

Appendix III, Table 4

SPINEL ANALYSES FROM LAKE BAY AND BAY OF ISLANDS

	1	2	3	4	7	8	9	10
Al <sub>2</sub> O <sub>3</sub> .....	54.67	53.45	53.90	53.50	48.38	51.09	57.97	63.19
Cr <sub>2</sub> O <sub>3</sub> .....	12.90	13.60	13.99	14.40	18.26	17.41	10.19	4.45
MgO.....	19.39	17.73	19.07	19.35	17.57	18.54	19.46	19.59
FeO.....	11.13	13.28	11.71	10.86	13.04	11.92	11.66	11.93
Fe <sub>2</sub> O <sub>3</sub> .....	1.78	1.30	2.14	1.63	2.67	1.21	1.18	.37
TiO <sub>2</sub> .....	.14	.07	.07	.05	.10	.10	.07	.02
Total.....	100.01	99.59	100.87	99.78	100.30	100.27	100.53	99.55
Al.....	13.53	13.45	13.32	13.32	12.35	12.84	14.13	15.22
Cr.....	2.14	2.29	2.32	2.40	3.13	2.93	1.67	.72
Fe <sup>3+</sup> .....	.28	.23	.34	.26	.47	.19	.18	.06
Ti.....	.02	.01	.01	.01	.03	.02	.01	.00
Mg <sub>2+</sub> .....	6.07	5.64	5.96	6.09	5.67	5.09	6.00	5.96
Fe <sup>2+</sup> .....	1.95	2.37	2.05	1.92	2.36	2.13	2.02	2.04
MgAl <sub>2</sub> O <sub>4</sub> %.....	75.8	70.5	74.5	76.1	70.9	73.6	74.9	74.6
FeAl <sub>2</sub> O <sub>4</sub> %.....	8.7	13.6	8.8	7.1	6.3	6.6	13.4	20.6
MgCr <sub>2</sub> O <sub>4</sub> %.....	.0	.0	.0	.0	.0	.0	.0	.0
FeCr <sub>2</sub> O <sub>4</sub> %.....	13.4	14.3	14.5	15.0	19.5	18.3	10.4	4.5
Fe <sub>2</sub> TiO <sub>4</sub> %.....	.3	.1	.1	.1	.4	.2	.1	.0
FeFe <sub>2</sub> O <sub>4</sub> %.....	1.8	1.5	2.1	1.6	2.9	1.2	1.2	.4
Cr/Cr+Al(x100).....	13.66	14.58	14.82	15.29	20.20	18.60	10.54	4.51
Mg/Mg+Fe <sup>2+</sup> (x100).....	75.64	70.40	74.38	76.06	70.60	73.48	74.84	74.53
Fe <sup>3+</sup> /Fe <sup>3+</sup> +Cr-Al(x100).....	1.76	1.46	2.11	1.62	2.93	1.21	1.15	.35
Fe <sup>2+</sup> /Mg.....	.32	.42	.34	.31	.42	.36	.34	.34

  

	11A	11B	13	14	15	17	18	19
Al <sub>2</sub> O <sub>3</sub> .....	55.45	52.53	60.24	40.96	40.10	36.09	29.85	30.18
Cr <sub>2</sub> O <sub>3</sub> .....	11.94	14.74	8.40	26.50	29.08	32.84	37.15	38.63
MgO.....	18.47	18.25	18.89	16.19	14.60	15.10	15.62	14.92
FeO.....	12.82	12.65	12.85	13.54	15.65	14.37	12.15	13.73
Fe <sub>2</sub> O <sub>3</sub> .....	1.95	2.18	.11	2.13	.00	.72	3.07	1.71
TiO <sub>2</sub> .....	.07	.11	.02	.02	n.d.	n.d.	.00	.01
Total.....	100.78	100.46	100.51	99.34	99.23	99.12	97.84	99.18
Al.....	13.69	13.14	14.61	10.90	10.80	9.86	8.42	8.44
Cr.....	1.98	2.47	1.37	4.73	5.25	6.02	7.03	7.25
Fe <sup>3+</sup> .....	.31	.35	.02	.36	.00	.13	.55	.31
Ti.....	.01	.02	.00	.00	-	-	.00	.00
Mg.....	5.77	5.77	5.79	5.45	4.94	5.21	5.57	5.28
Fe <sup>2+</sup> .....	2.25	2.25	2.21	2.56	2.99	2.79	2.43	2.73
MgAl <sub>2</sub> O <sub>4</sub> %.....	72.1	72.2	72.4	68.1	61.5	61.6	52.6	52.8
FeAl <sub>2</sub> O <sub>4</sub> %.....	13.5	10.0	18.9	.0	5.8	.0	.0	.0
MgCr <sub>2</sub> O <sub>4</sub> %.....	.0	.0	.0	.0	.0	3.6	17.0	13.2
FeCr <sub>2</sub> O <sub>4</sub> %.....	12.4	15.5	8.5	29.6	32.7	34.0	26.9	32.1
Fe <sub>2</sub> TiO <sub>4</sub> %.....	.1	.2	.0	.0	-	-	.0	.0
FeFe <sub>2</sub> O <sub>4</sub> %.....	1.9	2.2	.1	.3	.0	.8	3.5	1.9
Cr/Cr-Al(x100).....	12.62	15.84	8.55	30.26	32.72	37.90	45.49	46.19
Mg/Mg+Fe <sup>2+</sup> (x100).....	71.97	72.00	72.73	68.06	62.28	65.18	69.62	65.94
Fe <sup>3+</sup> /Fe <sup>3+</sup> +Cr-Al(x100).....	1.92	2.18	.11	2.27	.00	.78	3.46	1.91
Fe <sup>2+</sup> /Mg.....	.39	.39	.38	.47	.60	.53	.44	.52

11A INTERSTITIAL TO SILICATES  
 11B INCLUSION IN ORTHOPYROXENE

## Appendix III, Table 4 (cont'd)

## SPINEL ANALYSES FROM HARE BAY AND BAY OF ISLANDS

	20	22	25A	25B	26	27	29	30	
Al <sub>2</sub> O <sub>3</sub> .....	21.97	11.95	35.08	37.13	32.28	31.41	44.93	18.70	
Cr <sub>2</sub> O <sub>3</sub> .....	46.23	56.57	31.64	30.70	34.61	34.84	19.16	50.38	
MgO.....	13.41	12.49	15.19	17.28	13.01	12.82	16.96	14.01	
FeO.....	14.55	14.80	14.43	11.49	17.24	17.57	13.67	13.56	
Fe <sub>2</sub> O <sub>3</sub> .....	2.48	1.56	3.84	3.52	2.92	3.27	4.85	2.70	
TiO <sub>2</sub> .....	.00	.14	.05	.01	n.d.	.19	.48	.19	
Total.....	98.64	99.51	100.22	100.12	100.06	100.10	99.98	99.56	
Al.....	6.44	3.65	9.54	9.91	9.01	6.80	11.69	5.50	
Cr.....	9.09	11.99	5.77	5.49	6.47	6.55	3.34	9.93	
Fe <sup>3+</sup> .....	.46	.30	.67	.60	.52	.58	.81	.51	
Ti.....	.00	.03	.01	.00	-	.03	.08	.04	
Mg.....	4.97	4.82	5.22	5.83	4.59	4.54	5.56	5.20	
Fe <sup>2+</sup> .....	3.00	3.21	2.78	2.17	3.41	3.49	2.52	2.83	
MgAl <sub>2</sub> O <sub>4</sub> %.....	40.3	22.8	59.6	61.9	56.3	55.0	69.5	34.3	
FeAl <sub>2</sub> O <sub>4</sub> %.....	.0	.0	.0	.0	.0	.0	3.6	.0	
MgCr <sub>2</sub> O <sub>4</sub> %.....	21.9	37.5	5.7	10.9	1.1	1.8	.0	30.7	
FeCr <sub>2</sub> O <sub>4</sub> %.....	35.0	37.5	30.4	23.4	39.4	39.2	20.9	31.3	
Fe <sub>2</sub> TiO <sub>4</sub> %.....	.0	.3	.1	.0	-	.4	1.0	.4	
FeFe <sub>2</sub> O <sub>4</sub> %.....	2.9	1.9	4.2	3.7	3.3	3.7	5.0	3.2	
Cr/Cr+Al(x100).....	58.52	76.67	37.69	35.67	41.83	42.65	22.24	64.37	
Mg/Mg+Fe <sup>2+</sup> (x100).....	62.15	60.06	65.23	72.83	57.35	56.52	65.87	64.77	
Fe <sup>3+</sup> /Fe <sup>3+</sup> +Cr+Al(x100).....	2.90	1.90	4.17	3.74	3.25	3.67	5.08	3.18	
Fe <sup>2+</sup> /Mg.....	.61	.66	.53	.37	.74	.77	.45	.54	
25A DISSEMINATED 25B MASSIVE									
	31	32	33	34	35	36	37A	37B	38
Al <sub>2</sub> O <sub>3</sub> .....	6.58	66.56	29.58	35.82	38.76	31.36	47.56	45.77	52.51
Cr <sub>2</sub> O <sub>3</sub> .....	58.84	2.04	37.07	28.50	26.55	34.16	17.70	18.63	6.93
MgO.....	7.76	22.50	16.22	14.58	14.86	12.90	15.56	14.65	13.57
FeO.....	20.80	8.82	12.39	14.76	15.38	17.31	15.91	16.88	19.34
Fe <sub>2</sub> O <sub>3</sub> .....	3.96	2.15	5.09	4.23	4.31	3.63	3.44	3.43	6.59
TiO <sub>2</sub> .....	.22	.04	.35	.07	.03	.23	.11	.21	.15
Total.....	98.16	102.11	100.70	97.96	99.89	99.58	100.28	99.57	99.09
Al.....	2.16	15.36	8.14	9.93	10.45	8.82	12.32	12.06	13.65
Cr.....	12.92	.32	6.84	5.30	4.80	6.44	3.07	3.29	1.21
Fe <sup>3+</sup> .....	.83	.32	.89	.75	.74	.65	.57	.58	1.09
Ti.....	.05	.01	.06	.01	.01	.04	.02	.04	.02
Mg.....	3.21	6.56	5.64	5.11	5.06	4.59	5.10	4.88	4.46
Fe <sup>2+</sup> .....	4.83	1.44	2.42	2.90	2.94	3.45	2.92	3.16	3.57
MgAl <sub>2</sub> O <sub>4</sub> %.....	13.5	82.0	50.9	62.1	63.3	55.1	63.7	61.0	55.7
FeAl <sub>2</sub> O <sub>4</sub> %.....	.0	13.9	.0	.0	2.0	.0	13.3	14.4	29.6
MgCr <sub>2</sub> O <sub>4</sub> %.....	26.7	.0	19.7	1.8	.0	2.2	.0	.0	.0
FeCr <sub>2</sub> O <sub>4</sub> %.....	54.1	2.0	23.1	31.3	30.0	38.1	19.2	20.6	7.5
Fe <sub>2</sub> TiO <sub>4</sub> %.....	.6	.1	.8	.2	.1	.5	.2	.4	.3
FeFe <sub>2</sub> O <sub>4</sub> %.....	5.2	2.0	5.6	4.7	4.6	4.1	3.6	3.6	6.8
Cr/Cr+Al(x100).....	85.71	2.01	45.66	34.79	31.48	42.20	19.97	21.44	8.13
Mg/Mg+Fe <sup>2+</sup> (x100).....	39.94	81.97	70.00	63.76	63.26	57.05	63.55	60.73	55.56
Fe <sup>3+</sup> /Fe <sup>3+</sup> +Cr+Al(x100).....	5.21	1.98	5.64	4.68	4.64	4.09	3.56	3.62	6.86
Fe <sup>2+</sup> /Mg.....	1.50	.22	.43	.57	.58	.75	.57	.65	.80
37A SPINEL IN CLINOPYROXENITE 37B SPINEL IN WINKLITE									

## Appendix III, Table 4 (cont'd)

## SPINEL ANALYSES FROM HARE BAY AND BAY OF ISLANDS

	43	44	44B	47	48	52A	52B
Al <sub>2</sub> O <sub>3</sub> .....	24.27	23.71	23.52	47.05	29.76	43.84	40.95
Cr <sub>2</sub> O <sub>3</sub> .....	34.87	26.81	21.84	21.34	35.44	19.79	22.08
MgO.....	9.90	7.75	4.99	18.27	10.76	14.55	11.76
FeO.....	21.31	24.81	28.79	11.87	20.27	16.39	20.87
Fe <sub>2</sub> O <sub>3</sub> .....	7.38	12.49	16.49	1.86	3.02	3.58	4.34
TiO <sub>2</sub> .....	1.14	2.01	1.87	.19	.20	.25	.32
Total.....	98.87	97.57	97.50	100.58	99.45	98.40	100.31
Al.....	7.22	7.26	7.37	11.99	8.55	11.75	11.12
Cr.....	6.95	5.51	4.59	3.65	6.83	3.56	4.02
Fe <sup>3+</sup> .....	1.40	2.44	3.30	.30	.55	.61	.75
Ti.....	.22	.39	.37	.03	.04	.04	.06
Mg.....	3.72	3.00	1.98	5.89	3.91	4.93	4.04
Fe <sup>2+</sup> .....	4.50	5.39	6.40	2.15	4.13	3.56	4.02
MgAl <sub>2</sub> O <sub>4</sub> %.....	45.1	37.5	24.7	73.6	48.8	61.6	50.5
FeAl <sub>2</sub> O <sub>4</sub> %.....	.0	7.9	21.3	1.4	4.6	11.8	19.0
MgCr <sub>2</sub> O <sub>4</sub> %.....	1.4	.0	.0	.0	.0	.0	.0
FeCr <sub>2</sub> O <sub>4</sub> %.....	42.0	34.4	28.7	22.8	42.7	22.2	25.1
Fe <sub>2</sub> TiO <sub>4</sub> %.....	2.7	4.9	4.7	.4	.5	.5	.7
FeFe <sub>2</sub> O <sub>4</sub> %.....	8.7	15.3	20.6	1.9	3.5	3.8	4.7
Cr/Cr+Al(x100).....	49.07	43.13	38.37	23.32	44.40	23.24	26.56
Mg/Mg+Fe <sup>2+</sup> (x100).....	45.29	35.76	23.60	73.28	48.61	61.27	50.10
Fe <sup>3+</sup> /Fe <sup>3+</sup> +Cr+Al(x100)...	8.99	16.05	21.62	1.90	3.48	3.85	4.73
Fe <sup>2+</sup> /Mg.....	1.21	1.80	3.24	.36	1.06	.63	.99

44B EDGE OF GRAIN · 52A INCLUSION IN CLINOPYROXENE  
52B INTERSTITIAL TO OLIVINE

## MAGNETITE ANALYSES

	53	55	56
Al <sub>2</sub> O <sub>3</sub> .....	3.29	3.61	3.94
Cr <sub>2</sub> O <sub>3</sub> .....	3.39	3.38	.15
MgO.....	.61	.13	.26
FeO.....	32.82	34.35	37.58
Fe <sub>2</sub> O <sub>3</sub> .....	56.60	54.04	51.48
TiO <sub>2</sub> .....	2.51	3.40	6.69
Total.....	99.22	98.91	100.10
Al.....	1.17	1.29	1.39
Cr.....	.81	.81	.04
Fe <sup>3+</sup> .....	12.80	12.34	11.57
Ti.....	.57	.78	1.50
Mg.....	.27	.06	.12
Fe <sup>2+</sup> .....	8.30	8.72	9.39
MgAl <sub>2</sub> O <sub>4</sub> %.....	3.4	.7	1.4
FeAl <sub>2</sub> O <sub>4</sub> %.....	3.9	7.3	7.2
FeCr <sub>2</sub> O <sub>4</sub> %.....	5.1	5.1	.2
Fe <sub>2</sub> TiO <sub>4</sub> %.....	7.1	9.7	18.8
FeFe <sub>2</sub> O <sub>4</sub> %.....	80.5	77.2	72.3