
675400

82 m/13
Silence
Lake

* DATE: SEPT.13-82 *

NAME: K.M.DAWSON

PROJECT: 740098

LAB. FILE NO.: M82-128

GARNETS FROM SILENCE LAKE (82M/13), B.C.

* ***** *

M. BONARDI

Rm 755

tel. 613 - 9954947

SECTION LB-1

WTZ	* 1	2	* 3	4	* 5	6	* 7	8	9	AV
SI02	38.40	38.88	38.53	37.49	37.64	37.85	38.34	37.75	38.71	38.18
TI02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AL203	21.00	21.22	21.19	20.89	20.70	21.01	21.16	21.07	21.49	21.08
CR203	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FEO	10.74	10.51	10.46	13.60	10.88	10.96	11.89	14.07	10.91	11.56
MNO	7.94	7.33	7.57	8.83	7.89	8.11	8.38	9.02	7.98	8.12
MGO	.92	.89	.89	1.12	.69	.75	.79	.99	.78	.87
CAO	20.48	21.71	21.16	16.43	20.36	19.98	19.24	16.55	20.95	19.65
NA2O	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
K2O	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	99.48	100.54	99.80	98.36	98.16	98.66	99.80	99.45	100.82	99.45

NO. OF IONS ON THE BASIS OF:

	24(0)	24(0)	24(0)	24(0)	24(0)	24(0)	24(0)	24(0)	24(0)	24(0)
SI	6.025	6.025	6.017	5.997	6.002	5.999	6.016	5.985	5.996	6.007
TI	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AL	3.884	3.876	3.900	3.938	3.891	3.926	3.914	3.938	3.925	3.910
CR	0.000	0.000	0.000	0.000	.001	0.000	0.000	0.000	0.000	0.000
FE	1.409	1.363	1.366	1.819	1.451	1.453	1.560	1.866	1.414	1.521
MN	1.055	.962	1.001	1.196	1.066	1.088	1.114	1.211	1.047	1.082
MG	.215	.206	.208	.268	.164	.178	.185	.235	.181	.204
CA	3.444	3.604	3.540	2.815	3.478	3.393	3.236	2.812	3.478	3.313
NA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
K	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	16.032	16.036	16.032	16.033	16.053	16.037	16.025	16.047	16.041	16.038

PROPORTIONS

FE	27.81	26.34	26.71	37.11	28.49	28.92	31.33	37.99	27.87	30.19
MG	4.25	3.99	4.06	5.47	3.23	3.53	3.71	4.77	3.57	4.05
CA	67.95	69.67	69.22	57.42	68.28	67.55	64.96	57.24	68.57	65.76
FM RATIO	.53	.54	.53	.55	.54	.53	.55	.56	.53	.54

- * 1. CORE
- * 3. CORE
- * 5. CORE
- * 7. CORE
- 9. OPPOSITE EDGE

- 2. EDGE
- 4. EDGE
- 6. EDGE
- 8. EDGE

Grain 1 Anal. 1, 2
" 2 3, 4
3 5, 6
4 7, 8, 9

* 4 GRAINS ANALYZED

SECTION LB-1

same analyses as in page 1

WTZ	1	2	3	4	AV
SI02	38.40	38.53	37.64	38.34	38.23
TI02	0.00	0.00	0.00	0.00	0.00
AL203	21.00	21.19	20.70	21.16	21.01
CR203	0.00	0.00	0.00	0.00	0.00
FED	10.74	10.46	10.88	11.89	10.99
MNO	7.94	7.57	7.89	8.38	7.95
NGO	.92	.89	.69	.79	.82
CAO	20.48	21.16	20.36	19.24	20.31
NA2O	0.00	0.00	0.00	0.00	0.00
K2O	0.00	0.00	0.00	0.00	0.00
TOTALS	99.48	99.80	98.16	99.80	99.31

NO. OF IONS ON THE BASIS OF:

	24(O)	24(O)	24(O)	24(O)	24(O)
SI	6.025	6.017	6.002	6.016	6.015
TI	0.000	0.000	0.000	0.000	0.000
AL	3.884	3.900	3.891	3.914	3.897
CR	0.000	0.000	.001	0.000	0.000
FE	1.409	1.366	1.451	1.560	1.447
MN	1.055	1.001	1.066	1.114	1.059
NG	.215	.208	.164	.185	.193
CA	3.444	3.540	3.478	3.236	3.424
NA	0.000	0.000	0.000	0.000	0.000
K	0.000	0.000	0.000	0.000	0.000
TOTALS	16.032	16.032	16.053	16.025	16.036

PROPORTIONS

FE	27.81	26.71	28.49	31.33	28.57
NG	4.25	4.06	3.23	3.71	3.81
CA	67.95	69.22	68.28	64.96	67.62
FM RATIO	.53	.53	.54	.55	.54

1. CORE *Grain 1*
 3. CORE " " 3

2. CORE *Grain 2*
 4. CORE " " 4

SECTION LB-1

some analyses as in page 1

WTZ	1	2	3	4	5	AV
SI02	38.88	37.49	37.85	37.75	38.71	38.14
TIO2	0.00	0.00	0.00	0.00	0.00	0.00
AL2O3	21.22	20.89	21.01	21.07	21.49	21.14
CR2O3	0.00	0.00	0.00	0.00	0.00	0.00
FEO	10.51	13.60	10.96	14.07	10.91	12.01
MNO	7.33	8.83	8.11	9.02	7.98	8.25
KGO	.89	1.12	.75	.99	.78	.91
CAO	21.71	16.43	19.98	16.55	20.95	19.12
NA2O	0.00	0.00	0.00	0.00	0.00	0.00
K2O	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	100.54	98.36	98.66	99.45	100.82	99.57

NO. OF IONS ON THE BASIS OF:

	24(O)	24(O)	24(O)	24(O)	24(O)	24(O)
SI	6.025	5.997	5.999	5.985	5.996	6.001
TI	0.000	0.000	0.000	0.000	0.000	0.000
AL	3.876	3.938	3.926	3.938	3.925	3.920
CR	0.000	0.000	0.000	0.000	0.000	0.000
FE	1.363	1.819	1.453	1.866	1.414	1.581
NN	.962	1.196	1.088	1.211	1.047	1.100
NG	.206	.268	.178	.235	.181	.213
CA	3.604	2.815	3.393	2.812	3.478	3.224
NA	0.000	0.000	0.000	0.000	0.000	0.000
K	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	16.036	16.033	16.037	16.047	16.041	16.039

PROPORTIONS

FE	26.34	37.11	28.92	37.99	27.87	31.50
NG	3.99	5.47	3.53	4.77	3.57	4.24
CA	69.67	57.42	67.55	57.24	68.57	64.26
FM RATIO	.54	.55	.53	.56	.53	.55

1. EDGE *Grain 1*
 3. EDGE " 3
 5. OPPOSITE EDGE " 4

2. EDGE *Grain 2*
 4. EDGE " 4

SECTION LB-2

GRAIN 1

GRAIN 2

WTX	1	2	3	4	5	6	7	8	AV
SiO2	38.70	38.42	37.71	37.67	37.96	38.07	37.73	37.83	38.01
TiO2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AL2O3	21.28	20.84	21.40	21.12	21.20	21.21	21.04	20.90	21.12
CR2O3	.01	0.00	.01	0.00	0.00	0.00	0.00	0.00	.00
FeO	11.22	11.07	12.81	11.49	13.34	12.67	13.71	11.65	12.25
MNO	8.44	8.54	12.52	8.29	8.89	8.58	10.11	8.84	9.28
MGO	.70	.71	.81	.80	1.02	.81	.89	.83	.82
CAO	20.35	20.02	14.20	19.02	16.99	18.32	15.34	18.57	17.85
NA2O	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
K2O	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	100.70	99.60	99.46	98.39	99.40	99.66	98.82	98.62	99.33

NO. OF IONS ON THE BASIS OF:

	24(0)	24(0)	24(0)	24(0)	24(0)	24(0)	24(0)	24(0)	24(0)
SI	6.015	6.039	5.993	5.992	6.001	5.997	6.019	6.013	6.009
TI	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AL	3.899	3.860	4.009	3.960	3.950	3.938	3.955	3.916	3.936
CR	.001	.001	.001	0.000	0.000	0.000	.001	0.000	.000
FE	1.458	1.455	1.703	1.529	1.763	1.669	1.829	1.549	1.619
MN	1.112	1.137	1.685	1.117	1.190	1.145	1.366	1.190	1.242
MG	.162	.166	.192	.189	.241	.191	.211	.196	.194
CA	3.389	3.372	2.418	3.242	2.878	3.093	2.622	3.163	3.024
NA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
K	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	16.036	16.030	16.001	16.029	16.023	16.033	16.003	16.027	16.023

PROPORTIONS

FE	29.11	29.15	39.48	30.82	36.11	33.70	39.23	31.56	33.47
MG	3.24	3.33	4.46	3.81	4.94	3.86	4.53	4.00	4.00
CA	67.66	67.52	56.06	65.37	58.95	62.44	56.24	64.44	62.52
FM RATIO	.53	.53	.48	.54	.55	.55	.54	.53	.53

- * 1. CORE
- 3. OPPOSITE EDGE
- 5. EDGE
- 7. EDGE

- 2. EDGE
- * 4. CORE
- 6. OPPOSITE EDGE
- 8. BETWEEN CORE AND EDGE

* 2 GRAINS ANALYZED

SECTION LB-2

CORE

WTZ	1	2	AV
SiO2	38.70	37.67	38.18
TiO2	0.00	0.00	0.00
Al2O3	21.28	21.12	21.20
CR2O3	.01	0.00	.00
FeO	11.22	11.49	11.35
MnO	8.44	8.29	8.37
MgO	.70	.80	.75
CaO	20.35	19.02	19.69
Na2O	0.00	0.00	0.00
K2O	0.00	0.00	0.00
TOTALS	100.70	98.39	99.55

NO. OF IONS ON THE BASIS OF:

	24(O)	24(O)	24(O)
SI	6.015	5.992	6.003
TI	0.000	0.000	0.000
AL	3.899	3.960	3.929
CR	.001	0.000	.001
FE	1.458	1.529	1.493
MN	1.112	1.117	1.114
MG	.162	.189	.176
CA	3.389	3.242	3.316
NA	0.000	0.000	0.000
K	0.000	0.000	0.000
TOTALS	16.036	16.029	16.032

PROPORTIONS

FE	29.11	30.82	29.95
MG	3.24	3.81	3.53
CA	67.66	65.37	66.52
FM RATIO	.53	.54	.54

1. CORE Grain 1

2. CORE Grain 2

SECTION LB-2

EDGE

Grain 1

Grain 2

WTZ	Grain 1		Grain 2				AV
	1	2	3	4	5	6	
SiO2	38.42	37.71	37.96	38.07	37.73	37.83	37.95
TiO2	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AL2O3	20.84	21.40	21.20	21.21	21.04	20.90	21.10
CR2O3	0.00	.01	0.00	0.00	0.00	0.00	.00
FeO	11.07	12.81	13.34	12.67	13.71	11.65	12.54
NNO	8.54	12.52	8.89	8.58	10.11	8.84	9.58
NGO	.71	.81	1.02	.81	.89	.83	.84
CAO	20.02	14.20	16.99	18.32	15.34	18.57	17.24
NA2O	0.00	0.00	0.00	0.00	0.00	0.00	0.00
K2O	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	99.60	99.46	99.40	99.66	98.82	98.62	99.26

NO. OF IONS ON THE BASIS OF:

	24(O)	24(O)	24(O)	24(O)	24(O)	24(O)	24(O)
SI	6.039	5.993	6.001	5.997	6.019	6.013	6.011
TI	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AL	3.860	4.009	3.950	3.938	3.955	3.916	3.938
CR	.001	.001	0.000	0.000	.001	0.000	.000
FE	1.455	1.703	1.763	1.669	1.829	1.549	1.661
NN	1.137	1.685	1.190	1.145	1.366	1.190	1.285
NG	.166	.192	.241	.191	.211	.196	.199
CA	3.372	2.418	2.878	3.093	2.622	3.163	2.925
NA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
K	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	16.030	16.001	16.023	16.033	16.003	16.027	16.020

PROPORTIONS

FE	29.15	39.48	36.11	33.70	39.23	31.56	34.71
NG	3.33	4.46	4.94	3.86	4.53	4.00	4.17
CA	67.52	56.06	58.95	62.44	56.24	64.44	61.12
FM RATIO	.53	.48	.55	.55	.54	.53	.53

1. EDGE
3. EDGE
5. EDGE

2. OPPOSITE EDGE
4. OPPOSITE EDGE
6. BETWEEN CORE AND EDGE

SECTION UB-1

WTZ	GRAIN 1		* GRAIN 2			AV
	1	2	3	4	5	
SiO2	39.07	38.93	39.44	38.75	38.79	39.00
TiO2	.80	.73	.63	.66	.67	.70
AL2O3	19.15	19.31	19.62	19.54	19.35	19.39
CR2O3	.08	.01	0.00	0.00	0.00	.02
FE	5.03	5.49	4.71	4.55	4.77	4.91
MNO	.09	.11	.17	.04	.13	.11
MGO	.64	.65	.56	.63	.67	.63
CAO	35.14	34.99	35.70	34.82	34.97	35.12
NA2O	0.00	0.00	0.00	0.00	0.00	0.00
K2O	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	100.00	100.22	100.83	98.99	99.35	99.88

NO. OF IONS ON THE BASIS OF:

	24(0)	24(0)	24(0)	24(0)	24(0)	24(0)
SI	6.004	5.979	6.002	5.995	5.992	5.995
TI	.093	.085	.072	.076	.078	.081
AL	3.468	3.496	3.520	3.564	3.523	3.514
CR	.009	.001	0.000	0.000	0.000	.002
FE	.647	.705	.600	.588	.616	.631
MN	.011	.015	.022	.005	.018	.014
MG	.146	.148	.128	.146	.154	.144
CA	5.786	5.759	5.822	5.773	5.788	5.785
NA	0.000	0.000	0.000	0.000	0.000	0.000
K	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	16.164	16.188	16.166	16.147	16.169	16.167

PROPORTIONS

FE	9.83	10.67	9.16	9.04	9.39	9.62
MG	2.22	2.24	1.95	2.24	2.34	2.20
CA	87.94	87.10	88.89	88.72	88.26	88.18
FM RATIO	.80	.81	.80	.80	.78	.80

* 1. CORE

2. EDGE

* 3. CORE

4. EDGE

5. OPPOSITE EDGE

* 2 GRAINS ANALYZED

SECTION UB-1 CORE
 Grain 1 Grain 2

WTZ	1	2	AV
SiO2	39.44	39.07	39.26
TiO2	.63	.80	.72
Al2O3	19.62	19.15	19.39
Cr2O3	0.00	.08	.04
Fe	4.71	5.03	4.87
Mn	.17	.09	.13
Mg	.56	.64	.60
Ca	35.70	35.14	35.42
Na2O	0.00	0.00	0.00
K2O	0.00	0.00	0.00
TOTALS	100.83	100.00	100.41

NO. OF IONS ON THE BASIS OF:

	24(O)	24(O)	24(O)
SI	6.002	6.004	6.003
TI	.072	.093	.082
AL	3.520	3.468	3.494
CR	0.000	.009	.005
FE	.600	.647	.623
MN	.022	.011	.017
MG	.128	.146	.137
CA	5.822	5.786	5.804
NA	0.000	0.000	0.000
K	0.000	0.000	0.000
TOTALS	16.166	16.164	16.165

PROPORTIONS

FE	9.16	9.83	9.49
MG	1.95	2.22	2.08
CA	88.89	87.94	88.43
FM RATIO	.80	.80	.80

1. CORE

2. CORE

SECTION UB-1 *EDGE*

WTZ	<i>Grain 2</i>		<i>Grain 1</i>	AV
	1	2	3	
SiO2	38.75	38.79	38.93	38.82
TiO2	.66	.67	.73	.69
Al2O3	19.54	19.35	19.31	19.40
CR2O3	0.00	0.00	.01	.00
FeO	4.55	4.77	5.49	4.94
MnO	.04	.13	.11	.09
MgO	.63	.67	.65	.65
CaO	34.82	34.97	34.99	34.93
Na2O	0.00	0.00	0.00	0.00
K2O	0.00	0.00	0.00	0.00
TOTALS	98.99	99.35	100.22	99.52

NO. OF IONS ON THE BASIS OF:

	24(O)	24(O)	24(O)	24(O)
SI	5.995	5.992	5.979	5.989
TI	.076	.078	.085	.080
AL	3.564	3.523	3.496	3.527
CR	0.000	0.000	.001	.000
FE	.588	.616	.705	.637
MN	.005	.018	.015	.012
MG	.146	.154	.148	.149
CA	5.773	5.788	5.759	5.773
NA	0.000	0.000	0.000	0.000
K	0.000	0.000	0.000	0.000
TOTALS	16.147	16.169	16.188	16.168

PROPORTIONS

FE	9.04	9.39	10.67	9.71
MG	2.24	2.34	2.24	2.28
CA	88.72	88.26	87.10	88.01
FM RATIO	.80	.78	.81	.80

1. EDGE
3. EDGE

2. OPPOSITE EDGE

SECTION UB-2

WTZ	Grain 1		Grain 2		Grain 3		Grain 4		AV
	1	2	3	4	5	6	7	8	
SiO2	39.25	38.91	37.93	38.04	38.73	39.35	38.85	39.45	38.81
TiO2	.59	.15	.08	.15	.48	.47	.35	.21	.31
Al2O3	19.54	19.53	20.25	19.86	19.64	19.85	19.79	19.95	19.80
CR2O3	.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	.01
FED	5.59	5.41	7.07	6.27	5.64	5.59	6.02	5.12	5.84
MNO	.39	.40	1.88	1.36	.62	.82	.92	.34	.84
MGO	.58	.67	.68	.71	.71	.73	.71	.71	.69
CAO	34.43	34.52	31.10	32.39	33.55	33.80	33.25	34.91	33.49
NA2O	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
K2O	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	100.43	99.59	98.99	98.78	99.37	100.61	99.89	100.69	99.79

NO. OF IONS ON THE BASIS OF:

	24(0)	24(0)	24(0)	24(0)	24(0)	24(0)	24(0)	24(0)	24(0)
SI	6.008	6.008	5.926	5.944	5.991	6.009	5.988	6.011	5.986
TI	.068	.017	.009	.018	.056	.054	.040	.024	.036
AL	3.526	3.554	3.728	3.658	3.580	3.572	3.595	3.582	3.599
CR	.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	.001
FE	.716	.698	.924	.820	.730	.714	.777	.652	.753
MN	.051	.052	.249	.180	.081	.106	.120	.044	.110
MG	.131	.155	.159	.166	.163	.166	.163	.161	.158
CA	5.648	5.712	5.206	5.422	5.561	5.530	5.491	5.700	5.535
NA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
K	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	16.155	16.196	16.201	16.208	16.162	16.151	16.174	16.174	16.178

PROPORTIONS

FE	11.03	10.64	14.69	12.79	11.31	11.14	12.08	10.01	11.68
MG	2.02	2.36	2.53	2.60	2.52	2.59	2.54	2.47	2.45
CA	86.95	87.01	82.78	84.62	86.17	86.28	85.39	87.52	85.87
FM RATIO	.80	.77	.69	.70	.75	.72	.73	.76	.74

* 1. CORE
* 3. CORE
* 5. CORE
* 7. CORE

2. EDGE
4. EDGE
6. EDGE
8. EDGE

* 4 GRAINS ANALYZED

SEXCTION UB-2

CORE

WTZ	Grain 1	2	3	4	AV
	1	2	3	4	
STO2	39.25	37.93	38.73	38.85	38.69
TIO2	.59	.08	.48	.35	.38
AL2O3	19.54	20.25	19.64	19.79	19.81
CR2O3	.06	0.00	0.00	0.00	.02
FEO	5.59	7.07	5.64	6.02	6.08
MNO	.39	1.88	.62	.92	.95
NGO	.58	.68	.71	.71	.67
CAO	34.43	31.10	33.55	33.25	33.08
NA2O	0.00	0.00	0.00	0.00	0.00
K2O	0.00	0.00	0.00	0.00	0.00
TOTALS	100.43	98.99	99.37	99.89	99.67

NO. OF IONS ON THE BASIS OF:

	24(O)	24(O)	24(O)	24(O)	24(O)
SI	6.008	5.926	5.991	5.988	5.979
TI	.068	.009	.056	.040	.044
AL	3.526	3.728	3.580	3.595	3.607
CR	.007	0.000	0.000	0.000	.002
FE	.716	.924	.730	.777	.786
MN	.051	.249	.081	.120	.125
NG	.131	.159	.163	.163	.154
CA	5.648	5.206	5.561	5.491	5.478
NA	0.000	0.000	0.000	0.000	0.000
K	0.000	0.000	0.000	0.000	0.000
TOTALS	16.155	16.201	16.162	16.174	16.173

PROPORTIONS

FE	11.03	14.69	11.31	12.08	12.24
NG	2.02	2.53	2.52	2.54	2.40
CA	86.95	82.78	86.17	85.39	85.35
FM RATIO	.80	.69	.75	.73	.74

1. CORE
3. CORE

2. CORE
4. CORE

SECTION UB-2 *EDGE**Carin 1*

	1	2	3	4	AV
SI02	38.91	38.04	39.35	39.45	38.94
TI02	.15	.15	.47	.21	.25
AL203	19.53	19.86	19.85	19.95	19.80
CR203	0.00	0.00	0.00	0.00	0.00
FED	5.41	6.27	5.59	5.12	5.60
MND	.40	1.36	.82	.34	.73
NGD	.67	.71	.73	.71	.71
CAD	34.52	32.39	33.80	34.91	33.91
NA20	0.00	0.00	0.00	0.00	0.00
K2O	0.00	0.00	0.00	0.00	0.00
TOTALS	99.59	98.78	100.61	100.69	99.92

NO. OF IONS ON THE BASIS OF:

24(0) 24(0) 24(0) 24(0) 24(0)

SI	6.008	5.944	6.009	6.011	5.993
TI	.017	.018	.054	.024	.028
AL	3.554	3.658	3.572	3.582	3.592
CR	0.000	0.000	0.000	0.000	0.000
FE	.698	.820	.714	.652	.721
MN	.052	.180	.106	.044	.095
NG	.155	.166	.166	.161	.162
CA	5.712	5.422	5.530	5.700	5.592
NA	0.000	0.000	0.000	0.000	0.000
K	0.000	0.000	0.000	0.000	0.000
TOTALS	16.196	16.208	16.151	16.174	16.183

PROPORTIONS

FE	10.64	12.79	11.14	10.01	11.13
NG	2.36	2.60	2.59	2.47	2.50
CA	87.01	84.62	86.28	87.52	86.37
FM RATIO	.77	.70	.72	.76	.74

1. EDGE
3. EDGE2. EDGE
4. EDGE

SECTION UB-3

WTZ	Grain 1			Grain 2			Grain 3			AV
	1	2	3	4	5	6	7	8	9	
SiO ₂	37.56	37.66	37.64	37.69	38.23	38.04	38.60	38.93	38.67	38.11
TiO ₂	.09	.08	.07	.11	.08	.13	.08	.08	.06	.09
Al ₂ O ₃	20.58	20.66	20.86	20.74	21.02	20.73	20.75	20.68	20.46	20.72
Cr ₂ O ₃	.06	.05	.08	0.00	0.00	0.00	.02	.02	.02	.03
FeO	9.95	10.80	10.86	10.60	9.31	10.02	5.87	6.24	6.03	8.85
MnO	5.53	6.01	6.10	5.15	5.47	5.22	1.20	1.43	1.34	4.16
NGO	.65	.62	.64	.60	.51	.53	.49	.59	.48	.57
CaO	24.63	23.41	23.23	23.95	25.86	25.27	32.29	32.31	32.40	27.04
Na ₂ O	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
K ₂ O	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	99.05	99.29	99.48	98.84	100.48	99.94	99.30	100.28	99.46	99.57

NO. OF IONS ON THE BASIS OF:

	24(0)	24(0)	24(0)	24(0)	24(0)	24(0)	24(0)	24(0)	24(0)	24(0)
SI	5.927	5.940	5.925	5.951	5.933	5.944	5.965	5.970	5.978	5.949
TI	.011	.009	.009	.013	.010	.016	.010	.010	.007	.010
AL	3.827	3.841	3.871	3.860	3.845	3.818	3.780	3.737	3.729	3.812
CR	.008	.006	.010	0.000	0.000	0.000	.003	.002	.003	.003
FE	1.313	1.425	1.430	1.400	1.209	1.310	.759	.801	.779	1.156
MN	.739	.803	.813	.688	.719	.691	.157	.185	.176	.550
NG	.154	.145	.150	.142	.118	.123	.113	.136	.110	.132
CA	4.165	3.958	3.918	4.052	4.300	4.231	5.347	5.308	5.367	4.522
NA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
K	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	16.144	16.127	16.126	16.106	16.134	16.133	16.134	16.149	16.149	16.134

PROPORTIONS

FE	23.31	25.78	26.01	25.03	21.48	23.12	12.20	12.82	12.45	19.89
NG	2.73	2.63	2.73	2.53	2.10	2.18	1.81	2.18	1.76	2.27
CA	73.95	71.59	71.26	72.44	76.42	74.70	85.99	85.00	85.79	77.83
FM RATIO	.60	.60	.60	.63	.59	.62	.74	.71	.73	.63

- * 1. CORE
- 3. OPPOSITE EDGE
- 5. CORE
- * 7. CORE
- 9. OPPOSITE EDGE

- 2. EDGE
- * 4. CORE
- 6. EDGE
- 8. EDGE

* 3 GRAINS ANALYZED

4, 5 same grain

SECTION UB-3

CORE

MTZ	Grain 1	Grain 2		Grain 3	AV
	1	2	3	4	
SiO2	37.56	37.69	38.23	38.60	38.02
TiO2	.09	.11	.08	.08	.09
Al2O3	20.58	20.74	21.02	20.75	20.77
CR2O3	.06	0.00	0.00	.02	.02
FE	9.95	10.60	9.31	5.87	8.93
MNO	5.53	5.15	5.47	1.20	4.34
MGO	.65	.60	.51	.49	.56
CAO	24.63	23.95	25.86	32.29	26.68
NA2O	0.00	0.00	0.00	0.00	0.00
K2O	0.00	0.00	0.00	0.00	0.00
TOTALS	99.05	98.84	100.48	99.30	99.42

NO. OF IONS ON THE BASIS OF:

	24(O)	24(O)	24(O)	24(O)	24(O)
SI	5.927	5.951	5.933	5.965	5.945
TI	.011	.013	.010	.010	.011
AL	3.827	3.860	3.845	3.780	3.828
CR	.008	0.000	0.000	.003	.002
FE	1.313	1.400	1.209	.759	1.168
MN	.739	.688	.719	.157	.574
MG	.154	.142	.118	.113	.131
CA	4.165	4.052	4.300	5.347	4.470
NA	0.000	0.000	0.000	0.000	0.000
K	0.000	0.000	0.000	0.000	0.000
TOTALS	16.144	16.106	16.134	16.134	16.130

PROPORTIONS

FE	23.31	25.03	21.48	12.20	20.25
MG	2.73	2.53	2.10	1.81	2.27
CA	73.95	72.44	76.42	85.99	77.48
FM RATIO	.60	.63	.59	.74	.62

1. CORE
3. CORE

2. CORE
4. CORE

SECTION UB-3 *EDGE*

WTZ	<i>Grain 1</i>		<i>2</i>	<i>3</i>		AV
	1	2	3	4	5	
SiO2	37.66	37.64	38.04	38.93	38.67	38.19
TiO2	.08	.07	.13	.08	.06	.08
Al2O3	20.66	20.86	20.73	20.68	20.46	20.68
CR2O3	.05	.08	0.00	.02	.02	.03
FED	10.80	10.86	10.02	6.24	6.03	8.79
NNO	6.01	6.10	5.22	1.43	1.34	4.02
NGO	.62	.64	.53	.59	.48	.57
CAO	23.41	23.23	25.27	32.31	32.40	27.32
NA2O	0.00	0.00	0.00	0.00	0.00	0.00
K2O	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	99.29	99.48	99.94	100.28	99.46	99.69

NO. OF IONS ON THE BASIS OF:

	24(0)	24(0)	24(0)	24(0)	24(0)	24(0)
SI	5.940	5.925	5.944	5.970	5.978	5.952
TI	.009	.009	.016	.010	.007	.010
AL	3.841	3.871	3.818	3.737	3.729	3.799
CR	.006	.010	0.000	.002	.003	.004
FE	1.425	1.430	1.310	.801	.779	1.146
NN	.803	.813	.691	.185	.176	.531
NG	.145	.150	.123	.136	.110	.133
CA	3.958	3.918	4.231	5.308	5.367	4.563
NA	0.000	0.000	0.000	0.000	0.000	0.000
K	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	16.127	16.126	16.133	16.149	16.149	16.137

PROPORTIONS

FE	25.78	26.01	23.12	12.82	12.45	19.61
NG	2.63	2.73	2.18	2.18	1.76	2.27
CA	71.59	71.26	74.70	85.00	85.79	78.11
FH RATIO	.60	.60	.62	.71	.73	.63

- 1. EDGE
- 3. EDGE
- 5. OPPOSITE EDGE

- SECTION 2. OPPOSITE EDGE
- 4. EDGE

SECTION UB-4

WTZ	Grain 1		Grain 2		Grain 3		AV
	1	2	3	4	5	6	
STO2	38.12	37.71	38.02	37.86	38.17	38.22	38.02
TIO2	.20	.14	.38	.12	.16	.17	.20
AL2O3	20.38	20.34	20.31	20.06	20.43	20.57	20.35
CR2O3	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FED	7.73	7.92	8.31	8.01	8.48	8.50	8.16
MNO	5.87	5.48	5.70	4.90	4.89	5.46	5.38
MGO	.48	.49	.54	.54	.41	.62	.51
CAO	26.90	26.62	26.62	27.89	27.34	25.99	26.89
NA2O	0.00	0.00	0.00	0.00	0.00	0.00	0.00
K2O	.05	.05	.04	.03	.07	.02	.04
TOTALS	99.73	98.75	99.92	99.41	99.95	99.55	99.55

NO. OF IONS ON THE BASIS OF:

	24(0)	24(0)	24(0)	24(0)	24(0)	24(0)	24(0)
SI	5.957	5.949	5.939	5.941	5.953	5.972	5.952
TI	.024	.016	.044	.014	.019	.020	.023
AL	3.753	3.782	3.739	3.710	3.755	3.789	3.755
CR	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FE	1.010	1.045	1.086	1.052	1.106	1.111	1.068
MN	.777	.732	.755	.652	.646	.722	.714
MG	.111	.115	.125	.127	.096	.145	.120
CA	4.505	4.500	4.456	4.690	4.569	4.352	4.511
NA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
K	.009	.010	.007	.006	.014	.005	.009
TOTALS	16.146	16.149	16.151	16.192	16.158	16.116	16.152

PROPORTIONS

FE	17.95	18.46	19.17	17.92	19.16	19.81	18.74
MG	1.97	2.03	2.20	2.16	1.66	2.59	2.10
CA	80.08	79.51	78.63	79.92	79.17	77.60	79.16
FM RATIO	.53	.55	.55	.58	.60	.56	.56

* 1. CORE
* 3. CORE
* 5. CORE

2. EDGE
4. EDGE
6. EDGE

* 3 GRAINS ANALYZED

SECTION UB-4 CORE

WTZ	Grain 1	2	3	AV
	1	2	3	
SiO2	38.12	38.02	38.17	38.10
TiO2	.20	.38	.16	.25
AL2O3	20.38	20.31	20.43	20.37
CR2O3	0.00	0.00	0.00	0.00
FeO	7.73	8.31	8.48	8.17
MNO	5.87	5.70	4.89	5.49
NGO	.48	.54	.41	.48
CAO	26.90	26.62	27.34	26.95
NA2O	0.00	0.00	0.00	0.00
K2O	.05	.04	.07	.05
TOTALS	99.73	99.92	99.95	99.87

NO. OF IONS ON THE BASIS OF:

	24(O)	24(O)	24(O)	24(O)
SI	5.957	5.939	5.953	5.950
TI	.024	.044	.019	.029
AL	3.753	3.739	3.755	3.750
CR	0.000	0.000	0.000	0.000
FE	1.010	1.086	1.106	1.067
NN	.777	.755	.646	.726
NG	.111	.125	.096	.111
CA	4.505	4.456	4.569	4.509
NA	0.000	0.000	0.000	0.000
K	.009	.007	.014	.011
TOTALS	16.146	16.151	16.158	16.152

PROPORTIONS

FE	17.95	19.17	19.16	18.77
NG	1.97	2.20	1.66	1.95
CA	80.08	78.63	79.17	79.28
FM RATIO	.53	.55	.60	.56

1. CORE
3. CORE

SECTION UB-4

2. CORE

SECTION UB-4 *EDGE*

WTZ	<i>Grain</i>			AV
	1	2	3	
SI02	37.71	37.86	38.22	37.93
TI02	.14	.12	.17	.14
AL203	20.34	20.06	20.57	20.32
CR203	0.00	0.00	0.00	0.00
FEO	7.92	8.01	8.50	8.14
NNO	5.48	4.90	5.46	5.28
NGO	.49	.54	.62	.55
CAO	26.62	27.89	25.99	26.83
NA2O	0.00	0.00	0.00	0.00
K2O	.05	.03	.02	.03
TOTALS	98.75	99.41	99.55	99.24

NO. OF IONS ON THE BASIS OF:

	24(0)	24(0)	24(0)	24(0)
SI	5.949	5.941	5.972	5.954
TI	.016	.014	.020	.017
AL	3.782	3.710	3.789	3.761
CR	0.000	0.000	0.000	0.000
FE	1.045	1.052	1.111	1.069
NN	.732	.652	.722	.702
NG	.115	.127	.145	.129
CA	4.500	4.690	4.352	4.514
NA	0.000	0.000	0.000	0.000
K	.010	.006	.005	.007
TOTALS	16.149	16.192	16.116	16.152

PROPORTIONS

FE	18.46	17.92	19.81	18.72
NG	2.03	2.16	2.59	2.25
CA	79.51	79.92	77.60	79.03
FM RATIO	.55	.58	.56	.56

1. EDGE
3. EDGE

2. EDGE

SECTION UB-5

WTZ	* 1		* 2		* 3		AV
	1	2	3	4	5	6	
SiO2	37.56	37.97	38.04	38.86	38.42	39.07	38.32
TiO2	1.88	2.12	1.80	1.69	1.75	0.00	1.54
Al2O3	17.76	17.40	17.62	18.08	17.83	20.56	18.21
CR2O3	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FeO	3.73	3.67	3.75	3.51	3.70	3.86	3.70
MnO	0.00	0.00	.01	0.00	0.00	0.00	.00
NGO	1.72	1.84	1.98	2.09	1.85	.91	1.73
CaO	35.63	36.00	35.74	36.72	36.26	36.27	36.10
Na2O	0.00	0.00	0.00	0.00	0.00	0.00	0.00
K2O	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	98.28	99.00	98.94	100.95	99.81	100.67	99.61

NO. OF IONS ON THE BASIS OF:

	24(O)	24(O)	24(O)	24(O)	24(O)	24(O)	24(O)
SI	5.885	5.906	5.916	5.917	5.923	5.937	5.914
TI	.221	.248	.211	.193	.203	0.000	.179
AL	3.279	3.190	3.230	3.245	3.239	3.683	3.312
CR	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FE	.488	.478	.487	.447	.477	.490	.478
MN	0.000	0.000	.001	0.000	0.000	0.000	.000
MG	.401	.426	.460	.475	.426	.206	.398
CA	5.980	6.001	5.954	5.991	5.988	5.905	5.970
NA	0.000	0.000	.001	0.000	0.000	0.000	0.000
K	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	16.254	16.249	16.260	16.268	16.256	16.221	16.251

PROPORTIONS

FE	7.11	6.92	7.06	6.47	6.92	7.42	6.98
MG	5.84	6.18	6.66	6.87	6.18	3.13	5.82
CA	87.06	86.91	86.28	86.67	86.90	89.45	87.20
FM RATIO	.55	.53	.51	.49	.53	.70	.55

* 1. CORE
* 3. CORE
* 5. CORE

2. EDGE
4. EDGE
6. EDGE

* 3 GRAINS ANALYZED

SECTION UB-5

CORE

Grain 1

2

3

WTZ	1	2	3	AV
SiO2	37.56	38.04	38.42	38.01
TiO2	1.88	1.80	1.75	1.81
AL2O3	17.76	17.62	17.83	17.74
CR2O3	0.00	0.00	0.00	0.00
FE	3.73	3.75	3.70	3.73
MNO	0.00	.01	0.00	.00
MGO	1.72	1.98	1.85	1.85
CAO	35.63	35.74	36.26	35.88
NA2O	0.00	0.00	0.00	0.00
K2O	0.00	0.00	0.00	0.00
TOTALS	98.28	98.94	99.81	99.01

NO. OF IONS ON THE BASIS OF:

24(O) 24(O) 24(O) 24(O)

	24(O)	24(O)	24(O)	24(O)
SI	5.885	5.916	5.923	5.907
TI	.221	.211	.203	.212
AL	3.279	3.230	3.239	3.249
CR	0.000	0.000	0.000	0.000
FE	.488	.487	.477	.484
NN	0.000	.001	0.000	.000
NG	.401	.460	.426	.429
CA	5.980	5.954	5.988	5.975
NA	0.000	.001	0.000	0.000
K	0.000	0.000	0.000	0.000
TOTALS	16.254	16.260	16.256	16.257

PROPORTIONS

FE	7.11	7.06	6.92	7.03
NG	5.84	6.66	6.18	6.22
CA	87.06	86.28	86.90	86.74
FM RATIO	.55	.51	.53	.53

1. CORE
3. CORE

2. CORE

SECTION UB-5 *EDGE*

WTZ	<i>Grain 1</i>	2	3	AV
	1	2	3	
SI02	37.97	38.86	39.07	38.63
TIO2	2.12	1.69	0.00	1.27
AL2O3	17.40	18.08	20.56	18.68
CR2O3	0.00	0.00	0.00	0.00
FED	3.67	3.51	3.86	3.68
MNO	0.00	0.00	0.00	0.00
NGO	1.84	2.09	.91	1.61
CAD	36.00	36.72	36.27	36.33
NA2O	0.00	0.00	0.00	0.00
K2O	0.00	0.00	0.00	0.00
TOTALS	99.00	100.95	100.67	100.21

NO. OF IONS ON THE BASIS OF:

	24(O)	24(O)	24(O)	24(O)
SI	5.906	5.917	5.937	5.920
TI	.248	.193	0.000	.146
AL	3.190	3.245	3.683	3.374
CR	0.000	0.000	0.000	0.000
FE	.478	.447	.490	.472
MN	0.000	0.000	0.000	0.000
NG	.426	.475	.206	.369
CA	6.001	5.991	5.905	5.965
NA	0.000	0.000	0.000	0.000
K	0.000	0.000	0.000	0.000
TOTALS	16.249	16.268	16.221	16.246

PROPORTIONS

FE	6.92	6.47	7.42	6.93
NG	6.18	6.87	3.13	5.42
CA	86.91	86.67	89.45	87.65
FM RATIO	.53	.49	.70	.56

1. EDGE
3. EDGE

2. EDGE