05	.03	2.38	15.88	1.19	9.25	21.38	.37	.02	.01	.05		.14		
	95	48.71	.13	1.80	13.88	1.06	9.03	21.80	.35	.01	0.00	0.00		.08		
	AVERAGE	49.30	.09	2.15	14.34	1.02	9.88	21.44	.37	.01	.02	.02		.08		
K498/824																
HBE	104	42.81	1.84	11.44	18.46	.13	10.08	11.50	1.41	1.08	.07	.08		.04		
	113	41.91	1.81	11.47	18.83	.15	10.49	11.54	1.60	1.08	.06	.10		.04		
	AVERAGE	42.28	1.83	11.46	18.55	.14	10.27	11.52	1.51	1.08	.07	.12		.07		
OPX	102	49.07	.07	1.32	23.43	.55	18.19	.81	0.00	.01	.05	.04		.07		
	105	49.84	.08	1.23	24.88	.87	18.90	1.25	.06	.02	.05	.01		.02		
	103	49.34	.10	1.37	24.52	.57	17.52	.81	.07	0.00	.03	0.00		.10		
	115	49.47	.15	1.33	20.17	.83	17.56	.85	0.00	.01	.08	.08		.10		
	AVERAGE	49.43	.10	1.35	23.78	.58	17.94	.74	.03	.01	.04	.04		.08		
CPX	106	48.81	.18	1.59	27.71	.83	18.89	.85	0.00	.02	.11	.07		.08		
	107	47.32	.83	1.28	27.03	.55	18.28	1.86	.04	0.00	.21	.18		.11		
	109	50.97	.25	2.30	11.82	.26	12.43	21.84	.44	0.00	.07	.05		0.00		
	114	49.55	.25	2.45	11.26	.24	12.32	21.81	.47	0.00	.08	.03		.03		
	116	51.45	.13	.71	9.60	.20	13.17	23.17	.27	.02	.08	.11		.03		
	AVERAGE	49.46	.34	1.67	17.61	.36	14.82	13.81	.24	.01	.11	.08		.04		
PLAG	117	53.47	0.00	28.77	.17	.05	.04	11.25	1.31	.05	.01	.04		0.00		
K498/811																
GT	132	38.57	.06	21.43	33.50	.87	4.80	1.78	.03	0.00	0.00	0.00		0.00		.02 97.88

	130	37.45	.01	21.88	30.84	1.88	4.39	1.28	0.00	.02	.11	0.00	0.00
	131	37.05	.04	21.16	34.50	1.08	4.55	1.33	.03	0.00	0.00	0.00	.17
	140	37.68	.05	21.77	33.55	.89	5.21	1.15	.02	0.00	0.00	.03	.05
	141	37.56	0.00	21.31	35.58	1.07	3.93	1.46	.07	.02	.07	0.00	.08
AVERAGE	37.23	.03	21.59	34.66	.98	4.45	1.28	.03	.01	.03	.01	.01	.01
GT	131	36.56	2.32	17.87	12.99	.04	14.82	0.00	.42	9.85	.07	0.00	.18
	137	35.61	2.23	18.38	15.42	0.00	13.23	0.00	.16	9.83	.12	.11	.24
	138	36.10	2.48	17.71	14.85	.04	13.16	0.00	.14	9.49	.16	.13	.40
	141	36.93	2.37	18.70	12.75	.02	14.72	0.00	.20	9.76	.10	.10	.44
	142	35.57	2.39	17.03	15.02	.05	12.08	0.00	.16	9.81	.15	.04	.29
AVERAGE	35.95	2.35	17.16	14.45	.03	13.56	0.00	.22	9.75	.12	.08	.08	.31
PLAG	130	57.19	.06	25.64	.01	.04	0.00	8.67	6.81	.10	.05	.01	.09
K498/813A		52.08	1.14	14.30	11.48	.21	3.64	7.07	2.03	1.86			.01 39.40
GT	254	38.32	.10	21.72	30.87	1.34	5.64	1.49	.03	0.00	0.00	.08	.04
	257	37.62	.10	21.93	31.88	1.25	5.74	1.53	.02	.03	.05	0.00	.08
	263	38.32	.16	20.98	30.98	1.23	5.07	1.75	.07	0.00	.02	.01	0.00
	267	37.40	.08	21.49	32.14	1.27	5.08	1.64	.04	0.00	.02	.03	.06
AVERAGE	37.91	.11	21.53	31.47	1.27	5.13	1.63	.05	.01	.02	.03	.03	.07
BIO	265	35.75	2.54	17.75	16.13	.04	12.82	0.00	.12	9.64	.13	0.00	.43
	266	36.77	2.14	17.80	12.71	.04	14.86	0.00	.16	9.88	.06	.08	.19
	264	36.35	2.82	17.53	12.35	.02	15.46	0.00	.30	9.53	0.00	.09	.01
	268	35.36	2.22	17.45	14.80	.01	13.51	0.00	.18	9.67	.02	.17	.58
AVERAGE	36.07	2.41	17.74	14.02	.03	14.11	0.00	.19	9.68	.05	.08	.08	.39
K498/800		70.24	.34	14.80	4.48	.06	.65	4.33	3.95	.50			.10 39.15
GT	274	37.35	.07	20.05	30.67	.82	3.67	4.50	.01	.07	0.00	.03	.28
	275	37.00	0.00	19.62	29.99	2.28	4.41	4.58	0.00	.01	.02	.08	.03
AVERAGE	37.20	.04	19.84	30.33	2.55	4.04	4.63	.01	.02	.01	.06	.06	.06
PLAG	274	58.02	.06	24.88	.18	.05	.03	7.48	7.34	.33	.07	0.00	.11
	273	57.73	.01	24.37	.01	0.00	0.00	7.35	7.54	.23	.02	0.00	0.00
AVERAGE	57.88	.04	24.13	.10	.03	.02	.02	7.42	7.44	.28	.02	0.00	.06
BIO	271	34.43	3.57	18.30	20.51	.08	8.51	0.00	.03	8.34	.02	.08	.05
HBE	272	41.63	.98	10.68	20.47	.22	8.15	11.34	.88	1.08	.03	.10	.04
	270	41.71	.89	11.15	18.81	.25	8.81	10.34	1.08	1.15	0.00	0.00	.01
AVERAGE	41.67	.99	10.92	20.14	.24	8.63	10.39	.98	1.12	.07	.05	.05	.03
OPX	268	48.90	.14	1.77	33.85	1.01	14.19	.66	.07	0.00	.02	0.00	0.00
	269	49.51	.09	1.13	32.37	.98	14.40	.70	0.00	0.00	0.00	.01	.08
AVERAGE	49.21	.12	1.23	33.01	1.00	14.30	.68	.04	0.00	.01	.01	.01	.03
K498/723		ND	WHOLE	ROCK	ANALYSIS								
GT	299	37.45	.04	20.98	34.08	.75	4.45	1.35	.17	.03	.07	.07	.13
	302	37.77	.08	20.95	35.54	.89	4.25	1.03	.01	.02	.08	.03	.15
	306	36.93	0.00	20.77	36.51	.77	3.80	1.02	.05	0.00	.06	0.00	.05
AVERAGE	37.38	.03	20.90	35.37	.74	4.08	1.13	.06	.02	.05	.03	.03	.10
BIO	299	35.04	3.48	16.62	18.81	.01	10.18	0.00	.25	10.42	.19	.12	.07
	303	35.11	3.21	17.23	18.19	.04	10.87	0.00	.13	10.09	.15	.02	.09
	307	35.14	3.24	16.56	18.85	0.00	10.19	0.00	.11	10.21	.17	.15	.06
AVERAGE	35.16	3.31	16.80	18.62	.02	10.41	0.00	.16	10.24	.17	.10	.10	.08

SAMPLE	NORMALISED OXIDES			
	AL	FE	MG	K
K498/784D	54.98	33.33	8.88	2.81
HBE	27.38	40.59	30.82	1.21
GT	36.68	54.25	9.05	.02
BIO	30.25	27.54	25.23	16.98
AMPH	17.33	48.72	38.96	.43
PLAG	99.39	.02	.02	.57
K498/782	42.37	31.60	25.03	.98
OPX	2.80	50.99	46.20	.01
HBL	27.09	35.53	35.57	1.80
PLAG	99.52	.27	.10	.18
K498/826	44.51	48.55	8.58	.20
GT	42.35	51.89	5.71	.01
PLAG	99.00	.78	.09	.12
DIOP	6.27	54.78	37.40	.05
K498/824	18.11	40.04	20.94	.88
HBE	29.11	42.04	26.10	2.76
OPX	2.81	59.81	37.33	.02
CPX	4.91	51.62	43.45	.02
PLAG	99.10	.59	.14	.17
K498/811	44.44	40.03	10.50	5.33
GT	35.57	57.09	7.33	.91
BIO	32.45	20.89	24.23	17.43

K498/813A	45.57	36.58	11.50	6.25
GT	36.41	53.21	10.37	.01
BIO	31.84	25.24	25.40	17.42
K498/800	72.44	21.93	3.18	2.43
GT	36.58	55.83	7.45	.03
PLAG	98.47	.37	.06	1.10
BIO	28.34	37.63	15.32	17.71
HBE	26.75	49.36	21.15	2.74
OPX	2.47	68.05	28.47	0.30
GT	34.62	58.58	6.78	.33
BIO	29.97	33.20	18.57	18.26

K-FELDSPAR PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	A	F-M
A	= K498/784D	.553	.210
F	= HBE	.268	.432
C	= GT	.367	.143
D	= BIO	.201	.478
E	= AMPH	.120	.447
F	= PLAG	1.000	.500
G	= K498/782	.422	.442
H	= OPX	.028	.475
I	= HBE	.262	.500
J	= PLAG	.957	.300
K	= K498/826	.441	.105
L	= GT	.414	.088
M	= PLAG	.591	.105
N	= DIOP	.082	.408
O	= K498/824	.375	.343
P	= HBE	.279	.383
Q	= OPX	.028	.384
R	= CPX	.048	.457
S	= PLAG	.893	.180
T	= K498/811	.438	.201
U	= GT	.356	.114
V	= BIO	.231	.483
W	= PLAG	1.000	0.000
X	= K498/813A	.449	.241
Y	= GT	.364	.163
Z	= BIO	.223	.502
0	= K498/800	.736	.127
1	= GT	.381	.119
2	= PLAG	.991	.136
3	= BIO	.180	.289
4	= HBE	.234	.300
5	= OPX	.028	.302
6	= GT	.346	.104
7	= BIO	.124	.359

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DATE 79/11/04 13.33.59.

COMPOSITION VALUES ARE OXIDES OF ELEMENTS

CORKWOOD

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/707		51.95	.94	19.44	13.81	.20	4.90	3.28	2.03	3.08					.03	99.56
GT	23	37.67	.08	20.80	33.07	.82	4.47	2.22	0.00	0.00	.10	.17		.01		
	27	37.62	.03	21.15	32.47	.80	5.32	1.60	0.00	.01	.09	.08		0.00		
	28	36.98	.03	20.81	35.26	.90	4.05	2.03	.02	0.00	0.00	.03		0.00		
	29	37.78	0.00	21.27	31.27	.85	5.13	1.60	0.00	0.00	.10	.11		.08		
	31	38.06	0.00	21.17	31.53	.83	5.22	1.74	.03	.01	.02	.05		0.00		
	34	38.43	0.00	21.67	31.94	.85	5.05	1.61	.01	.31	.02	.09		.06		
	35	38.33	.02	21.05	32.68	.89	5.67	1.67	.04	.01	.02	0.00		.03		
	36	38.25	.05	20.95	34.33	.89	3.57	2.12	.01	.02	.05	.04		.04		
ETD	24	35.07	2.78	17.03	17.17	.04	11.75	0.00	.12	9.48	.08	.07		.34		
	37	36.28	2.55	17.28	15.95	0.00	12.40	0.00	.15	9.63	.21	.15		0.00		
	38	37.50	1.30	17.85	9.72	.05	17.77	0.00	.32	9.01	.14	.07		.03		
K498/704		62.21	1.28	20.14	12.47	.11	3.75	.48	.12	.07					.01	100.62
GT	42	37.42	0.00	21.33	34.07	.44	4.97	1.84	0.00	.03	.06	0.00		.05		
	45	37.73	0.00	21.05	34.18	.41	5.24	1.27	.03	0.00	.05	.10		0.00		
	47	38.12	.09	21.22	34.35	.38	4.88	1.42	.03	0.00	.10	.07		.02		
	51	37.40	.04	21.27	34.03	.41	5.13	1.31	0.00	0.00	.06	.04		0.00		
	53	37.85	.08	20.98	33.37	.35	5.58	1.62	.02	.01	.05	.09		.03		
	56	37.99	.08	21.23	34.02	.45	5.13	1.60	.02	.01	.02	.03		.03		
CORD	43	48.27	.07	32.11	4.25	.05	10.54	.05	.07	0.00	.02	0.00		0.00		
	44	48.52	.04	32.94	4.53	.03	10.69	.01	.06	.02	.03	.01		.08		
	46	48.72	.04	32.42	5.34	.03	10.81	.01	.06	.02	0.00	0.00		0.00		
	54	48.27	0.00	32.71	4.73	.04	10.51	.01	.12	.01	0.00	.08		0.00		
	55	48.71	0.00	32.24	4.62	.02	10.50	.02	.05	.20	.04	0.00		.04		
	58	48.20	0.00	32.19	6.18	.05	8.44	.04	.12	0.00	.03	.04		.05		
	59	48.57	0.00	32.23	6.15	.07	8.12	.01	.16	0.00	0.00	.22		0.00		
RIO	52	36.15	1.20	18.22	12.55	.06	15.02	0.00	.24	8.35	.08	.09		.22		
K498/710		45.75	1.35	23.64	14.25	.20	4.65	3.10	3.32	3.38					.05	99.99
GT	108	37.82	.05	21.09	35.89	1.36	3.51	1.04	.03	0.00	0.00	0.00		0.00		
	111	37.65	0.00	21.31	34.89	1.22	3.46	1.14	.02	.02	0.00	.18		0.00		
	112	37.82	0.00	20.99	33.56	1.06	4.53	1.08	.05	.01	.02	.07		0.00		
RIO	109	35.67	2.78	18.01	15.53	.01	11.18	0.00	.05	10.24	.02	.18		0.00		
	110	35.35	2.95	17.88	15.95	.01	11.14	0.00	.06	9.88	.02	.18		.18		
	113	34.77	3.10	17.94	16.67	0.00	10.65	0.00	.10	10.26	.07	.07		.24		
K498/784B		71.99	.75	13.14	7.77	.14	1.76	2.18	2.35	.33					.03	100.44
GT	114	38.36	.08	21.43	31.84	.65	5.53	1.15	0.00	.01	.04	.01		0.00		
	117	38.11	.04	21.41	32.24	.74	5.95	1.21	.05	0.00	.03	.05		.02		
	118	36.10	.01	21.32	32.46	.64	5.81	1.24	.04	0.00	.05	.10		0.00		
	120	38.45	.13	21.09	32.98	.65	5.44	1.25	.01	.03	.15	.11		0.00		
	123	38.66	.07	22.11	31.00	.64	6.93	1.23	.03	0.00	.05	.05		.07		
CORD	115	49.50	0.00	32.76	4.41	.01	10.28	0.00	.13	0.00	.02	0.00		.02		
	116	49.36	.07	33.10	4.35	.06	9.91	0.00	.15	.01	0.00	.05		0.00		
	119	48.43	.03	33.08	3.83	.04	10.68	0.00	.08	.02	.02	0.00		.18		
	122	49.62	0.00	32.78	4.16	.07	10.40	.01	.12	.01	.03	.05		.07		
RIO	121	36.78	2.03	18.02	11.86	0.00	14.27	0.00	.28	9.25	.26	.16		.13		
	125	39.08	2.29	16.80	9.94	0.00	15.48	0.00	.15	9.02	.07	.10		0.00		
K498/7830		61.46	1.29	15.05	12.51	.20	2.05	2.70	2.70	1.88					.03	98.88
GT	142	37.85	.02	20.95	33.89	1.39	4.21	1.71	.02	0.00	0.00	0.00		.04		
	145	37.73	.08	21.05	34.78	1.41	2.68	2.33	.01	0.00	.05	.11		0.00		
	146	37.78	.12	21.28	32.44	1.29	4.08	2.35	0.00	0.00	.08	.07		.20		
	161	36.35	.04	21.27	31.75	1.25	4.82	2.41	.03	0.00	.07	.02		.13		
	166	36.43	0.00	20.25	36.89	1.66	2.58	1.71	.01	.01	.04	.05		0.00		
	169	37.78	.01	21.07	33.29	1.26	3.74	2.50	.03	0.00	0.00	.03		.05		
RIO	144	34.25	3.31	18.77	21.47	.08	8.05	0.00	.05	9.85	.03	.17		.26		
	165	34.48	3.35	18.15	20.88	.04	8.98	0.00	0.00	9.86	.07	.05		.17		
	168	35.65	2.72	18.59	16.00	0.00	12.52	0.00	.13	9.98	.18	0.00		.18		
K498/785A		0.00	1.29	0.00	0.00	0.00	100.00	2.70	2.70	1.88					.03	99.88
GT	180	37.19	.08	20.58	35.05	.72	4.46	1.25	.04	0.00	.08	.04		0.00		
	183	36.45	.02	20.52	35.80	.85	4.17	1.22	0.00	0.00	.04	.06		.05		
	185	35.82	.04	20.73	37.70	.84	3.53	1.13	.03	0.00	.02	.07		.02		
	193	37.50	.10	20.15	35.86	1.02	3.56	1.15	0.00	.01	.01	.13		.07		

BTD	181	37.31	.22	18.33	11.44	.01	14.97	0.00	.09	10.40	.08	.07	.04
	182	34.72	2.96	17.61	18.01	.02	10.41	0.00	.05	10.41	.04	0.00	.17
	186	34.28	1.72	17.87	16.35	0.00	12.08	0.00	.10	10.30	.05	.08	.13
	192	35.75	.22	19.60	15.30	.04	12.60	0.00	.06	10.24	.05	.11	.29
	193	37.58	.43	18.81	11.61	.03	14.91	0.00	.03	10.06	.03	.08	.04

SAMPLE	AL	NORMALISED OXIDES		K
		FE	MG	
K498/807	47.15	33.50	11.88	7.47
GT	35.72	55.50	6.77	.01
BTD	31.83	25.95	25.39	17.09
K498/804	55.28	34.23	10.29	.19
GT	35.12	56.33	8.54	.01
CORD	67.55	11.89	20.49	.07
BTD	33.65	23.16	27.74	15.42
K498/810	51.80	30.83	10.06	7.31
GT	35.36	58.21	6.42	.02
BTD	32.36	29.57	19.82	18.26
K498/784B	57.13	33.78	7.65	1.43
GT	36.08	53.94	9.97	.01
CORD	69.41	8.83	21.75	.02
BTD	33.26	20.83	28.42	17.49
K498/830	47.79	39.73	6.51	5.97
GT	35.85	57.79	6.38	.00
BTD	29.63	34.92	17.69	17.77
K498/815A	0.00	0.00	88.18	1.85
GT	33.98	59.30	6.72	.00
BTD	32.78	25.85	23.10	18.27

K-FELDSPAR PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	A	F-M
A	= K498/807	.455	.262
B	= GT	.357	.136
C	= BTD	.221	.495
D	= K498/804	.553	.231
E	= GT	.351	.132
F	= CORD	.676	.633
G	= BTD	.284	.545
H	= K498/810	.521	.246
T	= GT	.354	.099
J	= BTD	.222	.401
K	= K498/784B	.573	.185
L	= GT	.361	.156
M	= CORD	.694	.711
N	= BTD	.243	.577
O	= K498/830	.475	.141
P	= GT	.356	.099
Q	= BTD	.164	.336
R	= K498/815A	-.019	1.000
S	= GT	.340	.102
T	= BTD	.229	.472

12.00.18.0000239 LINES PRINTED ON LP07.

DATE 79/08/09 15.13.07.

COMPOSITION VALUES ARE OXIDES OF ELEMENTS

BLACK ROCK

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K49877		50.88	1.70	13.50	18.43	.75	6.38	6.31	2.97	.18					.18	95.78
GT	804	37.33	.06	20.87	35.82	.73	2.75	2.45	.07	0.00	.01	0.00		.07		
	885	37.85	0.00	20.31	35.58	1.08	2.82	1.95	.04	0.00	.08	.01		0.00		
	868	37.80	.03	20.83	35.98	.90	2.58	1.90	0.00	.01	.02	.07		.08		
	870	37.01	.28	20.85	35.30	.84	3.12	1.90	.04	.09	.05	0.00		.12		
	1037	37.80	.08	20.52	36.08	.82	2.88	1.95	.03	.02	.02	0.00		.08		
BIO	1036	35.78	1.42	18.87	21.43	0.00	8.88	0.00	.07	9.30	0.00	.06		.03		
	858	35.13	.37	26.78	21.03	.01	.77	.14	.61	8.01	.06	.01		.08		
K4987111		57.09	1.42	19.11	14.94	.15	5.19	.49	.09	3.35					.13	89.98
GT	973	37.40		20.87	34.82	.76	2.84	2.53	.02	.01	.05	0.00		.05		
	984	38.00	.08	.82	35.11	.53	3.08	2.01	.08	.01	.14	.01		.08		
	985	37.58	.03	21.25	35.87	.61	3.33	2.24	.12	.02	.04	.04		0.00		
	987	37.38	.05	20.59	35.40	.64	2.78	2.54	.04	.01	.07	.01		0.00		
BIO	972	35.19	2.89	20.37	19.85	.07	7.12	0.00	.16	8.85	.23	.13		0.00		
	985	35.45	2.41	18.78	21.34	.07	7.40	0.00	.15	9.28	.13	0.00		.08		
	988	34.59	2.17	18.89	21.68	.05	8.08	0.00	.18	8.44	.20	.05		.01		
STL	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		
K4987104		85.42	1.10	10.74	15.48	.05	1.80	.99	.97	3.37					.04	100.00
GT	1028	37.24	.02	20.45	37.70	.35	1.22	3.58	.03	.01	.12	.08		.10		
	1029	37.19	0.00	20.92	35.31	.38	1.31	5.02	.04	.01	.11	.02		.08		
	1033	37.19	.01	20.43	36.23	.31	1.21	4.98	.04	.01	.07	.16		0.00		
BIO	1027	33.88	3.41	16.49	27.53	.02	4.18	0.00	.07	9.50	.22	.15		.12		
	1028	33.20	3.28	18.90	27.88	.02	3.73	0.00	.09	9.38	.14	.18		.07		
	1031	33.59	2.89	16.75	27.73	0.00	3.96	0.00	.11	9.29	.19	.12		.25		
	1032	33.52	2.50	17.30	27.43	.08	4.08	0.00	.09	9.07	.11	.07		0.00		
K4987105		55.83	2.03	16.34	20.12	.12	1.91	1.34	.17	2.83					.05	89.84
GT	1038	37.32	.10	20.87	35.73	.21	2.08	2.20	.05	0.00	0.00	.17		0.00		
	1041	37.19	0.00	21.86	36.24	.19	2.03	2.03	.02	0.00	.02	.11		.08		
	1042	36.87	.09	20.71	37.85	.18	2.34	1.98	0.00	.03	.02	0.00		.04		
BIO	1035	34.82	2.22	18.48	22.84	0.00	5.25	0.00	.05	8.19	.16	.04		0.00		
	1040	33.81	2.55	16.86	23.46	.03	5.57	0.00	.07	9.30	.04	.22		0.00		
	1043	33.90	2.88	18.50	24.59	.05	5.25	0.00	.13	9.52	.05	.13		.10		
K4987121		64.31	1.10	13.70	13.21	.10	4.64	.84	.12	1.70					.09	89.15
GT	1088	38.44	0.00	21.45	30.86	.27	8.70	2.11	.03	.01	.08	.18		.01		
	1081	38.83	.07	21.80	30.94	.50	5.12	2.87	.03	0.00	.11	.02		.07		
	1085	38.83	.03	21.70	31.87	.51	5.86	2.78	.05	.02	.04	.13		.10		
BIO	1089	36.92	1.75	18.53	14.90	0.00	12.84	0.00	.14	9.65	.04	.01		.08		
	1080	39.08	1.32	17.09	16.78	.01	11.88	0.00	.10	7.85	.03	.08		.02		
	1084	35.32	1.38	18.57	21.57	.03	11.38	0.00	.11	8.88	.07	0.00		.01		
STAU	057	28.23	.79	52.98	12.74	0.00	2.44	.02	.05	.03	.15		.04	0.00		
	1087	29.11	.76	53.72	12.50	.02	1.37	.03	.01	.01	.08		0.00	0.00		

	1064	27.80	.28	53.15	13.84	0.00	1.38	.00	.02	0.00	.02	0.00	.01
K498/59		35.97	.57	18.87	33.23	1.14	5.34	2.44	.12	1.30			.13 48.60
GT	884	38.38	.61	21.08	33.28	1.30	4.25	2.87	.07	0.00	0.00	.06	0.00
	885	38.02	.63	21.32	33.08	1.44	3.92	3.05	0.00	.01	.09	.04	0.00
	889	37.48	.10	21.07	33.82	1.45	3.79	2.89	0.00	0.00	0.00	.09	0.00
BIO	891	34.59	1.99	16.78	23.80	.74	7.35	0.00	.09	8.78	.13	.14	.26
	892	35.04	2.29	17.25	23.50	.08	7.34	0.00	.17	8.98	.08	0.00	0.00
	893	35.07	1.85	17.08	23.77	.17	7.08	0.00	.08	9.11	.12	.17	.58
	901	35.81	2.31	17.81	19.74	.10	8.27	0.00	.26	8.87	.94	0.00	0.00
CHL	896	23.56	.03	21.54	33.65	.11	8.58	.25	.03	.02	.02	.05	.22
	897	23.56	.25	21.22	34.54	.68	8.54	.48	0.00	.51	.03	0.00	.08
	898	25.35	0.00	21.00	28.18	.14	13.27	.04	0.00	.04	0.00	0.00	.01

SAMPLE	NORMALISED OXIDES			
	AL	FE	MG	K
K498/78	38.08	43.50	17.88	.45
GT	34.80	60.38	4.79	.04
BIO	40.28	37.82	8.58	13.57
K498/111	47.08	36.81	7.86	8.25
GT	35.55	59.83	5.00	.02
BIO	34.80	38.72	13.24	15.44
SILL	100.00	0.00	0.00	0.00
K498/104	34.18	48.28	5.79	10.73
GT	35.60	32.88	2.03	.02
BIO	29.10	47.74	8.87	16.28
K498/106	40.25	49.58	3.72	8.48
GT	33.89	62.80	3.40	.02
BIO	32.48	41.27	5.94	16.30
K498/121	41.74	39.87	13.93	5.25
GT	36.58	52.97	10.44	.02
BIO	32.01	31.44	21.05	15.47
STAUP	78.48	18.02	2.48	.02
K498/59	33.04	58.81	8.87	2.18
GT	30.18	57.00	6.82	.01
BIO	30.82	40.08	13.71	15.87
CHL	32.82	51.13	14.53	.51

MUSCOVITE PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	A	F-M
A	= K498/78	.374	.292
B	= GT	.347	.074
C	= BIO	-.010	.185
D	= K498/111	.333	.176
E	= GT	.351	.077
F	= BIO	-.307	.285
G	= SILL	1.000	0.000
H	= K498/104	.025	.105
I	= GT	.334	.031
J	= BIO	-.568	.124
K	= K498/106	.281	.070
L	= GT	.340	.052
M	= BIO	-.472	.194
N	= K498/121	.321	.260
O	= GT	.380	.185
P	= BIO	-.378	.401

R	=	K032759	.280	.138
S	=	GT	.352	.107
T	=	PIO	-.474	.255
U	=	CHL	.330	.221

BLACK ROCK

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/111		57.09	1.42	19.11	14.94	.15	3.19	.48	.06	3.35					.13	89.82
GT	973	37.40	.07	20.87	34.82	.76	2.64	2.53	.03	.01	.06	0.08		.06		
	984	38.00	.08	20.82	35.11	.63	3.08	2.01	.06	.01	.14	0.00		0.00		
	986	37.58	.03	21.25	35.87	.81	3.39	2.24	.12	.02	.04	.04		0.00		
	987	37.38	.08	20.59	35.40	.64	2.78	2.54	.04	.01	.07	.01		0.00		
BIO	972	37.19	2.88	20.37	18.65	.07	7.12	0.00	.16	8.65	.23	.13		0.00		
	985	36.40	2.41	18.78	21.34	.07	7.40	0.00	.15	9.28	.11	0.00		.08		
	988	34.53	2.17	19.59	21.88	.06	8.08	0.00	.18	8.44	.20	.06		.01		
SILL	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		
K498/104		65.42	1.10	10.74	15.48	.05	1.82	.99	.37	3.37					.09	100.00
GT	1028	37.24	.02	20.46	37.70	.36	1.22	3.68	.03	.01	.17	.06		.10		
	1029	37.19	0.00	20.82	35.31	.38	1.11	5.02	.04	.01	.11	.02		.04		
	1033	37.19	.01	20.43	36.23	.31	1.21	4.98	.04	.01	.07	.10		0.00		
BIO	1027	33.88	3.41	18.48	27.53	.02	4.18	0.00	.07	9.50	.22	.18		.12		
	1028	33.25	3.28	18.60	27.96	.02	3.73	0.00	.09	9.38	.14	.18		.18		
	1031	33.59	2.88	18.78	27.70	0.00	3.88	0.00	.11	9.29	.19	.12		.25		
	1032	33.52	2.50	17.30	27.43	.08	4.08	0.00	.09	8.57	.11	.07		0.00		
K498/121		64.31	1.10	13.70	13.21	.10	4.84	.84	.10	1.75					.08	89.61
GT	1052	38.44	0.00	21.48	30.84	.27	6.70	2.11	.03	.01	.05	.16		.01		
	1081	38.83	.07	21.60	30.94	.30	6.12	2.87	.03	0.00	.13	.02		.07		
	1055	38.83	.03	21.70	31.87	.51	5.88	2.88	.00	.02	.04	.12		.08		
BIO	1098	36.92	1.78	18.57	14.90	0.00	12.84	0.00	.14	9.88	.04	.01		.08		
	1060	38.08	1.32	17.03	16.78	.01	11.88	0.00	.10	7.88	.03	.08		.08		
	1084	37.32	1.38	18.57	21.57	.03	11.38	0.00	.11	8.88	.07	0.00		.08		
STAUR	1057	28.23	.79	52.88	12.74	0.00	2.44	.02	.05	.03	.18		.04	0.00		
	1062	28.11	.78	53.72	12.50	.02	1.27	.03	.01	.01	.09		0.00	0.00		
	1083	28.24	.87	54.38	12.70	.03	1.52	.01	.02	.02	.18		.04	0.00		
	1066	27.80	.38	53.15	13.84	0.00	1.35	.02	.02	0.00	.02		0.00	.01		

SAMPLE	AL	NORMALISED OXIDES		
		FE	MG	K
K498/111	47.08	35.81	7.86	3.25
GT	35.15	59.83	5.00	.02
BIO	34.60	36.72	13.24	15.44
SILL	100.00	0.00	0.00	0.00
K498/104	34.19	49.28	5.78	10.73
GT	35.40	62.58	2.03	.02
BIO	29.10	47.74	6.87	18.28
K498/121	41.14	39.87	13.93	5.28
GT	38.88	52.87	10.44	.02
BIO	32.01	51.44	21.09	15.47
STAUR	78.45	18.02	2.46	.02

RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	A	F-M
A	= K4987111	.485	.175
B	= GT	.351	.077
C	= RIO	.277	.265
D	= SILL	1.000	0.000
E	= K4987104	.299	.105
F	= GT	.354	.031
G	= RIO	.180	.125
H	= K4987121	.401	.260
I	= GT	.388	.185
J	= RIO	.239	.401
K	= STAIR	.785	.115

WHITE ROCK

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498768		56.70	.67	23.47	9.33	.12	2.58	.33	.75	5.95					.31	100.03
GT	926	37.53	0.00	21.29	36.84	1.71	2.33	1.72	.03	0.00	.01	0.00		.07		
	928	36.67	0.00	20.88	36.18	1.77	2.38	1.77	.01	0.00	.05	.05		.03		
	1069	37.23	0.00	20.65	36.88	.96	2.22	2.03	.04	0.00	.05	.15		.01		
RIO	924	35.88	1.38	19.60	18.46	.04	10.56	0.00	.33	8.80	.09	.09		.15		
	925	34.39	1.70	18.87	17.20	0.00	11.12	0.00	.21	8.74	.22	.08		0.00		
STAUF	927	27.63	.55	52.03	14.24	.08	1.30	0.00	.07	.01	.12		.72	0.00		
	1158	28.14	.29	53.39	13.51	.01	1.34	.01	.03	.04	.05		0.00	.06		
FIR	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		
K498732		82.17	.55	17.33	11.77	.12	2.10	.88	1.95	3.12					.15	99.77
GT	934	36.16	.17	20.88	36.51	.27	1.91	3.16	.04	0.00	0.00	.07		.05		
	935	36.81	.09	20.73	35.71	2.44	2.23	1.05	.07	0.00	0.00	0.00		0.00		
	936	36.55	.05	20.68	37.33	.71	1.88	1.82	.03	.01	.03	0.00		.07		
	939	36.37	.09	20.68	37.30	.32	1.90	2.78	.03	.02	.01	.11		.02		
	942	35.84	0.00	20.59	34.49	3.60	2.22	1.30	.03	.03	.02	0.00		0.04		
	944	36.55	.01	20.83	36.98	1.64	2.10	1.72	0.00	.01	.01	.20		0.00		
RIO	937	34.51	1.47	18.21	20.14	.05	9.95	0.00	.14	8.88	.12	0.00		0.00		
	938	34.77	1.49	18.17	20.20	.03	10.07	0.00	.20	8.92	.03	.11		.08		
STAUF	931	29.21	.45	51.15	14.03	.02	1.47	.01	.05	.02	.01		.50	.03		
	932	27.12	.44	52.88	14.54	.05	1.39	.02	.18	.04	0.00		.50	.10		
	933	27.20	.48	52.74	14.47	0.00	1.56	0.00	.01	0.00	.02		.41	0.07		
	941	27.38	.42	52.45	14.61	.04	1.58	.02	.13	.02	0.00		.72	0.01		
	942	27.50	.51	52.28	14.40	.01	1.38	.02	.02	0.00	.03		.56	.14		
FIR	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		
K4987138		59.49	1.52	18.28	13.14	.18	3.39	.82	1.78	1.91					.17	100.14
GT	955	37.76	.02	20.61	34.21	1.95	4.05	.79	.04	.03	.04	.04		0.00		
	958	37.14	.06	20.74	32.01	.32	4.57	.87	.07	0.00	.08	0.00		0.00		
	963	37.35	.08	20.68	34.93	.97	3.85	.79	.03	0.00	.10	.04		.05		
	964	37.43	.04	20.94	35.06	.88	3.85	.76	.05	0.00	.09	.04		.07		
	965	37.48	.07	20.75	34.24	.93	3.84	.82	.03	0.00	.10	.09		.14		
	967	37.67	.06	20.78	32.64	.85	5.04	.83	.04	0.00	.01	.03		.08		
	968	37.48	.03	20.58	34.40	1.04	4.00	.78	.03	.01	.02	.08		0.00		
RIO	969	38.09	1.81	18.44	15.27	0.00	11.73	0.00	.31	9.89	.01	.05		.01		
	971	36.18	1.30	32.79	11.08	.07	7.92	0.00	.17	8.81	.05	0.00		.07		
FLAG	957	62.41	.02	21.79	.27	0.00	.04	4.00	9.54	.10	.01	.03		.07		
K4987135		51.51	1.25	18.54	17.26	.32	1.45	1.70	3.19	.82					.51	99.71
GT	986	37.02	.35	18.73	31.89	.88	1.39	8.32	.03	.77	.08	0.00		.12		
	983	37.38	.03	20.41	32.14	1.37	1.85	7.05	0.00	0.00	0.00	0.00		.07		
	985	37.55	.05	20.31	33.23	2.14	1.25	8.21	.08	0.00	.03	0.00		.13		
	988	37.43	.13	20.48	31.20	1.74	1.43	7.48	0.00	.04	0.00	.07		.08		
	1000	36.91	.08	20.32	32.04	1.55	1.53	8.67	.02	0.00	.04	.02		.03		

	997	30.22	7.64	14.64	28.07	.10	5.14	0.00	.08	8.11	.03	.12	.05
HRE	994	39.60	1.04	13.45	24.43	.05	4.56	11.38	1.57	1.34	.08	.04	0.00
	998	38.18	.65	15.95	24.35	.08	1.81	10.12	1.25	2.23	.03	.02	.08
K498773		37.15	1.57	34.85	16.44	.14	4.78	.39	.15	4.08			.05 35.84
GT	1002	37.61	.03	21.44	34.47	.80	4.82	1.44	.04	0.00	.03	.08	0.00
	1005	37.33	.01	20.92	33.37	.45	4.92	1.70	.02	0.00	.08	.13	.11
	1008	37.22	0.00	21.05	35.04	.80	4.15	1.84	.04	.01	.03	.11	0.00
	1009	37.83	.08	21.11	33.37	.82	5.01	1.68	0.00	0.00	.10	.20	.09
	1010	37.65	.02	21.16	34.38	.82	4.43	1.44	0.00	.03	.01	.01	.02
	1011	37.78	.12	21.12	33.86	.48	4.83	1.84	.02	0.00	.03	.07	0.00
BIO	1007	35.11	2.14	18.52	18.43	0.00	8.97	0.00	.38	8.91	.12	.10	.07
	1012	34.87	1.50	22.85	18.16	.03	7.85	0.00	.10	7.49	.04	.10	.24
SILL	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
K498783		58.25	.63	17.19	8.17	.08	1.92	.18	.33	5.45			.12 100.11
GT	1017	37.07	.08	21.04	35.43	2.93	1.58	2.50	.03	.02	0.00	.12	0.00
	1020	26.34	0.00	20.85	35.70	2.02	1.46	3.36	.03	.02	0.00	.05	0.00
	1021	37.21	.12	20.85	36.55	2.24	1.41	2.86	.02	0.00	.01	.07	.01
BIO	1018	35.18	1.37	18.76	21.54	0.00	7.43	0.00	.14	8.95	.09	.07	.05
	1019	35.08	1.70	18.11	21.97	.10	7.81	0.00	.22	8.32	.07	.08	0.00
	1022	34.71	1.74	18.34	22.04	.05	7.83	0.00	.21	8.55	.11	.08	0.00

NORMALISED OXIDES

SAMPLE	AL	FE	MG	K
K498788	58.78	27.57	5.24	14.40
GT	35.07	51.07	3.85	0.00
BIO	34.02	31.48	19.17	15.30
STAU	77.74	20.28	1.93	.04
FIR	100.00	0.00	0.00	0.00
K498733	50.50	34.29	5.12	8.08
GT	34.81	51.82	3.45	.02
BIO	31.20	25.24	17.40	15.55
STAU	78.85	21.18	2.18	.02
FIR	100.00	0.00	0.00	0.00
K4987139	49.80	35.79	9.21	5.20
GT	35.10	57.67	7.15	.01
BIO	45.05	23.17	17.28	14.51
PLAG	98.15	1.22	.18	.45
K4987135	45.85	47.55	4.02	2.27
GT	37.54	55.43	2.88	.34
BIO	27.06	47.53	5.72	15.80
HRE	33.36	55.31	7.23	4.00
K498773	57.93	27.33	7.95	6.78
GT	35.29	58.92	7.78	.01
BIO	38.88	32.62	15.89	14.62
SILL	100.00	0.00	0.00	0.00
K498753	55.80	20.09	5.28	17.78
GT	25.81	51.55	2.52	.02
BIO	32.01	35.42	13.81	15.55

MUSCOVITE PROJECTION
RATIOS OF PLOTTED OXIDES
SYMBOL SAMPLE A F-M

B	=	GT	.351	.059
C	=	BID	-.310	.078
D	=	STAIR	.777	.087
E	=	FIB	1.000	0.000
F	=	K488733	.385	.151
G	=	GT	.348	.053
H	=	BID	-.353	.331
I	=	STAIR	.767	.088
J	=	FIB	1.000	0.000
K	=	K488733	.431	.205
L	=	GT	.351	.110
M	=	BID	.028	.427
N	=	PLAG	.991	.129
O	=	K488735	.428	.077
P	=	GT	.370	.043
Q	=	ETD	-.324	.168
R	=	HBE	.253	.115
S	=	K488733	.515	.221
T	=	GT	.313	.120
U	=	PIG	-.188	.328
V	=	DILL	1.000	.000
W	=	K488753	.087	.235
X	=	GT	.271	.038
Y	=	ETD	-.438	.262

WHITE ROCK

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BB	P	TOTAL
K498/139		59.49	1.52	18.27	13.14	.18	3.28	.92	1.28	1.91					.17	100.15
GT	955	37.75	.02	20.61	34.28	1.00	4.07	.79	.04	.03	.04	.04		0.00		
	956	37.14	.08	20.74	33.08	.92	4.97	.87	.07	0.00	.08	0.00		0.00		
	953	37.38	.08	20.68	34.93	.97	3.85	.79	.03	0.00	.10	.04		.08		
	954	37.43	.04	20.94	35.05	.95	3.89	.78	.05	0.00	.08	.04		.08		
	955	37.47	.07	20.79	34.24	.93	3.84	.82	.03	0.00	.10	.08		.08		
	957	37.67	.08	20.78	32.74	.85	5.04	.83	.04	0.00	.01	.03		.08		
	958	37.48	.03	20.59	34.46	1.04	4.60	.79	.03	.01	.02	.06		0.00		
BIO	969	38.09	1.91	18.44	15.27	0.00	11.73	0.00	.31	9.89	.01	.05		.04		
	971	38.18	1.30	32.79	11.08	.07	7.82	0.00	.17	8.81	.08	0.00		.07		
PLAG	957	62.41	.02	21.79	.27	0.00	.04	4.00	9.84	.10	.01	.03		.05		
K498/135		51.81	1.26	16.54	17.28	.32	1.45	8.73	3.19	.82					.01	98.65
GT	988	37.02	.35	16.73	31.89	.88	1.85	8.32	.00	.87	.08	0.00		.11		
	993	37.38	.03	20.41	32.14	1.37	1.65	7.08	0.01	0.00	0.00	0.00		.03		
	995	37.55	.07	20.31	33.23	2.14	1.25	8.21	.08	0.00	.03	0.00		.11		
	996	37.43	.13	20.47	31.20	1.74	1.83	7.88	0.00	.04	0.00	.07		.08		
	1000	38.31	.04	20.32	32.04	1.65	1.93	8.87	.02	0.00	.04	.02		.03		
BIO	987	34.91	2.79	18.15	26.20	0.30	5.93	0.00	.06	8.88	0.30	0.00		.03		
	997	30.73	7.84	14.84	23.07	.10	5.14	0.00	.01	8.11	.03	.13		.07		
HBE	994	39.84	1.04	13.45	24.43	.05	4.55	11.39	1.57	1.34	.08	.14		0.00		
	998	38.18	.89	19.89	24.38	.08	1.91	10.12	1.25	2.23	.02	.02		.09		
K498/73		37.15	1.87	34.75	13.44	.14	4.79	.08	.15	4.08					.07	98.64
GT	1002	37.81	.03	21.44	34.47	.85	4.87	1.44	.04	0.00	.03	.08		0.00		
	1005	37.33	.01	20.92	33.37	.45	4.92	1.70	.02	0.00	.08	.13		.11		
	1008	37.27	0.00	21.05	35.04	.80	4.15	1.84	.04	.01	.03	.11		0.00		
	1009	37.43	.08	21.11	33.37	.82	5.01	1.95	0.00	0.00	.14	.20		.07		
	1010	37.85	.02	21.18	34.38	.02	4.43	1.44	0.00	.03	.01	.03		.08		
	1011	37.79	.12	21.12	33.88	.49	4.83	1.84	.02	0.00	.03	.07		0.00		
BIO	1007	35.11	2.14	18.52	18.43	0.00	8.87	0.00	.38	8.91	.12	.17		.05		
	1012	34.87	1.50	22.88	18.18	.00	7.85	0.00	.10	7.43	.04	.10		.08		
STLL	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		

NORMALISED OXIDES

SAMPLE	AL	FE	MG	K
K498/139	49.80	35.73	8.21	5.28
GT	35.18	57.17	7.1E	.01
BIO	45.05	23.17	17.28	14.51
PLAG	88.15	1.22	.18	.45
K498/135	45.88	47.88	4.02	2.27
GT	37.04	59.43	2.89	.34
BIO	27.05	47.43	9.72	19.60
HBE	33.36	55.36	7.23	4.05
K498/73	37.53	27.33	7.96	5.78

R10	28.88	32.82	15.89	14.82
SILL	100.00	0.00	0.00	0.00

K-FELDSPAR PROJECTION

RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	F	F-M
A	= K488/135	.458	.205
B	= GT	.352	.110
C	= R10	.430	.427
D	= PLAG	.988	.129
E	= K498/135	.457	.077
F	= GT	.375	.043
G	= R10	.187	.153
H	= HBE	.019	.115
I	= K498/73	.592	.228
J	= GT	.803	.120
K	= R10	.315	.328
L	= SILL	1.000	0.000

15.17.08.0000842 LINES PRINTED ON LP08.

SGJAPKJ //// END OF LIST ////

CORKWOOD(3)

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CP	NI	ZN	BA	TOTAL
K49871469		NO	WHOLE	ROCK	ANALYSIS										
GT	4770	37.46	0.00	21.67	33.40	.24	8.81	1.05	0.00	0.00	.13	0.00		0.00	
	4771	37.12	0.00	21.71	33.14	.22	8.88	.92	0.00	0.00	0.00	0.00		0.00	
	4772	37.40	0.00	21.69	33.18	.17	8.70	.80	0.00	0.00	0.00	0.00		0.00	
	4773	37.07	0.00	21.67	33.21	.13	8.85	1.03	0.00	0.00	0.00	0.00		0.00	
	4774	38.67	0.00	21.81	34.58	.13	8.88	1.10	0.00	0.00	0.00	0.00		0.00	
	4775	38.58	0.00	21.47	34.72	.13	8.87	1.03	0.00	0.00	0.00	0.00		0.00	
	4776	37.01	0.00	21.40	37.38	.18	8.38	1.02	0.00	0.00	0.00	0.00		0.00	
	4780	38.74	0.00	21.59	35.88	.20	8.23	1.03	0.00	0.00	0.00	0.00		0.00	
	4784	37.42	0.00	21.78	34.90	.20	8.74	1.01	0.00	0.00	0.00	0.00		0.00	
	AVERAGE	37.03	0.00	21.64	34.49	.18	8.64	1.01	0.00	0.00	.01	0.00		0.00	
BIC	4778	38.08	1.80	18.13	19.00	0.00	10.81	.08	.11	8.81	.29	0.00		0.00	
	4778	38.82	2.14	18.01	18.87	0.00	11.44	0.00	.07	8.58	.25	0.00		0.00	
	4781	38.31	2.51	17.85	17.00	0.00	10.91	0.00	.07	8.87	.27	0.00		0.00	
	4782	38.10	2.18	18.19	18.88	0.00	11.51	0.00	.11	8.98	.24	0.00		0.00	
	AVERAGE	38.74	2.16	18.08	18.04	0.00	11.58	.02	.08	8.78	.27	0.00		0.00	
K49871029A		NO	WHOLE	ROCK	ANALYSIS										
GT	4808	38.82	0.00	20.74	37.32	1.48	8.31	1.50	.11	8.81	.26	0.00		0.00	
	4810	38.30	0.00	20.81	37.04	1.42	8.21	1.52	.07	8.58	.21	0.00		0.00	
	4811	38.78	0.00	21.84	37.28	1.38	8.47	1.38	.07	8.87	.27	0.00		0.00	
	AVERAGE	38.61	0.00	20.80	37.22	1.43	8.34	1.40	.09	8.75	.25	0.00		0.00	
BIC	4808	38.70	1.58	18.21	20.10	0.00	8.31	.07	.11	8.80	0.00	0.00		0.00	
	4808	38.88	1.18	18.81	20.48	0.00	8.08	0.00	.01	8.15	0.00	0.00		0.00	
	4811	38.04	1.88	18.29	20.27	0.00	8.84	0.00	.18	8.18	0.00	0.00		0.00	
	AVERAGE	38.88	2.01	18.70	20.30	0.00	8.48	.02	.18	8.10	0.00	0.00		0.00	
K49871002B		NO	WHOLE	ROCK	ANALYSIS										
GT	4884	38.70	0.00	21.74	31.18	1.30	8.71	1.67	.11	8.88	0.00	0.00		0.00	
	4884	37.70	0.00	21.80	31.82	1.30	8.12	1.44	.11	8.15	0.00	0.00		0.00	
	4888	37.83	0.00	21.78	31.88	1.41	8.67	1.57	0.00	.03	0.00	0.00		0.00	
	4810	38.48	0.00	21.35	31.88	1.48	8.27	1.62	0.00	0.00	0.00	0.00		0.00	
	AVERAGE	38.09	0.00	21.87	31.54	1.38	8.48	1.55	.11	8.53	0.00	0.00		0.00	
BIC	4880	37.37	1.18	18.82	8.80	0.00	17.73	0.00	.14	8.77	0.00	0.00		0.00	
	4881	37.83	1.48	18.87	10.88	0.00	17.18	0.00	.11	8.92	0.00	0.00		0.00	
	AVERAGE	37.80	1.33	18.40	9.88	0.00	17.40	0.00	.18	8.85	0.00	0.00		0.00	
CORD	4888	48.53	0.00	33.87	3.35	0.00	10.33	0.00	.11	0.00	0.00	0.00		0.00	
	4888	48.58	0.00	33.54	3.44	0.00	11.17	0.00	.13	0.00	0.00	0.00		0.00	
	4810	48.43	0.00	33.88	3.78	0.00	11.08	0.00	.13	0.00	0.00	0.00		0.00	
	AVERAGE	48.55	0.00	33.83	3.44	0.00	11.18	0.00	.12	0.00	0.00	0.00		0.00	
K49871011C		NO	WHOLE	ROCK	ANALYSIS										
GT	4833	38.22	0.00	21.83	31.48	3.40	8.34	1.34	.11	0.00	0.00	0.00		0.00	
	4834	37.83	0.00	21.78	29.84	3.34	8.48	1.37	.12	0.00	0.00	0.00		0.00	
	4835	37.22	0.00	21.88	31.74	3.45	8.88	1.55	.13	0.00	0.00	0.00		0.00	
	4836	37.48	0.00	21.48	30.84	3.17	8.81	1.38	0.00	0.00	0.00	0.00		0.00	
	AVERAGE	37.88	0.00	21.84	30.85	3.34	8.78	1.40	.08	0.00	0.00	0.00		0.00	
CORD	4832	48.24	0.00	33.48	3.58	.08	11.27	0.00	.07	0.00	0.00	0.00		0.00	
	4838	48.30	0.00	33.85	4.08	.11	11.10	0.00	0.00	0.00	0.00	0.00		0.00	
	4837	48.82	0.00	33.78	4.48	.13	10.88	0.00	0.00	0.00	0.00	0.00		0.00	
	AVERAGE	48.19	0.00	33.71	4.03	.11	11.02	0.00	.02	0.00	0.00	0.00		0.00	
K49871176A		NO	WHOLE	ROCK	ANALYSIS										
GT	4844	38.54	0.00	21.35	37.81	1.14	1.50	1.87	.07	0.00	0.00	8.70		0.00	
	4857	38.81	0.00	20.88	37.82	.82	2.30	1.87	0.00	0.00	0.00	0.00		0.00	
	4860	38.67	0.00	20.80	38.22	.84	2.13	1.88	0.00	0.00	0.00	0.00		0.00	
	AVERAGE	38.47	0.00	21.08	38.02	.87	2.18	1.88	.02	0.00	0.00	0.00		0.00	
BIC	4844	34.88	2.03	18.41	20.88	0.00	8.18	0.00	.11	8.38	0.00	0.00		0.00	
	4856	34.81	1.18	18.89	17.48	0.00	11.03	.05	.08	8.31	0.00	0.00		0.00	
	4858	34.75	1.33	18.38	17.78	0.00	10.72	0.00	.08	8.53	0.00	0.00		0.00	
	4859	34.87	2.78	18.82	20.30	0.00	8.85	0.00	.12	8.25	.12	0.00		0.00	
	AVERAGE	34.81	2.08	18.00	18.98	0.00	8.81	.01	.09	8.37	.03	0.00		0.00	
78285		NO	WHOLE	ROCK	ANALYSIS										
GT	4888	37.24	0.00	21.33	35.84	1.08	3.81	1.81	.11	8.38	0.00	0.00		0.00	
	4888	37.37	0.00	21.30	35.73	1.08	3.81	1.82	.08	8.31	0.00	0.00		0.00	
	4871	37.00	0.00	21.37	36.00	1.11	3.83	1.80	0.00	0.00	.10	0.00		0.00	
	AVERAGE	37.20	0.00	21.27	35.88	1.08	3.78	1.77	.08	8.23	.03	0.00		0.00	
BIC	4888	38.84	.84	18.48	14.78	0.00	13.28	.08	0.00	8.81	0.00	0.00		0.00	
	4887	38.07	1.73	18.00	15.22	0.00	13.25	0.00	0.00	8.92	.06	0.00		0.00	
	4870	38.80	1.58	18.33	18.78	0.00	12.24	.05	.32	8.70	.08	0.00		0.00	
	AVERAGE	38.24	1.42	18.27	15.93	0.00	12.52	.05	.11	8.73	.06	0.00		0.00	

SAMPLE	AL	NORMALIZED OXIDES		K
		FE	MG	
GT	34.83	55.47	9.72	0.00
B10	32.54	28.28	21.82	15.88
GT	30.15	52.88	5.39	12.57
B10	32.48	35.25	18.47	15.80
GT	33.73	46.10	10.11	7.06
B10	34.57	17.89	31.45	15.59
CORD	19.73	7.13	23.14	0.00
GT	37.28	52.79	8.85	0.00
CORD	19.18	8.30	22.89	0.00
GT	34.30	62.14	3.56	0.00
B10	33.16	33.13	17.36	18.35
GT	31.88	53.43	5.85	5.28
B10	34.55	27.86	22.87	15.45

K-FELDSPAR PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	A	F=M
A	B	GT	.342
B	B	B10	.249
C	B	GT	.335
D	B	B10	.244
E	B	GT	.112
F	B	B10	.261
G	B	CORD	.697
H	B	GT	.378
I	B	CORD	.893
J	B	GT	.343
K	B	B10	.250
L	B	GT	.375
M	B	B10	.270

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MO	CA	NA	K	CR	NI	ZN	BA	TOTAL
K452/1028A		NO WHOLE ROCK ANALYSIS													
GT	4208	38.53	0.00	20.84	37.32	1.42	2.31	1.51	0.00	0.00	0.00	0.00			0.00
	4210	38.36	0.00	20.81	37.04	1.42	2.23	1.36	0.00	0.00	0.00	0.00			0.00
	4211	38.78	0.00	20.84	37.28	1.38	2.47	1.38	0.00	0.00	0.00	0.00			0.00
	AVERAGE	38.56	0.00	20.84	37.22	1.40	2.34	1.42	0.00	0.00	0.00	0.00			0.00
B10		NO WHOLE ROCK ANALYSIS													
	4808	35.72	1.56	18.21	20.15	0.00	8.36	0.07	0.21	8.95	0.00	0.00			0.00
	4809	35.36	2.38	18.81	20.48	0.00	8.28	0.00	0.21	8.15	0.00	0.00			0.00
	4823	35.84	1.59	18.79	20.27	0.00	8.84	0.04	0.15	8.39	0.00	0.00			0.00
	AVERAGE	35.28	1.01	18.70	20.30	0.00	8.48	0.01	0.18	8.10	0.00	0.00			0.00
7201		NO WHOLE ROCK ANALYSIS													
GT	4272	37.23	0.00	20.80	36.86	0.27	2.42	3.41	0.00	0.00	0.08	1.00			0.00
	4273	36.87	0.13	21.17	36.51	0.20	2.54	4.23	0.01	8.15	0.00	0.00			0.00
	4274	37.09	0.00	20.53	35.56	0.12	2.71	3.76	0.18	8.19	0.00	0.00			0.00
	AVERAGE	37.06	0.04	21.00	36.28	0.20	2.51	3.80	0.12	8.11	0.03	0.00			0.00
B10		NO WHOLE ROCK ANALYSIS													
	4275	36.70	2.37	17.80	18.52	0.00	8.45	0.26	0.18	8.38	0.12	0.00			0.00
	4277	34.83	2.48	17.86	18.28	0.00	10.28	0.00	0.18	8.05	0.08	0.00			0.00
	4278	35.67	2.48	18.13	18.61	0.00	8.57	0.00	0.20	8.00	0.00	0.00			0.00
	AVERAGE	35.70	2.44	17.88	18.13	0.00	8.82	0.08	0.31	8.81	0.07	0.00			0.00
7200		NO WHOLE ROCK ANALYSIS													
GT	4223	31.83	0.00	20.19	37.83	0.52	2.75	2.17	0.58	2.38	0.12	0.00			0.00
	4224	32.12	0.00	21.03	34.86	0.00	2.46	3.11	0.18	2.05	0.05	0.00			0.00
	4225	36.71	0.00	21.18	38.27	0.48	2.75	1.50	0.20	8.00	0.00	0.00			0.00
	4226	36.35	0.00	21.01	37.85	0.48	2.84	2.18	0.00	0.00	0.00	0.00			0.00
	4227	37.33	0.00	21.12	37.54	0.52	0.50	2.34	0.00	0.00	0.00	0.00			0.00
	4228	37.86	0.00	21.22	34.87	0.00	0.58	3.40	0.00	0.00	0.00	0.00			0.00
	AVERAGE	37.00	0.00	21.08	36.87	0.34	2.82	3.18	0.16	4.41	0.00	0.00			0.00
B10		NO WHOLE ROCK ANALYSIS													
	4229	37.13	1.24	20.25	15.32	0.00	10.08	0.08	0.35	8.18	0.00	0.00			0.00
	4227	37.15	1.28	18.41	18.87	0.00	10.50	0.00	0.24	8.04	0.00	0.00			0.00
	4228	38.73	1.98	18.44	17.73	0.00	10.38	0.00	0.28	8.58	0.00	0.00			0.00
	4229	37.81	1.38	17.85	17.73	0.00	10.12	0.00	0.24	8.48	0.00	0.00			0.00
	4234	38.50	1.26	15.04	18.86	0.00	10.54	0.00	0.25	8.78	0.00	0.00			0.00
	4237	36.30	1.41	18.78	18.48	0.00	11.48	0.00	0.31	8.77	0.00	0.00			0.00
	4238	38.05	1.41	18.71	17.05	0.00	10.53	0.00	0.27	8.84	0.00	0.00			0.00
	AVERAGE	38.37	1.34	18.40	17.13	0.00	10.61	0.01	0.28	8.62	0.00	0.00			0.00

SAMPLE	AL	NORMALIZED Si	OXIDES MO	K
GT	24.53	61.58	3.88	0.00
B10	30.42	34.23	16.47	15.50
GT	31.87	55.04	3.81	8.38
B10	30.11	34.38	17.85	15.84
GT	32.44	38.73	4.84	8.78
B10	30.24	30.29	21.22	15.25

MUSCOVITE PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	F	F-M
A	GT	0.348	0.059
B	B10	-0.405	0.312
C	GT	0.084	0.065
D	B10	-0.401	0.304
E	GT	0.188	0.007
F	B10	-0.321	0.412

09.12.12.0000318 LINES PRINTED ON LPC7.

WHITEROCK(13)

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/660		57.32	1.23	14.53	18.41	.26	2.88	1.67	1.39	2.07					.10	99.96
GT	5	38.20	.11	21.23	32.38	2.51	2.57	3.64	.04	0.90	.08	.06		.05		
	12	36.68	.11	20.84	36.89	.51	3.34	1.73	.03	.01	.08	.01		0.00		
	15	37.42	0.00	20.81	35.93	.47	3.51	1.88	.04	.02	.06	.14		.07		
	AVERAGE	37.44	.07	20.89	35.07	1.16	3.14	2.41	.04	.01	.07	.07		.04		
BIO	9	36.16	2.58	18.55	19.67	.02	5.48	0.00	.17	9.43	.16	.08		0.00		
	10	35.99	2.80	18.18	20.45	0.00	8.28	0.00	.28	8.99	.07	.07		.17		
	13	35.08	3.81	17.22	20.85	.06	8.77	0.00	.13	8.14	.09	.11		.16		
	14	35.10	2.82	17.78	20.43	0.00	8.79	0.00	.25	9.09	.03	.16		.04		
	AVERAGE	35.59	3.03	17.93	20.38	.02	8.86	0.00	.21	9.19	.09	.11		.09		
K498/1416B		58.42	.85	22.26	8.99	.06	2.82	.60	.91	5.03					.10	99.84
GT	19	37.32	0.00	21.36	37.01	.74	2.12	1.65	.05	0.00	0.00	0.00		.02		
	20	37.88	.02	21.10	36.53	1.05	2.20	1.84	.02	0.00	0.00	.06		.10		
	24	37.24	.03	20.27	37.39	1.07	2.40	1.79	.02	0.00	.11	.03		0.00		
	AVERAGE	37.48	.02	20.91	36.98	.95	2.24	1.69	.03	0.00	.04	.03		.04		
K498/1327A		65.11	.74	17.90	7.68	.08	2.07	.29	.65	5.36					.10	99.98
GT	25	36.24	.08	20.08	36.52	1.95	2.38	1.73	.05	0.00	0.00	0.00		.03		
	32	36.61	.01	20.71	36.58	1.40	2.18	2.28	0.00	.01	.09	0.00		.01		
	35	36.59	.03	18.97	35.73	1.21	2.13	2.39	.01	.02	.07	0.00		.07		
	AVERAGE	36.46	.04	20.25	36.61	1.52	2.23	2.14	.02	.01	.05	0.00		.04		
BIO	33	34.98	1.53	18.57	19.72	.05	5.79	0.00	.20	9.27	.03	.07		0.00		
	34	37.97	1.35	22.35	16.00	.01	7.78	0.00	.41	9.30	.09	.04		0.00		
	AVERAGE	36.48	1.44	20.46	17.86	.03	8.79	0.00	.31	9.29	.06	.06		0.00		
STAUR	198	27.82	.38	51.56	14.32	.04	1.39	.01	.02	0.00	.12		1.48	.04		
	197	27.59	.49	51.18	14.08	.01	1.48	0.00	.09	0.00	.07		1.39	0.00		
	AVERAGE	27.71	.44	51.37	14.20	.03	1.44	.01	.06	0.00	.10		1.44	.02		
K498/608		56.95	1.39	17.34	13.25	.17	2.24	.51	.42	4.37					.09	99.73
GT	318	36.90	.10	21.26	36.72	1.25	2.19	2.16	.08	.01	.02	.06		0.00		
	319	36.63	.08	20.48	35.76	1.15	2.08	2.28	0.00	0.00	.05	.08		.14		
	320	36.77	.07	20.25	37.12	.60	2.35	2.22	0.00	.01	.01	.03		0.00		
	AVERAGE	36.77	.08	20.66	36.51	1.00	2.21	2.22	.03	.01	.03	.06		.05		
BIO	40	37.74	1.35	18.16	16.11	0.00	10.68	0.00	.14	8.37	.08	.05		.07		
K498/372		NO WHOLE ROCK ANALYSIS														
GT	111	36.20	.18	21.14	30.67	3.12	.81	7.75	.02	.03	.27	.06		0.00		
	121	34.56	0.00	19.90	36.64	1.11	.74	5.86	.15	.03	.09	.03		0.00		
	122	36.86	.04	20.27	31.40	2.91	.77	7.83	.01	0.00	.03	.04		0.00		
	125	36.59	.05	20.48	30.35	2.52	.72	8.59	.01	.02	.12	0.00		0.00		
	127	36.39	.17	20.59	36.20	1.54	.82	4.12	0.00	.09	.07	.06		0.00		
	AVERAGE	36.12	.09	20.48	33.05	2.26	.79	6.85	.04	.03	.12	.04		0.00		
BIO	118	32.53	3.14	17.91	25.82	.06	5.15	0.00	.09	9.84	.09	.13		.01		
	120	33.11	2.89	17.60	25.86	.05	4.56	0.00	.32	9.60	.07	0.00		0.00		
	124	32.82	3.10	17.59	25.96	.05	4.77	0.00	.13	9.74	.18	.13		0.00		
	128	32.42	3.36	17.71	26.44	.03	4.85	0.00	.10	9.66	.18	.01		.04		
	AVERAGE	32.72	3.12	17.70	26.02	.05	4.93	0.00	.16	9.71	.13	.07		.01		

SAMPLE	AL	NORMALISED FE	OXIDES MG	K
K498/660	36.25	48.46	7.84	5.45
GT	35.35	55.32	5.31	.02
BIO	31.84	36.18	15.72	16.25
K498/1416B	56.93	22.99	7.21	12.86
GT	34.78	61.50	3.73	0.00
K498/1327A	54.23	23.27	6.27	16.24
GT	34.27	61.94	3.77	.02
BIO	36.28	31.67	15.58	16.47
STAUR	76.67	21.19	2.14	0.00
K498/608	46.61	35.82	6.62	11.75
GT	34.79	61.48	3.72	.01
BIO	34.06	30.21	20.03	15.70
GT	37.67	60.81	1.46	.06
BIO	30.33	44.58	8.45	16.64

RATIO OF PLOTTED GRIDS		A	F-M
SYMBOL	SAMPLE		
A	= K498/660	.280	.138
B	= GT	.353	.662
C	= BIO	-.483	.303
D	= K498/1416B	.378	.238
E	= GT	.348	.057
F	= K498/1327A	.157	.212
G	= GT	.342	.057
H	= BIO	-.384	.330
I	= STAUP	.767	.092
J	= K498/608	.215	.145
K	= GT	.348	.057
L	= BIO	-.350	.388
M	= GT	.376	.023
N	= BIO	-.585	.158

WHITEROCK (3)

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/366		56.29	1.64	17.76	16.84	.23	2.60	.93	.87	2.81					.13	99.90
GT	181	37.43	.06	21.14	34.06	2.50	2.60	2.89	.02	.02	.05	0.00		.04		
	184	37.43	.07	19.73	34.40	2.48	2.69	3.06	.11	.03	.05	.19		.01		
	AVERAGE	37.43	.07	20.44	34.23	2.49	2.65	3.03	.07	.03	.05	.10		.03		
BIO	176	35.79	1.81	16.98	17.80	.02	10.81	0.00	.16	9.58	.05	.05		.03		
	182	35.74	1.56	18.81	18.14	.05	11.16	0.00	.22	9.58	.12	0.00		.18		
	183	35.44	2.07	18.11	18.54	.05	11.08	0.00	.18	9.87	.09	.13		.08		
	AVERAGE	35.66	1.81	18.63	18.16	.04	11.02	0.00	.19	9.68	.09	.06		.10		
STAIR	168	30.57	.40	51.59	12.61	.16	1.38	0.00	.05	.05	.10		.11	0.00		
	169	32.54	.38	51.14	11.99	.20	1.32	.01	.03	.03	.08		.15	0.00		
	170	28.45	.33	52.18	12.61	.15	1.34	.02	.01	.01	.07		.23	.05		
	171	27.94	.35	51.75	13.87	.15	1.82	0.00	0.00	0.00	.06		.08	0.00		
	174	28.59	.44	51.72	14.10	.09	1.65	.02	.02	.01	.03		.22	.02		
	179	27.66	.52	51.81	13.43	.19	1.93	.02	.04	0.00	.16		.18	.08		
	AVERAGE	29.29	.40	51.70	13.15	.16	1.57	.01	.03	.02	.08		.16	.03		
K498/1337		54.50	2.23	20.57	17.55	.21	2.39	.51	.34	1.26					.12	95.58
GT	188	38.17	.05	20.78	33.91	2.16	4.35	1.43	.03	.01	.08	0.00		0.00		
STAIR	185	28.20	.21	50.15	13.33	.10	2.56	.01	.04	0.00	.07		.55	.01		
	190	28.69	.35	52.97	13.22	.07	2.56	.02	.02	.01	.02		.75	0.00		
	193	28.45	.29	51.67	12.86	.11	2.53	.02	.03	.01	.03		.64	.02		
	AVERAGE	28.45	.28	51.60	13.14	.09	2.55	.02	.03	.01	.04		.65	.01		
PLAG	186	60.71	.01	23.30	0.00	.02	.03	6.14	6.43	.04	0.00	0.00		.05		
	194	59.96	0.00	24.61	0.00	.05	.03	6.41	7.97	.01	.10	.07		0.00		
	AVERAGE	60.34	.01	23.96	0.00	.04	.03	6.28	6.20	.03	.05	.04		.03		
CHLOR	191	26.15	.06	23.24	16.55	.03	21.53	.02	.04	.01	.02	.08		0.00		
	192	25.85	.06	23.33	16.45	.06	21.37	.03	0.00	.03	.05	.05		0.00		
	AVERAGE	26.00	.06	23.29	16.50	.05	21.45	.03	.02	.02	.04	.07		0.00		
K498/1380		57.71	1.42	19.41	13.71	.20	2.70	1.07	.87	2.83					.15	100.07
GT	210	37.68	0.00	20.70	36.30	1.54	2.65	2.49	.03	.02	.05	.03		0.00		
	211	37.87	.01	19.54	36.80	1.82	2.86	1.97	0.00	0.00	0.00	.10		.07		
	213	38.72	.04	19.89	36.09	1.84	2.87	1.80	.05	0.00	.05	.17		.12		
	AVERAGE	38.09	.02	20.04	36.40	1.77	2.83	2.09	.03	.01	.03	.10		.06		
BIO	209	35.81	1.66	18.36	18.53	0.00	10.52	0.00	.22	9.90	.10	.13		0.00		
	214	36.18	2.04	19.42	18.40	0.00	10.43	0.00	.31	9.92	.03	0.00		.11		
	AVERAGE	36.00	1.85	18.89	18.47	0.00	10.48	0.00	.27	9.91	.07	.07		.06		
STAIR	201	27.50	.62	52.58	14.56	.04	1.59	.04	.05	0.00	.10		.94	0.00		
	205	28.54	.34	52.46	13.83	.02	1.69	.01	.08	.02	.10		1.00	.10		
	206	26.56	.45	51.75	13.81	.04	1.60	.01	.04	0.00	.09		1.07	0.00		
	AVERAGE	27.53	.47	52.26	14.07	.03	1.63	.02	.06	.01	.10		1.00	.03		
PLAG	202	59.41	.02	25.33	.10	0.00	.02	7.62	7.35	.03	0.00	.28		.09		
	208	59.44	0.00	25.55	.06	0.00	.04	7.75	7.39	.02	.02	0.00		0.00		
	AVERAGE	59.43	.01	25.44	.08	0.00	.03	7.69	7.37	.03	.01	.14		.05		

SAMPLE	AL	NORMALISED FE	OXIDES MG	K
K498/366	44.61	42.30	6.53	6.56
GT	35.64	59.70	4.61	.04
BIO	32.41	31.59	19.16	16.83
STAIR	77.81	19.79	2.37	.03
K498/1337	45.25	42.02	5.72	3.02
GT	35.19	57.43	7.37	.02
STAIR	76.68	19.52	3.79	.01
PLAG	99.77	0.00	.12	.10
CHLOR	38.01	26.94	35.02	.03
K498/1380	50.22	35.47	6.89	7.32
GT	33.81	61.40	4.77	.01
BIO	32.72	31.98	18.14	17.16
STAIR	76.90	20.70	2.38	.01
PLAG	99.47	.31	.12	.10

A	=	K4987368	.338	.134
B	=	GT	.356	.072
C	=	BID	-.554	.378
D	=	STAUR	.778	.107
E	=	K49871337	.457	.120
F	=	GT	.352	.114
G	=	STAUR	.767	.163
H	=	PLAG	.999	1.000
I	=	CHLOR	.380	.565
J	=	K49871380	.400	.165
K	=	GT	.338	.072
L	=	BID	-.599	.362
M	=	STAUR	.769	.104
N	=	PLAG	.996	.273

WHITEROCK(3)

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/14128		58.39	1.06	19.39	12.19	.09	3.19	1.51	2.15	2.02					.08	100.07
GT	236	37.51	0.00	20.90	35.74	.55	3.33	1.30	.01	.02	.06	.20		.06		
	240	36.13	.08	20.90	36.49	.54	3.33	1.26	.03	.01	0.00	.03		.09		
	241	37.16	.01	21.32	33.41	.45	5.31	1.16	.02	.01	.02	0.00		0.00		
	AVERAGE	36.93	.03	21.04	35.21	.51	3.99	1.24	.02	.01	.03	.08		.06		
STAIR	215	27.58	.56	53.11	12.45	.02	1.85	0.00	.09	0.00	.44		2.29	0.00		
	216	33.19	.57	45.58	13.62	.05	3.20	.64	.07	.78	.09		1.55	0.00		
	217	26.78	.56	54.31	12.69	.05	1.84	.02	.06	0.00	.11		2.45	0.00		
	218	27.01	.43	53.35	13.17	.04	1.60	.03	.07	.03	.19		2.01	.07		
	AVERAGE	28.64	.53	51.62	12.98	.04	2.12	.02	.07	.20	.21		2.08	.02		
BIO	238	35.89	.95	21.53	13.72	.02	12.58	0.00	.27	7.33	.07	.08		.05		
	242	34.70	1.31	18.63	16.08	.02	12.25	0.00	.23	8.38	.11	.05		.16		
	AVERAGE	35.30	1.13	20.08	14.91	.02	12.42	0.00	.25	8.36	.09	.06		.11		
CHLOR	235	25.36	.04	22.93	19.50	.01	18.20	.02	.03	.10	.05	.03		.06		
	239	24.82	.08	23.47	21.15	.02	17.31	.05	0.00	.05	.06	.15		0.00		
	AVERAGE	25.09	.06	23.20	20.33	.02	17.76	.04	.02	.08	.06	.10		.03		
PLAG	243	59.89	0.00	23.56	.12	.02	0.00	5.49	8.48	.04	0.00	.06		0.00		
	234	61.13	.05	23.72	.06	.02	.02	5.56	8.60	.05	.01	.05		0.00		
	AVERAGE	60.51	.03	23.64	.09	.02	.01	5.53	8.54	.05	.01	.06		0.00		
K498/1384		72.31	.21	14.44	3.63	.08	.52	4.05	3.57	.56					.07	99.43
GT	277	37.16	.02	20.80	30.56	1.98	4.61	3.74	.06	.01	.04	.06		.13		
	279	36.91	.05	20.98	33.28	2.73	2.14	3.81	.02	0.00	0.00	.11		.07		
	284	39.13	.05	20.19	30.13	2.35	4.31	3.89	0.00	.02	.04	0.00		.03		
	AVERAGE	37.73	.04	20.66	31.32	2.35	3.69	3.81	.03	.01	.03	.06		.08		
BIO	280	33.76	3.65	15.41	22.52	.02	9.20	0.00	.01	9.45	0.00	.01		.59		
PLAG	278	58.30	.04	25.11	.11	.04	0.00	7.62	7.22	.32	.02	0.00		0.00		
OPX	281	48.35	.09	1.54	32.44	.76	14.00	.49	.05	.02	0.00	.09		.06		
	285	51.60	.19	1.48	32.01	.87	13.84	.47	.05	0.00	0.00	0.00		0.00		
	AVERAGE	49.98	.14	1.51	32.23	.82	13.97	.48	.05	.01	0.00	.05		.03		
K498/580A		61.98	1.35	15.43	12.72	.15	3.48	1.71	1.42	1.47					.03	95.74
GT	288	37.71	.06	21.25	34.44	.64	4.48	1.12	.01	.03	0.00	0.00		.11		
	291	38.09	.04	21.13	35.33	.57	4.71	1.23	.05	.02	.05	.03		.10		
	292	37.77	.04	21.33	33.65	.60	4.55	1.22	.02	0.00	.01	0.00		0.00		
	295	37.21	.08	20.81	34.56	.57	4.07	1.24	.03	.03	.08	0.00		0.00		
	AVERAGE	37.70	.06	21.13	34.50	.60	4.46	1.20	.03	.02	.04	.01		.05		
BIO	289	37.17	1.66	15.27	12.21	0.00	14.09	0.00	.40	9.74	.02	.01		.41		
	290	36.42	1.71	15.18	13.93	0.00	13.43	0.00	.29	9.82	.07	.02		.57		
	293	36.08	1.71	18.36	13.93	0.00	13.33	0.00	.34	9.52	.10	.25		.41		
	294	36.15	1.82	18.47	13.41	.02	13.29	0.00	.30	9.57	.12	.11		.36		
	AVERAGE	36.46	1.73	18.82	13.37	.01	13.54	0.00	.33	9.69	.08	.10		.44		

SAMPLE	AL	NORMALISED FE	OXIDES MG	K
K498/14128	52.70	33.13	6.67	5.49
GT	34.92	56.44	6.62	.02
STAIR	77.13	19.40	3.17	.30
BIO	36.01	26.73	22.27	14.98
CHLOR	37.61	33.13	26.94	.12
PLAG	99.39	.36	.04	.19
K498/1384	75.40	18.96	2.72	2.92
GT	37.10	56.26	6.62	.02
BIO	27.24	35.80	18.28	16.70
PLAG	98.32	.43	0.00	1.25
OPX	3.16	67.54	29.28	.02
K498/580A	46.62	38.43	10.51	4.44
GT	35.16	57.40	7.41	.03
BIO	33.97	24.13	24.42	17.48

MUSCOVITE PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL SAMPLE A F-K

A = K498/14128 AFA .267

B	=	GT	.346	.102
C	=	STAUF	.772	.141
D	=	BIO	-.223	.455
E	=	CHLOR	.378	.468
F	=	PLAG	.596	.100
G	=	K498/1384	.755	.125
H	=	GT	.571	.105
I	=	BIO	-.688	.290
J	=	PLAG	.985	0.000
K	=	OPX	.031	.302
L	=	K498/880A	.405	.215
M	=	GT	.351	.114
N	=	BIO	-.61	.503

09.09.17.0000452 LINES PRINTED ON LP07.

DATE 79/08/09 13.03.41.

COMPOSITION VALUES ARE OXIDES OF ELEMENTS

BLACK ROCK

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K49878		50.88	0.70	13.50	15.43	.25	6.32	8.31	2.97	.15					.08	85.75
CT	864	37.32	.06	20.87	35.82	.73	2.75	2.45	.07	0.00	.01	0.00		.02		
	865	37.85	0.00	20.31	35.58	1.08	2.72	1.85	.04	0.00	.01	.01		0.00		
	866	37.60	.03	20.69	35.98	.90	2.67	1.90	0.00	.01	.02	.07		.08		
	870	37.01	.28	20.69	35.30	.84	3.02	1.90	.04	.08	.05	0.00		.12		
	1027	37.50	.08	20.82	35.56	.82	2.86	1.95	.03	.02	.01	0.00		.08		
PTC	1036	35.78	1.42	18.87	21.43	0.00	6.89	0.00	.07	9.30	0.00	.06		.03		
	869	35.10	.37	21.78	21.03	.01	.77	.14	.61	4.01	.05	.01		.08		
K4987111		57.09	1.42	15.21	14.84	.17	3.19	.43	.09	3.31					.13	81.41
CT	873	37.60	.07	20.87	34.82	.74	2.84	2.52	.03	.01	.01	0.00		.01		
	884	38.00	.07	21.82	38.11	.73	3.08	2.01	.08	.01	.14	.01		.01		
	886	37.99	.03	21.25	31.87	.81	3.39	2.24	.12	.02	.04	.04		0.00		
	887	37.38	.04	20.89	35.40	.84	2.77	2.54	.04	.03	.07	.01		0.00		
BIC	872	35.18	2.69	20.37	18.89	.07	7.12	0.00	.14	3.87	.22	.71		0.00		
	885	35.45	2.41	19.78	21.34	.07	7.40	0.00	.17	3.25	.13	1.08		.08		
	888	34.75	0.17	19.89	21.83	.05	4.08	0.00	.18	7.44	.20	.08		.01		
FILL	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		
K4987104		65.42	1.10	17.74	15.48	.05	1.82	.99	.37	3.37					.73	100.00
CT	1026	37.24	.02	21.46	37.70	.31	1.02	3.58	.03	.01	.12	.06		.10		
	1029	37.19	0.00	20.92	38.01	.35	1.11	5.02	.04	.01	.13	.07		.08		
	1033	37.18	.01	21.43	36.23	.31	1.21	4.87	.04	.01	.07	.10		0.00		
BIC	1027	33.82	3.41	18.49	27.53	.02	4.13	0.00	.07	6.00	.22	.19		.10		
	1028	33.75	0.28	18.90	27.86	.02	3.73	0.00	.08	6.38	.14	.18		.08		
	1031	33.59	2.19	16.75	27.73	0.00	3.86	0.00	.11	6.28	.18	.12		.08		
	1032	33.52	2.50	17.30	27.43	.07	4.06	0.00	.05	6.87	.11	.07		0.00		
K4987106		57.83	2.03	14.34	20.12	.12	3.11	1.14	.17	2.83					.77	81.84
CT	1038	37.32	.10	20.87	31.93	.21	2.08	2.20	.05	0.00	0.00	.17		0.00		
	1041	37.15	0.00	21.06	38.24	.19	2.03	2.05	.02	0.00	.02	.11		.02		
	1042	36.87	.08	20.71	37.87	.18	2.14	1.58	0.00	.03	.02	0.00		.04		
BIC	1039	34.62	2.22	17.46	22.84	0.00	6.23	0.00	.06	6.19	.15	.04		0.00		
	1040	33.61	2.55	17.86	23.48	.03	5.87	0.00	.07	6.30	.04	.22		0.00		
	1043	33.90	2.86	17.70	24.59	.05	5.75	0.00	.13	6.82	.05	.13		.10		
K4987101		64.31	1.10	13.70	13.21	.10	4.84	.84	.12	1.75					.01	75.83
CT	1057	38.44	0.00	21.45	30.96	.27	5.70	2.31	.03	.01	.03	.18		.01		
	1061	38.83	.07	21.60	30.94	.50	5.12	2.87	.03	0.00	.11	.02		.07		
	1055	37.83	.03	21.70	31.87	.51	5.88	2.15	.05	.02	.04	.13		.10		
PTC	1059	36.92	1.75	18.53	14.80	0.00	12.84	0.00	.14	6.55	.04	.01		.08		
	1060	36.08	1.32	17.09	16.76	.01	13.68	0.00	.10	7.85	.03	.08		.03		
	1064	35.82	1.36	17.57	21.57	.03	11.38	0.00	.11	8.88	.07	0.00		.01		
STAMP	1057	28.21	.75	50.58	12.74	0.00	2.44	.02	.01	.03	.19		.04	0.00		
	1052	29.11	.78	53.72	12.50	.02	1.37	.03	.01	.01	.08		0.00	0.00		

	1068	27.80	.38	53.15	13.84	0.00	1.38	.02	.02	0.00	.02	0.00
K498/68		35.87	.57	19.87	33.23	1.14	5.34	2.44	.12	1.30		.13 28.96
GT	884	38.38	.01	21.08	33.26	1.30	4.25	2.87	.07	0.00	0.00	.08 0.00
	885	32.02	.03	21.32	33.09	1.44	3.82	3.06	0.00	.01	.05	.04 0.00
	889	37.86	.10	21.07	33.62	1.45	3.79	2.88	0.00	0.00	0.00	.09 0.00
BIO	891	34.89	1.89	18.76	23.80	.24	7.36	0.00	.05	2.88	.13	.14 .20
	892	35.04	2.29	17.25	23.50	.08	7.34	0.00	.17	8.98	.06	0.00 0.00
	893	35.07	1.85	17.08	23.77	.17	7.08	0.00	.03	8.11	.12	.17 .08
	891	36.01	2.31	17.61	19.74	.10	8.27	0.00	.25	8.57	.04	0.00 0.00
CHL	896	23.56	.03	21.54	33.88	.11	8.58	.25	.03	.02	.02	.05 .22
	897	23.88	.25	21.22	34.54	.85	8.74	.46	0.00	.51	.03	0.00 .08
	898	25.35	0.00	21.00	28.18	.14	13.27	.04	0.00	.04	0.00	0.00 .01

SAMPLE	NORMALISED OXIDES			
	AL	FE	MG	K
K498/8	38.08	41.50	17.88	.45
GT	34.80	63.26	4.78	.04
BIO	40.25	37.62	8.88	13.87
K498/111	47.08	36.81	7.88	8.25
GT	38.15	18.83	5.00	.02
BIO	34.80	35.72	13.24	18.44
SILL	100.00	0.00	0.00	0.00
K498/104	34.18	48.28	7.78	10.73
GT	35.40	62.86	2.03	.02
BIO	29.10	47.74	5.87	18.28
K498/108	40.25	48.88	3.72	5.88
GT	33.89	62.80	3.40	.02
BIO	32.48	41.27	5.84	18.30
K498/121	41.14	38.87	13.83	5.26
GT	36.38	52.97	10.44	.02
BIO	32.01	31.44	21.08	15.47
STAUP	78.48	18.02	2.48	.02
K498/88	33.04	55.81	8.87	2.18
GT	28.18	57.00	6.82	.01
BIO	30.32	40.08	13.71	15.87
CHL	33.82	51.13	14.53	.01

MUSCOVITE PROJECTION
RATIOS OF FLOTTED OXIDES

SYMBOL	SAMPLE	A	F-K
A	= K498/8	.374	.253
B	= GT	.347	.174
C	= BIO	-.010	.185
D	= K498/111	.323	.178
E	= GT	.351	.077
F	= BIO	-.307	.285
G	= SILL	1.000	0.000
H	= K498/104	.035	.105
I	= GT	.354	.031
J	= BIO	-.556	.128
K	= K498/108	.281	.070
L	= GT	.340	.052
M	= BIO	-.472	.194
N	= K498/121	.321	.288
O	= GT	.365	.165
P	= BIO	-.378	.403

P =	K458/68	.250	.138
S =	GT	.362	.107
T =	BIO	-.474	.255
U =	CHL	.330	.221

DATE 79/08/09 13.03.49.

COMPOSITION VALUES ARE OXIDES OF ELEMENTS

BLACK ROCK

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	F	TOTAL
K498/111		57.09	1.42	19.11	14.94	.15	3.13	.49	.09	3.35					.12	93.98
GT	873	37.40	.07	20.87	34.82	.76	2.64	2.53	.03	.01	.05	0.00		.05		
	884	38.00	.08	20.82	36.11	.83	3.08	2.01	.06	.01	.14	0.00		0.00		
	886	37.59	.03	21.25	35.77	.61	3.39	2.24	.12	.02	.04	.04		0.00		
	887	37.38	.06	20.59	35.40	.64	2.78	2.54	.04	.01	.07	.01		0.00		
BIO	972	35.19	2.65	20.37	18.6	.07	7.12	0.00	.16	8.85	.13	.13		0.00		
	985	35.45	2.41	18.78	21.34	.07	7.40	0.00	.15	9.26	.11	0.00		.08		
	988	34.59	2.17	19.79	21.58	.08	8.08	0.00	.15	8.44	.20	.08		.01		
SILL	0	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		
K498/104		65.42	1.10	10.74	15.48	.05	1.72	.95	.87	3.37					.09	100.00
GT	1026	37.24	.02	27.45	37.70	.38	1.22	3.88	.03	.01	.12	.09		.10		
	1029	37.19	0.00	20.92	35.31	.36	1.11	5.02	.04	.01	.11	.02		.04		
	1030	37.19	.01	20.43	35.23	.31	1.21	4.88	.04	.03	.07	.15		0.00		
BIO	1027	32.88	3.41	18.49	27.63	.02	4.28	0.00	.07	9.50	.22	.15		.10		
	1028	32.25	3.28	18.50	27.98	.02	3.73	0.00	.05	9.38	.14	.16		.04		
	1031	32.85	2.89	18.75	27.75	0.00	3.88	0.00	.11	9.29	.19	.12		.21		
	1032	33.52	2.50	19.30	27.43	.08	4.05	0.00	.09	9.57	.11	.07		0.00		
K498/121		64.31	1.10	13.70	13.21	.10	4.84	.84	.12	1.75					.14	99.65
GT	1058	38.44	0.00	21.45	30.88	.27	5.70	2.11	.03	.01	.05	.18		.01		
	1061	38.83	.07	21.80	30.84	.50	6.12	2.87	.03	0.00	.11	.02		.07		
	1065	38.83	.03	21.70	31.87	.51	5.16	2.89	.05	.02	.04	.12		.28		
BIO	1018	38.92	1.75	18.73	14.80	0.00	12.84	0.00	.14	8.66	.04	.01		.08		
	1060	38.08	1.87	17.09	16.75	.01	11.88	0.00	.10	7.85	.03	.08		.03		
	1064	35.32	1.36	18.17	21.57	.03	14.38	0.00	.11	8.88	.07	0.00		.01		
STAIR	1057	28.21	.75	52.98	12.74	0.00	2.44	.02	.05	.03	.15		.04	0.00		
	1062	29.11	.78	53.72	10.50	.02	3.37	.03	.03	.01	.08		0.15	0.00		
	1063	28.24	.87	54.36	12.74	.03	1.82	.01	.03	.02	.18		.04	0.00		
	1068	27.80	.38	53.15	13.84	0.00	1.39	.02	.02	0.00	.02		0.00	.01		

NORMALISED OXIDES

SAMPLE	AL	FE	MG	K
K498/111	47.08	38.81	7.88	8.25
GT	35.15	55.83	5.00	.02
BIO	34.60	36.72	13.24	15.44
SILL	100.00	0.00	0.00	0.00
K498/104	34.19	48.28	5.75	10.73
GT	35.40	62.56	2.03	.02
BIO	29.10	47.74	6.87	18.28
K498/121	41.14	35.67	13.53	5.26
GT	35.58	52.97	10.44	.02
BIO	32.01	31.44	21.05	15.47
STAIR	78.49	19.02	2.46	.02

SYMBOL	SAMPLE	A	F-M
A	= K498/111	.485	.176
P	= GT	.351	.077
C	= BIO	.277	.265
D	= SILL	1.000	0.000
E	= K498/104	.298	.105
F	= GT	.354	.031
G	= BIO	.190	.124
M	= K498/121	.401	.260
I	= GT	.386	.165
J	= BIO	.239	.401
K	= STAUP	.785	.115

13.42.44.0000320 LINES PRINTED ON LE07.

WHITEROCK (3)

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	HG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/660		57.32	1.23	14.53	18.41	.26	2.98	1.57	1.39	2.07					.10	99.95
GT	5	38.20	.11	21.23	32.38	2.51	2.57	3.64	.04	0.00	.08	.06		.05		
	12	36.68	.11	20.84	36.89	.51	3.34	1.73	.03	.01	.08	.01		0.00		
	15	37.43	0.00	20.61	35.83	.47	3.51	1.88	.04	.02	.06	.14		.07		
	AVERAGE	37.44	.07	20.89	35.07	1.18	3.14	2.41	.04	.01	.07	.07		.04		
BIO	9	36.16	2.58	18.55	19.67	.02	8.48	0.00	.17	9.43	.16	.08		0.00		
	10	35.89	2.80	18.18	20.45	0.00	8.38	0.00	.28	8.99	.07	.07		.17		
	13	35.09	3.81	17.22	20.85	.06	8.77	0.00	.13	9.14	.09	.11		.16		
	14	35.10	2.82	17.78	20.43	0.30	8.79	0.00	.25	9.05	.03	.16		.04		
	AVERAGE	35.59	3.03	17.93	20.38	.02	8.86	0.00	.21	9.15	.09	.11		.05		
K498/1416B		58.42	.65	22.26	8.89	.06	2.82	.60	.91	5.03					.10	99.94
GT	19	37.32	0.00	21.36	37.01	.74	2.12	1.65	.05	0.00	0.00	0.00		.02		
	20	37.88	.02	21.18	36.53	1.05	2.20	1.64	.02	0.00	0.00	.06		.10		
	24	37.24	.03	20.27	37.39	1.07	2.40	1.79	.02	0.00	.11	.03		0.00		
	AVERAGE	37.48	.02	20.91	36.98	.95	2.24	1.69	.03	0.00	.04	.03		.04		
K498/1327A		65.11	.74	17.90	7.68	.08	2.07	.29	.85	5.36					.10	99.98
GT	29	36.24	.08	20.08	36.52	1.95	2.36	1.73	.05	0.00	0.00	0.00		.03		
	32	36.61	.01	20.71	36.58	1.40	2.18	2.28	0.00	.01	.09	0.00		.01		
	35	36.59	.03	19.97	36.73	1.21	2.13	2.39	.01	.02	.07	0.00		.07		
	AVERAGE	36.48	.04	20.25	36.61	1.52	2.23	2.14	.02	.01	.05	0.00		.04		
BIO	33	34.98	1.53	18.57	19.72	.05	8.79	0.00	.20	9.27	.03	.07		0.00		
	34	37.97	1.35	22.35	16.00	.01	7.78	0.00	.41	9.30	.09	.04		0.00		
	AVERAGE	36.48	1.44	20.46	17.86	.03	8.79	0.00	.31	9.29	.06	.06		0.00		
STAUR	196	27.82	.38	51.56	14.32	.04	1.38	.01	.02	0.00	.12		1.48	.04		
	197	27.59	.49	51.18	14.08	.01	1.48	0.00	.05	0.00	.07		1.39	0.00		
	AVERAGE	27.71	.44	51.37	14.20	.03	1.44	.01	.06	0.00	.10		1.44	.02		
K498/608		58.95	1.39	17.34	13.25	.17	2.24	.51	.42	4.37					.09	99.73
GT	27	38.25	0.00	22.83	34.24	.55	2.13	1.15	1.29	0.00	0.00	0.00		0.00		
	28	36.80	0.00	20.85	38.30	.79	2.32	1.86	0.00	0.00	0.00	0.00		0.00		
	29	36.88	0.00	20.61	37.53	1.11	2.23	2.33	0.00	0.00	0.00	0.00		0.00		
	30	36.11	0.00	20.24	38.61	.57	2.36	.88	0.00	0.00	0.00	0.00		0.00		
	31	36.69	0.00	20.56	38.83	.69	2.36	1.09	0.00	0.00	0.00	0.00		0.00		
	32	35.58	0.00	20.55	38.10	.79	2.21	1.93	0.00	0.00	0.00	0.00		0.00		
	33	37.04	0.00	20.74	37.86	.87	2.21	2.14	0.00	0.00	0.00	0.00		0.00		
	34	36.49	0.00	20.58	36.81	1.44	2.27	2.44	0.00	0.00	0.00	0.00		0.00		
	35	36.67	0.00	20.36	36.58	2.11	2.12	2.33	0.00	0.00	0.00	0.00		0.00		
	318	36.90	.10	21.26	36.72	1.25	2.19	2.15	.08	.01	.02	.06		0.00		
	319	36.63	.08	20.48	35.70	1.15	2.08	2.28	0.00	0.00	.05	.08		.14		
	320	36.77	.07	20.25	37.12	.60	2.35	2.22	0.00	.01	.01	.03		0.00		
	AVERAGE	36.82	.02	20.77	37.19	1.00	2.24	1.99	.11	.00	.01	.01		.01		
BIO	40	37.74	1.35	18.16	15.11	0.00	10.68	0.00	.14	8.37	.08	.05		.07		
K498/372		65.25	1.54	11.42	13.00	.11	1.80	2.88	.16	3.57					.12	99.85
GT	118	36.20	.18	21.14	30.67	3.12	.81	7.75	.02	.03	.27	.06		0.00		
	121	34.56	0.00	19.90	36.64	1.11	.74	5.96	.15	.03	.09	.03		0.00		
	122	36.86	.04	20.27	31.40	2.91	.77	7.83	.01	0.00	.05	.04		0.00		
	125	36.59	.05	20.48	30.35	2.82	.72	8.59	.01	.02	.12	0.00		0.00		
	127	36.39	.17	20.59	38.20	1.54	.82	4.12	0.00	.09	.07	.05		0.00		
	AVERAGE	36.12	.09	20.48	33.05	2.26	.79	6.85	.04	.03	.12	.04		0.00		
BIO	119	32.53	3.14	17.91	25.82	.06	5.15	0.00	.09	9.84	.09	.13		.01		
	120	33.11	2.89	17.60	25.86	.05	4.96	0.00	.32	9.60	.07	0.00		0.00		
	124	32.82	3.10	17.59	25.96	.05	4.77	0.00	.13	9.74	.18	.15		0.00		
	126	32.42	3.36	17.71	26.44	.03	4.85	0.00	.10	9.66	.18	.01		.04		
	AVERAGE	32.72	3.12	17.70	26.02	.05	4.83	0.00	.16	9.71	.13	.07		.01		

SAMPLE	NORMALISED OXIDES			
	AL	FE	HG	K
K498/660	38.25	48.46	7.84	5.45
GT	35.35	59.32	5.31	.02
BIO	31.84	36.18	15.72	16.25
K498/1416B	56.93	22.99	7.21	12.86
GT	34.78	61.50	3.73	0.00
K498/1327A	54.23	23.27	6.27	16.24
GT	34.27	61.84	3.77	.02

STAIR	76.67	21.13	2.14	0.00
K498/608	48.61	35.62	5.02	11.75
GT	34.51	61.78	3.72	.00
BIO	34.08	39.21	20.03	15.70
K498/372	38.34	43.64	6.04	11.88
GT	37.67	60.81	1.46	.06
BIO	30.33	44.58	8.45	15.64

MUSCOVITE PROJECTION
RATIOS OF PLOTTED OXIDES

SYMBOL	SAMPLE	A	F-M
A	= K498/660	.280	.139
B	= GT	.353	.082
C	= BIO	-.483	.303
D	= K498/1416B	.378	.239
E	= GT	.348	.057
F	= K498/1327A	.157	.212
G	= GT	.342	.057
H	= BIO	-.384	.330
I	= STAIR	.767	.092
J	= K498/608	.215	.145
K	= GT	.345	.057
L	= BIO	-.350	.399
M	= K498/372	.046	.122
N	= GT	.376	.023
O	= BIO	-.585	.159

WHITEROCK (3)

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/366		56.29	1.64	17.76	16.84	.23	2.80	.93	.87	2.61					.13	99.90
GT	181	37.43	.06	21.14	34.06	2.50	2.80	2.99	.02	.02	.05	0.00		.04		
	184	37.43	.07	19.73	34.40	2.48	2.89	3.06	.11	.03	.05	.19		.01		
	AVERAGE	37.43	.07	20.44	34.23	2.49	2.85	3.03	.07	.03	.05	.10		.03		
BID	178	35.79	1.61	18.98	17.80	.02	10.81	0.00	.16	9.58	.05	.05		.03		
	182	35.74	1.56	18.81	18.14	.05	11.16	0.00	.22	9.58	.12	0.00		.18		
	183	35.44	2.07	18.11	18.54	.05	11.08	0.00	.18	9.87	.09	.13		.08		
	AVERAGE	35.66	1.81	18.63	18.16	.04	11.02	0.00	.19	9.68	.09	.06		.10		
STAUR	168	30.57	.40	51.59	12.61	.16	1.38	0.00	.05	.05	.10		.11	0.00		
	169	32.54	.38	51.14	11.99	.20	1.32	.01	.03	.03	.08		.15	0.00		
	170	28.45	.33	52.18	12.81	.15	1.34	.02	.01	.01	.07		.23	.05		
	171	27.94	.35	51.75	13.87	.15	1.82	0.00	0.00	0.00	.06		.08	0.00		
	174	28.59	.44	51.72	14.10	.09	1.65	.02	.02	.01	.03		.22	.02		
	178	27.66	.52	51.81	13.43	.18	1.93	.02	.04	0.00	.16		.18	.08		
	AVERAGE	29.29	.40	51.70	13.15	.16	1.57	.01	.03	.02	.08		.16	.03		
K498/1337		54.50	2.23	20.57	17.55	.21	2.39	.51	.34	1.26					.12	95.68
GT	188	38.17	.05	20.78	33.91	2.16	4.35	1.43	.03	.01	.08	0.00		0.00		
STAUR	185	28.20	.21	50.15	13.33	.10	2.56	.91	.04	0.00	.07		.55	.01		
	190	28.69	.35	52.97	13.22	.07	2.56	.02	.02	.01	.02		.75	0.00		
	193	28.45	.29	51.67	12.86	.11	2.53	.02	.03	.01	.03		.84	.02		
	AVERAGE	28.45	.28	51.60	13.14	.09	2.55	.02	.03	.01	.04		.80	.01		
PLAG	186	60.71	.01	23.30	0.00	.02	.03	6.14	8.43	.04	0.00	0.00		.05		
	194	59.96	0.00	24.61	0.00	.05	.03	6.41	7.97	.01	.10	.07		0.00		
	AVERAGE	60.34	.01	23.96	0.00	.04	.03	6.28	8.20	.03	.05	.04		.03		
CHLOR	191	26.15	.06	23.24	16.55	.03	21.53	.02	.04	.01	.02	.08		0.00		
	192	25.85	.06	23.33	16.45	.06	21.37	.03	0.00	.03	.05	.05		0.00		
	AVERAGE	26.00	.06	23.29	16.50	.05	21.45	.03	.02	.02	.04	.07		0.00		
K498/1380		57.71	1.42	19.41	13.71	.20	2.70	1.07	.87	2.83					.15	100.07
GT	210	37.68	0.00	20.70	36.30	1.54	2.85	2.49	.03	.02	.05	.03		0.00		
	211	37.87	.01	19.94	36.80	1.92	2.96	1.97	0.00	0.00	0.00	.10		.07		
	213	38.72	.04	19.89	36.09	1.84	2.88	1.80	.05	0.00	.05	.17		.12		
	AVERAGE	38.09	.02	20.04	36.40	1.77	2.83	2.09	.03	.01	.03	.10		.06		
BID	209	35.81	1.65	18.36	18.53	0.00	10.52	0.00	.22	9.90	.10	.13		0.00		
	214	36.18	2.04	19.42	18.40	0.00	10.43	0.00	.31	9.92	.13	0.00		.11		
	AVERAGE	36.00	1.85	18.89	18.47	0.00	10.48	0.00	.27	9.91	.07	.07		.06		
STAUR	201	27.50	.52	52.58	14.56	.04	1.59	.04	.05	0.00	.10		.94	0.00		
	205	28.54	.34	52.46	13.83	.02	1.69	.01	.08	.02	.10		1.00	.00		
	206	26.56	.45	51.75	13.81	.04	1.80	.01	.04	0.00	.09		1.07	0.00		
	AVERAGE	27.53	.47	52.26	14.07	.03	1.63	.02	.06	.01	.10		1.00	.03		
PLAG	202	59.41	.02	25.33	.10	0.00	.02	7.62	7.35	.03	0.00	.28		.09		
	208	59.44	0.00	25.55	.06	0.00	.04	7.75	7.39	.02	.02	0.00		0.00		
	AVERAGE	59.43	.01	25.44	.08	0.00	.03	7.69	7.37	.03	.01	.14		.05		

SAMPLE	AL	NORMALISED FE	OXIDES MG	K
K498/366	44.61	42.30	6.53	5.56
GT	35.64	59.70	4.81	.04
BID	32.41	31.59	18.16	16.83
STAUR	77.81	19.79	2.37	.03
K498/1337	48.25	42.02	5.72	3.02
GT	35.19	57.43	7.37	.02
STAUR	76.68	18.52	3.78	.01
PLAG	99.77	0.00	.12	.10
CHLOR	38.01	26.94	35.02	.03
K498/1380	50.22	35.47	6.99	7.32
GT	33.81	61.40	4.77	.01
BID	32.72	31.98	18.14	17.16
STAUR	76.90	20.70	2.38	.01
PLAG	99.47	.31	.12	.10

MUSCOVITE PROJECTION
RATIOS OF PLOTTED OXIDES
SYMBOL SAMPLE A F=M

A	=	K498/366	.336	.134
B	=	GT	.356	.072
C	=	BID	-.554	.378
D	=	STAIR	.778	.107
E	=	K498/1337	.457	.120
F	=	GT	.352	.114
G	=	STAIR	.767	.163
H	=	PLAG	.888	1.000
I	=	CHLOR	.380	.585
J	=	K498/1380	.400	.185
K	=	GT	.338	.072
L	=	BID	-.588	.362
M	=	STAIR	.769	.104
N	=	PLAG	.888	.273

WHITEROCK(3)

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/1412B		58.35	1.06	19.38	12.19	.09	3.19	1.51	2.15	2.02					.09	100.07
GT	236	37.51	0.00	20.90	35.74	.55	3.33	1.30	.01	.02	.06	.20		.08		
	240	36.13	.08	20.99	36.49	.54	3.33	1.25	.03	.01	0.00	.03		.05		
	241	37.16	.01	21.32	33.41	.45	3.31	1.16	.02	.01	.02	0.00		0.00		
	AVERAGE	36.93	.03	21.04	35.21	.51	3.95	1.24	.02	.01	.03	.08		.06		
STAUR	215	27.56	.56	53.11	12.45	.02	1.85	0.00	.09	0.00	.44		2.23	0.00		
	216	33.19	.57	45.68	13.62	.05	3.20	.04	.07	.78	.08		1.55	0.00		
	217	26.78	.56	54.31	12.68	.05	1.84	.02	.06	0.00	.11		2.46	0.00		
	218	27.01	.43	53.36	13.17	.04	1.60	.03	.07	.03	.19		2.01	.07		
	AVERAGE	28.64	.53	51.62	12.98	.04	2.12	.02	.07	.29	.21		2.08	.02		
BIO	238	35.89	.95	21.53	13.72	.02	12.58	0.00	.27	7.33	.07	.08		.05		
	242	34.70	1.31	18.63	16.09	.02	12.26	0.00	.23	9.38	.11	.05		.15		
	AVERAGE	35.30	1.13	20.08	14.91	.02	12.42	0.00	.25	8.36	.09	.06		.11		
CHLOR	235	25.36	.04	22.83	19.50	.01	13.20	.02	.03	.10	.05	.03		.06		
	239	24.82	.08	23.47	21.15	.02	17.31	.05	0.00	.05	.06	.16		0.00		
	AVERAGE	25.09	.06	23.20	20.33	.02	17.75	.04	.02	.08	.06	.10		.03		
PLAG	243	59.89	0.00	23.56	.12	.02	0.00	5.48	8.48	.04	0.00	.05		0.00		
	234	61.13	.05	23.72	.06	.02	.02	5.56	8.60	.05	.01	.05		0.00		
	AVERAGE	60.51	.03	23.64	.09	.02	.01	5.53	8.54	.05	.01	.06		0.00		
K498/1384		72.31	.21	14.44	3.63	.06	.52	4.05	3.57	.56					.06	99.43
GT	277	37.16	.02	20.80	30.56	1.95	4.61	3.74	.06	.01	.04	.06		.13		
	279	35.91	.05	20.96	33.28	2.73	2.14	3.81	.02	0.00	0.00	.11		.08		
	284	39.13	.05	20.19	30.13	2.35	4.31	3.89	0.00	.02	.04	0.00		.03		
	AVERAGE	37.73	.04	20.65	31.32	2.35	3.69	3.81	.03	.01	.03	.06		.08		
BIO	280	33.76	3.65	15.41	22.52	.02	9.20	0.00	.01	9.45	0.00	.01		.55		
PLAG	278	58.30	.04	25.11	.11	.04	0.00	7.62	7.22	.32	.02	0.00		0.00		
OPX	281	48.35	.08	1.54	32.44	.76	14.00	.43	.05	.02	0.00	.09		.06		
	285	51.60	.19	1.48	32.01	.87	13.94	.47	.05	0.00	0.00	0.00		0.00		
	AVERAGE	49.98	.14	1.51	32.23	.82	13.97	.48	.05	.01	0.00	.05		.03		
K498/680A		61.98	1.35	15.43	12.72	.15	3.48	1.71	1.42	1.47					.03	99.74
GT	288	37.71	.06	21.25	34.44	.64	4.48	1.12	.01	.03	0.00	0.00		.11		
	291	38.09	.04	21.13	35.33	.57	4.71	1.23	.05	.02	.05	.03		.10		
	292	37.77	.04	21.33	33.65	.60	4.56	1.22	.02	0.00	.01	0.00		0.00		
	295	37.21	.08	20.81	34.56	.57	4.07	1.24	.05	.03	.08	0.00		0.00		
	AVERAGE	37.70	.06	21.13	34.50	.60	4.46	1.20	.03	.02	.04	.01		.05		
BIO	289	37.17	1.66	18.27	12.21	0.00	14.09	0.00	.40	9.74	.02	.01		.41		
	290	36.42	1.71	19.19	13.93	0.00	13.43	0.00	.29	9.82	.07	.02		.57		
	293	36.08	1.71	18.36	13.93	0.00	13.33	0.00	.34	9.52	.10	.25		.41		
	294	36.15	1.62	18.47	13.41	.02	13.29	0.00	.30	9.67	.12	.11		.36		
	AVERAGE	36.46	1.73	18.82	13.37	.01	13.54	0.00	.33	9.68	.08	.10		.44		

SAMPLE	AL	NORMALISED OXIDES		
		FE	MG	K
K498/1412B	52.70	33.13	8.67	5.43
GT	34.32	58.44	6.62	.02
STAUR	77.10	19.40	3.17	.30
BIO	36.01	26.70	22.27	14.98
CHLOR	37.81	33.13	28.94	.12
PLAG	59.39	.38	.04	.19
K498/1384	75.40	16.96	2.72	2.92
GT	37.10	56.26	6.62	.02
BIO	27.24	39.60	16.26	16.70
PLAG	98.32	.43	0.00	1.25
OPX	3.16	67.54	28.26	.02
K498/680A	46.62	38.43	10.51	4.44
GT	35.16	57.40	7.41	.03
BIO	33.97	24.13	24.42	17.48

MUSCOVITE PROJECTION
RATIOS OF PLOTTED OXIDES
SYMBOL SAMPLE A F=M

A = K498/1412B .464 .207

B	==	GT	.789	.197
C	==	STAIR	.772	.141
D	==	BIO	-.223	.455
E	==	CHLOR	.376	.486
F	==	PLAG	.996	.100
G	==	K498/284	.755	.125
H	==	GT	.371	.105
I	==	BIO	-.689	.290
J	==	PLAG	.995	0.000
K	==	OPX	.031	.302
L	==	K498/680A	.405	.215
M	==	GT	.351	.114
N	==	BIO	-.814	.503

10.32.10.0000473 LINES PRINTED ON LP06.

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SGJAPKJ //// END OF LIST ////

DATE 79/11/04 13.37.26.

COMPOSITION VALUES ARE OXIDES OF ELEMENTS

ZONED GARNETS

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	P	TOTAL
K498/830																
GTRIM1	166	36.43	0.00	20.26	35.89	1.66	2.58	1.71	.01	.01	.04	.05		0.00		
GT2	146	37.73	.08	21.05	34.78	1.41	2.98	2.33	.01	0.00	.06	.01		0.00		
GT3	147	37.07	.08	20.62	34.83	1.52	2.53	2.37	.06	0.00	.09	.05		.02		
GT4	148	37.78	.22	21.28	32.44	1.29	4.08	2.35	0.00	0.00	.08	.02		.20		
GT5	154	37.72	.08	20.84	32.95	1.32	3.61	2.46	.03	0.00	0.00	0.00		.20		
GT6	157	37.39	.01	20.87	33.86	1.33	3.01	2.37	.03	.01	.08	.06		0.00		
GT7	160	38.16	.10	21.11	31.01	1.32	4.98	2.35	.04	0.00	.07	0.00		.04		
GT8	161	38.95	.04	21.27	31.75	1.25	4.82	2.41	.03	0.00	.07	.02		.13		
GTCORE9	162	38.28	.05	21.48	31.65	1.25	5.03	1.91	.04	0.00	.08	.10		0.00		

SAMPLE	FE	NORMALISED MN	OXIDES MG	CA
GTRIM1	86.11	3.87	6.02	3.98
GT2	83.81	3.40	7.18	5.51
GT3	84.44	3.57	6.13	5.75
GT4	80.78	3.21	10.18	5.85
GT5	81.68	3.27	8.95	6.10
GT6	83.46	3.28	7.42	5.84
GT7	78.19	3.33	12.56	5.93
GT8	78.92	3.11	11.98	5.99
GTCORE9	79.44	3.14	12.63	4.78

COORDINATES OF SYMBOL	SAMPLE	PLOTTED X	OXIDES Y	X1	Y1
A =	GTRIM1	18.224	1.734	10.203	15.586
B =	GT2	18.041	2.216	10.157	15.104
C =	GT3	18.077	2.057	10.039	15.263
D =	GT4	17.756	2.773	10.431	14.547
E =	GT5	17.842	2.606	10.285	14.714
F =	GT6	18.018	2.217	10.158	15.024
G =	GT7	17.486	3.201	10.663	14.119
H =	GT8	17.581	3.113	10.599	14.208
I =	GTCORE9	17.631	3.017	10.783	14.303

12.04.57.000005F LINES PRINTED ON LP07.

SGJAPYJ //// END OF LIST ////

ZONED GARNETS

SAMPLE	PROBE NO	SI	TI	AL	FE	MN	MG	CA	NA	K	CR	NI	ZN	BA	F	TOTAL
76256 GT1	4823	36.83	0.00	20.69	37.83	.52	2.79	2.17	0.00	0.00	0.00	0.00		0.00		
GT2	4824	37.32	0.00	21.08	34.88	0.00	2.48	5.11	0.00	0.00	0.00	0.00		0.00		
GT3	4830	36.71	0.00	21.16	38.27	.48	2.85	1.80	0.00	0.00	0.00	0.00		0.00		
GT4	4831	36.95	0.00	21.08	37.85	.49	2.64	2.15	0.00	0.00	0.00	0.00		0.00		
GT5	4832	37.33	0.00	21.12	37.54	.52	2.60	2.34	0.00	0.00	0.00	0.00		0.00		
GT6	4833	37.05	0.00	21.22	34.87	0.00	2.38	5.40	0.00	0.00	.11	0.00		0.00		
K49876198 GT1	4887	36.86	0.00	21.25	24.68	11.84	3.17	2.20	0.00	0.00	0.00	0.00		0.00		
GT2	4888	36.88	0.00	20.84	25.55	10.87	3.17	2.47	0.00	0.00	0.00	0.00		0.00		
GT3	4893	37.09	0.00	20.84	24.93	11.85	3.22	2.14	0.00	0.00	0.00	0.00		0.00		

SAMPLE	FE	NORMALISED OXIDES		
		PN	MG	CA
GT1	27.31	1.20	6.44	5.01
GT2	32.17	0.00	6.80	10.04
GT3	25.28	1.21	6.97	4.15
GT4	27.74	1.24	6.22	5.01
GT5	27.30	1.21	6.05	5.44
GT6	31.63	0.00	6.82	10.75
GT1	26.78	1.24	7.15	5.24
GT2	30.75	0.00	7.14	5.87
GT3	28.42	1.27	7.88	5.10

COORDINATES OF		PLOTTED OXIDES				
SYMBOL	SAMPLE	X	Y	X1	Y1	
A	H	GT1	18.817	1.924	10.143	15.857
B	H	GT2	18.217	0.000	3.375	14.232
C	H	GT3	18.707	1.858	10.242	15.485
D	H	GT4	18.580	1.927	10.111	15.393
E	H	GT5	18.800	1.930	10.080	15.951
F	H	GT6	18.183	0.000	8.267	14.198
G	H	GT1	13.034	0.215	10.231	15.105
H	H	GT2	13.450	0.323	10.188	14.858
I	H	GT3	13.187	0.215	10.255	15.111

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WAVELENGTH 498/1401

SN K ALPHA	2.54
PB K ALPHA	8.07
ZR K ALPHA	9.40
Y K ALPHA	10.91
SR K ALPHA	12.70
RB K ALPHA	14.81
SE K ALPHA	24.52
AS K ALPHA	29.22
GA K ALPHA	42.26
ZH K ALPHA	51.41
CU K ALPHA	62.76
NI K ALPHA	77.20
CO K ALPHA	56.40
MN K ALPHA	91.09
CR K ALPHA	115.91
V K ALPHA	143.64
TI K ALPHA	186.80
SC K ALPHA	245.93
TH L ALPHA	16.59
BA L ALPHA	171.82
PB L BETA1	17.72
BA L BETA1	152.17
CE L BETA1	124.10
PD K ALPHA	6.98
W L ALPHA	55.49

WHOLE ROCK ANALYSES (ORIGINAL MATERIAL)

SiO2	58.43
Al2O3	18.19
Fe2O3	12.03
FeO	0.00
MnO	0.06
MgO	3.45
CaO	0.86
Na2O	1.17
K2O	3.39
TiO2	1.18
P2O5	0.04
H2O+	1.04
NiO	0.00
S	0.00
TOTAL	99.84

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH K498/203

BN K ALPHA	2.85
NB K ALPHA	9.09
ZR K ALPHA	10.59
Y K ALPHA	12.29
SR K ALPHA	14.31
RB K ALPHA	16.74
SE K ALPHA	27.62
AS K ALPHA	32.93
GA K ALPHA	47.62
ZN K ALPHA	57.91
CU K ALPHA	70.71
NI K ALPHA	86.99
CO K ALPHA	66.28
MN K ALPHA	102.69
CR K ALPHA	130.68
V K ALPHA	160.84
TI K ALPHA	209.15
SC K ALPHA	275.36
TH L ALPHA	18.69
BA L ALPHA	214.78
PB L BETA1	19.84
BA L BETA1	167.33

WHOLE ROCK ANALYSES (ORIGINAL MATERIAL)

SI02	42.46
TIO2	1.57
AL2O3	12.18
FE2O3	13.37
FE0	0.00
MNO	0.24
MGO	4.16
CAO	11.50
NA2O	4.46
K2O	0.26
P2O5	0.20
H2O+	10.33
NIO	0.00
S	0.00
TOTAL	100.72

WAVELENGTH	K498/210	K498/211	K498/212	K498/213
SN K ALPHA	2.17	3.10	1.90	1.99
NB K ALPHA	6.85	9.93	5.96	6.27
ZR K ALPHA	7.99	11.56	6.96	7.32
Y K ALPHA	9.27	13.42	8.06	8.49
SR K ALPHA	10.80	15.63	9.39	9.89
RB K ALPHA	12.63	18.28	10.99	11.57
SE K ALPHA	20.85	30.16	18.14	19.09
AS K ALPHA	24.84	35.94	21.61	22.74
GA K ALPHA	35.93	51.99	31.26	32.90
ZN K ALPHA	43.70	63.22	38.02	40.02
CU K ALPHA	53.35	77.20	46.41	48.85
NI K ALPHA	65.62	94.97	57.08	60.08
CO K ALPHA	59.58	73.10	57.89	61.52
MN K ALPHA	92.97	113.70	90.30	96.22
CR K ALPHA	118.35	144.68	114.97	122.52
V K ALPHA	149.28	178.27	146.08	156.13
TI K ALPHA	194.25	231.82	190.14	203.22
SC K ALPHA	255.88	305.22	250.55	267.79
TH L ALPHA	14.12	20.37	12.31	12.95
BA L ALPHA	199.47	238.06	195.26	208.69
PB L BETA1	15.17	21.65	13.29	13.95
BA L BETA1	157.71	184.72	154.77	164.39

WHOLE ROCK ANALYSES (ORIGINAL MATERIAL)

SiO2	68.43	52.78	76.53	74.92
TiO2	0.65	1.70	0.41	0.34
Al2O3	14.44	12.84	11.31	11.13
Fe2O3	7.09	14.37	4.26	4.29
FeO	0.00	0.00	0.00	0.00
MnO	0.06	0.17	0.06	0.02
MgO	1.82	3.67	0.62	0.54
CaO	0.58	13.62	0.53	0.35
Na2O	1.58	0.26	2.53	1.86
K2O	4.57	0.28	3.26	6.17
P2O5	0.12	0.22	0.14	0.12
H2O+	0.00	0.00	0.00	0.00
NiO	0.00	0.00	0.00	0.00
S	0.00	0.00	0.00	0.00
TOTAL	99.34	99.91	99.65	99.74

WAVELENGTH	498/231	498/232	498/242	560/94
SN K ALPHA	1.97	1.91	2.82	2.75
NB K ALPHA	6.19	6.02	9.02	6.79
ZR K ALPHA	7.22	7.03	10.49	10.23
Y K ALPHA	8.38	8.15	12.19	11.88
SR K ALPHA	9.76	9.49	14.19	13.83
RB K ALPHA	11.41	11.10	16.60	16.18
SE K ALPHA	18.83	18.32	27.38	26.70
AB K ALPHA	22.44	21.82	32.64	31.83
GA K ALPHA	32.46	31.57	47.21	46.03
ZN K ALPHA	39.48	38.40	57.41	55.98
CU K ALPHA	48.17	46.87	70.10	68.35
NI K ALPHA	59.27	57.65	86.25	84.09
CO K ALPHA	62.22	61.87	59.51	58.60
MN K ALPHA	97.21	96.86	91.63	90.52
CR K ALPHA	123.79	123.34	116.55	115.15
V K ALPHA	158.13	157.67	140.70	142.88
TI K ALPHA	205.87	205.26	182.88	185.74
SC K ALPHA	271.29	270.51	240.66	244.47
TH L ALPHA	12.77	12.42	18.52	18.06
BA L ALPHA	211.41	210.78	187.79	190.73
PB L BETA1	13.77	13.41	19.70	19.22
BA L BETA1	166.26	165.82	148.82	150.85
CE L BETA1	132.08	131.66	124.26	122.87

WHOLE ROCK ANALYSES (ORIGINAL MATERIAL)

SI02	72.99	74.42	53.68	51.63
AL2O3	12.44	11.98	11.97	13.32
FE2O3	3.74	3.21	15.25	14.68
FeO	0.00	0.00	0.00	0.00
MNO	0.05	0.01	0.30	0.24
NGO	0.88	0.71	5.20	5.90
CAO	0.04	0.02	4.14	4.73
NA2O	0.16	0.14	3.27	3.08
K2O	7.41	7.23	0.40	0.62
TIO2	0.26	0.24	1.99	1.12
P2O5	0.02	0.02	0.32	0.13
H2O+	1.53	1.45	3.31	4.23
NIO	0.00	0.00	0.00	0.00
S	0.00	0.00	0.00	0.00
TOTAL	99.51	99.44	99.83	99.69

	498/54	498/62	498/31	498/65	498/600	498/306	498/306B	498/307
SI02	52.54	72.13	77.86	70.16	46.81	49.66	71.37	73.16
AL2O3	13.87	14.68	11.20	14.87	15.58	23.50	15.21	12.89
FE2O3	11.33	2.56	3.25	2.86	10.31	10.90	2.60	4.56
MNO	0.19	0.06	0.02	0.07	0.20	0.15	0.02	0.07
MGO	5.95	0.49	0.43	0.65	7.27	3.47	0.95	1.48
CAO	10.99	1.19	0.90	1.88	14.45	0.76	3.17	2.03
NA2O	2.01	5.44	2.23	4.44	1.64	1.19	4.57	2.81
K2O	0.15	2.41	2.95	2.60	0.27	4.57	0.95	1.45
TI02	1.27	0.21	0.36	0.31	1.14	0.80	0.23	0.47
P2O5	0.14	0.06	0.07	0.10	0.12	0.05	0.05	0.12
LOSS	0.93	0.71	0.97	1.12	1.56	4.18	0.89	1.63
TOTAL	99.36	99.94	100.23	99.05	99.35	99.25	100.01	100.66

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	3109.94	2745.71	2844.75	2758.47	3118.19	3013.93	2770.82	2877.68
SN K ALPHA	2.72	1.73	1.81	1.77	2.75	2.43	1.75	1.90
NB K ALPHA	8.68	5.41	5.68	5.56	8.77	7.73	5.47	5.98
ZR K ALPHA	10.11	6.32	6.64	6.50	10.21	9.00	6.39	6.99
Y K ALPHA	11.73	7.33	7.70	7.53	11.86	10.46	7.41	8.10
SR K ALPHA	13.66	8.54	8.97	8.77	13.81	12.17	8.63	9.44
RB K ALPHA	15.98	9.98	10.49	10.26	16.15	14.23	10.09	11.04
SE K ALPHA	26.37	16.48	17.31	16.93	26.65	23.48	16.67	18.22
AS K ALPHA	31.43	19.64	20.63	20.18	31.76	28.00	19.86	21.71
GA K ALPHA	45.45	28.41	29.84	29.18	45.94	40.49	28.72	31.41
ZN K ALPHA	55.28	34.55	36.29	35.49	55.86	49.24	34.93	38.20
CU K ALPHA	67.50	42.18	44.30	43.33	68.21	60.12	42.65	46.63
NI K ALPHA	83.03	51.87	54.48	53.29	83.91	73.95	52.45	57.35
CO K ALPHA	67.80	56.73	57.85	57.55	72.08	57.87	57.33	57.26
MN K ALPHA	105.32	88.53	90.44	89.79	112.08	89.87	89.68	89.27
CR K ALPHA	134.04	112.75	115.16	114.35	142.67	114.37	114.21	113.67
V K ALPHA	166.59	144.16	146.59	145.77	178.29	143.38	145.96	144.11
TI K ALPHA	216.68	187.68	190.82	189.76	231.94	186.48	190.01	187.56
SC K ALPHA	285.34	247.35	251.48	250.09	305.48	245.54	250.43	247.15
TH L ALPHA	17.83	11.21	11.76	11.51	18.02	15.90	11.33	12.37
BA L ALPHA	222.51	192.73	195.96	194.88	238.19	191.49	195.13	192.61
PB L BETA1	19.00	12.13	12.72	12.44	19.18	16.98	12.26	13.35
BA L BETA1	173.49	152.80	155.30	154.16	184.46	151.60	154.46	152.82

	498/24	498/56	498/1442	498/PU5-R	498/449-R	498/960-R	498/689
ST02	49.36	69.44	76.35	78.67	72.70	39.97	74.18
203	13.98	15.28	15.05	11.94	14.60	31.60	9.93
E203	11.00	3.42	3.06	4.98	2.42	19.12	12.14
NO	0.19	0.08	0.05	0.00	0.08	0.25	0.20
MO	5.13	0.87	1.21	0.56	0.48	6.29	1.42
CAO	13.52	2.26	0.34	0.05	3.06	1.20	0.37
MA20	1.71	4.02	6.84	0.12	4.65	0.71	0.02
20	1.26	2.84	0.50	3.36	1.08	0.04	0.38
T02	0.92	0.38	0.38	0.64	0.08	1.81	1.60
205	0.15	0.11	0.15	0.06	0.06	0.04	0.09
LOSS	2.12	0.67	1.45	0.00	0.94	-0.80	-0.41
TOTAL	99.33	99.37	99.39	99.78	100.14	100.24	99.82

101.04

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	3159.35	2790.08	2693.16	2899.51	2773.69	3163.86	3095.03
SR K ALPHA	2.80	1.85	1.66	1.95	1.74	3.03	2.48
RB K ALPHA	8.93	5.82	5.17	6.15	5.43	9.70	7.88
ZR K ALPHA	10.40	6.79	6.05	7.18	6.35	11.28	9.19
Y K ALPHA	12.08	7.88	7.01	8.32	7.36	13.11	10.66
BR K ALPHA	14.06	9.18	8.16	9.69	8.57	15.26	12.41
KB K ALPHA	16.45	10.73	9.55	11.34	10.02	17.84	14.52
SE K ALPHA	27.14	17.71	15.76	18.71	16.55	29.43	23.96
AS K ALPHA	32.35	21.11	18.78	22.29	19.72	35.10	28.55
GA K ALPHA	46.79	30.53	27.17	32.24	28.52	50.75	41.30
ZN K ALPHA	56.90	37.13	33.04	39.22	34.69	61.72	50.23
CU K ALPHA	69.48	45.33	40.34	47.88	42.35	75.35	61.32
NI K ALPHA	85.47	55.75	49.61	58.89	52.08	92.72	75.44
CO K ALPHA	71.85	58.86	52.34	57.88	57.45	55.33	55.95
MN K ALPHA	111.74	91.79	81.67	90.56	89.57	85.71	86.42
CR K ALPHA	142.23	116.88	104.00	115.30	114.07	105.47	109.94
V K ALPHA	178.73	148.70	132.08	145.44	146.45	131.03	134.05
TI K ALPHA	232.50	193.56	171.93	189.29	190.66	170.22	174.30
SC K ALPHA	306.21	255.09	226.58	249.41	251.29	223.86	229.44
TH L ALPHA	18.35	12.03	10.74	12.69	11.26	19.89	16.21
BA L ALPHA	238.77	198.78	176.56	194.38	195.80	174.78	178.97
PP L BETA1	19.53	12.98	11.62	13.70	12.18	21.14	17.36
BA L BETA1	184.92	157.02	141.07	154.29	154.97	140.08	143.26

WHOLE ROCK MASS ABSORPTION MATRIX

WAVELENGTH	K498/200	K498/202	K498/215	K498/222	K498/340CS	K498/340TC	K498/207
SN K ALPHA	2.90	2.97	2.85	2.86	3.09	3.11	2.97
NB K ALPHA	9.27	9.48	9.10	9.13	9.91	9.96	9.49
ZR K ALPHA	10.79	11.03	10.59	10.63	11.53	11.59	11.04
Y K ALPHA	12.53	12.81	12.30	12.34	13.39	13.45	12.83
SR K ALPHA	14.59	14.91	14.32	14.37	15.59	15.67	14.93
RB K ALPHA	17.07	17.45	16.76	16.81	18.23	18.32	17.47
SE K ALPHA	28.16	28.79	27.64	27.73	30.08	30.23	28.82
AS K ALPHA	33.56	34.31	32.95	33.05	35.85	36.04	34.36
GA K ALPHA	48.54	49.63	47.65	47.80	51.85	52.12	49.69
ZN K ALPHA	59.04	60.35	57.96	58.14	63.06	63.38	60.43
CU K ALPHA	72.08	73.69	70.76	70.98	77.00	77.39	73.78
NI K ALPHA	88.68	90.66	87.06	87.33	94.73	95.22	90.77
CO K ALPHA	59.30	63.74	58.51	57.24	67.22	67.57	58.10
MN K ALPHA	92.27	98.50	90.41	88.33	104.14	104.65	89.62
CR K ALPHA	117.35	125.30	114.98	112.34	132.49	133.13	113.97
V K ALPHA	143.08	153.19	139.73	136.98	163.82	164.56	140.92
TI K ALPHA	185.97	199.14	181.61	178.02	212.97	213.93	183.13
SC K ALPHA	244.71	262.10	238.98	234.23	280.32	281.58	240.94
TH L ALPHA	19.03	19.46	18.70	18.76	20.32	20.43	19.48
BA L ALPHA	190.95	204.49	186.49	182.80	218.70	219.68	188.04
PB L BETA1	20.26	20.67	19.89	19.94	21.58	21.69	20.69
BA L BETA1	151.51	160.51	148.09	145.46	170.87	171.63	149.02

WHOLE ROCK ANALYSES (ORIGINAL MATERIAL)

SI02	62.12	47.95	54.76	51.52	47.46	47.51	45.70
TI02	1.70	1.72	1.76	1.62	1.42	1.44	1.21
AL203	11.28	12.86	12.85	14.61	14.25	14.40	15.59
FE203	16.29	15.64	15.89	16.40	16.14	16.22	17.48
FE0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MNO	0.09	0.26	0.22	0.24	0.23	0.24	0.26
MGO	1.72	5.57	4.09	5.55	6.94	6.94	8.34
CAO	0.92	8.04	2.85	2.44	10.06	10.13	4.25
NA2O	0.08	1.62	4.00	4.61	2.69	2.67	2.59
K2O	3.36	0.49	0.96	0.76	0.36	0.37	0.66
P2O5	0.12	0.22	0.62	0.29	0.19	0.19	0.16
H2O+	1.97	5.89	2.21	2.69	0.00	0.00	4.02
NID	0.00	0.00	0.00	0.00	0.00	0.00	0.00
S	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	99.65	100.26	100.21	100.72	99.74	100.11	100.26

	NR0-1	498/PW3-R	498/PW4-R	498/PW5-R	498/WK11-R	498/447-R	498/500-R	498/960-R	498/1444-R
SI02	39.42	49.03	50.76	70.33	72.07	72.99	62.93	40.05	65.74
AL203	8.58	17.70	15.71	11.94	14.71	14.76	14.82	31.79	13.48
FE203	18.07	9.14	10.60	4.94	2.04	2.11	5.38	19.22	2.36
MNO	0.20	0.16	0.19	0.03	0.02	0.08	0.08	0.26	0.09
H60	13.73	0.48	7.29	0.40	0.74	0.44	2.42	6.22	1.68
CAD	14.86	10.01	10.84	0.63	0.12	3.09	4.12	1.20	4.49
NA20	0.72	1.91	1.88	0.12	0.13	4.67	3.40	0.72	4.98
K20	0.18	1.66	0.73	3.36	7.43	1.08	2.19	0.04	0.77
TI02	3.66	0.92	0.92	0.63	0.27	0.09	0.63	1.80	0.30
P205	0.08	0.13	0.15	0.07	0.06	0.05	0.18	0.04	0.10
LOSS	0.00	1.53	1.19	1.99 1.99	1.75	0.94	1.58	-0.80	4.63
TOTAL	99.72	99.46	100.26	99.87	99.32	100.51	99.93	100.45	99.53

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

	3371.73	3035.04	3099.37	2902.74	2835.41	2783.48	2885.03	3172.69	2807.96
NA K ALPHA	3.49	2.55	2.67	1.95	1.83	1.74	2.07	3.04	1.77
NB K ALPHA	11.23	8.11	8.51	6.15	5.73	5.45	6.54	9.74	3.55
ZR K ALPHA	13.06	9.47	9.91	7.18	6.69	6.37	7.62	11.32	6.48
Y K ALPHA	15.17	10.66	11.50	8.32	7.76	7.37	8.85	13.16	7.52
SR K ALPHA	17.66	12.77	13.40	9.69	9.03	8.60	10.30	15.31	8.75
RP K ALPHA	20.66	14.93	15.67	11.34	10.57	10.06	12.05	17.91	10.23
SE K ALPHA	34.09	24.64	25.85	18.72	17.44	16.61	19.88	29.54	16.90
AS K ALPHA	40.63	29.37	30.82	22.30	20.76	19.79	23.69	35.23	20.13
GA K ALPHA	58.77	42.47	44.57	32.25	30.06	28.63	34.27	50.94	29.13
ZN K ALPHA	71.47	51.65	54.20	39.23	36.56	34.82	41.68	61.96	35.42
CU K ALPHA	87.27	63.07	66.10	47.89	44.63	42.51	50.89	75.64	43.25
NI K ALPHA	107.37	77.68	81.41	58.90	54.88	52.28	62.59	93.07	53.18
CO K ALPHA	76.75	67.91	68.07	58.03	62.10	57.69	60.52	55.46	57.38
NN K ALPHA	119.33	108.70	108.77	90.64	97.26	89.74	94.42	85.46	89.46
CR K ALPHA	151.82	134.55	134.63	115.40	123.79	114.55	120.22	108.65	113.94
V K ALPHA	177.52	168.89	168.95	145.61	158.13	147.03	151.80	131.31	145.24
TI K ALPHA	230.75	219.73	219.78	189.51	205.88	191.41	197.56	170.58	189.07
SC K ALPHA	303.67	289.42	289.45	249.70	271.36	252.75	260.30	224.34	249.19
TH L ALPHA	23.00	16.67	17.49	12.59	11.83	11.30	13.49	19.96	11.49
RA L ALPHA	236.96	225.65	225.70	194.61	211.42	196.57	202.88	175.15	194.17
FB L BETA1	24.36	17.79	18.64	13.70	12.80	12.23	14.49	21.22	12.40
BA L BETA1	183.50	175.74	175.89	154.47	166.22	155.58	159.86	140.36	153.30

	NRG-1	498/90	498/125	498/180	498/1080B	498/1080C	498/1080D	498/1084	498/1090
SI02	29.49	70.91	65.65	66.02	68.27	73.76	74.34	60.00	59.49
AL2O3	8.60	15.10	16.78	17.07	14.46	12.41	12.21	20.33	15.61
FF2O3	18.23	2.28	4.60	5.63	6.78	5.06	5.20	7.52	14.29
MNO	0.20	0.03	0.08	0.03	0.03	0.04	0.03	0.12	0.06
H6U	13.78	0.31	1.01	1.39	1.56	0.94	0.76	1.92	2.95
CAO	14.81	2.45	3.82	0.41	0.25	0.09	0.10	0.20	1.28
NA2O	0.72	4.37	4.02	0.41	0.21	0.16	0.16	0.53	2.02
K2O	0.18	1.92	2.15	5.57	5.22	4.20	4.05	5.97	2.62
TI02	3.81	0.16	0.46	0.53	0.48	0.49	0.50	0.57	1.03
P2O5	0.08	0.08	0.14	0.14	0.12	0.07	0.08	0.08	0.08
LOSS	0.00	1.96	0.88	2.52	2.18	1.97	2.01	2.79	0.78
TOTAL	99.90	99.58	99.53	99.72	99.58	99.18	99.43	100.02	100.20

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	3378.73	2765.60	2836.51	2923.81	2956.76	2901.27	2913.72	2969.15	3119.23
SN K ALPHA	3.50	1.72	1.98	2.06	2.14	1.96	1.97	2.22	2.70
NB K ALPHA	11.26	5.37	6.23	6.49	6.75	6.16	6.20	7.02	8.62
ZR K ALPHA	13.10	6.27	7.27	7.57	7.87	7.20	7.24	8.18	10.04
Y K ALPHA	15.21	7.27	8.43	8.79	9.13	8.34	8.39	9.50	11.66
SR K ALPHA	17.71	8.47	9.82	10.23	10.63	9.72	9.77	11.06	13.57
RE K ALPHA	20.72	9.91	11.48	11.97	12.44	11.37	11.43	12.93	15.88
SE K ALPHA	34.18	16.36	18.95	19.75	20.52	18.76	18.86	21.35	26.20
AS K ALPHA	40.75	19.49	22.59	23.54	24.46	22.36	22.48	25.44	31.23
GA K ALPHA	58.93	28.19	32.67	34.04	35.37	32.34	32.51	36.80	45.16
ZN K ALPHA	71.67	34.28	39.73	41.41	43.03	39.34	39.54	44.76	54.93
CU K ALPHA	87.51	41.85	48.51	50.54	52.53	48.02	48.27	54.63	67.06
NI K ALPHA	107.67	51.47	59.66	62.17	64.61	59.06	59.37	67.20	82.50
CO K ALPHA	76.69	57.09	59.98	59.85	59.30	57.83	57.77	60.14	57.90
MN K ALPHA	119.23	89.27	93.56	93.59	92.58	90.31	90.26	93.63	90.27
CR K ALPHA	151.69	113.69	119.14	119.15	117.86	114.98	114.91	119.18	114.82
V K ALPHA	177.58	145.62	151.22	150.91	149.44	145.71	145.57	150.69	142.89
TI K ALPHA	230.82	189.57	196.82	196.39	194.46	189.64	189.46	196.08	185.76
SC K ALPHA	303.77	249.87	259.35	258.76	256.17	249.87	249.62	258.28	244.51
TH L ALPHA	23.07	11.13	12.87	13.39	13.91	12.72	12.79	14.46	17.72
BA L ALPHA	237.03	194.69	202.13	201.68	199.69	194.74	194.55	201.35	190.75
PB L BETA1	24.43	12.04	13.84	14.40	14.94	13.72	13.79	15.51	18.89
BA L BETA1	183.59	154.04	159.34	159.21	157.82	154.29	154.20	158.97	151.46

	498/1444	498/30	498/PWA	498/689	498/1338	498/307	498/1177	498/1401
SI02	64.99	46.88	50.13	74.47	56.95	73.40	51.79	58.43
AL2O3	13.27	15.71	15.42	9.99	19.26	12.97	13.60	18.19
FE2O3	2.83	9.58	10.61	12.07	15.98	4.52	15.85	12.03
MNO	0.07	0.16	0.16	0.15	0.12	0.07	0.25	0.06
H60	1.89	6.12	7.18	1.45	2.70	1.33	6.02	3.45
CAO	4.41	14.20	10.71	0.37	0.52	2.06	9.52	0.86
NA2O	4.92	2.51	1.86	0.02	0.52	2.81	0.99	1.23
K2O	0.76	0.11	0.72	0.28	1.97	1.47	0.29	3.39
TIO2	0.30	1.11	0.89	1.60	1.73	0.47	1.65	1.18
P2O5	0.11	0.16	0.15	0.09	0.19	0.10	0.18	0.04
LOSS	4.83	2.54	1.19	-0.41	0.32	1.63	0.27	1.04
TOTAL	98.37	99.07	99.03	100.12	100.26	100.82	100.41	99.90

100-53

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

MASS ABSORPTION MATRIX

MASS ABSORPTION MATRIX

	2775.21	3085.61	3064.87	3100.80	3174.11	2881.96	3265.20	3054.63
NA K ALPHA	1.75	2.66	2.64	2.48	2.83	1.91	3.08	2.54
SM K ALPHA	5.47	8.48	8.43	7.87	9.03	5.99	9.85	8.07
ZR K ALPHA	6.39	9.87	9.82	9.18	10.51	6.99	11.46	9.40
Y K ALPHA	7.41	11.46	11.40	10.64	12.21	8.10	13.30	10.91
SR K ALPHA	8.63	13.35	13.27	12.40	14.21	9.44	15.49	12.71
RB K ALPHA	10.09	15.61	15.52	14.51	16.62	11.04	18.12	14.86
SE K ALPHA	16.67	25.76	25.62	23.94	27.42	18.23	29.90	24.52
AS K ALPHA	19.86	30.70	30.53	28.52	32.68	21.71	35.64	29.23
GA K ALPHA	28.72	44.40	44.16	41.26	47.28	31.41	51.54	42.27
ZN K ALPHA	34.93	53.00	53.71	50.18	57.51	38.20	62.69	51.42
CU K ALPHA	42.65	65.93	65.58	61.26	70.20	46.64	76.54	62.77
NI K ALPHA	52.45	81.11	80.67	75.37	86.38	57.36	94.17	77.22
CO K ALPHA	56.58	70.88	67.12	56.08	57.40	57.42	67.46	58.42
MN K ALPHA	88.30	110.41	104.42	86.67	89.16	89.53	104.40	91.13
CR K ALPHA	112.46	140.55	132.91	110.26	113.40	114.00	132.82	115.95
V K ALPHA	143.38	175.71	166.88	134.47	137.81	144.54	163.21	143.71
TI K ALPHA	186.65	228.59	217.08	174.84	179.11	185.12	212.19	186.88
SC K ALPHA	246.00	301.10	285.89	230.15	235.68	247.88	279.29	246.04
TH L ALPHA	11.34	17.42	17.33	16.20	18.54	12.38	20.20	16.59
BA L ALPHA	191.69	234.76	222.93	179.52	183.91	193.18	217.89	191.90
PB L BETA1	12.23	18.56	18.47	17.34	19.75	13.35	21.47	17.72
BA L BETA1	151.35	181.89	173.73	143.70	146.67	153.26	170.49	152.24

	498/153	498/1340	498/1299	498/10110	498/960	498/1474	498/113
SiO2	63.29	55.40	69.31	56.97	39.62	60.75	49.90
Al2O3	16.70	16.23	15.73	18.97	31.36	21.13	17.90
Fe2O3	5.00	6.18	4.72	17.30	19.12	7.34	9.21
MnO	0.07	0.13	0.06	0.33	0.23	0.17	0.17
MgO	1.95	2.78	1.47	3.27	6.35	2.50	6.56
CaO	4.00	11.11	0.15	0.43	1.17	0.33	10.03
Na2O	4.92	1.19	0.35	0.38	0.71	1.01	1.91
K2O	0.84	2.20	5.34	0.07	0.05	5.52	1.87
TiO2	0.64	0.98	0.57	1.64	1.74	0.55	0.72
P2O5	0.18	0.13	0.10	0.04	0.04	0.06	0.12
LOSS	1.58	1.07	1.95	0.40	-0.80	0.63	1.53
TOTAL	99.16	99.40	99.74	99.80	99.80	100.00	99.92

100.40

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

MASS ABSORPTION MATRIX

NA K ALPHA	2814.51	3066.48	2897.42	3184.91	3144.87	2928.54	3045.95
SN K ALPHA	1.96	2.54	1.98	2.87	3.01	2.21	2.55
NB K ALPHA	6.16	8.08	6.24	9.16	9.66	7.00	8.13
ZR K ALPHA	7.19	9.42	7.28	10.66	11.23	8.16	9.47
Y K ALPHA	8.35	10.93	8.44	12.38	13.05	9.47	10.99
SR K ALPHA	9.72	12.72	9.83	14.42	15.19	11.03	12.79
RB K ALPHA	11.37	14.88	11.50	16.87	17.76	12.89	14.96
SE K ALPHA	18.76	24.56	18.97	27.82	29.30	21.28	24.69
AS K ALPHA	22.36	29.27	22.61	33.17	34.93	25.36	29.43
GA K ALPHA	32.34	42.33	32.70	47.97	50.52	36.68	42.57
ZN K ALPHA	39.33	51.48	39.78	58.34	61.44	44.62	51.77
CU K ALPHA	48.01	62.86	48.56	71.22	75.01	54.46	63.21
NI K ALPHA	59.06	77.32	59.72	87.63	92.29	66.99	77.75
CO K ALPHA	57.96	70.61	59.71	54.81	54.80	60.45	67.90
MN K ALPHA	90.44	110.08	93.21	84.02	84.58	73.85	105.64
CR K ALPHA	115.16	140.14	118.68	106.83	107.53	119.47	134.48
V K ALPHA	145.25	175.81	150.12	129.74	130.15	151.19	169.69
TI K ALPHA	189.03	228.76	195.39	168.57	169.07	196.73	220.78
SC K ALPHA	249.07	301.36	257.45	221.75	221.36	259.15	290.80
TH L ALPHA	12.74	16.41	12.87	18.81	19.80	14.41	16.71
BA L ALPHA	194.13	234.93	200.64	173.09	173.61	202.02	226.73
PB L BETA1	13.70	17.74	13.87	20.03	21.04	15.47	17.83
BA L BETA1	153.44	182.44	158.54	138.89	139.15	159.58	176.39

	498/1321	498/1176	498/645	498/1452	498/1332	498/1469
SI02	51.19	61.04	57.48	69.39	65.50	50.54
AL2O3	13.42	20.68	17.97	15.87	14.24	21.73
FE2O3	19.08	7.43	7.00	3.43	6.17	15.80
MNO	0.34	0.05	0.11	0.06	0.15	0.07
MGO	3.31	2.37	3.31	0.94	1.13	4.07
CAO	7.63	0.41	7.39	3.09	7.48	0.60
NA2O	2.46	0.79	3.94	4.32	1.17	0.81
K2O	0.32	5.63	0.45	2.10	2.93	5.56
TI02	2.09	0.62	0.67	0.31	0.82	1.40
P2O5	0.60	0.09	0.15	0.15	0.14	0.04
LOSS	0.00	0.71	1.12	0.30	0.44	-0.21
TOTAL	100.44	99.82	99.59	99.96	100.17	100.41 100.62

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	3331.47	2933.13	2916.92	2798.68	3008.37	3165.60
SN K ALPHA	3.30	2.21	2.23	1.86	2.30	2.92
NB K ALPHA	10.57	7.02	7.07	5.85	7.29	9.35
ZR K ALPHA	12.30	8.18	8.24	6.83	8.50	10.88
Y K ALPHA	14.28	9.49	9.56	7.92	9.86	12.64
SR K ALPHA	16.63	11.05	11.14	9.22	11.48	14.71
RB K ALPHA	19.46	12.92	13.02	10.79	13.43	17.21
SE K ALPHA	32.09	21.33	21.50	17.81	22.17	28.38
AS K ALPHA	38.26	25.42	25.62	21.22	26.42	33.84
GA K ALPHA	55.33	36.76	37.05	30.69	38.21	48.93
ZN K ALPHA	67.30	44.72	45.06	37.33	46.47	59.52
CU K ALPHA	82.17	54.59	55.02	45.57	56.73	72.66
NI K ALPHA	101.10	67.15	67.68	56.04	69.78	89.40
CO K ALPHA	65.92	60.38	62.35	59.17	67.61	61.67
MN K ALPHA	101.47	94.33	97.17	92.38	105.21	96.19
CR K ALPHA	129.05	120.08	123.72	117.65	133.95	122.36
V K ALPHA	156.28	151.66	156.08	150.00	168.62	150.86
TI K ALPHA	203.09	197.34	203.10	195.25	219.44	196.11
SC K ALPHA	267.20	259.95	267.56	257.32	289.13	258.10
TH L ALPHA	21.68	14.45	14.57	12.10	15.01	19.18
BA L ALPHA	208.54	202.65	208.58	200.52	225.36	201.38
PB L BETA1	23.00	15.50	15.61	13.05	16.09	20.41
BA L BETA1	163.87	160.00	163.71	158.34	175.99	159.14

	498/1407	498/1407B	498/1448	498/1449C	498/1464	498/1467	498/1481
SiO2	67.53	67.45	65.81	44.25	77.93	73.03	45.58
Al2O3	15.62	15.70	15.57	6.12	11.94	14.57	14.18
Fe2O3	3.67	3.67	4.79	11.75	0.82	2.52	9.32
MNO	0.05	0.06	0.06	0.10	0.00	0.02	0.20
MgO	1.78	1.74	1.76	26.47	-0.07 0.00	0.71	2.50
CaO	4.04	3.90	3.82	2.40	0.75	3.85	25.01
Na2O	4.45	4.26	3.55	0.00	2.20	3.48	1.05
K2O	1.77	1.85	1.70	0.00	6.53	1.14	0.10
Loss	0.38	0.38	0.41	0.55	0.04	0.29	1.01
Loss	0.16	0.16	0.13	0.05	0.00	0.08	0.28
Loss	0.49	0.55	2.12	7.86	0.11	0.45	1.20
TOTAL	99.94	99.72	99.73	99.62	100.26 100.33	100.15	100.43

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	2808.63	2805.09	2858.52	2984.59	2794.47	2802.23	3298.47
SN K ALPHA	1.90	1.89	1.96	2.32	1.74	1.79	3.06
NB K ALPHA	5.97	5.96	6.19	7.38	5.43	5.59	9.80
ZR K ALPHA	6.97	6.96	7.22	8.60	6.35	6.54	11.41
Y K ALPHA	8.09	8.07	8.38	9.99	7.36	7.58	13.24
SR K ALPHA	9.42	9.39	9.75	11.62	8.57	8.83	15.42
RB K ALPHA	11.02	10.99	11.41	13.59	10.02	10.32	18.03
SE K ALPHA	18.18	18.14	18.83	22.44	15.54	17.04	29.76
AS K ALPHA	21.67	21.61	22.44	26.74	19.71	20.30	35.47
GA K ALPHA	31.34	31.26	32.45	38.68	28.51	29.37	51.30
ZN K ALPHA	38.12	38.02	39.47	47.03	34.68	35.72	62.38
CU K ALPHA	46.53	46.42	48.19	57.42	42.33	43.61	76.18
NI K ALPHA	57.23	57.09	59.27	70.64	52.05	53.64	93.70
CO K ALPHA	59.88	59.71	58.90	51.07	62.45	59.06	87.34
MN K ALPHA	93.56	93.24	91.97	79.08	97.84	92.39	136.00
CR K ALPHA	119.14	118.74	117.10	100.62	124.62	117.67	173.16
V K ALPHA	151.60	151.08	148.80	126.81	160.25	150.13	218.17
TI K ALPHA	197.33	196.66	193.67	164.88	208.66	195.44	283.89
SC K ALPHA	260.05	259.16	255.19	217.06	275.07	257.60	374.01
TH L ALPHA	12.35	12.32	12.78	15.19	11.24	11.58	20.10
BA L ALPHA	202.65	201.96	198.89	169.33	214.29	200.71	291.55
PB L BETA1	13.31	13.28	13.76	16.22	12.18	12.53	21.36
BA L BETA1	159.77	159.26	156.98	135.27	168.46	158.52	222.39

	498/138	498/147	498/308	498/449	498/589	498/651	498/652	498/682	498/587
SI02	69.51	45.07	48.44	73.39	52.36	70.51	70.90	74.39	48.32
AL203	9.68	7.90	1.04	14.68	0.39	15.67	15.35	14.54	15.63
FE203	15.43	12.60	45.98	2.45	40.84	2.51	2.72	1.65	11.67
M20	0.06	0.17	0.33	0.07	0.52	0.02	0.03	0.03	0.19
M60	1.78	23.49	0.76	0.39	0.42	0.75	0.72	0.19	6.05
CA0	0.89	4.12	3.35	3.07	3.43	3.56	3.20	2.36	14.24
NA20	0.31	0.05	0.04	4.69	0.00	5.00	5.19	5.17	1.32
K20	1.71	0.04	0.07	1.11	0.11	0.94	1.10	1.90	0.23
TI02	0.77	0.69	0.02	0.08	0.02	0.27	0.24	0.09	0.92
P205	0.06	0.07	1.20	0.95	1.74	0.07	0.07	0.02	0.10
LOSS	0.05	4.75	-0.91	0.94	-0.22	0.27	0.67	0.10	1.69
TOTAL	100.24	98.95	100.32	100.91	99.62	99.57	100.19	100.43	100.35

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	3194.62	3000.39	4084.11	2795.37	3943.67	2749.16	2769.99	2744.62	3192.01
SN K ALPHA	2.77	2.48	5.23	1.75	4.83	1.75	1.77	1.69	2.85
NB K ALPHA	8.82	7.90	16.91	5.48	15.59	5.49	5.54	5.27	9.12
ZR K ALPHA	10.27	9.20	19.64	6.40	18.11	6.42	6.47	6.16	10.62
Y K ALPHA	11.92	10.69	22.82	7.42	21.04	7.44	7.50	7.14	12.33
SR K ALPHA	13.28	12.44	26.57	8.64	24.50	8.66	8.73	8.32	14.35
RB K ALPHA	16.24	14.55	31.10	10.11	28.68	10.13	10.22	9.73	16.79
SE K ALPHA	26.79	24.01	51.26	16.68	47.27	16.73	16.86	16.06	27.70
AS K ALPHA	31.92	28.62	61.12	19.88	56.36	19.93	20.09	19.13	33.02
GA K ALPHA	46.17	41.40	88.39	28.75	81.51	28.83	29.06	27.68	47.76
ZN K ALPHA	56.16	50.34	107.52	34.97	99.15	35.06	35.35	33.64	58.07
CU K ALPHA	66.56	61.46	131.27	42.69	121.05	42.80	43.15	41.10	70.91
NI K ALPHA	84.36	75.61	161.55	52.50	148.97	52.64	53.07	50.54	87.24
CO K ALPHA	56.66	54.56	56.53	57.88	57.08	57.83	57.71	57.95	71.95
MN K ALPHA	88.22	84.58	86.27	90.29	86.26	90.47	90.24	90.60	111.88
CR K ALPHA	112.19	107.62	109.35	114.99	109.39	115.23	114.92	115.40	142.40
V K ALPHA	140.69	135.20	139.98	147.64	140.12	147.07	146.82	148.13	178.91
TI K ALPHA	182.88	175.79	181.34	192.20	181.61	191.47	191.13	192.86	232.73
SC K ALPHA	240.68	231.41	237.84	253.33	238.33	252.35	251.90	254.21	306.49
TH L ALPHA	18.11	16.24	34.54	11.35	31.86	11.38	11.47	10.93	18.73
BA L ALPHA	187.78	180.53	186.14	197.39	186.43	196.63	196.28	198.06	239.00
PB L BETA1	19.32	17.33	36.38	12.28	33.59	12.30	12.40	11.84	19.93
BA L BETA1	149.57	143.35	148.48	156.23	148.54	155.47	155.29	156.70	185.25

	498/1442	498/1447	498/1453	498/1454	BHN-1(2)	498/307-R	498/682-R
SiO2	70.18	60.92	49.00	74.31	53.22	72.37	73.92
Al2O3	15.05	19.34	14.22	12.53	17.27	12.96	14.54
Fe2O3	3.07	6.87	12.78	3.55	9.12	4.49	1.65
MnO	0.06	0.10	0.21	0.05	0.16	0.06	0.04
MgO	1.02	1.68	6.48	1.52	4.18	1.39	0.32
CaO	0.34	0.14	12.85	1.51	8.82	2.05	2.35
Na2O	6.82	0.26	1.60	1.79	2.67	2.78	5.15
K2O	0.50	6.42	0.17	2.34	2.72	1.43	1.88
TiO2	0.37	0.57	1.30	0.52	1.18	0.48	0.10
P2O5	0.14	0.06	0.14	0.14	0.61	0.12	0.02
LOSS	1.45	3.01	1.45	1.83	0.00	1.63	0.10
TOTAL	99.00	99.36	100.20	100.10	99.95	99.74	100.06

*High Na2O
could be cause of
low total.*

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	2689.70	2947.46	3202.49	2855.98	3039.15	2851.18	2734.02
SN K ALPHA	1.65	2.17	2.91	1.83	2.57	1.89	1.68
NB K ALPHA	5.16	6.86	9.30	5.75	8.19	5.92	5.25
ZR K ALPHA	6.03	8.00	10.83	6.72	9.53	6.92	6.14
Y K ALPHA	7.00	9.29	12.57	7.78	11.07	8.02	7.12
SR K ALPHA	8.14	10.81	14.63	9.07	12.89	9.34	8.29
RB K ALPHA	9.53	12.64	17.12	10.61	15.07	10.93	9.70
SE K ALPHA	15.73	20.86	28.24	17.51	24.87	18.04	16.01
AS K ALPHA	18.74	24.87	33.66	20.86	29.64	21.49	19.07
GA K ALPHA	27.11	35.96	48.69	30.17	42.88	31.08	27.59
ZN K ALPHA	32.97	43.75	59.21	36.70	52.14	37.80	33.56
CU K ALPHA	40.25	53.40	72.30	44.80	63.67	46.15	40.96
NI K ALPHA	49.50	65.68	88.94	55.10	78.31	56.76	50.38
CO K ALPHA	52.17	60.32	70.57	57.64	68.89	56.77	57.75
MN K ALPHA	81.35	94.01	109.59	89.98	107.22	88.56	90.24
CR K ALPHA	103.59	119.68	139.47	114.56	136.49	112.76	114.93
V K ALPHA	131.61	151.36	173.41	145.09	170.17	142.90	147.48
TI K ALPHA	171.31	196.95	225.53	188.85	221.40	185.98	192.02
SC K ALPHA	225.77	259.76	296.97	248.88	291.62	245.07	253.10
TH L ALPHA	10.71	14.13	19.09	11.89	16.83	12.25	10.89
BA L ALPHA	175.93	202.25	231.60	193.94	227.36	190.99	197.19
PB L BETA1	11.59	15.17	20.30	12.85	17.96	13.21	11.80
BA L BETA1	140.57	159.52	179.99	153.73	177.19	151.52	156.02

	498/1090	498/1090	498/1303A	498/1080	498/1080B	498/1080C	498/1080D	498/1084
SI02	59.93	59.87	73.26	66.13	68.65	74.25	74.70	60.25
AL203	15.60	15.66	14.74	16.98	14.56	12.45	12.17	20.38
FE203	14.20	14.24	2.62	5.61	6.78	5.04	5.19	7.46
MNO	0.06	0.05	0.03	0.04	0.04	0.02	0.00	0.13
MGO	3.05	2.95	0.16	1.22	1.43	0.78	0.69	1.81
CAO	1.30	1.30	2.03	0.41	0.26	0.09	0.10	0.20
NA2O	2.03	2.03	4.77	0.41	0.21	0.16	0.16	0.53
K2O	2.64	2.64	2.34	5.59	5.26	4.23	4.08	6.00
TI02	1.04	1.04	0.08	0.53	0.48	0.49	0.50	0.57
P205	0.08	0.08	0.04	0.13	0.12	0.07	0.07	0.07
LOSS	0.78	0.78	0.16	2.52	2.18	1.97	2.01	2.79
TOTAL	100.70	100.63	100.22	99.56	99.97	99.54	99.68	100.18

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	3130.51	3129.88	2770.31	2920.97	2968.39	2911.60	2921.01	2972.67
SN K ALPHA	2.71	2.71	1.76	2.06	2.14	1.96	1.97	2.22
NB K ALPHA	8.63	8.63	5.53	6.49	6.77	6.17	6.21	7.02
ZR K ALPHA	10.05	10.05	6.46	7.57	7.89	7.21	7.25	8.18
Y K ALPHA	11.66	11.67	7.49	8.78	9.16	8.36	8.40	9.49
SR K ALPHA	13.58	13.59	8.72	10.22	10.67	9.74	9.79	11.05
RB K ALPHA	15.89	15.90	10.20	11.96	12.48	11.39	11.45	12.93
SE K ALPHA	26.21	26.22	16.83	19.73	20.59	18.80	18.89	21.33
AS K ALPHA	31.24	31.26	20.06	23.52	24.53	22.40	22.51	25.43
GA K ALPHA	45.18	45.21	29.01	34.01	35.49	32.39	32.56	36.77
ZN K ALPHA	54.95	54.99	35.29	41.37	43.16	39.40	39.61	44.73
CU K ALPHA	67.09	67.13	43.08	50.50	52.69	48.10	48.35	54.60
NI K ALPHA	82.54	82.59	52.98	62.12	64.81	59.16	59.47	67.16
CO K ALPHA	58.24	58.17	57.94	59.84	59.55	58.02	57.92	60.31
MN K ALPHA	90.79	90.74	90.57	93.53	93.03	90.70	90.54	93.84
CR K ALPHA	115.49	115.43	115.35	119.08	118.42	115.48	115.27	119.45
V K ALPHA	143.70	143.62	148.09	150.82	150.17	146.36	146.04	151.04
TI K ALPHA	186.83	186.72	192.80	196.28	195.41	190.48	190.07	196.53
SC K ALPHA	245.91	245.77	254.10	258.60	257.43	250.98	250.43	258.88
TH L ALPHA	17.73	17.74	11.45	13.38	13.95	12.75	12.81	14.45
BA L ALPHA	191.84	191.73	197.99	201.56	200.66	195.60	195.18	201.82
PB L BETA1	18.91	18.92	12.38	14.39	14.99	13.75	13.82	15.50
BA L BETA1	152.31	152.22	156.65	159.11	158.58	154.96	154.68	159.33

	498/1442	498/1447	498/1453	498/1454	BHN-1(2)	498/307-R	498/682-R
SI02	70.04	60.82	48.73	74.32	53.18	72.52	74.04
AL203	14.96	19.31	14.17	12.49	17.21	12.93	14.43
FE203	3.04	6.06	12.71	3.55	9.10	4.46	1.64
MNO	0.06	0.10	0.21	0.04	0.14	0.06	0.04
MGO	1.06	1.70	6.46	1.52	4.28	1.40	0.27
CAO	0.33	0.13	12.81	1.50	8.80	2.04	2.35
NA2O	6.80	0.26	1.59	1.79	2.67	2.79	5.15
K2O	0.50	6.39	0.17	2.34	2.70	1.43	1.89
TIO2	0.37	0.57	1.30	0.51	1.18	0.48	0.10
P2O5	0.15	0.07	0.14	0.13	0.61	0.11	0.02
LOSS	1.45	3.01	1.45	1.83	0.00	1.53	0.10
TOTAL	98.75	99.21	99.74	100.03	79.87	99.82	100.02

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	2682.30	2942.79	3187.91	2853.70	3035.00	2852.49	2733.55
SN K ALPHA	1.64	2.16	2.90	1.83	2.56	1.88	1.68
NB K ALPHA	5.14	6.85	9.26	5.74	8.17	5.92	5.25
ZR K ALPHA	6.01	7.98	10.78	6.71	9.51	6.91	6.14
Y K ALPHA	6.97	9.27	12.51	7.77	11.04	8.01	7.11
SR K ALPHA	8.11	10.79	14.57	9.06	12.86	9.33	8.29
RB K ALPHA	9.49	12.62	17.04	10.59	15.04	10.92	9.69
SE K ALPHA	15.66	20.82	28.11	17.49	24.81	18.02	16.00
AS K ALPHA	18.66	24.82	33.51	20.83	29.58	21.47	19.06
GA K ALPHA	26.99	35.89	48.47	30.13	42.78	31.06	27.58
ZN K ALPHA	32.83	43.66	58.94	36.65	52.02	37.77	33.54
CU K ALPHA	40.08	53.30	71.97	44.74	63.52	46.11	40.95
NI K ALPHA	49.29	65.56	88.54	55.03	78.13	56.71	50.35
CO K ALPHA	52.03	60.19	70.29	57.54	68.73	56.80	57.75
MN K ALPHA	81.13	93.81	109.14	89.89	107.06	88.61	90.24
CR K ALPHA	103.32	119.42	138.90	114.46	136.28	112.82	114.94
V K ALPHA	131.25	151.02	172.67	144.97	169.91	142.98	147.49
TI K ALPHA	170.85	196.52	224.57	188.70	221.06	186.09	192.03
SC K ALPHA	225.16	258.69	295.71	248.67	291.10	245.21	253.12
TH L ALPHA	10.67	14.11	19.00	11.87	16.79	12.24	10.89
BA L ALPHA	175.46	201.81	230.62	193.76	227.02	191.10	197.21
PB L BETA1	11.54	15.14	20.21	12.83	17.92	13.20	11.80
SA L BETA1	140.19	159.18	179.22	153.61	176.94	151.61	156.03

	498/1206B	498/1332-	498/1406A	498/1406C	498/1406D	498/1441B	498/1443
SiO2	50.35	63.52	79.01	55.67	78.33	69.40	70.64
Al2O3	13.89	14.86	10.67	23.33	10.55	10.12	6.91
Fe2O3	13.57	6.45	3.34	6.80	2.92	3.04	6.07
MnO	0.24	0.11	0.02	0.02	0.02	0.07	0.03
MgO	7.11	1.26	0.99	2.28	0.74	1.98	4.15
CaO	11.16	6.42	0.46	0.02	0.51	5.15	0.14
Na2O	1.31	1.39	1.18	0.50	1.50	3.42	0.02
K2O	0.26	4.35	2.84	7.52	4.15	0.70	0.76
TiO2	1.23	0.85	0.42	0.37	0.42	0.26	0.70
P2O5	0.12	0.11	0.11	0.05	0.12	0.11	0.09
LOSS	0.72	0.44	1.19	3.03	0.85	5.50	2.70
TOTAL	99.96	99.76	100.23	99.74	100.16	99.78	100.20

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	3192.87	2994.72	2859.91	2935.93	2851.46	2871.64	2942.47
SN K ALPHA	2.92	2.33	1.81	2.19	1.82	1.81	1.94
NB K ALPHA	9.33	7.37	5.66	6.93	5.71	5.68	6.08
ZR K ALPHA	10.86	8.60	6.61	8.08	6.67	6.64	7.10
Y K ALPHA	12.61	9.97	7.66	9.38	7.73	7.69	8.33
SR K ALPHA	14.69	11.62	8.92	10.92	9.01	8.96	9.57
RB K ALPHA	17.18	13.59	10.44	12.76	10.54	10.48	11.22
SE K ALPHA	28.34	22.42	17.23	21.07	17.39	17.30	18.52
AS K ALPHA	33.79	26.72	20.53	25.11	20.72	20.61	22.07
GA K ALPHA	48.86	38.65	29.70	36.32	29.97	29.81	31.92
ZN K ALPHA	59.42	47.01	36.12	44.17	36.46	36.25	38.83
CU K ALPHA	72.56	57.39	44.09	53.92	44.50	44.26	47.40
NI K ALPHA	89.26	70.59	54.23	66.32	54.73	54.43	58.30
CO K ALPHA	68.50	67.73	57.25	61.31	59.17	58.39	53.73
MN K ALPHA	106.15	105.60	89.48	95.99	72.53	90.98	83.85
CR K ALPHA	135.08	134.45	113.94	122.21	117.83	115.86	106.73
V K ALPHA	168.06	169.13	141.70	154.61	149.76	147.95	134.11
TI K ALPHA	218.55	220.10	188.36	201.19	194.96	192.59	174.51
SC K ALPHA	287.75	289.98	248.23	265.05	256.94	253.82	229.90
TH L ALPHA	19.16	15.18	11.70	14.27	11.81	11.76	12.57
BA L ALPHA	224.43	226.03	193.43	206.61	200.20	197.70	179.20
PB L BETA1	20.38	16.26	12.67	15.31	12.78	12.68	13.56
BA L BETA1	174.97	176.42	153.54	162.64	158.37	155.93	143.29

	498/57	498/WK11	498/PW5	498/603	AGV-1(2)	498/PW3	498/PW4	498/30	498/960
SI02	66.56	71.60	77.69	56.97	59.93	49.25	49.72	46.91	39.88
AL203	16.54	14.70	11.85	14.44	17.33	17.57	15.37	15.82	31.55
FE203	4.61	2.06	4.97	15.63	6.85	9.13	10.58	9.60	19.22
MNO	0.06	0.02	0.03	0.25	0.11	0.18	0.17	0.18	0.24
MGO	1.52	0.63	0.43	1.71	1.57	6.44	7.06	6.15	6.32
CAO	3.71	0.12	0.05	4.62	4.91	9.86	10.60	14.16	1.18
NA2O	3.90	0.13	0.12	3.17	4.35	1.89	1.85	2.51	0.71
K2O	1.71	7.42	3.37	1.65	2.98	1.84	0.71	0.10	0.04
TI02	0.57	0.25	0.61	0.96	1.05	0.69	0.89	1.11	1.74
P205	0.15	0.05	0.06	0.50	0.50	0.13	0.14	0.15	0.04
LOSS	0.00 0.55	1.75	0.00 1.99	0.32	0.00	1.53	1.19	2.54	-0.80
TOTAL	99.33 99.88	98.72	99.18 101.17	100.22	99.58	98.50	98.29	99.22	100.13

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	2817.11	2819.74	2884.21	3183.52	2907.28	3004.49	3043.82	3089.44	3161.94
SN K ALPHA	1.96	1.82	1.95	2.91	2.25	2.52	2.63	2.66	3.03
NB K ALPHA	6.19	5.70	6.12	9.30	7.14	8.02	8.38	8.49	9.71
ZR K ALPHA	7.23	6.66	7.15	10.82	8.32	9.34	9.76	9.89	11.29
Y K ALPHA	8.38	7.72	8.29	12.57	9.65	10.85	11.33	11.48	13.12
SR K ALPHA	9.76	9.00	9.66	14.63	11.24	12.63	13.20	13.36	15.27
RB K ALPHA	11.42	10.52	11.30	17.12	13.15	14.77	15.43	15.62	17.85
SE K ALPHA	18.85	17.37	18.64	28.24	21.70	24.37	25.47	25.79	29.45
AS K ALPHA	22.46	20.69	22.21	33.66	25.86	29.05	30.35	30.74	35.12
GA K ALPHA	32.40	29.93	32.12	48.69	37.40	42.01	43.90	44.46	50.79
ZN K ALPHA	39.51	36.41	39.08	59.22	45.49	51.09	53.39	54.06	61.77
CU K ALPHA	48.23	44.44	47.70	72.30	55.53	62.38	65.19	66.02	75.41
NI K ALPHA	59.32	54.65	58.67	88.95	68.31	76.74	80.19	81.21	92.79
CO K ALPHA	59.53	71.74	57.64	61.69	63.63	66.89	66.62	70.95	55.10
MN K ALPHA	92.94	96.64	90.03	95.28	99.16	104.00	103.59	110.41	85.00
CR K ALPHA	118.34	123.08	114.63	121.19	126.24	132.39	131.85	140.55	108.06
V K ALPHA	149.67	157.31	144.71	151.40	157.62	167.14	165.50	175.71	130.83
TI K ALPHA	194.81	204.81	188.34	196.82	205.10	217.45	215.29	228.59	169.96
SC K ALPHA	256.69	269.95	248.16	259.04	270.19	286.43	283.53	301.10	223.52
TH L ALPHA	12.79	11.78	12.64	19.10	14.71	16.49	17.22	17.45	19.90
BA L ALPHA	200.06	210.33	193.41	202.10	210.62	223.32	221.09	234.76	174.52
PB L BETA1	13.77	12.74	13.65	20.32	15.75	17.60	18.36	18.58	21.15
BA L BETA1	157.89	165.34	153.50	159.43	165.35	173.95	172.31	181.91	139.88

	498/140dB	498/PW3	498/PW1	498/1242	498/1244	498/1441A	498/927-R	498/1027A-K
SI02	75.53	49.73	75.38	73.83	79.21	72.68	49.26	58.32
AL203	12.21	17.60	11.69	12.93	10.66	10.83	16.83	22.05
FE203	3.45	9.15	2.47	4.16	2.99	2.60	15.73	7.53
MNO	0.00	0.16	0.00	0.03	0.02	0.05	0.25	0.11
HGO	1.06	6.33	0.53	1.09	0.59	1.35	4.26	2.10
CAO	0.56	9.90	0.18	0.30	0.50	3.19	10.67	0.14
NA2O	1.10	1.90	3.41	0.29	0.07	4.38	0.56	0.55
K2O	3.20	1.86	5.10	4.31	3.76	0.94	0.45	5.98
TI02	0.40	0.70	0.20	0.47	0.48	0.22	1.91	0.57
P205	0.10	0.12	0.04	0.11	0.11	0.11	0.24	0.07
LOSS	1.61	1.53	0.45	1.95	1.51	3.70	0.20	2.67
TOTAL	99.30	98.96	99.74	99.47	99.90	100.05	100.35	100.09

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	2838.72	3018.63	2790.44	2882.46	2874.56	2814.28	3266.21	2960.11
SN K ALPHA	1.81	2.53	1.80	1.90	1.81	1.73	3.12	2.21
NB K ALPHA	5.68	8.05	5.63	5.97	5.68	5.41	10.00	7.01
ZR K ALPHA	6.64	9.38	6.58	6.97	6.63	6.32	11.64	8.17
Y K ALPHA	7.69	10.89	7.63	8.09	7.69	7.33	13.52	9.49
SR K ALPHA	8.96	12.67	8.88	9.42	8.96	8.54	15.74	11.05
RB K ALPHA	10.48	14.82	10.39	11.02	10.48	9.99	18.41	12.92
SE K ALPHA	17.30	24.46	17.16	18.18	17.29	16.49	30.37	21.32
AS K ALPHA	20.61	29.15	20.44	21.66	20.60	19.64	36.21	25.41
GA K ALPHA	29.81	42.17	29.56	31.34	29.80	28.41	52.36	36.75
ZN K ALPHA	36.26	51.28	35.96	38.12	36.25	34.55	63.68	44.70
CU K ALPHA	44.26	62.61	43.89	46.53	44.25	42.19	77.76	54.56
NI K ALPHA	54.44	77.02	53.98	57.23	54.42	51.88	95.66	67.11
CO K ALPHA	57.14	67.18	59.66	58.38	58.57	56.62	69.68	59.99
MN K ALPHA	89.43	104.55	93.42	91.25	91.57	88.42	107.91	93.45
CR K ALPHA	113.88	133.09	118.98	116.18	116.60	112.60	137.30	118.96
V K ALPHA	144.72	167.99	152.23	147.36	147.87	143.91	167.79	150.41
TI K ALPHA	188.38	218.56	198.19	191.81	192.49	187.34	218.15	195.70
SC K ALPHA	248.26	287.89	261.21	252.75	253.69	246.92	287.15	257.79
TH L ALPHA	11.75	16.55	11.65	12.34	11.74	11.22	20.52	14.44
BA L ALPHA	193.45	224.46	203.53	196.97	197.68	192.39	224.07	200.97
PB L BETA1	12.70	17.66	12.60	13.32	12.71	12.13	21.80	15.49
BA L BETA1	153.37	174.83	160.62	155.91	156.54	152.32	174.92	158.71

	498/307	498/1177	498/587	498/689	498/147	498/682	498/1444	498/1092B	498/678
SiO2	72.82	51.51	47.98	75.46	44.94	74.20	64.64	75.32	71.03
Al2O3	12.98	13.51	15.62	10.08	7.89	14.47	13.24	12.90	15.37
Fe2O3	4.53	16.04	11.75	12.79	12.73	1.68	2.84	3.21	3.09
MnO	0.08	0.25	0.19	0.23	0.18	0.05	0.06	0.04	0.03
H2O	1.41	6.07	6.26	1.45	23.83	0.42	1.99	1.50	1.08
CaO	2.04	9.47	14.21	0.37	4.14	2.35	4.37	0.36	3.59
Na2O	2.80	0.99	1.32	0.02	0.05	5.17	4.90	0.25	4.52
K2O	1.45	0.28	0.22	0.30	0.03	1.89	0.76	3.68	0.98
TiO2	0.47	1.62	0.92	1.59	0.69	0.10	0.30	0.25	0.29
P2O5	0.11	0.19	0.11	0.09	0.08	0.02	0.10	0.07	0.10
LOSS	1.63	0.27	1.69	0.00	4.75	0.10	4.83	2.50	0.25
TOTAL	100.31	100.20	100.26	102.38	99.30	100.44	98.02	100.08	100.33

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

MASS ABSORPTION MATRIX

Na K ALPHA	2868.01	3263.40	3189.70	3187.40	3011.51	2744.76	2764.87	2868.39	2793.44
SM K ALPHA	1.90	3.08	2.86	2.57	2.49	1.69	1.74	1.80	1.81
Nb K ALPHA	5.97	9.88	9.13	8.16	7.95	5.28	5.45	5.64	5.69
Zr K ALPHA	6.97	11.49	10.63	9.51	9.26	6.17	6.37	6.59	6.65
Y K ALPHA	8.08	13.34	12.34	11.03	10.75	7.16	7.38	7.64	7.71
SR K ALPHA	9.41	15.54	14.37	12.85	12.52	8.33	8.60	8.90	8.98
RB K ALPHA	11.00	18.18	16.80	15.04	14.64	9.75	10.06	10.41	10.50
SE K ALPHA	18.16	29.99	27.73	24.80	24.16	16.09	16.60	17.18	17.34
AS K ALPHA	21.64	35.74	33.06	29.56	28.80	19.17	19.78	20.47	20.66
GA K ALPHA	31.31	51.70	47.81	42.75	41.65	27.73	28.61	29.61	29.89
Zn K ALPHA	38.08	62.87	58.14	52.00	50.64	33.73	34.80	36.01	36.35
CU K ALPHA	46.48	76.76	70.99	63.48	61.83	41.18	42.49	43.96	44.38
NI K ALPHA	57.17	94.44	87.33	78.10	76.08	50.64	52.25	54.06	54.58
CO K ALPHA	57.12	67.21	71.82	57.22	54.75	57.98	56.30	57.44	58.42
HN K ALPHA	89.01	104.00	111.68	88.25	84.83	90.55	87.92	89.72	91.34
CR K ALPHA	113.34	132.31	142.15	112.26	107.93	115.34	111.97	114.24	116.32
V K ALPHA	143.68	162.70	178.59	137.06	135.60	148.00	142.76	145.88	148.38
TI K ALPHA	187.01	211.51	232.30	178.20	176.31	192.70	185.83	189.89	193.15
SC K ALPHA	246.42	278.40	305.93	234.56	232.09	254.00	244.92	250.26	254.56
TH L ALPHA	12.33	20.26	18.75	16.78	16.34	10.95	11.29	11.66	11.79
BA L ALPHA	192.04	217.20	238.56	182.97	181.06	197.89	190.85	195.01	198.36
PB L BETA1	13.31	21.53	19.95	17.96	17.43	11.86	12.18	12.62	12.73
BA L BETA1	152.36	169.97	184.92	146.48	143.77	156.58	150.70	154.58	156.84

	791/2	HRG-1(2)	498/1327	498/927	498/1003	498/1481	498/306	498/1464	498/65
SI02	65.80	39.43	88.29	49.25	51.39	45.06	49.42	78.18	70.31
AL203	14.71	8.58	5.91	16.90	15.36	13.91	23.57	11.93	15.04
FE203	12.66	18.35	1.34	15.80	12.92	9.41	10.88	0.81	2.91
MND	0.04	0.21	0.04	0.25	1.20	0.23	0.16	0.01	0.08
HGO	3.00	13.80	0.21	4.10	4.68	2.71	3.50	0.07	0.63
CAG	0.90	14.81	0.15	10.51	12.10	24.76	0.77	0.74	1.87
NA20	2.00	0.72	1.32	0.56	0.73	1.04	1.19	2.21	4.46
K20	2.49	0.18	1.94	0.44	0.09	0.10	4.56	6.52	2.61
TI02	1.13	3.80	0.30	1.84	1.59	0.99	0.80	0.04	0.31
P205	0.12	0.09	0.05	0.24	0.19	0.29	0.04	0.01	0.09
LOSS	0.00	0.00	0.54	0.20	0.09	1.20	4.18	0.11	1.12
TOTAL	102.91	79.97	100.09	100.08	100.33	99.69	99.07	100.63	99.44

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	3144.88	3384.00	2808.02	3278.37	3242.01	3276.48	3008.09	2803.59	2720.14
SN K ALPHA	2.61	3.51	1.62	3.12	3.00	3.05	2.43	1.74	1.78
NB K ALPHA	8.30	11.30	5.02	9.98	9.60	9.76	7.72	5.44	5.59
ZR K ALPHA	9.67	13.14	5.88	11.62	11.18	11.36	8.99	6.36	6.54
Y K ALPHA	11.22	15.26	6.81	13.49	12.98	13.18	10.44	7.37	7.58
SR K ALPHA	13.07	17.77	7.93	15.71	15.11	15.35	12.15	8.59	8.82
RB K ALPHA	15.29	20.79	9.29	18.37	17.67	17.95	14.21	10.05	10.32
SE K ALPHA	25.22	34.29	15.33	30.31	29.16	29.63	23.44	16.59	17.04
AS K ALPHA	30.06	40.88	18.25	36.13	34.76	35.32	27.95	19.76	20.30
GA K ALPHA	43.47	59.12	26.41	52.25	50.27	51.08	40.42	28.58	29.36
ZN K ALPHA	52.87	71.89	32.12	63.55	61.14	62.12	49.16	34.76	35.71
CU K ALPHA	64.53	87.79	39.21	77.59	74.65	75.86	60.01	42.43	43.60
NI K ALPHA	79.41	108.01	48.22	95.46	91.84	93.31	73.83	52.18	53.62
CO K ALPHA	59.21	76.73	56.09	69.21	73.76	86.57	57.80	62.65	57.81
MN K ALPHA	92.40	119.25	87.54	107.17	109.66	134.78	89.72	98.09	90.14
CR K ALPHA	117.56	151.72	111.48	136.35	139.54	171.61	114.17	124.94	114.80
V K ALPHA	145.98	177.65	142.15	166.89	172.16	216.27	143.12	160.66	146.34
TI K ALPHA	189.83	230.92	185.08	216.98	223.88	281.41	186.15	209.20	190.50
SC K ALPHA	249.91	303.89	243.96	285.61	294.76	370.74	245.10	275.77	251.07
TH L ALPHA	17.07	23.14	10.42	20.47	19.70	20.02	15.87	11.27	11.58
BA L ALPHA	194.92	237.13	190.04	222.81	229.90	289.00	191.15	214.83	195.64
PB L BETA1	18.24	24.50	11.35	21.75	20.96	21.27	16.95	12.22	12.51
BA L BETA1	154.94	183.67	151.22	173.94	178.97	220.46	151.33	168.91	154.76

	498/1469-E	498/17	498/20	498/22	498/24	498/56	498/66	498/91	498/1206A
SiO2	50.32	64.88	71.99	73.95	49.14	69.40	81.55	79.68	49.81
Al2O3	21.77	15.99	15.39	12.58	13.88	15.30	10.30	4.37	13.01
Fe2O3	15.81	4.15	2.35	3.11	10.91	3.43	0.93	9.72	16.01
MnO	0.06	0.05	0.03	0.13	0.19	0.08	0.01	0.34	0.26
MgO	3.78	1.99	0.41	0.38	5.11	0.77	0.56	0.93	6.35
CaO	0.62	4.70	2.34	3.60	13.47	2.26	3.44	3.27	10.43
Na2O	0.81	4.19	5.59	0.94	1.70	4.02	3.64	0.02	1.03
K2O	5.54	1.37	1.32	3.09	1.25	2.83	1.37	0.38	0.34
TiO2	1.44	0.44	0.13	0.10	0.92	0.39	0.98	0.45	1.51
P2O5	0.05	0.19	0.06	0.02	0.13	0.11	0.04	0.07	0.16
LOSS	-0.21	1.48	0.56	1.91	2.12	0.67	0.90	0.56	0.61
TOTAL	99.99	99.42	100.17	99.78	98.84	99.26	99.82	99.78	99.52

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	3156.58	2822.28	2743.90	2885.64	3139.18	2788.02	2727.51	3086.32	3256.67
SN K ALPHA	2.92	1.93	1.71	1.89	2.78	1.85	1.54	2.36	3.10
NB K ALPHA	9.34	6.08	5.35	5.93	8.68	5.82	4.78	7.47	9.93
ZR K ALPHA	10.86	7.10	6.26	6.92	10.34	6.79	5.59	8.72	11.56
Y K ALPHA	12.62	8.23	7.25	8.02	12.01	7.88	6.48	10.11	13.42
BR K ALPHA	14.69	9.59	8.45	9.35	13.98	9.17	7.55	11.78	15.63
RB K ALPHA	17.18	11.21	9.88	10.93	16.35	10.73	8.83	13.78	18.28
SE K ALPHA	28.35	18.51	16.31	18.04	26.99	17.71	14.58	22.74	30.15
AS K ALPHA	33.80	22.05	19.43	21.50	32.17	21.10	17.36	27.09	35.94
GA K ALPHA	48.87	31.90	28.11	31.10	46.52	30.52	25.11	39.18	51.96
ZN K ALPHA	59.45	38.79	34.18	37.82	56.58	37.12	30.55	47.66	63.22
CU K ALPHA	72.57	47.36	41.73	46.17	69.08	45.32	37.29	58.18	77.19
NI K ALPHA	89.29	58.25	51.32	56.76	84.98	55.74	45.65	71.58	94.97
CO K ALPHA	61.50	59.64	56.72	61.12	71.32	58.81	54.42	58.78	67.93
MN K ALPHA	95.98	93.19	88.67	95.09	111.23	91.71	85.10	90.20	105.11
CR K ALPHA	122.08	118.67	112.93	121.09	141.57	118.78	108.38	114.78	133.73
V K ALPHA	150.32	150.68	144.76	155.41	177.88	148.53	139.17	145.58	165.00
TI K ALPHA	195.42	196.12	188.46	202.30	231.40	193.34	181.20	189.36	214.51
SC K ALPHA	257.18	258.45	248.40	266.62	304.76	254.79	238.87	249.37	282.35
TH L ALPHA	19.16	12.57	11.10	12.25	18.25	12.03	9.93	15.39	20.37
BA L ALPHA	200.66	201.41	193.54	207.75	237.63	198.55	186.09	194.44	220.28
PB L BETA1	20.39	13.53	12.01	13.22	19.42	12.98	10.81	16.51	21.64
BA L BETA1	158.56	158.71	153.38	163.52	184.04	156.84	148.18	154.20	171.99

	498/57	498/WK11	498/PW5	498/603	AGV-112)	498/PW3	498/PW4	498/30	498/960
SI02	66.48	71.57	77.77	56.68	59.69	49.10	49.79	46.74	39.71
AL203	16.33	14.64	11.79	14.52	12.31	17.58	15.40	15.72	31.62
FE203	4.60	2.02	4.92	15.62	6.86	9.06	10.57	5.98	19.25
MNO	0.08	0.01	0.03	0.25	0.12	0.17	0.19	0.19	0.25
HGO	1.71	0.68	0.49	1.85	1.55	6.41	7.19	6.08	6.33
CA0	3.70	0.11	0.05	4.62	4.87	9.77	10.63	14.13	1.19
NA20	3.90	0.12	0.12	3.17	4.35	1.88	1.85	2.50	0.71
K20	1.71	7.43	3.37	1.65	2.98	1.83	0.71	0.10	0.04
TI02	0.57	0.25	0.61	0.94	1.04	0.69	0.88	1.11	1.75
P205	0.17	0.05	0.05	0.51	0.51	0.13	0.15	0.15	0.03
LOSS	0.00 0.55	1.75	0.00 1.99	0.32	0.00	1.53	1.19	2.54	-0.80
TOTAL	99.55/00.10	98.62	99.20/01.19	100.11	99.28	98.14	98.56	98.84	100.09

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

	2821.60	2815.53	2883.20	3178.54	2899.04	2991.49	3050.65	3079.38	3161.75
NA K ALPHA	1.97	1.81	1.94	2.91	2.25	2.50	2.63	2.65	3.03
SN K ALPHA	6.20	5.69	6.11	9.29	7.12	7.97	8.40	8.47	9.72
ZR K ALPHA	7.24	6.64	7.14	10.81	8.30	9.29	9.78	9.86	11.30
Y K ALPHA	8.40	7.70	8.27	12.55	9.64	10.78	11.35	11.45	13.13
SR K ALPHA	9.78	8.97	9.64	14.62	11.22	12.55	13.22	13.33	15.28
RB K ALPHA	11.43	10.49	11.27	17.10	13.12	14.68	15.46	15.59	17.87
SE K ALPHA	18.87	17.31	18.60	28.20	21.65	24.23	25.51	25.72	29.48
AS K ALPHA	22.49	20.63	22.16	33.62	25.81	28.88	30.41	30.66	35.16
GA K ALPHA	32.53	29.84	32.06	48.62	37.33	41.76	43.98	44.34	50.84
ZN K ALPHA	39.57	36.30	39.00	59.14	45.40	50.79	53.49	53.92	61.83
CU K ALPHA	48.30	44.30	47.60	72.21	55.43	62.01	65.31	65.85	75.49
NI K ALPHA	59.41	54.48	58.55	88.84	68.18	76.28	80.34	81.00	92.89
CO K ALPHA	59.67	61.66	57.65	61.58	63.43	66.54	66.83	70.75	55.13
MN K ALPHA	93.06	96.56	90.05	95.11	98.80	103.50	103.83	110.05	85.00
CR K ALPHA	118.50	122.98	114.65	120.97	125.79	131.76	132.15	140.10	108.06
V K ALPHA	149.88	157.18	144.74	151.21	157.08	166.33	165.94	175.13	130.78
TI K ALPHA	195.07	204.64	188.38	196.58	204.40	216.40	215.06	227.83	169.89
SC K ALPHA	257.05	269.73	246.21	258.73	269.27	285.04	284.29	300.10	223.44
TH L ALPHA	12.81	11.75	12.62	19.07	14.68	16.39	17.26	17.40	19.92
BA L ALPHA	200.33	210.15	193.44	201.85	209.90	222.23	221.68	233.98	174.45
PB L BETA1	13.79	12.70	13.62	20.29	15.72	17.49	18.39	18.53	21.18
BA L BETA1	158.12	165.21	153.53	159.23	164.79	173.12	172.77	181.30	139.83

	498/683	498/814A	498/814B	498/833	498/902	498/927	498/1003	498/1063	498/1091
SiO2	48.96	68.90	68.91	65.49	51.37	48.96	51.81	74.55	61.81
Al2O3	12.48	15.56	15.29	15.63	15.26	16.73	15.36	14.25	19.46
Fe2O3	16.97	3.58	3.61	6.68	10.75	15.46	12.81	2.06	6.91
MnO	0.24	0.04	0.03	0.05	0.31	0.25	1.23	0.00	0.10
H2O	5.41	1.27	1.31	1.51	2.13	3.92	4.59	0.04	1.63
CaO	11.62	3.93	3.77	4.43	17.10	10.44	12.21	3.52	0.40
Na2O	1.70	4.00	3.80	3.34	0.54	0.55	0.73	4.67	0.55
K2O	0.20	1.53	1.56	1.42	0.54	0.45	0.10	0.48	5.54
TiO2	1.59	0.38	0.38	0.79	0.64	1.83	1.61	0.11	0.49
P2O5	0.15	0.09	0.09	0.19	0.07	0.23	0.19	0.00	0.13
LOSS	0.20	0.54	0.51	0.27	1.50	0.20	0.09	0.32	2.69
TOTAL	99.51	99.82	99.27	99.79	100.20	99.04	100.72	100.01	99.71

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

	3289.98	2810.97	2798.70	2912.11	3242.44	3241.83	3253.04	2759.16	2945.59
Na K ALPHA	3.22	1.88	1.87	2.16	2.90	3.08	3.01	1.70	2.15
Nb K ALPHA	10.32	5.91	5.88	6.83	9.28	9.85	9.62	5.32	6.81
Zr K ALPHA	12.00	6.90	6.87	7.96	10.81	11.46	11.19	6.23	7.94
Y K ALPHA	13.94	8.00	7.96	9.24	12.54	13.31	12.99	7.21	9.22
Sr K ALPHA	16.23	9.32	9.27	10.76	14.60	15.49	15.13	8.40	10.73
Rb K ALPHA	18.99	10.90	10.84	12.58	17.08	18.12	17.70	9.83	12.55
Se K ALPHA	31.32	17.99	17.90	20.77	28.18	29.90	29.20	16.23	20.72
As K ALPHA	37.34	21.43	21.33	24.75	33.59	35.64	34.81	19.33	24.69
Ga K ALPHA	54.00	31.00	30.85	35.79	48.58	51.54	50.34	27.96	35.71
Zn K ALPHA	65.68	37.71	37.52	43.53	59.08	62.69	61.23	34.01	43.43
Cu X ALPHA	80.19	46.04	45.81	53.15	72.15	76.54	74.76	41.52	53.02
Ni K ALPHA	98.66	56.62	56.34	65.37	88.75	94.17	91.97	51.06	65.22
Co K ALPHA	69.51	59.41	58.97	60.53	76.74	68.60	74.26	57.29	59.61
Mn K ALPHA	107.69	92.86	92.21	94.55	118.83	106.23	110.31	89.70	92.89
Cr K ALPHA	136.99	118.25	117.42	120.37	151.27	135.15	140.37	114.25	118.24
V K ALPHA	168.84	150.46	149.38	151.26	191.64	165.40	3.14	146.55	149.90
Ti K ALPHA	219.50	195.85	194.45	196.82	249.32	215.04	225.15	190.80	195.05
Sc K ALPHA	288.90	258.10	256.26	259.29	328.40	283.06	296.44	251.49	256.95
Th L ALPHA	21.16	12.22	12.16	14.08	19.05	20.20	19.73	11.04	14.04
Ba L ALPHA	225.40	201.13	199.69	202.12	256.04	220.82	231.21	195.94	200.30
Pb L BETA1	22.45	13.18	13.11	15.11	20.27	21.46	20.99	11.96	15.07
Ra L BETA1	175.60	158.70	157.61	159.40	197.39	172.36	179.96	155.09	158.19

	498/1469-R	498/17	498/20	498/22	498/24	498/56	498/66	498/91	498/1206H
SiO2	50.40	65.06	71.86	73.83	48.97	69.42	81.53	79.75	50.01
Al2O3	21.80	16.03	15.25	12.62	13.74	15.27	10.34	4.26	13.02
Fe2O3	15.84	4.15	2.33	3.11	10.91	3.43	0.91	9.71	16.05
MnO	0.08	0.07	0.02	0.13	0.19	0.09	0.02	0.34	0.28
MgO	3.64	1.85	0.43	0.32	4.98	0.78	0.63	0.91	6.49
CaO	0.62	4.70	2.34	3.61	13.46	2.26	0.44	3.26	10.42
Na2O	0.81	4.30	5.56	0.94	1.70	1.02	3.64	0.02	1.04
K2O	5.56	1.38	1.32	3.09	1.24	2.63	1.37	0.38	0.34
TiO2	1.43	0.44	0.13	0.10	0.92	0.39	0.08	0.44	1.51
P2O5	0.05	0.19	0.06	0.01	0.15	0.12	0.04	0.07	0.17
LOSS	-0.21	1.46	0.56	1.91	2.12	0.67	0.90	0.56	0.61
TOTAL	100.02	99.55	99.87	99.67	98.38	99.28	99.90	99.71	99.93

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	3159.64	2827.00	2735.51	2882.87	3127.95	2768.90	2728.75	3084.37	3268.44
BM K ALPHA	2.92	1.93	1.70	1.89	2.78	1.85	1.54	2.36	3.11
MB K ALPHA	9.36	6.09	5.33	5.92	8.86	5.02	4.78	7.47	9.96
ZO K ALPHA	10.88	7.11	6.23	6.92	10.32	6.80	5.59	8.71	11.59
Y K ALPHA	12.64	8.25	7.22	8.02	11.96	7.88	6.48	10.10	13.46
SR K ALPHA	14.72	9.61	8.41	9.34	13.95	9.18	7.55	11.76	15.67
RS K ALPHA	17.21	11.23	9.84	10.92	16.31	10.74	8.83	13.77	18.34
SE K ALPHA	28.40	18.54	16.25	18.03	26.92	17.72	14.58	22.71	30.25
AS K ALPHA	33.66	22.10	19.36	21.48	32.09	21.11	17.36	27.06	36.06
GA K ALPHA	48.96	31.96	28.00	31.08	46.41	30.54	25.12	39.14	52.15
ZK K ALPHA	59.55	38.87	34.05	37.80	56.44	37.15	30.55	47.61	63.42
CU K ALPHA	72.70	47.46	41.57	46.14	68.92	45.35	37.29	58.13	77.44
NI K ALPHA	89.44	58.37	51.12	56.75	84.78	55.77	45.86	71.50	95.27
CO K ALPHA	61.60	59.79	56.54	61.08	71.27	58.85	54.48	58.72	68.18
MN K ALPHA	96.03	93.33	88.43	95.02	110.83	91.73	85.15	90.11	105.41
CR K ALPHA	122.16	118.84	112.63	121.01	141.08	116.81	108.45	114.66	134.10
V K ALPHA	150.46	150.91	144.37	155.30	177.24	148.56	139.25	145.47	165.48
TI K ALPHA	195.60	196.42	187.95	202.16	230.56	193.38	181.32	189.22	215.13
SC K ALPHA	257.42	258.84	247.72	266.43	303.66	254.84	239.02	249.20	283.17
TH L ALPHA	19.19	12.59	11.06	12.24	18.20	12.04	9.93	15.36	20.43
BA L ALPHA	200.85	201.72	193.02	207.61	236.78	198.59	186.20	194.30	220.92
PB L BETA1	20.42	13.56	11.96	13.22	19.37	12.99	10.81	16.49	21.71
RA L BETA1	158.70	158.95	152.95	163.40	183.36	156.87	148.28	154.09	172.31

	AGV-1(2)	498/588	498/1027A	498/153	498/1469	498/1321	498/678	498/1444	498/449
SI02	59.96	63.01	58.03	63.41	50.34	51.11	70.99	64.54	73.28
AL2O3	17.32	16.92	21.88	16.72	21.80	13.63	15.44	13.23	14.67
FE2O3	6.88	5.64	7.62	5.03	15.80	19.13	3.12	2.86	2.48
MNO	0.11	0.09	0.12	0.07	0.08	0.36	0.04	0.08	0.08
H60	1.59	2.51	2.13	1.99	3.80	3.13	1.00	1.99	0.53
CAO	4.92	4.10	0.14	4.00	0.60	7.66	3.62	4.38	3.06
NA2O	4.35	3.41	0.54	4.93	0.81	2.16 2.16	4.52	4.70	4.69
K2O	2.98	2.22	5.97	0.84	5.54	0.32	0.97	0.75	1.10
TIO2	1.04	0.63	0.56	0.64	1.39	2.10	0.30	0.30	0.08
P2O5	0.50	0.17	0.08	0.18	0.04	0.62	0.09	0.11	0.06
LOSS	0.00	1.58	2.67	1.58	-0.21	0.00	0.25	4.83	0.94
TOTAL	99.65	100.28	99.74	99.38	99.99	100.52	100.35	97.97	100.97

100.22

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	2909.92	2895.10	2953.28	2820.71	3155.50	3336.55	2795.49	2764.89	2796.85
SN K ALPHA	2.25	2.08	2.22	1.96	2.92	3.31	1.82	1.74	1.75
NB K ALPHA	7.15	6.57	7.02	6.18	9.33	10.60	5.71	5.46	5.49
ZR K ALPHA	8.33	7.66	8.18	7.21	10.86	12.33	6.67	6.38	6.41
Y K ALPHA	9.67	8.89	9.50	8.37	12.61	14.32	7.73	7.40	7.43
SR K ALPHA	11.26	10.35	11.06	9.74	14.68	16.67	9.00	8.61	8.65
RB K ALPHA	13.17	12.11	12.93	11.40	17.17	19.51	10.53	10.07	10.12
SE K ALPHA	21.73	19.98	21.34	18.81	28.33	32.18	17.39	16.63	16.71
AS K ALPHA	25.90	23.81	25.44	22.42	33.77	38.36	20.71	19.82	19.91
GA K ALPHA	37.46	34.44	36.79	32.43	48.84	55.48	29.96	28.67	28.80
ZN K ALPHA	45.55	41.89	44.75	39.43	59.41	67.47	36.44	34.86	35.03
CU K ALPHA	55.62	51.14	54.62	48.15	72.52	82.38	44.49	42.57	42.77
NI K ALPHA	68.41	62.90	67.19	59.22	89.23	101.36	54.72	52.35	52.60
CO K ALPHA	63.66	60.73	59.81	58.07	61.46	66.09	58.50	56.33	57.90
MN K ALPHA	99.21	94.70	93.11	90.61	95.81	101.64	91.41	87.88	90.27
CR K ALPHA	126.31	120.57	118.53	115.37	121.87	129.25	116.42	111.91	114.97
V K ALPHA	157.75	152.26	149.89	145.52	150.27	156.50	148.46	142.68	147.61
TI K ALPHA	205.26	198.15	195.03	189.39	195.35	203.37	193.25	185.74	192.16
SC K ALPHA	270.41	261.07	256.91	249.54	257.10	267.57	254.69	244.79	253.28
TH L ALPHA	14.73	13.56	14.46	12.78	19.4	21.74	11.82	11.31	11.37
BA L ALPHA	210.79	203.49	200.28	194.49	200.59	208.83	198.47	190.75	197.35
PB L BETA1	15.77	14.56	15.50	13.74	20.37	23.06	12.76	12.20	12.30
BA L BETA1	165.48	160.34	158.17	153.74	158.52	164.09	156.91	150.62	156.20

	498/WK11	498/WK10	498/603	498/306E	498/1027A	498/KTT5	498/588	498/619B	498/KTT4
SiO2	71.51	71.17	57.06	54.89	57.59	68.38	62.44	58.85	76.40
AL2O3	14.54	15.39	14.48	21.04	21.73	15.45	16.58	18.32	11.65
FE2O3	2.06	2.02	15.63	10.04	7.56	5.77	5.55	14.84	3.66
MNO	0.00	0.00	0.24	0.07	0.10	0.04	0.07	0.20	0.00
HGO	0.94	0.90	1.96	2.94	2.13	1.67	2.51	2.68	1.14
CAO	0.12	0.11	4.62	0.55	0.14	0.03	4.07	0.48	0.26
NA2O	0.13	0.12	3.18	0.68	0.54	0.28	3.37	0.66	1.06
K2O	7.42	7.39	1.65	4.73	5.92	4.58	2.18	1.74	3.30
TIO2	0.25	0.33	0.95	0.65	0.55	0.48	0.62	1.49	0.39
P2O5	0.05	0.06	0.51	0.13	0.08	0.05	0.18	0.12	0.11
LOSS	1.75	1.82	0.32	3.75	2.67	3.02	1.58	0.26	1.68
TOTAL	98.76	99.32	100.60	99.49	99.01	99.75	99.16	99.63	99.66

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	2818.70	2831.64	3191.43	3012.07	2931.21	2926.62	2862.64	3122.66	2853.30
SN K ALPHA	1.82	1.82	2.91	2.36	2.20	2.02	2.05	2.72	1.82
NB K ALPHA	5.70	5.71	9.31	7.51	6.96	6.36	6.48	8.67	5.72
ZR K ALPHA	6.66	6.67	10.84	8.74	8.11	7.42	7.56	10.09	6.68
Y K ALPHA	7.72	7.74	12.58	10.15	9.42	8.61	8.77	11.72	7.74
SR K ALPHA	8.99	9.01	14.65	11.82	10.97	10.02	10.22	13.64	9.02
RB K ALPHA	10.51	10.54	17.14	13.82	12.82	11.72	11.95	15.96	10.55
SE K ALPHA	17.35	17.40	28.27	22.81	21.16	19.35	19.72	26.33	17.41
AS K ALPHA	20.67	20.73	33.70	27.19	25.22	23.06	23.50	31.38	20.74
GA K ALPHA	29.90	29.99	48.74	39.32	36.48	33.35	34.00	45.39	30.00
ZN K ALPHA	36.37	36.48	59.28	47.83	44.37	40.56	41.35	55.20	36.49
CU K ALPHA	44.40	44.52	72.38	58.39	54.17	49.52	50.48	67.39	44.54
NI K ALPHA	54.60	54.75	89.05	71.82	66.63	60.90	62.09	82.92	54.78
CO K ALPHA	61.68	62.00	61.81	57.96	59.29	57.86	59.99	56.68	56.93
MN K ALPHA	96.64	97.15	95.52	90.43	92.40	90.39	93.64	87.64	89.09
CR K ALPHA	123.08	123.73	121.51	115.08	117.63	115.08	119.23	111.47	113.44
V K ALPHA	157.31	157.75	151.85	144.88	148.77	145.85	150.57	136.48	144.20
TI K ALPHA	204.81	205.38	197.41	188.45	193.58	189.80	195.95	177.41	187.70
SC K ALPHA	269.95	270.70	259.82	248.16	254.99	250.06	258.18	233.46	247.35
TH L ALPHA	11.77	11.81	19.12	15.44	14.34	13.12	13.38	17.80	11.82
BA L ALPHA	210.32	210.91	202.71	193.52	198.79	194.91	201.23	182.16	192.75
PB L BETA1	12.73	12.77	20.34	16.52	15.37	14.12	14.37	18.99	12.78
BA L BETA1	165.35	165.84	159.91	153.18	156.99	154.38	158.57	145.35	152.93

WAVELENGTH	498/206	498/217	498/218	498/219	498/220	498/221	498/224	498/226	498/229	498/230
SN K ALPHA	2.91	3.42	3.01	3.16	3.03	2.67	2.83	2.85	1.71	1.85
NB K ALPHA	9.29	10.98	9.65	10.12	9.71	8.52	9.02	9.11	5.33	5.81
ZR K ALPHA	10.81	12.77	11.22	11.78	11.29	9.92	10.51	10.61	6.24	6.79
Y K ALPHA	12.55	14.92	13.04	13.67	13.12	11.52	12.20	12.31	7.22	7.87
SR K ALPHA	14.62	17.26	15.17	15.92	15.27	13.41	14.20	14.34	8.42	9.16
RB K ALPHA	17.10	20.19	17.75	18.63	17.86	15.89	16.61	16.77	9.86	10.72
SE K ALPHA	28.21	33.31	29.28	30.73	29.46	25.89	27.41	27.67	16.27	17.69
AS K ALPHA	33.62	39.71	34.91	36.63	35.13	30.86	32.67	32.98	19.37	21.07
GA K ALPHA	48.63	57.43	50.49	52.97	50.80	44.63	47.25	47.70	28.03	30.48
ZH K ALPHA	59.15	69.84	61.49	64.43	61.78	54.28	57.47	58.01	34.09	37.08
CU K ALPHA	72.21	85.28	74.97	78.66	75.43	66.27	70.17	70.83	41.61	45.27
NI K ALPHA	88.34	104.92	92.24	96.78	92.81	81.53	86.32	87.14	51.18	55.67
CO K ALPHA	57.84	73.49	55.50	65.74	61.65	59.41	66.14	68.81	53.97	61.08
MN K ALPHA	89.82	114.33	85.68	101.72	95.67	91.92	102.71	106.83	84.26	95.65
CR K ALPHA	114.22	145.44	108.94	129.39	121.69	116.94	130.70	135.96	107.29	121.81
V K ALPHA	141.71	176.02	133.10	155.56	146.58	142.86	162.40	169.05	137.23	155.79
TI K ALPHA	184.17	228.81	172.92	202.19	190.50	185.73	211.19	219.86	178.64	202.82
SC K ALPHA	242.34	301.13	227.14	266.06	250.67	244.48	278.05	289.51	235.43	267.31
TH L ALPHA	19.07	22.49	19.80	20.76	19.93	17.52	18.53	18.71	11.05	12.01
BA L ALPHA	189.11	234.96	172.56	207.61	195.62	190.73	216.87	225.79	183.44	208.28
PB L BETA1	20.28	23.83	21.01	22.03	21.14	18.66	19.72	19.90	12.00	12.98
BA L BETA1	150.04	182.25	141.46	162.95	154.39	150.99	169.42	175.73	146.36	164.03
CE L BETA1	122.21	152.06	116.74	136.65	129.19	124.75	137.94	143.02	116.13	130.18

WHOLE ROCK ANALYSES (ORIGINAL MATERIAL)

SiO2	54.83	44.43	45.38	48.96	47.01	54.40	49.50	48.16	88.49	76.49
Al2O3	13.91	15.08	15.21	13.24	13.54	13.00	13.25	13.94	3.42	10.87
Fe2O3	16.81	18.17	18.89	17.42	17.15	13.42	13.16	12.63	3.19	2.48
FeO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MnO	0.13	0.17	0.22	0.24	0.17	0.21	0.18	0.21	0.02	0.00
MgO	3.68	2.03	7.28	4.35	4.05	5.58	7.03	7.32	1.30	0.29
CaO	1.38	13.11	1.96	7.22	4.82	4.03	9.99	11.95	0.81	0.19
Na2O	2.19	0.81	4.10	1.60	5.20	4.21	1.65	1.81	0.05	1.58
K2O	3.02	1.19	1.11	1.41	1.39	0.79	0.48	0.23	0.38	6.38
TiO2	1.11	2.39	1.50	2.35	2.14	1.64	1.24	1.26	0.19	0.22
P2O5	0.13	0.22	0.23	0.16	0.28	0.24	0.13	0.13	0.00	0.03
H2O+	2.49	1.99	3.44	2.98	2.53	2.64	3.37	2.09	1.56	0.57
H2O	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	99.69	99.59	99.32	100.13	100.29	100.16	99.99	99.74	99.40	99.30

WAVELENGTH 498/1401

SN K ALPHA	2.54
PB K ALPHA	8.07
ZR K ALPHA	9.40
Y K ALPHA	10.91
SR K ALPHA	12.70
RB K ALPHA	14.81
SE K ALPHA	24.52
AS K ALPHA	29.22
GA K ALPHA	42.26
ZN K ALPHA	51.41
CU K ALPHA	62.76
NI K ALPHA	77.20
CO K ALPHA	58.40
MN K ALPHA	91.09
CR K ALPHA	115.91
V K ALPHA	143.64
TI K ALPHA	186.80
SC K ALPHA	245.93
TH L ALPHA	16.59
BA L ALPHA	171.82
PB L BETA1	17.72
BA L BETA1	152.17
CE L BETA1	124.10
PD K ALPHA	6.98
W L ALPHA	55.49

WHOLE ROCK ANALYSES (ORIGINAL MATERIAL)

SiO2	58.43
Al2O3	18.19
Fe2O3	12.03
FeO	0.00
MnO	0.06
MgO	3.45
CaO	0.86
Na2O	1.17
K2O	3.39
TiO2	1.18
P2O5	0.04
H2O+	1.04
NiO	0.00
S	0.00
TOTAL	99.84

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH K498/203

BN K ALPHA	2.85
NB K ALPHA	9.09
ZR K ALPHA	10.59
Y K ALPHA	12.29
SR K ALPHA	14.31
RB K ALPHA	16.74
SE K ALPHA	27.62
AS K ALPHA	32.93
GA K ALPHA	47.62
ZN K ALPHA	57.91
CU K ALPHA	70.71
NI K ALPHA	86.99
CO K ALPHA	66.28
MN K ALPHA	102.69
CR K ALPHA	130.68
V K ALPHA	160.84
TI K ALPHA	209.15
SC K ALPHA	275.36
TH L ALPHA	18.69
BA L ALPHA	214.78
PB L BETA1	19.84
BA L BETA1	167.33

WHOLE ROCK ANALYSES (ORIGINAL MATERIAL)

SI02	42.46
TIO2	1.57
AL2O3	12.18
FE2O3	13.37
FE0	0.00
MNO	0.24
MGO	4.16
CAO	11.50
NA2O	4.46
K2O	0.26
P2O5	0.20
H2O+	10.33
NIO	0.00
S	0.00
TOTAL	100.72

WAVELENGTH	K498/210	K498/211	K498/212	K498/213
SN K ALPHA	2.17	3.10	1.90	1.99
NB K ALPHA	6.85	9.93	5.96	6.27
ZR K ALPHA	7.99	11.56	6.96	7.32
Y K ALPHA	9.27	13.42	8.06	8.49
SR K ALPHA	10.80	15.63	9.39	9.89
RB K ALPHA	12.63	18.28	10.99	11.57
SE K ALPHA	20.85	30.16	18.14	19.09
AS K ALPHA	24.84	35.94	21.61	22.74
GA K ALPHA	35.93	51.99	31.26	32.90
ZN K ALPHA	43.70	63.22	38.02	40.02
CU K ALPHA	53.35	77.20	46.41	48.85
NI K ALPHA	65.62	94.97	57.08	60.08
CO K ALPHA	59.58	73.10	57.89	61.52
MN K ALPHA	92.97	113.70	90.30	96.22
CR K ALPHA	118.35	144.68	114.97	122.52
V K ALPHA	149.28	178.27	146.08	156.13
TI K ALPHA	194.25	231.82	190.14	203.22
SC K ALPHA	255.88	305.22	250.55	267.79
TH L ALPHA	14.12	20.37	12.31	12.95
BA L ALPHA	199.47	238.06	195.26	208.69
PB L BETA1	15.17	21.65	13.29	13.95
BA L BETA1	157.71	184.72	154.77	164.39

WHOLE ROCK ANALYSES (ORIGINAL MATERIAL)

SiO2	68.43	52.78	76.53	74.92
TiO2	0.65	1.70	0.41	0.34
Al2O3	14.44	12.84	11.31	11.13
Fe2O3	7.09	14.37	4.26	4.29
FeO	0.00	0.00	0.00	0.00
MnO	0.06	0.17	0.06	0.02
MgO	1.82	3.67	0.62	0.54
CaO	0.58	13.62	0.53	0.35
Na2O	1.58	0.26	2.53	1.86
K2O	4.57	0.28	3.26	6.17
P2O5	0.12	0.22	0.14	0.12
H2O+	0.00	0.00	0.00	0.00
NiO	0.00	0.00	0.00	0.00
S	0.00	0.00	0.00	0.00
TOTAL	99.34	99.91	99.65	99.74

WAVELENGTH	498/231	498/232	498/242	560/94
SN K ALPHA	1.97	1.91	2.82	2.75
NB K ALPHA	6.19	6.02	9.02	6.79
ZR K ALPHA	7.22	7.03	10.49	10.23
Y K ALPHA	8.38	8.15	12.19	11.88
SR K ALPHA	9.76	9.49	14.19	13.83
RB K ALPHA	11.41	11.10	16.60	16.18
SE K ALPHA	18.83	18.32	27.38	26.70
AB K ALPHA	22.44	21.82	32.64	31.83
GA K ALPHA	32.46	31.57	47.21	46.03
ZN K ALPHA	39.48	38.40	57.41	55.98
CU K ALPHA	48.17	46.87	70.10	68.35
NI K ALPHA	59.27	57.65	86.25	84.09
CO K ALPHA	62.22	61.87	59.51	58.60
MN K ALPHA	97.21	96.86	91.63	90.52
CR K ALPHA	123.79	123.34	116.55	115.15
V K ALPHA	158.13	157.67	140.70	142.88
TI K ALPHA	205.87	205.26	182.88	185.74
SC K ALPHA	271.29	270.51	240.66	244.47
TH L ALPHA	12.77	12.42	18.52	18.06
BA L ALPHA	211.41	210.78	187.79	190.73
PB L BETA1	13.77	13.41	19.70	19.22
BA L BETA1	166.26	165.82	148.82	150.85
CE L BETA1	132.08	131.66	124.26	122.87

WHOLE ROCK ANALYSES (ORIGINAL MATERIAL)

SI02	72.99	74.42	53.68	51.63
AL2O3	12.44	11.98	11.97	13.32
FE2O3	3.74	3.21	15.25	14.68
FeO	0.00	0.00	0.00	0.00
MNO	0.05	0.01	0.30	0.24
NGO	0.88	0.71	5.20	5.90
CAO	0.04	0.02	4.14	4.73
NA2O	0.16	0.14	3.27	3.08
K2O	7.41	7.23	0.40	0.62
TIO2	0.26	0.24	1.99	1.12
P2O5	0.02	0.02	0.32	0.13
H2O+	1.53	1.45	3.31	4.23
NIO	0.00	0.00	0.00	0.00
S	0.00	0.00	0.00	0.00
TOTAL	99.51	99.44	99.83	99.69

	498/54	498/62	498/31	498/65	498/600	498/306	498/306B	498/307
SI02	52.54	72.13	77.86	70.16	46.81	49.66	71.37	73.16
AL2O3	13.87	14.68	11.20	14.87	15.58	23.50	15.21	12.89
FE2O3	11.33	2.56	3.25	2.86	10.31	10.90	2.60	4.56
MNO	0.19	0.06	0.02	0.07	0.20	0.15	0.02	0.07
MGO	5.95	0.49	0.43	0.65	7.27	3.47	0.95	1.48
CAO	10.99	1.19	0.90	1.88	14.45	0.76	3.17	2.03
NA2O	2.01	5.44	2.23	4.44	1.64	1.19	4.57	2.81
K2O	0.15	2.41	2.95	2.60	0.27	4.57	0.95	1.45
TI02	1.27	0.21	0.36	0.31	1.14	0.80	0.23	0.47
P2O5	0.14	0.06	0.07	0.10	0.12	0.05	0.05	0.12
LOSS	0.93	0.71	0.97	1.12	1.56	4.18	0.89	1.63
TOTAL	99.36	99.94	100.23	99.05	99.35	99.25	100.01	100.66

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	3109.94	2745.71	2844.75	2758.47	3118.19	3013.93	2770.82	2877.68
SN K ALPHA	2.72	1.73	1.81	1.77	2.75	2.43	1.75	1.90
NB K ALPHA	8.68	5.41	5.68	5.56	8.77	7.73	5.47	5.98
ZR K ALPHA	10.11	6.32	6.64	6.50	10.21	9.00	6.39	6.99
Y K ALPHA	11.73	7.33	7.70	7.53	11.86	10.46	7.41	8.10
SR K ALPHA	13.66	8.54	8.97	8.77	13.81	12.17	8.63	9.44
RB K ALPHA	15.98	9.98	10.49	10.26	16.15	14.23	10.09	11.04
SE K ALPHA	26.37	16.48	17.31	16.93	26.65	23.48	16.67	18.22
AS K ALPHA	31.43	19.64	20.63	20.18	31.76	28.00	19.86	21.71
GA K ALPHA	45.45	28.41	29.84	29.18	45.94	40.49	28.72	31.41
ZN K ALPHA	55.28	34.55	36.29	35.49	55.86	49.24	34.93	38.20
CU K ALPHA	67.50	42.18	44.30	43.33	68.21	60.12	42.65	46.63
NI K ALPHA	83.03	51.87	54.48	53.29	83.91	73.95	52.45	57.35
CO K ALPHA	67.80	56.73	57.85	57.55	72.08	57.87	57.33	57.26
MN K ALPHA	105.32	88.53	90.44	89.79	112.08	89.87	89.68	89.27
CR K ALPHA	134.04	112.75	115.16	114.35	142.67	114.37	114.21	113.67
V K ALPHA	166.59	144.16	146.59	145.77	178.29	143.38	145.96	144.11
TI K ALPHA	216.68	187.68	190.82	189.76	231.94	186.48	190.01	187.56
SC K ALPHA	285.34	247.35	251.48	250.09	305.48	245.54	250.43	247.15
TH L ALPHA	17.83	11.21	11.76	11.51	18.02	15.90	11.33	12.37
BA L ALPHA	222.51	192.73	195.96	194.88	238.19	191.49	195.13	192.61
PB L BETA1	19.00	12.13	12.72	12.44	19.18	16.98	12.26	13.35
BA L BETA1	173.49	152.80	155.30	154.16	184.46	151.60	154.46	152.82

	498/24	498/56	498/1442	498/PU5-R	498/449-R	498/960-R	498/689
ST02	49.36	69.44	76.35	78.67	72.70	39.97	74.18
203	13.98	15.28	15.05	11.94	14.60	31.60	9.93
E203	11.00	3.42	3.06	4.98	2.42	19.12	12.14
NO	0.19	0.08	0.05	0.00	0.08	0.25	0.20
MO	5.13	0.87	1.21	0.56	0.48	6.29	1.42
CAO	13.52	2.26	0.34	0.05	3.06	1.20	0.37
NA2O	1.71	4.02	6.84	0.12	4.65	0.71	0.02
20	1.26	2.84	0.50	3.36	1.08	0.04	0.38
T02	0.92	0.38	0.38	0.64	0.08	1.81	1.60
205	0.15	0.11	0.15	0.06	0.06	0.04	0.09
LOSS	2.12	0.67	1.45	0.00	0.94	-0.80	-0.41
TOTAL	99.33	99.37	99.39	99.78	100.14	100.24	99.82

101.04

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	3159.35	2790.08	2693.16	2899.51	2773.69	3163.86	3095.03
SR K ALPHA	2.80	1.85	1.66	1.95	1.74	3.03	2.48
RB K ALPHA	8.93	5.82	5.17	6.15	5.43	9.70	7.88
ZR K ALPHA	10.40	6.79	6.05	7.18	6.35	11.28	9.19
Y K ALPHA	12.08	7.88	7.01	8.32	7.36	13.11	10.66
BR K ALPHA	14.06	9.18	8.16	9.69	8.57	15.26	12.41
KB K ALPHA	16.45	10.73	9.55	11.34	10.02	17.84	14.52
SE K ALPHA	27.14	17.71	15.76	18.71	16.55	29.43	23.96
AS K ALPHA	32.35	21.11	18.78	22.29	19.72	35.10	28.55
BA K ALPHA	46.79	30.53	27.17	32.24	28.52	50.75	41.30
ZN K ALPHA	56.90	37.13	33.04	39.22	34.69	61.72	50.23
CU K ALPHA	69.48	45.33	40.34	47.88	42.35	75.35	61.32
NI K ALPHA	85.47	55.75	49.61	58.89	52.08	92.72	75.44
CO K ALPHA	71.85	58.86	52.34	57.88	57.45	55.33	55.95
MN K ALPHA	111.74	91.79	81.67	90.56	89.57	85.71	86.42
CR K ALPHA	142.23	116.88	104.00	115.30	114.07	105.47	109.94
V K ALPHA	178.73	148.70	132.08	145.44	146.45	131.03	134.05
TI K ALPHA	232.50	193.56	171.93	189.29	190.66	170.22	174.30
SC K ALPHA	306.21	255.09	226.58	249.41	251.29	223.86	229.44
TH L ALPHA	18.35	12.03	10.74	12.69	11.26	19.89	16.21
BA L ALPHA	238.77	198.78	176.56	194.38	195.80	174.78	178.97
PP L BETA1	19.53	12.98	11.62	13.70	12.18	21.14	17.36
BA L BETA1	184.92	157.02	141.07	154.29	154.97	140.08	143.26

WHOLE ROCK MASS ABSORPTION MATRIX

WAVELENGTH	K498/200	K498/202	K498/215	K498/222	K498/340CS	K498/340TC	K498/207
SN K ALPHA	2.90	2.97	2.85	2.86	3.09	3.11	2.97
NB K ALPHA	9.27	9.48	9.10	9.13	9.91	9.96	9.49
ZR K ALPHA	10.79	11.03	10.59	10.63	11.53	11.59	11.04
Y K ALPHA	12.53	12.81	12.30	12.34	13.39	13.45	12.83
SR K ALPHA	14.59	14.91	14.32	14.37	15.59	15.67	14.93
RB K ALPHA	17.07	17.45	16.76	16.81	18.23	18.32	17.47
SE K ALPHA	28.16	28.79	27.64	27.73	30.08	30.23	28.82
AS K ALPHA	33.56	34.31	32.95	33.05	35.85	36.04	34.36
GA K ALPHA	48.54	49.63	47.65	47.80	51.85	52.12	49.69
ZN K ALPHA	59.04	60.35	57.96	58.14	63.06	63.38	60.43
CU K ALPHA	72.08	73.69	70.76	70.98	77.00	77.39	73.78
NI K ALPHA	88.68	90.66	87.06	87.33	94.73	95.22	90.77
CO K ALPHA	59.30	63.74	58.51	57.24	67.22	67.57	58.10
MN K ALPHA	92.27	98.50	90.41	88.33	104.14	104.65	89.62
CR K ALPHA	117.35	125.30	114.98	112.34	132.49	133.13	113.97
V K ALPHA	143.08	153.19	139.73	136.98	163.82	164.56	140.92
TI K ALPHA	185.97	199.14	181.61	178.02	212.97	213.93	183.13
SC K ALPHA	244.71	262.10	238.98	234.23	280.32	281.58	240.94
TH L ALPHA	19.03	19.46	18.70	18.76	20.32	20.43	19.48
BA L ALPHA	190.95	204.49	186.49	182.80	218.70	219.68	188.04
PB L BETA1	20.26	20.67	19.89	19.94	21.58	21.69	20.69
BA L BETA1	151.51	160.51	148.09	145.46	170.87	171.63	149.02

WHOLE ROCK ANALYSES (ORIGINAL MATERIAL)

SI02	62.12	47.95	54.76	51.52	47.46	47.51	45.70
TI02	1.70	1.72	1.76	1.62	1.42	1.44	1.21
AL203	11.28	12.86	12.85	14.61	14.25	14.40	15.59
FE203	16.29	15.64	15.89	16.40	16.14	16.22	17.48
FE0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MNO	0.09	0.26	0.22	0.24	0.23	0.24	0.26
MGO	1.72	5.57	4.09	5.55	6.94	6.94	8.34
CAO	0.92	8.04	2.85	2.44	10.06	10.13	4.25
NA2O	0.08	1.62	4.00	4.61	2.69	2.67	2.59
K2O	3.36	0.49	0.96	0.76	0.36	0.37	0.66
P2O5	0.12	0.22	0.62	0.29	0.19	0.19	0.16
H2O+	1.97	5.89	2.21	2.69	0.00	0.00	4.02
NID	0.00	0.00	0.00	0.00	0.00	0.00	0.00
S	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	99.65	100.26	100.21	100.72	99.74	100.11	100.26

	NR0-1	498/PW3-R	498/PW4-R	498/PW5-R	498/WK11-R	498/447-R	498/500-R	498/960-R	498/1444-R
SI02	39.42	49.03	50.76	78.33	72.07	72.99	62.93	40.05	65.74
AL203	8.58	17.70	15.71	11.94	14.71	14.76	14.82	31.79	13.48
FE203	18.07	9.14	10.60	4.94	2.04	2.11	5.38	19.22	2.36
MNO	0.20	0.16	0.19	0.03	0.02	0.08	0.08	0.26	0.09
H60	13.73	0.48	7.29	0.40	0.74	0.44	2.42	6.22	1.68
CAD	14.86	10.01	10.84	0.63	0.12	3.09	4.12	1.20	4.49
NA20	0.72	1.91	1.88	0.12	0.13	4.67	3.40	0.72	4.98
K20	0.18	1.86	0.73	3.36	7.43	1.08	2.19	0.04	0.77
TI02	3.66	0.92	0.92	0.63	0.27	0.09	0.63	1.80	0.30
P205	0.08	0.13	0.15	0.07	0.06	0.05	0.18	0.04	0.10
LOSS	0.00	1.53	1.19	1.99 1.99	1.75	0.94	1.58	-0.80	4.63
TOTAL	99.72	99.46	100.26	99.87	99.32	100.51	99.93	100.45	99.53

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

	3371.73	3035.04	3099.37	2902.74	2835.41	2783.48	2885.03	3172.69	2807.96
NA K ALPHA	3.49	2.55	2.67	1.95	1.83	1.74	2.07	3.04	1.77
MB K ALPHA	11.23	8.11	8.51	6.15	5.73	5.45	6.54	9.74	3.55
ZR K ALPHA	13.06	9.47	9.91	7.18	6.69	6.37	7.62	11.32	6.48
Y K ALPHA	15.17	10.66	11.50	8.32	7.76	7.37	8.85	13.16	7.52
SR K ALPHA	17.66	12.77	13.40	9.69	9.03	8.60	10.30	15.31	8.75
RP K ALPHA	20.66	14.93	15.67	11.34	10.57	10.06	12.05	17.91	10.23
SE K ALPHA	34.09	24.64	25.85	18.72	17.44	16.61	19.88	29.54	16.90
AS K ALPHA	40.63	29.37	30.82	22.30	20.76	19.79	23.69	35.23	20.13
GA K ALPHA	58.77	42.47	44.57	32.25	30.06	28.63	34.27	50.94	29.13
ZN K ALPHA	71.47	51.65	54.20	39.23	36.56	34.82	41.68	61.96	35.42
CU K ALPHA	87.27	63.07	66.18	47.89	44.63	42.51	50.89	75.64	43.25
NI K ALPHA	107.37	77.68	81.41	58.90	54.88	52.28	62.59	93.07	53.18
CO K ALPHA	76.75	67.91	68.07	58.03	62.10	57.69	60.52	55.46	57.38
NN K ALPHA	119.33	108.70	108.77	90.64	97.26	89.74	94.42	85.46	89.46
CR K ALPHA	151.82	134.55	134.63	115.40	123.79	114.55	120.22	108.65	113.94
V K ALPHA	177.52	168.89	168.95	145.61	158.13	147.03	151.80	131.31	145.24
TI K ALPHA	230.75	219.73	219.78	189.51	205.88	191.41	197.56	170.58	189.07
SC K ALPHA	303.67	289.42	289.45	249.70	271.36	252.75	260.30	224.34	249.19
TH L ALPHA	23.00	16.67	17.49	12.59	11.83	11.30	13.49	19.96	11.49
RA L ALPHA	236.96	225.65	225.70	194.61	211.42	196.57	202.88	175.15	194.17
FB L BETA1	24.36	17.79	18.64	13.70	12.80	12.23	14.49	21.22	12.40
BA L BETA1	183.50	175.74	175.89	154.47	166.22	155.58	159.86	140.36	153.30

	NRG-1	498/90	498/125	498/180	498/1080B	498/1080C	498/1080D	498/1084	498/1090
SI02	29.49	70.91	65.65	66.02	68.27	73.76	74.34	60.00	59.49
AL2O3	8.60	15.10	16.78	17.07	14.46	12.41	12.21	20.33	15.61
FF2O3	18.23	2.28	4.60	5.63	6.78	5.06	5.20	7.52	14.29
MNO	0.20	0.03	0.08	0.03	0.03	0.04	0.03	0.12	0.06
H6U	13.78	0.31	1.01	1.39	1.56	0.94	0.76	1.92	2.95
CAO	14.81	2.45	3.82	0.41	0.25	0.09	0.10	0.20	1.28
NA2O	0.72	4.37	4.02	0.41	0.21	0.16	0.16	0.53	2.02
K2O	0.18	1.92	2.15	5.57	5.22	4.20	4.05	5.97	2.62
TI02	3.81	0.16	0.46	0.53	0.48	0.49	0.50	0.57	1.03
P2O5	0.08	0.08	0.14	0.14	0.12	0.07	0.08	0.08	0.08
LOSS	0.00	1.96	0.88	2.52	2.18	1.97	2.01	2.79	0.78
TOTAL	99.90	99.58	99.53	99.72	99.58	99.18	99.43	100.02	100.20

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	3378.73	2765.60	2836.51	2923.81	2956.76	2901.27	2913.72	2969.15	3119.23
SN K ALPHA	3.50	1.72	1.98	2.06	2.14	1.96	1.97	2.22	2.70
NB K ALPHA	11.26	5.37	6.23	6.49	6.75	6.16	6.20	7.02	8.62
ZR K ALPHA	13.10	6.27	7.27	7.57	7.87	7.20	7.24	8.18	10.04
Y K ALPHA	15.21	7.27	8.43	8.79	9.13	8.34	8.39	9.50	11.66
SR K ALPHA	17.71	8.47	9.82	10.23	10.63	9.72	9.77	11.06	13.57
RE K ALPHA	20.72	9.91	11.48	11.97	12.44	11.37	11.43	12.93	15.88
SE K ALPHA	34.18	16.36	18.95	19.75	20.52	18.76	18.86	21.35	26.20
AS K ALPHA	40.75	19.49	22.59	23.54	24.46	22.36	22.48	25.44	31.23
GA K ALPHA	58.93	28.19	32.67	34.04	35.37	32.34	32.51	36.80	45.16
ZN K ALPHA	71.67	34.28	39.73	41.41	43.03	39.34	39.54	44.76	54.93
CU K ALPHA	87.51	41.85	48.51	50.54	52.53	48.02	48.27	54.63	67.06
NI K ALPHA	107.67	51.47	59.66	62.17	64.61	59.06	59.37	67.20	82.50
CO K ALPHA	76.69	57.09	59.98	59.85	59.30	57.83	57.77	60.14	57.90
MN K ALPHA	119.23	89.27	93.56	93.59	92.58	90.31	90.26	93.63	90.27
CR K ALPHA	151.69	113.69	119.14	119.15	117.86	114.98	114.91	119.18	114.82
V K ALPHA	177.58	145.62	151.22	150.91	149.44	145.71	145.57	150.69	142.89
TI K ALPHA	230.82	189.57	196.82	196.39	194.46	189.64	189.46	196.08	185.76
SC K ALPHA	303.77	249.87	259.35	258.76	256.17	249.87	249.62	258.28	244.51
TH L ALPHA	23.07	11.13	12.87	13.39	13.91	12.72	12.79	14.46	17.72
BA L ALPHA	237.03	194.69	202.13	201.68	199.69	194.74	194.55	201.35	190.75
PB L BETA1	24.43	12.04	13.84	14.40	14.94	13.72	13.79	15.51	18.89
BA L BETA1	183.59	154.04	159.34	159.21	157.82	154.29	154.20	158.97	151.46

	498/1444	498/30	498/PWA	498/689	498/1338	498/307	498/1177	498/1401
SI02	64.99	46.88	50.13	74.47	56.95	73.40	51.79	58.43
AL2O3	13.27	15.71	15.42	9.99	19.26	12.97	13.60	18.19
FE2O3	2.83	9.58	10.61	12.07	15.98	4.52	15.85	12.03
MNO	0.07	0.16	0.16	0.15	0.12	0.07	0.25	0.06
H60	1.89	6.12	7.18	1.45	2.70	1.33	6.02	3.45
CAO	4.41	14.20	10.71	0.37	0.52	2.06	9.52	0.86
NA2O	4.92	2.51	1.86	0.02	0.52	2.81	0.99	1.23
K2O	0.76	0.11	0.72	0.28	1.97	1.47	0.29	3.39
TIO2	0.30	1.11	0.89	1.60	1.73	0.47	1.65	1.18
P2O5	0.11	0.16	0.15	0.09	0.19	0.10	0.18	0.04
LOSS	4.83	2.54	1.19	-0.41	0.32	1.63	0.27	1.04
TOTAL	98.37	99.07	99.03	100.12	100.26	100.82	100.41	99.90

100-53

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

MASS ABSORPTION MATRIX

MASS ABSORPTION MATRIX

	2775.21	3085.61	3064.87	3100.80	3174.11	2881.96	3265.20	3054.63
NA K ALPHA	1.75	2.66	2.64	2.48	2.83	1.91	3.08	2.54
SM K ALPHA	5.47	8.48	8.43	7.87	9.03	5.99	9.85	8.07
NR K ALPHA	6.39	9.87	9.82	9.18	10.51	6.99	11.46	9.40
Y K ALPHA	7.41	11.46	11.40	10.64	12.21	8.10	13.30	10.91
SR K ALPHA	8.63	13.35	13.27	12.40	14.21	9.44	15.49	12.71
RB K ALPHA	10.09	15.61	15.52	14.51	16.62	11.04	18.12	14.86
SE K ALPHA	16.67	25.76	25.62	23.94	27.42	18.23	29.90	24.52
AS K ALPHA	19.86	30.70	30.53	28.52	32.68	21.71	35.64	29.23
GA K ALPHA	28.72	44.40	44.16	41.26	47.28	31.41	51.54	42.27
ZN K ALPHA	34.93	53.00	53.71	50.18	57.51	38.20	62.69	51.42
CU K ALPHA	42.65	65.93	65.58	61.26	70.20	46.64	76.54	62.77
NI K ALPHA	52.45	81.11	80.67	75.37	86.38	57.36	94.17	77.22
CO K ALPHA	56.58	70.88	67.12	56.08	57.40	57.42	67.46	58.42
MN K ALPHA	88.30	110.41	104.42	86.67	89.16	89.53	104.40	91.13
CR K ALPHA	112.46	140.55	132.91	110.26	113.40	114.00	132.82	115.95
V K ALPHA	143.38	175.71	166.88	134.47	137.81	144.54	163.21	143.71
TI K ALPHA	186.65	228.59	217.08	174.84	179.11	185.12	212.19	186.88
SC K ALPHA	246.00	301.10	285.89	230.15	235.68	247.88	279.29	246.04
TH L ALPHA	11.34	17.42	17.33	16.20	18.54	12.38	20.20	16.59
BA L ALPHA	191.69	234.76	222.93	179.52	183.91	193.18	217.89	191.90
PB L BETA1	12.23	18.56	18.47	17.34	19.75	13.35	21.47	17.72
BA L BETA1	151.35	181.89	173.73	143.70	146.67	153.26	170.49	152.24

	498/153	498/1340	498/1299	498/10110	498/960	498/1474	498/113
SiO2	63.29	55.40	69.31	56.97	39.62	60.75	49.90
AL2O3	16.70	16.23	15.73	18.97	31.36	21.13	17.90
FE2O3	5.00	6.18	4.72	17.30	19.12	7.34	9.21
MNO	0.07	0.13	0.06	0.33	0.23	0.17	0.17
MGO	1.95	2.78	1.47	3.27	6.35	2.50	6.56
CAD	4.00	11.11	0.15	0.43	1.17	0.33	10.03
NA2O	4.92	1.19	0.35	0.38	0.71	1.01	1.91
K2O	0.84	2.20	5.34	0.07	0.05	5.52	1.87
TI02	0.64	0.98	0.57	1.64	1.74	0.55	0.72
P2O5	0.18	0.13	0.10	0.04	0.04	0.06	0.12
LOSS	1.58	1.07	1.95	0.40	-0.80	0.63	1.53
TOTAL	99.16	99.40	99.74	99.80	99.80	100.00	99.92

100.40

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

MASS ABSORPTION MATRIX

NA K ALPHA	2814.51	3066.48	2897.42	3184.91	3144.87	2928.54	3045.95
SN K ALPHA	1.96	2.54	1.98	2.87	3.01	2.21	2.55
NB K ALPHA	6.16	8.08	6.24	9.16	9.66	7.00	8.13
ZR K ALPHA	7.19	9.42	7.28	10.66	11.23	8.16	9.47
Y K ALPHA	8.35	10.93	8.44	12.38	13.05	9.47	10.99
SR K ALPHA	9.72	12.72	9.83	14.42	15.19	11.03	12.79
RB K ALPHA	11.37	14.88	11.50	16.87	17.76	12.89	14.96
SE K ALPHA	18.76	24.56	18.97	27.82	29.30	21.28	24.69
AS K ALPHA	22.36	29.27	22.61	33.17	34.93	25.36	29.43
GA K ALPHA	32.34	42.33	32.70	47.97	50.52	36.68	42.57
ZN K ALPHA	39.33	51.48	39.78	58.34	61.44	44.62	51.77
CU K ALPHA	48.01	62.86	48.56	71.22	75.01	54.46	63.21
NI K ALPHA	59.06	77.32	59.72	87.63	92.29	66.99	77.75
CO K ALPHA	57.96	70.61	59.71	54.81	54.80	60.45	67.90
MN K ALPHA	90.44	110.08	93.21	84.02	84.58	73.85	105.64
CR K ALPHA	115.16	140.14	118.68	106.83	107.53	119.47	134.48
V K ALPHA	145.25	175.81	150.12	129.74	130.15	151.19	169.69
TI K ALPHA	189.03	228.76	195.39	168.57	169.07	196.73	220.78
SC K ALPHA	249.07	301.36	257.45	221.75	221.36	259.15	290.80
TH L ALPHA	12.74	16.41	12.87	18.81	19.80	14.41	16.71
BA L ALPHA	194.13	234.93	200.64	173.09	173.61	202.02	226.73
PB L BETA1	13.70	17.74	13.87	20.03	21.04	15.47	17.83
BA L BETA1	153.44	182.44	158.54	138.89	139.15	159.58	176.39

	498/1321	498/1176	498/645	498/1452	498/1332	498/1469
SI02	51.19	61.04	57.48	69.39	65.50	50.54
AL2O3	13.42	20.68	17.97	15.87	14.24	21.73
FE2O3	19.08	7.43	7.00	3.43	6.17	15.80
MNO	0.34	0.05	0.11	0.06	0.15	0.07
MGO	3.31	2.37	3.31	0.94	1.13	4.07
CAO	7.63	0.41	7.39	3.09	7.48	0.60
NA2O	2.46	0.79	3.94	4.32	1.17	0.81
K2O	0.32	5.63	0.45	2.10	2.93	5.56
TI02	2.09	0.62	0.67	0.31	0.82	1.40
P2O5	0.60	0.09	0.15	0.15	0.14	0.04
LOSS	0.00	0.71	1.12	0.30	0.44	-0.21
TOTAL	100.44	99.82	99.59	99.96	100.17	100.41 100.62

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	3331.47	2933.13	2916.92	2798.68	3008.37	3165.60
SN K ALPHA	3.30	2.21	2.23	1.86	2.30	2.92
NB K ALPHA	10.57	7.02	7.07	5.85	7.29	9.35
ZR K ALPHA	12.30	8.18	8.24	6.83	8.50	10.88
Y K ALPHA	14.28	9.49	9.56	7.92	9.86	12.64
SR K ALPHA	16.63	11.05	11.14	9.22	11.48	14.71
RB K ALPHA	19.46	12.92	13.02	10.79	13.43	17.21
SE K ALPHA	32.09	21.33	21.50	17.81	22.17	28.38
AS K ALPHA	38.26	25.42	25.62	21.22	26.42	33.84
GA K ALPHA	55.33	36.76	37.05	30.69	38.21	48.93
ZN K ALPHA	67.30	44.72	45.06	37.33	46.47	59.52
CU K ALPHA	82.17	54.59	55.02	45.57	56.73	72.66
NI K ALPHA	101.10	67.15	67.68	56.04	69.78	89.40
CO K ALPHA	65.92	60.38	62.35	59.17	67.61	61.67
MN K ALPHA	101.47	94.33	97.17	92.38	105.21	96.19
CR K ALPHA	129.05	120.08	123.72	117.65	133.95	122.36
V K ALPHA	156.28	151.66	156.08	150.00	168.62	150.86
TI K ALPHA	203.09	197.34	203.10	195.25	219.44	196.11
SC K ALPHA	267.20	259.95	267.56	257.32	289.13	258.10
TH L ALPHA	21.68	14.45	14.57	12.10	15.01	19.18
BA L ALPHA	208.54	202.65	208.58	200.52	225.36	201.38
PB L BETA1	23.00	15.50	15.61	13.05	16.09	20.41
BA L BETA1	163.87	160.00	163.71	158.34	175.99	159.14

	498/1407	498/1407B	498/1448	498/1449C	498/1464	498/1467	498/1481
SiO2	67.53	67.45	65.81	44.25	77.93	73.03	45.58
Al2O3	15.62	15.70	15.57	6.12	11.94	14.57	14.18
Fe2O3	3.67	3.67	4.79	11.75	0.82	2.52	9.32
MNO	0.05	0.06	0.06	0.10	0.00	0.02	0.20
MgO	1.78	1.74	1.76	26.47	-0.07 0.00	0.71	2.50
CaO	4.04	3.90	3.82	2.40	0.75	3.85	25.01
Na2O	4.45	4.26	3.55	0.00	2.20	3.48	1.05
K2O	1.77	1.85	1.70	0.00	6.53	1.14	0.10
Loss	0.38	0.38	0.41	0.55	0.04	0.29	1.01
Loss	0.16	0.16	0.13	0.05	0.00	0.08	0.28
Loss	0.49	0.55	2.12	7.86	0.11	0.45	1.20
TOTAL	99.94	99.72	99.73	99.62	100.26 100.33	100.15	100.43

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	2808.63	2805.09	2858.52	2984.59	2794.47	2802.23	3298.47
SN K ALPHA	1.90	1.89	1.96	2.32	1.74	1.79	3.06
NB K ALPHA	5.97	5.96	6.19	7.38	5.43	5.59	9.80
ZR K ALPHA	6.97	6.96	7.22	8.60	6.35	6.54	11.41
Y K ALPHA	8.09	8.07	8.38	9.99	7.36	7.58	13.24
SR K ALPHA	9.42	9.39	9.75	11.62	8.57	8.83	15.42
RB K ALPHA	11.02	10.99	11.41	13.59	10.02	10.32	18.03
SE K ALPHA	18.18	18.14	18.83	22.44	15.54	17.04	29.76
AS K ALPHA	21.67	21.61	22.44	26.74	19.71	20.30	35.47
GA K ALPHA	31.34	31.26	32.45	38.68	28.51	29.37	51.30
ZN K ALPHA	38.12	38.02	39.47	47.03	34.68	35.72	62.38
CU K ALPHA	46.53	46.42	48.19	57.42	42.33	43.61	76.18
NI K ALPHA	57.23	57.09	59.27	70.64	52.05	53.64	93.70
CO K ALPHA	59.88	59.71	58.90	51.07	62.45	59.06	87.34
MN K ALPHA	93.56	93.24	91.97	79.08	97.84	92.39	136.00
CR K ALPHA	119.14	118.74	117.10	100.62	124.62	117.67	173.16
V K ALPHA	151.60	151.08	148.80	126.81	160.25	150.13	218.17
TI K ALPHA	197.33	196.66	193.67	164.88	208.66	195.44	283.89
SC K ALPHA	260.05	259.16	255.19	217.06	275.07	257.60	374.01
TH L ALPHA	12.35	12.32	12.78	15.19	11.24	11.58	20.10
BA L ALPHA	202.65	201.96	198.89	169.33	214.29	200.71	291.55
PB L BETA1	13.31	13.28	13.76	16.22	12.18	12.53	21.36
BA L BETA1	159.77	159.26	156.98	135.27	168.46	158.52	222.39

	498/138	498/147	498/308	498/449	498/589	498/651	498/652	498/682	498/587
SI02	69.51	45.07	48.44	73.39	52.36	70.51	70.90	74.39	48.32
AL203	9.68	7.90	1.04	14.68	0.39	15.67	15.35	14.54	15.63
FE203	15.43	12.60	45.98	2.45	40.84	2.51	2.72	1.65	11.67
M20	0.06	0.17	0.33	0.07	0.52	0.02	0.03	0.03	0.19
M60	1.78	23.49	0.76	0.39	0.42	0.75	0.72	0.19	6.05
CA0	0.89	4.12	3.35	3.07	3.43	3.56	3.20	2.36	14.24
NA20	0.31	0.05	0.04	4.69	0.00	5.00	5.19	5.17	1.32
K20	1.71	0.04	0.07	1.11	0.11	0.94	1.10	1.90	0.23
TI02	0.77	0.69	0.02	0.08	0.02	0.27	0.24	0.09	0.92
P205	0.06	0.07	1.20	0.95	1.74	0.07	0.07	0.02	0.10
LOSS	0.05	4.75	-0.91	0.94	-0.22	0.27	0.67	0.10	1.69
TOTAL	100.24	98.95	100.32	100.91	99.62	99.57	100.19	100.43	100.35

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	3194.62	3000.39	4084.11	2795.37	3943.67	2749.16	2769.99	2744.62	3192.01
SN K ALPHA	2.77	2.48	5.23	1.75	4.83	1.75	1.77	1.69	2.85
NB K ALPHA	8.82	7.90	16.91	5.48	15.59	5.49	5.54	5.27	9.12
ZR K ALPHA	10.27	9.20	19.64	6.40	18.11	6.42	6.47	6.16	10.62
Y K ALPHA	11.92	10.69	22.82	7.42	21.04	7.44	7.50	7.14	12.33
SR K ALPHA	13.28	12.44	26.57	8.64	24.50	8.66	8.73	8.32	14.35
RB K ALPHA	16.24	14.55	31.10	10.11	28.68	10.13	10.22	9.73	16.79
SE K ALPHA	26.79	24.01	51.26	16.68	47.27	16.73	16.86	16.06	27.70
AS K ALPHA	31.92	28.62	61.12	19.88	56.36	19.93	20.09	19.13	33.02
GA K ALPHA	46.17	41.40	88.39	28.75	81.51	28.83	29.06	27.68	47.76
ZN K ALPHA	56.16	50.34	107.52	34.97	99.15	35.06	35.35	33.64	58.07
CU K ALPHA	66.56	61.46	131.27	42.69	121.05	42.80	43.15	41.10	70.91
NI K ALPHA	84.36	75.61	161.55	52.50	148.97	52.64	53.07	50.54	87.24
CO K ALPHA	56.66	54.56	56.53	57.88	57.08	57.83	57.71	57.95	71.95
MN K ALPHA	88.22	84.58	86.27	90.29	86.26	90.47	90.24	90.60	111.88
CR K ALPHA	112.19	107.62	109.35	114.99	109.39	115.23	114.92	115.40	142.40
V K ALPHA	140.69	135.20	139.98	147.64	140.12	147.07	146.82	148.13	178.91
TI K ALPHA	182.88	175.79	181.34	192.20	181.61	191.47	191.13	192.86	232.73
SC K ALPHA	240.68	231.41	237.84	253.33	238.33	252.35	251.90	254.21	306.49
TH L ALPHA	18.11	16.24	34.54	11.35	31.86	11.38	11.47	10.93	18.73
BA L ALPHA	187.78	180.53	186.14	197.39	186.43	196.63	196.28	198.06	239.00
PB L BETA1	19.32	17.33	36.38	12.28	33.59	12.30	12.40	11.84	19.93
BA L BETA1	149.57	143.35	148.48	156.23	148.54	155.47	155.29	156.70	185.25

	498/1442	498/1447	498/1453	498/1454	BHN-1(2)	498/307-R	498/682-R
SiO2	70.18	60.92	49.00	74.31	53.22	72.37	73.92
Al2O3	15.05	19.34	14.22	12.53	17.27	12.96	14.54
Fe2O3	3.07	6.87	12.78	3.55	9.12	4.49	1.65
MnO	0.06	0.10	0.21	0.05	0.16	0.06	0.04
MgO	1.02	1.68	6.48	1.52	4.18	1.39	0.32
CaO	0.34	0.14	12.85	1.51	8.82	2.05	2.35
Na2O	6.82	0.26	1.60	1.79	2.67	2.78	5.15
K2O	0.50	6.42	0.17	2.34	2.72	1.43	1.88
TiO2	0.37	0.57	1.30	0.52	1.18	0.48	0.10
P2O5	0.14	0.06	0.14	0.14	0.61	0.12	0.02
LOSS	1.45	3.01	1.45	1.83	0.00	1.63	0.10
TOTAL	99.00	99.36	100.20	100.10	99.95	99.74	100.06

*High Na2O
could be cause of
low total.*

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	2689.70	2947.46	3202.49	2855.98	3039.15	2851.18	2734.02
SN K ALPHA	1.65	2.17	2.91	1.83	2.57	1.89	1.68
NB K ALPHA	5.16	6.86	9.30	5.75	8.19	5.92	5.25
ZR K ALPHA	6.03	8.00	10.83	6.72	9.53	6.92	6.14
Y K ALPHA	7.00	9.29	12.57	7.78	11.07	8.02	7.12
SR K ALPHA	8.14	10.81	14.63	9.07	12.89	9.34	8.29
RB K ALPHA	9.53	12.64	17.12	10.61	15.07	10.93	9.70
SE K ALPHA	15.73	20.86	28.24	17.51	24.87	18.04	16.01
AS K ALPHA	18.74	24.87	33.66	20.86	29.64	21.49	19.07
GA K ALPHA	27.11	35.96	48.69	30.17	42.88	31.08	27.59
ZN K ALPHA	32.97	43.75	59.21	36.70	52.14	37.80	33.56
CU K ALPHA	40.25	53.40	72.30	44.80	63.67	46.15	40.96
NI K ALPHA	49.50	65.68	88.94	55.10	78.31	56.76	50.38
CO K ALPHA	52.17	69.32	70.57	57.64	68.89	56.77	57.75
MN K ALPHA	81.35	94.01	109.59	89.98	107.22	88.56	90.24
CR K ALPHA	103.59	119.68	139.47	114.56	136.49	112.76	114.93
V K ALPHA	131.61	151.36	173.41	145.09	170.17	142.90	147.48
TI K ALPHA	171.31	196.95	225.53	188.85	221.40	185.98	192.02
SC K ALPHA	225.77	259.76	296.97	248.88	291.62	245.07	253.10
TH L ALPHA	10.71	14.13	19.09	11.89	16.83	12.25	10.89
BA L ALPHA	175.93	202.25	231.60	193.94	227.36	190.99	197.19
PB L BETA1	11.59	15.17	20.30	12.85	17.96	13.21	11.80
BA L BETA1	140.57	159.52	179.99	153.73	177.19	151.52	156.02

	498/1090	498/1090	498/1303A	498/1080	498/1080B	498/1080C	498/1080D	498/1084
SI02	59.93	59.87	73.26	66.13	68.65	74.25	74.70	60.25
AL203	15.60	15.66	14.74	16.98	14.56	12.45	12.17	20.38
FE203	14.20	14.24	2.62	5.61	6.78	5.04	5.19	7.46
MNO	0.06	0.05	0.03	0.04	0.04	0.02	0.00	0.13
MGO	3.05	2.95	0.16	1.22	1.43	0.78	0.69	1.81
CAO	1.30	1.30	2.03	0.41	0.26	0.09	0.10	0.20
NA2O	2.03	2.03	4.77	0.41	0.21	0.16	0.16	0.53
K2O	2.64	2.64	2.34	5.59	5.26	4.23	4.08	6.00
TI02	1.04	1.04	0.08	0.53	0.48	0.49	0.50	0.57
P205	0.08	0.08	0.04	0.13	0.12	0.07	0.07	0.07
LOSS	0.78	0.78	0.16	2.52	2.18	1.97	2.01	2.79
TOTAL	100.70	100.63	100.22	99.56	99.97	99.54	99.68	100.18

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	3130.51	3129.88	2770.31	2920.97	2968.39	2911.60	2921.01	2972.67
SN K ALPHA	2.71	2.71	1.76	2.06	2.14	1.96	1.97	2.22
NB K ALPHA	8.63	8.63	5.53	6.49	6.77	6.17	6.21	7.02
ZR K ALPHA	10.05	10.05	6.46	7.57	7.89	7.21	7.25	8.18
Y K ALPHA	11.66	11.67	7.49	8.78	9.16	8.36	8.40	9.49
SR K ALPHA	13.58	13.59	8.72	10.22	10.67	9.74	9.79	11.05
RB K ALPHA	15.89	15.90	10.20	11.96	12.48	11.39	11.45	12.93
SE K ALPHA	26.21	26.22	16.83	19.73	20.59	18.80	18.89	21.33
AS K ALPHA	31.24	31.26	20.06	23.52	24.53	22.40	22.51	25.43
GA K ALPHA	45.18	45.21	29.01	34.01	35.49	32.39	32.56	36.77
ZN K ALPHA	54.95	54.99	35.29	41.37	43.16	39.40	39.61	44.73
CU K ALPHA	67.09	67.13	43.08	50.50	52.69	48.10	48.35	54.60
NI K ALPHA	82.54	82.59	52.98	62.12	64.81	59.16	59.47	67.16
CO K ALPHA	58.24	58.17	57.94	59.84	59.55	58.02	57.92	60.31
MN K ALPHA	90.79	90.74	90.57	93.53	93.03	90.70	90.54	93.84
CR K ALPHA	115.49	115.43	115.35	119.08	118.42	115.48	115.27	119.45
V K ALPHA	143.70	143.62	148.09	150.82	150.17	146.36	146.04	151.04
TI K ALPHA	186.83	186.72	192.80	196.28	195.41	190.48	190.07	196.53
SC K ALPHA	245.91	245.77	254.10	258.60	257.43	250.98	250.43	258.88
TH L ALPHA	17.73	17.74	11.45	13.38	13.95	12.75	12.81	14.45
BA L ALPHA	191.84	191.73	197.99	201.56	200.66	195.60	195.18	201.82
PB L BETA1	18.91	18.92	12.38	14.39	14.99	13.75	13.82	15.50
BA L BETA1	152.31	152.22	156.65	159.11	158.58	154.96	154.68	159.33

	498/1442	498/1447	498/1453	498/1454	BHN-1(2)	498/307-R	498/682-R
SI02	70.04	60.82	48.73	74.32	53.18	72.52	74.04
AL203	14.96	19.31	14.17	12.49	17.21	12.93	14.43
FE203	3.04	6.06	12.71	3.55	9.10	4.46	1.64
MNO	0.06	0.10	0.21	0.04	0.14	0.06	0.04
MGO	1.06	1.70	6.46	1.52	4.28	1.40	0.27
CAO	0.33	0.13	12.81	1.50	8.80	2.04	2.35
NA2O	6.80	0.26	1.59	1.79	2.67	2.79	5.15
K2O	0.50	6.39	0.17	2.34	2.70	1.43	1.89
TIO2	0.37	0.57	1.30	0.51	1.18	0.48	0.10
P2O5	0.15	0.07	0.14	0.13	0.61	0.11	0.02
LOSS	1.45	3.01	1.45	1.83	0.00	1.53	0.10
TOTAL	98.75	99.21	99.74	100.03	79.87	99.82	100.02

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	2682.30	2942.79	3187.91	2853.70	3035.00	2852.49	2733.55
SN K ALPHA	1.64	2.16	2.90	1.83	2.56	1.88	1.68
NB K ALPHA	5.14	6.85	9.26	5.74	8.17	5.92	5.25
ZR K ALPHA	6.01	7.98	10.78	6.71	9.51	6.91	6.14
Y K ALPHA	6.97	9.27	12.51	7.77	11.04	8.01	7.11
SR K ALPHA	8.11	10.79	14.57	9.06	12.86	9.33	8.29
RB K ALPHA	9.49	12.62	17.04	10.59	15.04	10.92	9.69
SE K ALPHA	15.66	20.82	28.11	17.49	24.81	18.02	16.00
AS K ALPHA	18.66	24.82	33.51	20.83	29.58	21.47	19.06
GA K ALPHA	26.99	35.89	48.47	30.13	42.78	31.06	27.58
ZN K ALPHA	32.83	43.66	58.94	36.65	52.02	37.77	33.54
CU K ALPHA	40.08	53.30	71.97	44.74	63.52	46.11	40.95
NI K ALPHA	49.29	65.56	88.54	55.03	78.13	56.71	50.35
CO K ALPHA	52.03	60.19	70.29	57.54	68.73	56.80	57.75
MN K ALPHA	81.13	93.81	109.14	89.89	107.06	88.61	90.24
CR K ALPHA	103.32	119.42	138.90	114.46	136.28	112.82	114.94
V K ALPHA	131.25	151.02	172.67	144.97	169.91	142.98	147.49
TI K ALPHA	170.85	196.52	224.57	188.70	221.06	186.09	192.03
SC K ALPHA	225.16	258.69	295.71	248.67	291.10	245.21	253.12
TH L ALPHA	10.67	14.11	19.00	11.87	16.79	12.24	10.89
BA L ALPHA	175.46	201.81	230.62	193.76	227.02	191.10	197.21
PB L BETA1	11.54	15.14	20.21	12.83	17.92	13.20	11.80
SA L BETA1	140.19	159.18	179.22	153.61	176.94	151.61	156.03

	498/1206B	498/1332-	498/1406A	498/1406C	498/1406D	498/1441B	498/1443
SiO2	50.35	63.52	79.01	55.67	78.33	69.40	70.64
Al2O3	13.89	14.86	10.67	23.33	10.55	10.12	6.91
Fe2O3	13.57	6.45	3.34	6.80	2.92	3.04	6.07
MnO	0.24	0.11	0.02	0.02	0.02	0.07	0.03
MgO	7.11	1.26	0.99	2.28	0.74	1.98	4.15
CaO	11.16	6.42	0.46	0.02	0.51	5.15	0.14
Na2O	1.31	1.39	1.18	0.50	1.50	3.42	0.02
K2O	0.26	4.35	2.84	7.52	4.15	0.70	0.76
TiO2	1.23	0.85	0.42	0.37	0.42	0.26	0.70
P2O5	0.12	0.11	0.11	0.05	0.12	0.11	0.09
LOSS	0.72	0.44	1.19	3.03	0.85	5.50	2.70
TOTAL	99.96	99.76	100.23	99.74	100.16	99.78	100.20

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	3192.87	2994.72	2859.91	2935.93	2851.46	2871.64	2942.47
SN K ALPHA	2.92	2.33	1.81	2.19	1.82	1.81	1.94
NB K ALPHA	9.33	7.37	5.66	6.93	5.71	5.68	6.08
ZR K ALPHA	10.86	8.60	6.61	8.08	6.67	6.64	7.10
Y K ALPHA	12.61	9.97	7.66	9.38	7.73	7.69	8.33
SR K ALPHA	14.69	11.62	8.92	10.92	9.01	8.96	9.57
RB K ALPHA	17.18	13.59	10.44	12.76	10.54	10.48	11.22
SE K ALPHA	28.34	22.42	17.23	21.07	17.39	17.30	18.52
AS K ALPHA	33.79	26.72	20.53	25.11	20.72	20.61	22.07
GA K ALPHA	48.86	38.65	29.70	36.32	29.97	29.81	31.92
ZN K ALPHA	59.42	47.01	36.12	44.17	36.46	36.25	38.83
CU K ALPHA	72.56	57.39	44.09	53.92	44.50	44.26	47.40
NI K ALPHA	89.26	70.59	54.23	66.32	54.73	54.43	58.30
CO K ALPHA	68.50	67.73	57.25	61.31	59.17	58.39	53.73
MW K ALPHA	106.15	105.60	89.48	95.99	92.53	90.98	83.85
CR K ALPHA	135.08	134.45	113.94	122.21	117.83	115.86	106.73
V K ALPHA	168.06	169.13	141.70	154.61	149.76	147.95	134.11
TI K ALPHA	218.55	220.10	188.36	201.19	194.96	192.59	174.51
SC K ALPHA	287.75	289.98	248.23	265.05	256.94	253.82	229.90
TH L ALPHA	19.16	15.18	11.70	14.27	11.81	11.76	12.57
BA L ALPHA	224.43	226.03	193.43	206.61	200.20	197.70	179.20
PB L BETA1	20.38	16.26	12.67	15.31	12.78	12.68	13.56
BA L BETA1	174.97	176.42	153.54	162.64	158.37	155.93	143.29

	498/57	498/WK11	498/PW5	498/603	AGV-1(2)	498/PW3	498/PW4	498/30	498/960
SI02	66.56	71.60	77.69	56.97	59.93	49.25	49.72	46.91	39.88
AL203	16.54	14.70	11.85	14.44	17.33	17.57	15.37	15.82	31.55
FE203	4.61	2.06	4.97	15.63	6.85	9.13	10.58	9.60	19.22
MNO	0.06	0.02	0.03	0.25	0.11	0.18	0.17	0.18	0.24
MGO	1.52	0.63	0.43	1.71	1.57	6.44	7.06	6.15	6.32
CAO	3.71	0.12	0.05	4.62	4.91	9.86	10.60	14.16	1.18
NA2O	3.90	0.13	0.12	3.17	4.35	1.89	1.85	2.51	0.71
K2O	1.71	7.42	3.37	1.65	2.98	1.84	0.71	0.10	0.04
TI02	0.57	0.25	0.61	0.96	1.05	0.69	0.89	1.11	1.74
P205	0.15	0.05	0.06	0.50	0.50	0.13	0.14	0.15	0.04
LOSS	0.00 0.55	1.75	0.00 1.99	0.32	0.00	1.53	1.19	2.54	-0.80
TOTAL	99.33 99.88	98.72	99.18 101.17	100.22	99.58	98.50	98.29	99.22	100.13

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	2817.11	2819.74	2884.21	3183.52	2907.28	3004.49	3043.82	3089.44	3161.94
SN K ALPHA	1.96	1.82	1.95	2.91	2.25	2.52	2.63	2.66	3.03
NB K ALPHA	6.19	5.70	6.12	9.30	7.14	8.02	8.38	8.49	9.71
ZR K ALPHA	7.23	6.66	7.15	10.82	8.32	9.34	9.76	9.89	11.29
Y K ALPHA	8.38	7.72	8.29	12.57	9.65	10.85	11.33	11.48	13.12
SR K ALPHA	9.76	9.00	9.66	14.63	11.24	12.63	13.20	13.36	15.27
RB K ALPHA	11.42	10.52	11.30	17.12	13.15	14.77	15.43	15.62	17.85
SE K ALPHA	18.85	17.37	18.64	28.24	21.70	24.37	25.47	25.79	29.45
AS K ALPHA	22.46	20.69	22.21	33.66	25.86	29.05	30.35	30.74	35.12
GA K ALPHA	32.40	29.93	32.12	48.69	37.40	42.01	43.90	44.46	50.79
ZN K ALPHA	39.51	36.41	39.08	59.22	45.49	51.09	53.39	54.06	61.77
CU K ALPHA	48.23	44.44	47.70	72.30	55.53	62.38	65.19	66.02	75.41
NI K ALPHA	59.32	54.65	58.67	88.95	68.31	76.74	80.19	81.21	92.79
CO K ALPHA	59.53	71.74	57.64	61.69	63.63	66.89	66.62	70.95	55.10
MN K ALPHA	92.94	96.64	90.03	95.28	99.16	104.00	103.59	110.41	85.00
CR K ALPHA	118.34	123.08	114.63	121.19	126.24	132.39	131.85	140.55	108.06
V K ALPHA	149.67	157.31	144.71	151.40	157.62	167.14	165.50	175.71	130.83
TI K ALPHA	194.81	204.81	188.34	196.82	205.10	217.45	215.29	228.59	169.96
SC K ALPHA	256.69	269.95	248.16	259.04	270.19	286.43	283.53	301.10	223.52
TH L ALPHA	12.79	11.78	12.64	19.10	14.71	16.49	17.22	17.45	19.90
BA L ALPHA	200.06	210.33	193.41	202.10	210.62	223.32	221.09	234.76	174.52
PB L BETA1	13.77	12.74	13.65	20.32	15.75	17.60	18.36	18.58	21.15
BA L BETA1	157.89	165.34	153.50	159.43	165.35	173.95	172.31	181.91	139.88

	498/140dB	498/PW3	498/PW1	498/1242	498/1244	498/1441A	498/927-R	498/1027A-K
SI02	75.53	49.73	75.38	73.83	79.21	72.68	49.26	58.32
AL203	12.21	17.60	11.69	12.93	10.66	10.83	16.83	22.05
FE203	3.45	9.15	2.47	4.16	2.99	2.60	15.73	7.53
MNO	0.00	0.16	0.00	0.03	0.02	0.05	0.25	0.11
HGO	1.06	6.33	0.53	1.09	0.59	1.35	4.26	2.10
CAO	0.56	9.90	0.18	0.30	0.50	3.19	10.67	0.14
NA2O	1.10	1.90	3.41	0.29	0.07	4.38	0.56	0.55
K2O	3.20	1.86	5.10	4.31	3.76	0.94	0.45	5.98
TI02	0.40	0.70	0.20	0.47	0.48	0.22	1.91	0.57
P205	0.10	0.12	0.04	0.11	0.11	0.11	0.24	0.07
LOSS	1.61	1.53	0.45	1.95	1.51	3.70	0.20	2.67
TOTAL	99.30	98.96	99.74	99.47	99.90	100.05	100.35	100.09

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	2838.72	3018.63	2790.44	2882.46	2874.56	2814.28	3266.21	2960.11
SN K ALPHA	1.81	2.53	1.80	1.90	1.81	1.73	3.12	2.21
NB K ALPHA	5.68	8.05	5.63	5.97	5.68	5.41	10.00	7.01
ZR K ALPHA	6.64	9.38	6.58	6.97	6.63	6.32	11.64	8.17
Y K ALPHA	7.69	10.89	7.63	8.09	7.69	7.33	13.52	9.49
SR K ALPHA	8.96	12.67	8.88	9.42	8.96	8.54	15.74	11.05
RB K ALPHA	10.48	14.82	10.39	11.02	10.48	9.99	18.41	12.92
SE K ALPHA	17.30	24.46	17.16	18.18	17.29	16.49	30.37	21.32
AS K ALPHA	20.61	29.15	20.44	21.66	20.60	19.64	36.21	25.41
GA K ALPHA	29.81	42.17	29.56	31.34	29.80	28.41	52.36	36.75
ZN K ALPHA	36.26	51.28	35.96	38.12	36.25	34.55	63.68	44.70
CU K ALPHA	44.26	62.61	43.89	46.53	44.25	42.19	77.76	54.56
NI K ALPHA	54.44	77.02	53.98	57.23	54.42	51.88	95.66	67.11
CO K ALPHA	57.14	67.18	59.66	58.38	58.57	56.62	69.68	59.99
MN K ALPHA	89.43	104.55	93.42	91.25	91.57	88.42	107.91	93.45
CR K ALPHA	113.88	133.09	118.98	116.18	116.60	112.60	137.30	118.96
V K ALPHA	144.72	167.99	152.23	147.36	147.87	143.91	167.79	150.41
TI K ALPHA	188.38	218.56	198.19	191.81	192.49	187.34	218.15	195.70
SC K ALPHA	248.26	287.89	261.21	252.75	253.69	246.92	287.15	257.79
TH L ALPHA	11.75	16.55	11.65	12.34	11.74	11.22	20.52	14.44
BA L ALPHA	193.45	224.46	203.53	196.97	197.68	192.39	224.07	200.97
PB L BETA1	12.70	17.66	12.60	13.32	12.71	12.13	21.80	15.49
BA L BETA1	153.37	174.83	160.62	155.91	156.54	152.32	174.92	158.71

	498/307	498/1177	498/587	498/689	498/147	498/682	498/1444	498/1092B	498/678
SiO2	72.82	51.51	47.98	75.46	44.94	74.20	64.64	75.32	71.03
Al2O3	12.98	13.51	15.62	10.08	7.89	14.47	13.24	12.90	15.37
Fe2O3	4.53	16.04	11.75	12.79	12.73	1.68	2.84	3.21	3.09
MnO	0.08	0.25	0.19	0.23	0.18	0.05	0.06	0.04	0.03
H2O	1.41	6.07	6.26	1.45	23.83	0.42	1.99	1.50	1.08
CaO	2.04	9.47	14.21	0.37	4.14	2.35	4.37	0.36	3.59
Na2O	2.80	0.99	1.32	0.02	0.05	5.17	4.90	0.25	4.52
K2O	1.45	0.28	0.22	0.30	0.03	1.89	0.76	3.68	0.98
TiO2	0.47	1.62	0.92	1.59	0.69	0.10	0.30	0.25	0.29
P2O5	0.11	0.19	0.11	0.09	0.08	0.02	0.10	0.07	0.10
LOSS	1.63	0.27	1.69	0.00	4.75	0.10	4.83	2.50	0.25
TOTAL	100.31	100.20	100.26	102.38	99.30	100.44	98.02	100.08	100.33

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

MASS ABSORPTION MATRIX

Na K ALPHA	2868.01	3263.40	3189.70	3187.40	3011.51	2744.76	2764.87	2868.39	2793.44
SM K ALPHA	1.90	3.08	2.86	2.57	2.49	1.69	1.74	1.80	1.81
Nb K ALPHA	5.97	9.88	9.13	8.16	7.95	5.28	5.45	5.64	5.69
Zr K ALPHA	6.97	11.49	10.63	9.51	9.26	6.17	6.37	6.59	6.65
Y K ALPHA	8.08	13.34	12.34	11.03	10.75	7.16	7.38	7.64	7.71
Sr K ALPHA	9.41	15.54	14.37	12.85	12.52	8.33	8.60	8.90	8.98
Rb K ALPHA	11.00	18.18	16.80	15.04	14.64	9.75	10.06	10.41	10.50
Se K ALPHA	18.16	29.99	27.73	24.80	24.16	16.09	16.60	17.18	17.34
As K ALPHA	21.64	35.74	33.06	29.56	28.80	19.17	19.78	20.47	20.66
Ga K ALPHA	31.31	51.70	47.81	42.75	41.65	27.73	28.61	29.61	29.89
Zn K ALPHA	38.08	62.87	58.14	52.00	50.64	33.73	34.80	36.01	36.35
Cu K ALPHA	46.48	76.76	70.99	63.48	61.83	41.18	42.49	43.96	44.38
Ni K ALPHA	57.17	94.44	87.33	78.10	76.08	50.64	52.25	54.06	54.58
Co K ALPHA	57.12	67.21	71.82	57.22	54.75	57.98	56.30	57.44	58.42
Mn K ALPHA	89.01	104.00	111.68	88.25	84.83	90.55	87.92	89.72	91.34
Cr K ALPHA	113.34	132.31	142.15	112.26	107.93	115.34	111.97	114.24	116.32
V K ALPHA	143.68	162.70	178.59	137.06	135.60	148.00	142.76	145.88	148.38
Ti K ALPHA	187.01	211.51	232.30	178.20	176.31	192.70	185.83	189.89	193.15
Sc K ALPHA	246.42	278.40	305.93	234.56	232.09	254.00	244.92	250.26	254.56
Th L ALPHA	12.33	20.26	18.75	16.78	16.34	10.95	11.29	11.66	11.79
Ba L ALPHA	192.04	217.20	238.56	182.97	181.06	197.89	190.85	195.01	198.36
Pb L BETA1	13.31	21.53	19.95	17.96	17.43	11.86	12.18	12.62	12.73
Ba L BETA1	152.36	169.97	184.92	146.48	143.77	156.58	150.70	154.58	156.84

	791/2	HRG-1(2)	498/1327	498/927	498/1003	498/1481	498/306	498/1464	498/65
SI02	65.80	39.43	88.29	49.25	51.39	45.06	49.42	78.18	70.31
AL203	14.71	8.58	5.91	16.90	15.36	13.91	23.57	11.93	15.04
FE203	12.66	18.35	1.34	15.80	12.92	9.41	10.88	0.81	2.91
MND	0.04	0.21	0.04	0.25	1.20	0.23	0.16	0.01	0.08
HGO	3.00	13.80	0.21	4.10	4.68	2.71	3.50	0.07	0.63
CAG	0.90	14.81	0.15	10.51	12.10	24.76	0.77	0.74	1.87
NA20	2.00	0.72	1.32	0.56	0.73	1.04	1.19	2.21	4.46
K20	2.49	0.18	1.94	0.44	0.09	0.10	4.56	6.52	2.61
TI02	1.13	3.80	0.30	1.84	1.59	0.99	0.80	0.04	0.31
P205	0.12	0.09	0.05	0.24	0.19	0.29	0.04	0.01	0.09
LOSS	0.00	0.00	0.54	0.20	0.09	1.20	4.18	0.11	1.12
TOTAL	102.91	79.97	100.09	100.08	100.33	99.69	99.07	100.63	99.44

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	3144.88	3384.00	2808.02	3278.37	3242.01	3276.48	3008.09	2803.59	2720.14
SN K ALPHA	2.61	3.51	1.62	3.12	3.00	3.05	2.43	1.74	1.78
NB K ALPHA	8.30	11.30	5.02	9.98	9.60	9.76	7.72	5.44	5.59
ZR K ALPHA	9.67	13.14	5.88	11.62	11.18	11.36	8.99	6.36	6.54
Y K ALPHA	11.22	15.26	6.81	13.49	12.98	13.18	10.44	7.37	7.58
SR K ALPHA	13.07	17.77	7.93	15.71	15.11	15.35	12.15	8.59	8.82
RB K ALPHA	15.29	20.79	9.29	18.37	17.67	17.95	14.21	10.05	10.32
SE K ALPHA	25.22	34.29	15.33	30.31	29.16	29.63	23.44	16.59	17.04
AS K ALPHA	30.06	40.88	18.25	36.13	34.76	35.32	27.95	19.76	20.30
GA K ALPHA	43.47	59.12	26.41	52.25	50.27	51.08	40.42	28.58	29.36
ZN K ALPHA	52.87	71.89	32.12	63.55	61.14	62.12	49.16	34.76	35.71
CU K ALPHA	64.53	87.79	39.21	77.59	74.65	75.86	60.01	42.43	43.60
NI K ALPHA	79.41	108.01	48.22	95.46	91.84	93.31	73.83	52.18	53.62
CO K ALPHA	59.21	76.73	56.09	69.21	73.76	86.57	57.80	62.65	57.81
MN K ALPHA	92.40	119.25	87.54	107.17	109.66	134.78	89.72	98.09	90.14
CR K ALPHA	117.56	151.72	111.48	136.35	139.54	171.61	114.17	124.94	114.80
V K ALPHA	145.98	177.65	142.15	166.89	172.16	216.27	143.12	160.66	146.34
TI K ALPHA	189.83	230.92	185.08	216.98	223.88	281.41	186.15	209.20	190.50
SC K ALPHA	249.91	303.89	243.96	285.61	294.76	370.74	245.10	275.77	251.07
TH L ALPHA	17.07	23.14	10.42	20.47	19.70	20.02	15.87	11.27	11.58
BA L ALPHA	194.92	237.13	190.04	222.81	229.90	289.00	191.15	214.83	195.64
PB L BETA1	18.24	24.50	11.35	21.75	20.96	21.27	16.95	12.22	12.51
BA L BETA1	154.94	183.67	151.22	173.94	178.97	220.46	151.33	168.91	154.76

	498/1469-E	498/17	498/20	498/22	498/24	498/56	498/66	498/91	498/1206A
SiO2	50.32	64.88	71.99	73.95	49.14	69.40	81.55	79.68	49.81
Al2O3	21.77	15.99	15.39	12.58	13.88	15.30	10.30	4.37	13.01
Fe2O3	15.81	4.15	2.35	3.11	10.91	3.43	0.93	9.72	16.01
MnO	0.06	0.05	0.03	0.13	0.19	0.08	0.01	0.34	0.26
MgO	3.78	1.99	0.41	0.38	5.11	0.77	0.56	0.93	6.35
CaO	0.62	4.70	2.34	3.60	13.47	2.26	3.44	3.27	10.43
Na2O	0.81	4.19	5.59	0.94	1.70	4.02	3.64	0.02	1.03
K2O	5.54	1.37	1.32	3.09	1.25	2.83	1.37	0.38	0.34
TiO2	1.44	0.44	0.13	0.10	0.92	0.39	0.98	0.45	1.51
P2O5	0.05	0.19	0.06	0.02	0.13	0.11	0.04	0.07	0.16
Loss	-0.21	1.48	0.56	1.91	2.12	0.67	0.90	0.56	0.61
TOTAL	99.99	99.42	100.17	99.78	98.84	99.26	99.82	99.78	99.52

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

Na K ALPHA	3156.58	2822.28	2743.90	2885.64	3139.18	2788.02	2727.51	3086.32	3256.67
Si K ALPHA	2.92	1.93	1.71	1.89	2.78	1.85	1.54	2.36	3.10
Nb K ALPHA	9.34	6.08	5.35	5.93	8.68	5.82	4.78	7.47	9.93
Zr K ALPHA	10.86	7.10	6.26	6.92	10.34	6.79	5.59	8.72	11.56
Y K ALPHA	12.62	8.23	7.25	8.02	12.01	7.88	6.48	10.11	13.42
Sr K ALPHA	14.69	9.59	8.45	9.35	13.98	9.17	7.55	11.78	15.63
Rb K ALPHA	17.18	11.21	9.88	10.93	16.35	10.73	8.83	13.78	18.28
Se K ALPHA	28.35	18.51	16.31	18.04	26.99	17.71	14.58	22.74	30.15
As K ALPHA	33.80	22.05	19.43	21.50	32.17	21.10	17.36	27.09	35.94
Ga K ALPHA	48.87	31.90	28.11	31.10	46.52	30.52	25.11	39.18	51.96
Zn K ALPHA	59.45	38.79	34.18	37.82	56.58	37.12	30.55	47.66	63.22
Cu K ALPHA	72.57	47.36	41.73	46.17	69.08	45.32	37.29	58.18	77.19
Ni K ALPHA	89.29	58.25	51.32	56.76	84.98	55.74	45.85	71.58	94.97
Co K ALPHA	61.50	59.64	56.72	61.12	71.32	58.81	54.42	58.78	67.93
Mn K ALPHA	95.98	93.19	88.67	95.09	111.23	91.71	85.10	90.20	105.11
Cr K ALPHA	122.08	118.67	112.93	121.09	141.57	118.78	108.38	114.78	133.73
V K ALPHA	150.32	150.68	144.76	155.41	177.88	148.53	139.17	145.58	165.00
Ti K ALPHA	195.42	196.12	188.46	202.30	231.40	193.34	181.20	189.36	214.51
Sc K ALPHA	257.18	258.45	248.40	266.62	304.76	254.79	238.87	249.37	282.35
Th L ALPHA	19.16	12.57	11.10	12.25	18.25	12.03	9.93	15.39	20.37
Ba L ALPHA	200.66	201.41	193.54	207.75	237.63	198.55	186.09	194.44	220.28
Pb L BETA1	20.39	13.53	12.01	13.22	19.42	12.98	10.81	16.51	21.64
Ra L BETA1	158.56	158.71	153.38	163.52	184.04	156.84	148.18	154.20	171.99

	498/57	498/WK11	498/PW5	498/603	AGV-112)	498/PW3	498/PW4	498/30	498/960
SI02	66.48	71.57	77.77	56.68	59.69	49.10	49.79	46.74	39.71
AL203	16.33	14.64	11.79	14.52	12.31	17.58	15.40	15.72	31.62
FE203	4.60	2.02	4.92	15.62	6.86	9.06	10.57	5.98	19.25
MNO	0.08	0.01	0.03	0.25	0.12	0.17	0.19	0.19	0.25
HGO	1.71	0.68	0.49	1.85	1.55	6.41	7.19	6.08	6.33
CA0	3.70	0.11	0.05	4.62	4.87	9.77	10.63	14.13	1.19
NA20	3.90	0.12	0.12	3.17	4.35	1.88	1.85	2.50	0.71
K20	1.71	7.43	3.37	1.65	2.98	1.83	0.71	0.10	0.04
TI02	0.57	0.25	0.61	0.94	1.04	0.69	0.88	1.11	1.75
P205	0.17	0.05	0.05	0.51	0.51	0.13	0.15	0.15	0.03
LOSS	0.00 0.55	1.75	0.00 1.99	0.32	0.00	1.53	1.19	2.54	-0.80
TOTAL	99.55/00.10	98.62	99.20/01.19	100.11	99.28	98.14	98.56	98.84	100.09

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

	2821.60	2815.53	2883.20	3178.54	2899.04	2991.49	3050.65	3079.38	3161.75
NA K ALPHA	1.97	1.81	1.94	2.91	2.25	2.50	2.63	2.65	3.03
SN K ALPHA	6.20	5.69	6.11	9.29	7.12	7.97	8.40	8.47	9.72
ZR K ALPHA	7.24	6.64	7.14	10.81	8.30	9.29	9.78	9.86	11.30
Y K ALPHA	8.40	7.70	8.27	12.55	9.64	10.78	11.35	11.45	13.13
SR K ALPHA	9.78	8.97	9.64	14.62	11.22	12.55	13.22	13.33	15.28
RB K ALPHA	11.43	10.49	11.27	17.10	13.12	14.68	15.46	15.59	17.87
SE K ALPHA	18.87	17.31	18.60	28.20	21.65	24.23	25.51	25.72	29.48
AS K ALPHA	22.49	20.63	22.16	33.62	25.81	28.88	30.41	30.66	35.16
GA K ALPHA	32.53	29.84	32.06	48.62	37.33	41.76	43.98	44.34	50.84
ZN K ALPHA	39.57	36.30	39.00	59.14	45.40	50.79	53.49	53.92	61.83
CU K ALPHA	48.30	44.30	47.60	72.21	55.43	62.01	65.31	65.85	75.49
NI K ALPHA	59.41	54.48	58.55	88.84	68.18	76.28	80.34	81.00	92.89
CO K ALPHA	59.67	61.66	57.65	61.58	63.43	66.54	66.83	70.75	55.13
MN K ALPHA	93.06	96.56	90.05	95.11	98.80	103.50	103.83	110.05	85.00
CR K ALPHA	118.50	122.98	114.65	120.97	125.79	131.76	132.15	140.10	108.06
V K ALPHA	149.88	157.18	144.74	151.21	157.08	166.33	165.94	175.13	130.78
TI K ALPHA	195.07	204.64	188.38	196.58	204.40	216.40	215.06	227.83	169.89
SC K ALPHA	257.05	269.73	246.21	258.73	269.27	285.04	284.29	300.10	223.44
TH L ALPHA	12.81	11.75	12.62	19.07	14.68	16.39	17.26	17.40	19.92
BA L ALPHA	200.33	210.15	193.44	201.85	209.90	222.23	221.68	233.98	174.45
PB L BETA1	13.79	12.70	13.62	20.29	15.72	17.49	18.39	18.53	21.18
BA L BETA1	158.12	165.21	153.53	159.23	164.79	173.12	172.77	181.30	139.83

	498/683	498/814A	498/814B	498/833	498/902	498/927	498/1003	498/1063	498/1091
SiO2	48.96	68.90	68.91	65.49	51.37	48.96	51.81	74.55	61.81
Al2O3	12.48	15.56	15.29	15.63	15.26	16.73	15.36	14.25	19.46
Fe2O3	16.97	3.58	3.61	6.68	10.75	15.48	12.81	2.06	6.91
MnO	0.24	0.04	0.03	0.05	0.31	0.25	1.23	0.00	0.10
H2O	5.41	1.27	1.31	1.51	2.13	3.92	4.59	0.04	1.63
CaO	11.62	3.93	3.77	4.43	17.10	10.44	12.21	3.52	0.40
Na2O	1.70	4.00	3.80	3.34	0.54	0.55	0.73	4.67	0.55
K2O	0.20	1.53	1.56	1.42	0.54	0.45	0.10	0.48	5.54
TiO2	1.59	0.38	0.38	0.79	0.64	1.83	1.61	0.11	0.49
P2O5	0.15	0.09	0.09	0.19	0.07	0.23	0.19	0.00	0.13
LOSS	0.20	0.54	0.51	0.27	1.50	0.20	0.09	0.32	2.69
TOTAL	99.51	99.82	99.27	99.79	100.20	99.04	100.72	100.01	99.71

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

	3289.98	2810.97	2798.70	2912.11	3242.44	3241.83	3253.04	2759.16	2945.59
NA K ALPHA	3.22	1.88	1.87	2.16	2.90	3.08	3.01	1.70	2.15
SN K ALPHA	10.32	5.91	5.88	6.83	9.28	9.85	9.62	5.32	6.81
ZR K ALPHA	12.00	6.90	6.87	7.96	10.81	11.46	11.19	6.23	7.94
Y K ALPHA	13.94	8.00	7.96	9.24	12.54	13.31	12.99	7.21	9.22
SR K ALPHA	16.23	9.32	9.27	10.76	14.60	15.49	15.13	8.40	10.73
RB K ALPHA	18.99	10.90	10.84	12.58	17.08	18.12	17.70	9.83	12.55
SE K ALPHA	31.32	17.99	17.90	20.77	28.18	29.90	29.20	16.23	20.72
AS K ALPHA	37.34	21.43	21.33	24.75	33.59	35.64	34.81	19.33	24.69
GA K ALPHA	54.00	31.00	30.85	35.79	48.58	51.54	50.34	27.96	35.71
ZN K ALPHA	65.68	37.71	37.52	43.53	59.08	62.69	61.23	34.01	43.43
CU X ALPHA	80.19	46.04	45.81	53.15	72.15	76.54	74.76	41.52	53.02
NI K ALPHA	98.66	56.62	56.34	65.37	88.75	94.17	91.97	51.06	65.22
CO K ALPHA	69.51	59.41	58.97	60.53	76.74	68.60	74.26	57.29	59.61
MN K ALPHA	107.69	92.86	92.21	94.55	118.83	106.23	110.31	89.70	92.89
CR K ALPHA	136.99	118.25	117.42	120.37	151.27	135.15	140.37	114.25	118.24
V K ALPHA	168.84	150.46	149.38	151.26	191.64	165.40	3.14	146.55	149.90
TI K ALPHA	219.50	195.85	194.45	196.82	249.32	215.04	225.15	190.80	195.05
SC K ALPHA	288.90	258.10	256.26	259.29	328.40	283.06	296.44	251.49	256.95
TH L ALPHA	21.16	12.22	12.16	14.08	19.05	20.20	19.73	11.04	14.04
BA L ALPHA	225.40	201.13	199.69	202.12	256.04	220.82	231.21	195.94	200.30
PB L BETA1	22.45	13.18	13.11	15.11	20.27	21.46	20.99	11.96	15.07
BA L BETA1	175.60	158.70	157.61	159.40	197.39	172.36	179.96	155.09	158.19

	498/1469-R	498/17	498/20	498/22	498/24	498/56	498/66	498/91	498/1206H
SiO2	50.40	65.06	71.86	73.83	48.97	69.42	81.53	79.75	50.01
Al2O3	21.80	16.03	15.25	12.62	13.74	15.27	10.34	4.26	13.02
Fe2O3	15.84	4.15	2.33	3.11	10.91	3.43	0.91	9.71	16.05
MnO	0.08	0.07	0.02	0.13	0.19	0.09	0.02	0.34	0.28
MgO	3.64	1.85	0.43	0.32	4.98	0.78	0.63	0.91	6.49
CaO	0.62	4.70	2.34	3.61	13.46	2.26	0.44	3.26	10.42
Na2O	0.81	4.30	5.56	0.94	1.70	1.02	3.64	0.02	1.04
K2O	5.56	1.38	1.32	3.09	1.24	2.63	1.37	0.38	0.34
TiO2	1.43	0.44	0.13	0.10	0.92	0.39	0.08	0.44	1.51
P2O5	0.05	0.19	0.06	0.01	0.15	0.12	0.04	0.07	0.17
LOSS	-0.21	1.46	0.56	1.91	2.12	0.67	0.90	0.56	0.61
TOTAL	100.02	99.55	99.87	99.67	98.38	99.28	99.90	99.71	99.93

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	3159.64	2827.00	2735.51	2882.87	3127.95	2768.90	2728.75	3084.37	3268.44
BM K ALPHA	2.92	1.93	1.70	1.89	2.78	1.85	1.54	2.36	3.11
MB K ALPHA	9.36	6.09	5.33	5.92	8.86	5.02	4.78	7.47	9.96
ZO K ALPHA	10.88	7.11	6.23	6.92	10.32	6.80	5.59	8.71	11.59
Y K ALPHA	12.64	8.25	7.22	8.02	11.96	7.88	6.48	10.10	13.46
SR K ALPHA	14.72	9.61	8.41	9.34	13.95	9.18	7.55	11.76	15.67
RS K ALPHA	17.21	11.23	9.84	10.92	16.31	10.74	8.83	13.77	18.34
SE K ALPHA	28.40	18.54	16.25	18.03	26.92	17.72	14.58	22.71	30.25
AS K ALPHA	33.66	22.10	19.36	21.48	32.09	21.11	17.36	27.06	36.06
GA K ALPHA	48.96	31.96	28.00	31.08	46.41	30.54	25.12	39.14	52.15
ZK K ALPHA	59.55	38.87	34.05	37.80	56.44	37.15	30.55	47.61	63.42
CU K ALPHA	72.70	47.46	41.57	46.14	68.92	45.35	37.29	58.13	77.44
NI K ALPHA	89.44	58.37	51.12	56.75	84.78	55.77	45.86	71.50	95.27
CO K ALPHA	61.60	59.79	56.54	61.08	71.27	58.85	54.48	58.72	68.18
MN K ALPHA	96.03	93.33	88.43	95.02	110.83	91.73	85.15	90.11	105.41
CR K ALPHA	122.16	118.84	112.63	121.01	141.08	116.81	108.45	114.66	134.10
V K ALPHA	150.46	150.91	144.37	155.30	177.24	148.56	139.25	145.47	165.48
TI K ALPHA	195.60	196.42	187.95	202.16	230.56	193.38	181.32	189.22	215.13
SC K ALPHA	257.42	258.84	247.72	266.43	303.66	254.84	239.02	249.20	283.17
TH L ALPHA	19.19	12.59	11.06	12.24	18.20	12.04	9.93	15.36	20.43
BA L ALPHA	200.85	201.72	193.02	207.61	236.78	198.59	186.20	194.30	220.92
PB L BETA1	20.42	13.56	11.96	13.22	19.37	12.99	10.81	16.49	21.71
RA L BETA1	158.70	158.95	152.95	163.40	183.36	156.87	148.28	154.09	172.31

	AGV-1(2)	498/588	498/1027A	498/153	498/1469	498/1321	498/678	498/1444	498/449
SI02	59.96	63.01	58.03	63.41	50.34	51.11	70.99	64.54	73.28
AL2O3	17.32	16.92	21.88	16.72	21.80	13.63	15.44	13.23	14.67
FE2O3	6.88	5.64	7.62	5.03	15.80	19.13	3.12	2.86	2.48
MNO	0.11	0.09	0.12	0.07	0.08	0.36	0.04	0.08	0.08
H60	1.59	2.51	2.13	1.99	3.80	3.13	1.00	1.99	0.53
CAO	4.92	4.10	0.14	4.00	0.60	7.66	3.62	4.38	3.06
NA2O	4.35	3.41	0.54	4.93	0.81	2.16 2.16	4.52	4.70	4.69
K2O	2.98	2.22	5.97	0.84	5.54	0.32	0.97	0.75	1.10
TIO2	1.04	0.63	0.56	0.64	1.39	2.10	0.30	0.30	0.08
P2O5	0.50	0.17	0.08	0.18	0.04	0.62	0.09	0.11	0.06
LOSS	0.00	1.58	2.67	1.58	-0.21	0.00	0.25	4.83	0.94
TOTAL	99.65	100.28	99.74	99.38	99.99	100.52	100.35	97.97	100.97

100.22

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	2909.92	2895.10	2953.28	2820.71	3155.50	3336.55	2795.49	2764.89	2796.85
SN K ALPHA	2.25	2.08	2.22	1.96	2.92	3.31	1.82	1.74	1.75
NB K ALPHA	7.15	6.57	7.02	6.18	9.33	10.60	5.71	5.46	5.49
ZR K ALPHA	8.33	7.66	8.18	7.21	10.86	12.33	6.67	6.38	6.41
Y K ALPHA	9.67	8.89	9.50	8.37	12.61	14.32	7.73	7.40	7.43
SR K ALPHA	11.26	10.35	11.06	9.74	14.68	16.67	9.00	8.61	8.65
RB K ALPHA	13.17	12.11	12.93	11.40	17.17	19.51	10.53	10.07	10.12
SE K ALPHA	21.73	19.98	21.34	18.81	28.33	32.18	17.39	16.63	16.71
AS K ALPHA	25.90	23.81	25.44	22.42	33.77	38.36	20.71	19.82	19.91
GA K ALPHA	37.46	34.44	36.79	32.43	48.84	55.48	29.96	28.67	28.80
ZN K ALPHA	45.55	41.89	44.75	39.43	59.41	67.47	36.44	34.86	35.03
CU K ALPHA	55.62	51.14	54.62	48.15	72.52	82.38	44.49	42.57	42.77
NI K ALPHA	68.41	62.90	67.19	59.22	89.23	101.36	54.72	52.35	52.60
CO K ALPHA	63.66	60.73	59.81	58.07	61.46	66.09	58.50	56.33	57.90
MN K ALPHA	99.21	94.70	93.11	90.61	95.81	101.64	91.41	87.88	90.27
CR K ALPHA	126.31	120.57	118.53	115.37	121.87	129.25	116.42	111.91	114.97
V K ALPHA	157.75	152.26	149.89	145.52	150.27	156.50	148.46	142.68	147.61
TI K ALPHA	205.26	198.15	195.03	189.39	195.35	203.37	193.25	185.74	192.16
SC K ALPHA	270.41	261.07	256.91	249.54	257.10	267.57	254.69	244.79	253.28
TH L ALPHA	14.73	13.56	14.46	12.78	19.4	21.74	11.82	11.31	11.37
BA L ALPHA	210.79	203.49	200.28	194.49	200.59	208.83	198.47	190.75	197.35
PB L BETA1	15.77	14.56	15.50	13.74	20.37	23.06	12.76	12.20	12.30
BA L BETA1	165.48	160.34	158.17	153.74	158.52	164.09	156.91	150.62	156.20

	498/WK11	498/WK10	498/603	498/306E	498/1027A	498/KTT5	498/588	498/619B	498/KTT4
SiO2	71.51	71.17	57.06	54.89	57.59	68.38	62.44	58.85	76.40
AL2O3	14.54	15.39	14.48	21.04	21.73	15.45	16.58	18.32	11.65
FE2O3	2.06	2.02	15.63	10.04	7.56	5.77	5.55	14.84	3.66
MNO	0.00	0.00	0.24	0.07	0.10	0.04	0.07	0.20	0.00
HGO	0.94	0.90	1.96	2.94	2.13	1.67	2.51	2.68	1.14
CAD	0.12	0.11	4.62	0.55	0.14	0.03	4.07	0.48	0.26
NA2O	0.13	0.12	3.18	0.68	0.54	0.28	3.37	0.66	1.06
K2O	7.42	7.39	1.65	4.73	5.92	4.58	2.18	1.74	3.30
TIO2	0.25	0.33	0.95	0.65	0.55	0.48	0.62	1.49	0.39
P2O5	0.05	0.06	0.51	0.13	0.08	0.05	0.18	0.12	0.11
LOSS	1.75	1.82	0.32	3.75	2.67	3.02	1.58	0.26	1.68
TOTAL	98.76	99.32	100.60	99.49	99.01	99.75	99.16	99.63	99.66

WHOLE ROCK MASS ABSORPTION MATRIX
WAVELENGTH

NA K ALPHA	2818.70	2831.64	3191.43	3012.07	2931.21	2926.62	2862.64	3122.66	2853.30
SN K ALPHA	1.82	1.82	2.91	2.36	2.20	2.02	2.05	2.72	1.82
NB K ALPHA	5.70	5.71	9.31	7.51	6.96	6.36	6.48	8.67	5.72
ZR K ALPHA	6.66	6.67	10.84	8.74	8.11	7.42	7.56	10.09	6.68
Y K ALPHA	7.72	7.74	12.58	10.15	9.42	8.61	8.77	11.72	7.74
SR K ALPHA	8.99	9.01	14.65	11.82	10.97	10.02	10.22	13.64	9.02
RB K ALPHA	10.51	10.54	17.14	13.82	12.82	11.72	11.95	15.96	10.55
SE K ALPHA	17.35	17.40	28.27	22.81	21.16	19.35	19.72	26.33	17.41
AS K ALPHA	20.67	20.73	33.70	27.19	25.22	23.06	23.50	31.38	20.74
GA K ALPHA	29.90	29.99	48.74	39.32	36.48	33.35	34.00	45.39	30.00
ZN K ALPHA	36.37	36.48	59.28	47.83	44.37	40.56	41.35	55.20	36.49
CU K ALPHA	44.40	44.52	72.38	58.39	54.17	49.52	50.48	67.39	44.54
NI K ALPHA	54.60	54.75	89.05	71.82	66.63	60.90	62.09	82.92	54.78
CO K ALPHA	61.68	62.00	61.81	57.96	59.29	57.86	59.99	56.68	56.93
MN K ALPHA	96.64	97.15	95.52	90.43	92.40	90.39	93.64	87.64	89.09
CR K ALPHA	123.08	123.73	121.51	115.08	117.63	115.08	119.23	111.47	113.44
V K ALPHA	157.31	157.75	151.85	144.88	148.77	145.85	150.57	136.48	144.20
TI K ALPHA	204.81	205.38	197.41	188.45	193.58	189.80	195.95	177.41	187.70
SC K ALPHA	269.95	270.70	259.82	248.16	254.99	250.06	258.18	233.46	247.35
TH L ALPHA	11.77	11.81	19.12	15.44	14.34	13.12	13.38	17.80	11.82
BA L ALPHA	210.32	210.91	202.71	193.52	198.79	194.91	201.23	182.16	192.75
PB L BETA1	12.73	12.77	20.34	16.52	15.37	14.12	14.37	18.99	12.78
BA L BETA1	165.35	165.84	159.91	153.18	156.99	154.38	158.57	145.35	152.93

WAVELENGTH	498/206	498/217	498/218	498/219	498/220	498/221	498/224	498/226	498/229	498/230
SN K ALPHA	2.91	3.42	3.01	3.16	3.03	2.67	2.83	2.85	1.71	1.85
NB K ALPHA	9.29	10.98	9.65	10.12	9.71	8.52	9.02	9.11	5.33	5.81
ZR K ALPHA	10.81	12.77	11.22	11.78	11.29	9.92	10.51	10.61	6.24	6.79
Y K ALPHA	12.55	14.92	13.04	13.67	13.12	11.52	12.20	12.31	7.22	7.87
SR K ALPHA	14.62	17.26	15.17	15.92	15.27	13.41	14.20	14.34	8.42	9.16
RB K ALPHA	17.10	20.19	17.75	18.63	17.86	15.89	16.61	16.77	9.86	10.72
SE K ALPHA	28.21	33.31	29.28	30.73	29.46	25.89	27.41	27.67	16.27	17.69
AS K ALPHA	33.62	39.71	34.91	36.63	35.13	30.86	32.67	32.98	19.37	21.07
GA K ALPHA	48.63	57.43	50.49	52.97	50.80	44.63	47.25	47.70	28.03	30.48
ZH K ALPHA	59.15	69.84	61.49	64.43	61.78	54.28	57.47	58.01	34.09	37.08
CU K ALPHA	72.21	85.28	74.97	78.66	75.43	66.27	70.17	70.83	41.61	45.27
NI K ALPHA	88.34	104.92	92.24	96.78	92.81	81.53	86.32	87.14	51.18	55.67
CO K ALPHA	57.84	73.49	55.50	65.74	61.65	59.41	66.14	68.81	53.97	61.08
MN K ALPHA	89.82	114.33	85.68	101.72	95.67	91.92	102.71	106.83	84.26	95.65
CR K ALPHA	114.22	145.44	108.94	129.39	121.69	116.94	130.70	135.96	107.29	121.81
V K ALPHA	141.71	176.02	133.10	155.56	146.58	142.86	162.40	169.05	137.23	155.79
TI K ALPHA	184.17	228.81	172.92	202.19	190.50	185.73	211.19	219.86	178.64	202.82
SC K ALPHA	242.34	301.13	227.14	266.06	250.67	244.48	278.05	289.51	235.43	267.31
TH L ALPHA	19.07	22.49	19.80	20.76	19.93	17.52	18.53	18.71	11.05	12.01
BA L ALPHA	189.11	234.96	172.56	207.61	195.62	190.73	216.87	225.79	183.44	208.28
PB L BETA1	20.28	23.83	21.01	22.03	21.14	18.66	19.72	19.90	12.00	12.98
BA L BETA1	150.04	182.25	141.46	162.95	154.39	150.99	169.42	175.73	146.36	164.03
CE L BETA1	122.21	152.06	116.74	136.65	129.19	124.75	137.94	143.02	116.13	130.18

WHOLE ROCK ANALYSES (ORIGINAL MATERIAL)

SiO2	54.83	44.43	45.38	48.96	47.01	54.40	49.50	48.16	88.49	76.49
Al2O3	13.91	15.08	15.21	13.24	13.54	13.00	13.25	13.94	3.42	10.87
Fe2O3	16.81	18.17	18.89	17.42	17.15	13.42	13.16	12.63	3.19	2.48
FeO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MnO	0.13	0.17	0.22	0.24	0.17	0.21	0.18	0.21	0.02	0.00
MgO	3.68	2.03	7.28	4.35	4.05	5.58	7.03	7.32	1.30	0.29
CaO	1.38	13.11	1.96	7.22	4.82	4.03	9.99	11.95	0.81	0.19
Na2O	2.19	0.81	4.10	1.60	5.20	4.21	1.65	1.81	0.05	1.58
K2O	3.02	1.19	1.11	1.41	1.39	0.79	0.48	0.23	0.38	6.38
TiO2	1.11	2.39	1.50	2.35	2.14	1.64	1.24	1.26	0.19	0.22
P2O5	0.13	0.22	0.23	0.16	0.28	0.24	0.13	0.13	0.00	0.03
H2O+	2.49	1.99	3.44	2.98	2.53	2.64	3.37	2.09	1.56	0.57
H2O	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	99.69	99.59	99.32	100.13	100.29	100.16	99.99	99.74	99.40	99.30