GEOLOGICAL SURVEY OF CANADA
MINERAL RESOURCES DIVISION
ANALYTICAL CHEMISTRY SECTION
X-RAY FLUORESCENCE LABORATORY

Sulphurets
803865

R. V. KIRKHAM

REPORT OF XRF ANALYSIS

792 - 922

DATE: 01-MAR-88

REPORT NO.: 153-87

SUBMITTED BY: S. BALLANTYNE

PROJECT NO.: 790003

METHOD: XRF WAVELENGTH DISPERSIVE ANALYSIS ON FUSED DISKS.

ELEMENT	CALIBRATION RANGE (%)	ESTIMATE OF ERROR (ABSOLUTE + RELATIVE %)		DETERMINATION LIMIT (%)
SIO2	0 - 100	0.40	1	0.40
TIO2	0 - 3	0.02	1	0.02
AL2O3	0 - 60	0.40	1	0.40
CR2O3	0 - 4	0.02	1	0.02
FE2O3	0 - 90	0.10	1	0.10
FEO	0 - 30	0.20	2	0.20
MNO	0 - 1	0.01	2	0.01
MGO	0 - 50	0.10	1	0.10
CAO	0 - 35	0.10	1	0.10
NA2O	0 - 10	0.50	1	0.50
K2O	0 - 15	0.05	1	0.05
H2OT	0 - 5	0.10	5	0.10
CO2T	0 - 20	0.05	3	0.05
C				
P2O5	0 - 1	0.02	1	0.02
S	0 - 3	0.04	5	0.04
BA	0 - 0.3000	0.002	10	0.002
NB	0 - 0.0400	0.003	10	0.003
RB	0 - 0.0600	0.002	2	0.002
SR	0 - 0.2000	0.002	10	0.002
Y	0 - 0.0200	0.003	10	0.003
ZR	0 - 0.2000	0.002	10	0.002

ANALYST: ..... SUPERVISOR: .....

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SUBMITTER'S NAME: S. BALLANTYNE — PROJECT: 790003 — REPORT: 153-87

		109	110	KQ-87-110A	110B	111	*
LAB. NO.		1	2	3	4	5	6
SPL. NO.		104B-879 792	104B-879 793	104B-879 794	104B-879 795	104B-879 796	104B-879 797
SIO2	(%)	60.6	53.4	41.3	51.8	56.2	58.7
TIO2	(%)	0.42	0.41	0.06	0.45	0.48	1.06
AL203	(%)	17.7	15.1	5.7	17.1	17.0	12.8
CR203	(%)	0.00	0.00	0.00	0.00	0.00	0.06
FE203T	(%)	4.5	8.7	15.3	7.1	4.1	7.7
FE203	(%)	0.4	8.7	15.3	7.1	0.9	4.2
FEO	(%)	3.7				2.9	3.2
MNO	(%)	0.08	0.09	0.35	0.13	0.12	0.14
MGO	(%)	2.14	0.98	3.86	2.85	1.88	6.10
CAO	(%)	2.34	5.24	11.43	5.71	5.81	4.10
NA2O	(%)	4.4	0.1	0.0	0.7	1.9	2.4
K2O	(%)	4.78	6.60	0.53	4.78	4.19	1.84
H2OT	(%)	2.1				3.0	3.3
CO2T	(%)	0.9	3.6	9.7	3.8	4.0	1.9
P2O5	(%)	0.40	0.35	0.07	0.44	0.35	0.26
S	(%)	0.38	6.43	7.18	2.66	0.64	0.00
BA	(PPM)	2682.	2676.	226.	2264.	1646.	729.
NB	(PPM)	0.	0.	0.	0.	0.	16.
RB	(PPM)	88.	169.	0.	116.	93.	108.
SR	(PPM)	448.	171.	236.	133.	268.	437.
Y	(PPM)	0.	0.	0.	0.	0.	63.
ZR	(PPM)	32.	34.	0.	29.	43.	169.
TOTAL	(%)	100.7	101.2	95.6	97.9	99.7	100.3

COMMENTS: Lab # with * have a lot in common

* ALL ANALYSIS BY XRF, EXCEPT FEO, H2OT, CO2T, CO2, C AND S BY RAPID CHEMICAL METHODS.

* FE203 IS CALCULATED USING FE203 = FE203(XRF) - 1.11134*FEO(VOLUMETRIC).

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SUBMITTER'S NAME: S. BALLANTYNE — PROJECT: 790003 — REPORT: 153-87

		112	KQ-87-109A	113	—	113A	114
LAB. NO.		7	8	9	10	11	12
SPL. NO.		104B-879 798	104B-879 799	104B-879 800	104B-879 801	104B-879 802	104B-879 803
SIO2	(%)	57.1	37.8	51.5	56.4	53.3	53.5
TIO2	(%)	0.58	0.32	0.45	0.45	0.54	0.59
AL2O3	(%)	14.4	10.4	14.9	15.8	17.0	14.6
CR2O3	(%)	0.01	0.00	0.00	0.00	0.00	0.02
FE2O3T	(%)	5.6	3.1	7.1	9.0	6.1	6.0
FE2O3	(%)	0.1	2.7	7.1	9.0	0.6	8.0
FEO	(%)	5.0	0.3			5.0	
MNO	(%)	0.18	0.37	0.16	0.17	0.13	0.14
MGO	(%)	2.96	1.22	2.78	1.47	3.10	3.62
CAO	(%)	6.13	21.34	7.38	2.86	6.18	5.12
NA2O	(%)	2.8	1.1	2.9	0.0	3.2	2.9
K2O	(%)	2.37	4.47	3.83	6.79	2.70	5.22
H2OT	(%)	3.0	1.5			3.3	
CO2T	(%)	5.2	16.3	5.0	2.0	4.2	1.1
P2O5	(%)	0.31	0.23	0.32	0.32	0.39	0.34
S	(%)	0.32	0.76	1.82	4.00	0.09	1.36
BA	(PPM)	1068.	2150.	4032.	3190.	1965.	4022.
NB	(PPM)	0.	0.	0.	0.	0.	0.
RB	(PPM)	49.	57.	64.	175.	46.	81.
SR	(PPM)	264.	389.	460.	63.	358.	349.
Y	(PPM)	0.	23.	0.	0.	0.	0.
ZR	(PPM)	76.	73.	33.	32.	38.	37.
TOTAL	(%)	100.6	99.0	98.6	99.6	99.9	99.0

COMMENTS:

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* FE2O3 IS CALCULATED USING FE2O3 = FE2O3(XRF) - 1.11134*FEO(VOLUMETRIC).

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SUBMITTER'S NAME: S. BALLANTYNE — PROJECT: 790003 — REPORT: 153-87

		114A	114B	RQ-87-114C	— *	114D	114E
LAB. NO.		13	14	15	16	17	18
SPL. NO.		104B-879 804	104B-879 805	104B-879 806	104B-879 807	104B-879 808	104B-879 809
SIO2	(%)	50.2	57.1	57.3	59.3	52.6	47.2
TIO2	(%)	0.41	0.45	0.45	1.05	0.48	0.66
AL2O3	(%)	10.8	16.6	16.1	12.9	15.6	15.8
CR2O3	(%)	0.00	0.00	0.00	0.06	0.00	0.01
FE2O3T	(%)	12.9	5.7	9.1	7.6	6.2	15.8
FE2O3	(%)	12.9	5.7	9.1	4.1	6.2	15.8
FEO	(%)				3.2		
MNO	(%)	0.28	0.13	0.17	0.14	0.17	0.32
MGO	(%)	1.88	2.54	1.49	6.16	3.53	6.33
CAO	(%)	6.51	3.31	2.79	4.17	5.64	1.65
NA2O	(%)	0.0	3.2	0.0	2.4	3.4	0.0
K2O	(%)	4.01	5.30	6.92	1.82	5.54	3.70
H2OT	(%)				3.3		
CO2T	(%)	4.7	1.9	1.8	1.8	4.1	0.8
P2O5	(%)	0.22	0.27	0.31	0.25	0.28	0.30
S	(%)	7.51	1.56	3.84	0.01	2.19	6.03
BA	(PPM)	1813.	4703.	3225.	702.	2567.	791.
NB	(PPM)	0.	0.	0.	10.	0.	0.
RB	(PPM)	116.	110.	177.	111.	64.	100.
SR	(PPM)	124.	310.	62.	441.	375.	42.
Y	(PPM)	0.	0.	0.	67.	8.	0.
ZR	(PPM)	40.	65.	38.	170.	57.	36.
TOTAL	(%)	99.7	98.7	100.6	100.8	99.4	98.0

COMMENTS:

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SUBMITTER'S NAME: S. BALLANTYNE — PROJECT: 790003 — REPORT: 153-87

		115A	115B	115C	KQ-87-115D	116	115E
LAB. NO.		19	20	21	22	23	24
SPL. NO.		104B-879 810	104B-879 812	104B-879 813	104B-879 814	104B-879 815	104B-879 816
SIO2	(%)	91.9	60.7	75.9	54.6	52.4	91.3
TIO2	(%)	0.37	0.52	0.38	0.58	0.99	0.40
AL203	(%)	3.8	17.1	12.0	21.3	18.9	2.8
CR203	(%)	0.00	0.00	0.00	0.00	0.00	0.00
FE203T	(%)	0.5	5.7	1.7	5.4	10.2	2.9
FE203	(%)	0.4	5.7		5.4	4.0	2.9
FEO	(%)	0.1		2.1		5.6	
MNO	(%)	0.00	0.01	0.01	0.02	0.21	0.00
MGO	(%)	0.11	0.43	0.52	0.68	4.04	0.04
CAO	(%)	0.00	0.18	0.18	0.49	3.52	0.11
NA2O	(%)	0.0	0.2	0.2	0.6	4.3	0.0
K2O	(%)	1.18	10.86	5.03	10.54	8.01	0.60
H2OT	(%)	0.8		2.2		3.4	
CO2T	(%)	0.0	0.1	0.1	0.1	0.2	0.1
P2O5	(%)	0.02	0.24	0.14	0.26	0.45	0.00
S	(%)	0.22	1.77	0.80	3.75	0.00	2.57
BA	(PPM)	4171.	7965.	2506.	3672.	2431.	619.
NB	(PPM)	0.	0.	0.	0.	0.	0.
RB	(PPM)	33.	265.	134.	202.	47.	13.
SR	(PPM)	135.	119.	53.	117.	1358.	41.
Y	(PPM)	0.	0.	0.	17.	9.	0.
ZR	(PPM)	40.	102.	72.	119.	94.	56.
TOTAL	(%)	99.4	98.6	100.8	98.7	100.5	100.4

COMMENTS:

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SUBMITTER'S NAME: S. BALLANTYNE — PROJECT: 790003 — REPORT: 153-87

		— *	115F	KQ-87-117A	117B	—	118
LAB. NO.		25	26	27	28	29	30
SPL. NO.		104B-879 817	104B-879 818	104B-879 819	104B-879 820	104B-879 821	104B-879 822
SIO2	(%)	58.6	95.2	88.0	60.4	55.1	64.7
TIO2	(%)	1.05	0.06	0.29	0.69	0.58	0.71
AL2O3	(%)	12.8	2.3	7.2	17.1	14.9	18.0
CR2O3	(%)	0.06	0.00	0.00	0.00	0.00	0.00
FE2O3T	(%)	7.8	0.8	1.1	6.9	7.7	4.3
FE2O3	(%)	4.3		0.9	1.3	1.0	4.3
FEO	(%)	3.1	1.5	0.2	5.0	6.0	
MNO	(%)	0.14	0.00	0.00	0.18	0.27	0.02
MGO	(%)	6.19	0.10	0.14	1.36	0.91	0.76
CAO	(%)	4.20	0.00	0.00	3.64	7.57	0.37
NA2O	(%)	2.4	0.0	0.1	0.4	1.3	0.2
K2O	(%)	1.84	0.65	2.04	3.46	2.58	4.87
H2OT	(%)	3.3	0.5	1.2	3.9	2.9	
CO2T	(%)	1.8	0.1	0.2	2.6	5.7	0.0
P2O5	(%)	0.26	0.05	0.08	0.28	0.23	0.29
S	(%)	0.00	0.37	0.21	0.10	0.64	2.07
BA	(PPM)	747.	328.	1179.	1663.	1862.	1335.
NB	(PPM)	14.	0.	0.	0.	0.	0.
RB	(PPM)	119.	56.	61.	97.	68.	174.
SR	(PPM)	441.	31.	46.	126.	160.	50.
Y	(PPM)	59.	0.	0.	0.	0.	0.
ZR	(PPM)	162.	0.	32.	84.	71.	58.
TOTAL	(%)	100.2	100.9	100.6	100.6	99.9	96.4

COMMENTS:

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		119	119A	KQ-87-119B	119C	*	120
LAB. NO.		31	32	33	34	35	36
SPL. NO.		104B-879 823	104B-879 824	104B-879 825	104B-879 826	104B-879 827	104B-879 828
SIO2	(%)	56.7	55.3	51.8	54.3	59.2	55.6
TIO2	(%)	0.76	0.64	0.96	0.93	1.06	0.57
AL203	(%)	18.7	16.7	20.2	19.8	12.9	14.8
CR203	(%)	0.00	0.00	0.00	0.00	0.06	0.00
FE203T	(%)	10.9	7.3	10.4	8.0	7.7	7.5
FE203	(%)	4.8	1.0	1.5	1.0	4.2	0.9
FEO	(%)	5.5	5.6	8.0	6.3	3.2	5.9
MNO	(%)	0.14	0.16	0.17	0.15	0.14	0.26
MGO	(%)	3.61	3.09	2.97	2.28	6.15	6.30
CAO	(%)	0.83	6.00	3.62	3.40	4.19	7.47
NA2O	(%)	1.4	1.6	1.6	3.5	2.4	1.3
K2O	(%)	2.01	2.71	2.76	2.34	1.83	3.59
H2OT	(%)	5.2	3.6	4.7	3.8	3.3	3.0
CO2T	(%)	0.5	4.5	2.4	2.3	1.0	5.7
P2O5	(%)	0.17	0.25	0.49	0.24	0.25	0.23
S	(%)	0.00	0.28	0.01	0.01	0.00	0.59
BA	(PPM)	1374.	1316.	2335.	2381.	719.	1880.
NB	(PPM)	0.	0.	0.	0.	10.	0.
RB	(PPM)	42.	72.	57.	49.	110.	68.
SR	(PPM)	199.	396.	267.	248.	442.	164.
Y	(PPM)	0.	0.	28.	0.	64.	0.
ZR	(PPM)	93.	77.	120.	96.	166.	66.
TOTAL	(%)	100.4	100.6	100.8	100.5	100.9	100.1

COMMENTS:

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		121	"West Cataear" KQ-87-121A	122	122A	122B	122C
LAB. NO.		37	38	39	40	41	42
SPL. NO.		104B-879 829	104B-879 830	104B-879 832	104B-879 833	104B-879 834	104B-879 835
SIO2	(%)	87.3	71.3	58.5	64.9	66.5	54.1
TIO2	(%)	0.16	0.02	1.36	0.66	0.56	0.97
AL2O3	(%)	5.7	0.6	16.1	18.0	15.6	20.9
CR2O3	(%)	0.00	0.00	0.00	0.00	0.00	0.00
FE2O3T	(%)	2.1	11.8	14.0	4.8	4.4	8.8
FE2O3	(%)	2.1	11.8	10.6	0.9	0.0	7.4
FEO	(%)			3.1	3.5	4.2	1.3
MNO	(%)	0.00	0.00	0.03	0.03	0.04	0.13
MGO	(%)	0.23	0.10	1.69	1.71	1.32	2.05
CAO	(%)	0.14	0.00	0.67	0.82	1.50	3.65
NA2O	(%)	0.0	0.1	3.1	3.8	4.0	4.3
K2O	(%)	1.71	0.09	2.01	2.61	2.19	2.96
H2OT	(%)			2.8	2.9	2.4	2.8
CO2T	(%)	0.0	0.0	0.2	0.4	1.1	0.1
P2O5	(%)	0.06	0.00	0.08	0.10	0.11	0.30
S	(%)	1.72	10.53	0.01	0.00	0.37	0.00
BA	(PPM)	3718.	17671.	2073.	1473.	1140.	2239.
NB	(PPM)	0.	0.	0.	0.	0.	0.
RB	(PPM)	60.	0.	82.	47.	86.	52.
SR	(PPM)	87.	314.	315.	359.	376.	695.
Y	(PPM)	0.	0.	71.	0.	0.	23.
ZR	(PPM)	26.	0.	191.	119.	93.	154.
TOTAL	(%)	99.6	96.4	100.5	100.5	100.1	100.5

COMMENTS:

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		122D	← *	KQ-87-122E	122F	123	—
LAB. NO.		43	44	45	46	47	48
SPL. NO.		104B-879 836	104B-879 837	104B-879 838	104B-879 839	104B-879 840	104B-879 841
SIO2	(%)	53.4	58.9	57.1	60.4	60.1	51.1
TIO2	(%)	0.97	1.05	0.77	0.64	0.81	0.38
AL203	(%)	16.8	13.9	18.5	16.3	15.6	17.6
CR203	(%)	0.01	0.06	0.00	0.00	0.00	0.00
FE203T	(%)	9.7	7.7	7.2	7.1	8.8	7.7
FE203	(%)	7.4	4.2	5.8	5.0	6.3	7.7
FEO	(%)	2.1	3.1	1.3	1.9	2.3	
MNO	(%)	0.26	0.14	0.15	0.09	0.19	0.18
MGO	(%)	5.83	6.15	2.67	1.47	2.79	1.86
CAO	(%)	2.32	4.21	1.13	3.37	2.19	6.23
NA2O	(%)	3.3	2.4	6.4	3.6	5.4	1.1
K2O	(%)	2.27	1.84	3.62	2.87	0.69	5.14
H2OT	(%)	3.9	3.3	1.9	2.4	2.5	
CO2T	(%)	1.4	1.8	0.4	2.4	0.1	4.3
P2O5	(%)	0.25	0.25	0.27	0.24	0.21	0.27
S	(%)	0.00	0.01	0.00	0.00	0.00	5.42
BA	(PPM)	1324.	761.	2762.	865.	488.	1910.
NB	(PPM)	0.	20.	0.	0.	0.	0.
RB	(PPM)	46.	110.	48.	61.	0.	155.
SR	(PPM)	178.	439.	357.	195.	555.	136.
Y	(PPM)	0.	57.	10.	0.	0.	0.
ZR	(PPM)	96.	161.	142.	115.	78.	42.
TOTAL	(%)	100.3	100.5	100.4	100.8	100.3	99.0

COMMENTS:

* ALL ANALYSIS BY XRF, EXCEPT FEO, H2OT, CO2T, CO2, C AND S BY RAPID CHEMICAL METHODS.

* FE2O3 IS CALCULATED USING FE2O3 = FE2O3(XRF) - 1.11134*FEO(VOLUMETRIC).

GEOLOGICAL SURVEY OF CANADA
MINERAL RESOURCES DIVISION
ANALYTICAL CHEMISTRY SECTION REPORT OF XRF ANALYSIS DATE: 01-MAR-88
X-RAY FLUORESCENCE LABORATORY

SUBMITTER'S NAME: S. BALLANTYNE PROJECT: 790003 REPORT: 153-87

		124	125	126	KQ-87-127	127A	— *
LAB. NO.		49	50	51	52	53	54
SPL. NO.		104B-879 842	104B-879 843	104B-879 844	104B-879 845	104B-879 846	104B-879 847
SIO2	(%)	72.4	63.8	58.5	56.5	74.0	58.7
TIO2	(%)	0.17	0.64	0.60	0.41	0.08	1.05
AL2O3	(%)	15.0	17.5	17.2	16.1	12.7	15.8
CR2O3	(%)	0.00	0.00	0.00	0.00	0.00	0.06
FE2O3T	(%)	1.7	5.4	6.3	10.2	2.4	7.7
FE2O3	(%)	0.4	5.4	1.7	10.2	2.4	4.2
FEO	(%)	1.2		4.1			3.2
MNO	(%)	0.12	0.04	0.33	0.05	0.15	0.14
MGO	(%)	0.51	0.60	1.62	1.04	0.14	6.17
CAO	(%)	0.82	1.73	4.39	1.62	5.17	4.21
NA2O	(%)	4.3	3.1	2.6	0.1	1.3	2.5
K2O	(%)	3.81	3.07	3.31	5.28	0.76	1.85
H2OT	(%)	1.3		3.0			3.3
CO2T	(%)	0.3	0.6	2.6	0.8	4.2	1.7
P2O5	(%)	0.05	0.29	0.24	0.32	0.06	0.26
S	(%)	0.00	2.14	0.01	7.72	4.61	0.00
BA	(PPM)	1814.	2140.	2067.	3864.	1703.	734.
NB	(PPM)	0.	0.	0.	0.	0.	8.
RB	(PPM)	56.	60.	64.	119.	0.	113.
SR	(PPM)	181.	637.	271.	99.	100.	440.
Y	(PPM)	14.	0.	0.	0.	4.	57.
ZR	(PPM)	175.	104.	103.	39.	22.	160.
TOTAL	(%)	100.7	98.7	100.7	100.5	95.8	100.2

COMMENTS:

* ALL ANALYSIS BY XRF, EXCEPT FEO, H2OT, CO2T, CO2, C AND S BY RAPID CHEMICAL METHODS.

* FE2O3 IS CALCULATED USING FE2O3 = FE2O3(XRF) - 1.11134*FEO(VOLUMETRIC).

GEOLOGICAL SURVEY OF CANADA
MINERAL RESOURCES DIVISION
ANALYTICAL CHEMISTRY SECTION — REPORT OF XRF ANALYSIS — DATE: 01-MAR-88
X-RAY FLUORESCENCE LABORATORY

SUBMITTER'S NAME: S. BALLANTYNE — PROJECT: 790003 — REPORT: 153-87

		127B	127C	KQ-87-127D	127E	128	128A
LAB. NO.		55	56	57	58	59	60
SPL. NO.		104B-879 848	104B-879 849	104B-879 850	104B-879 852	104B-879 853	104B-879 854
SIO2	(%)	85.9	53.5	84.9	59.3	52.4	61.0
TIO2	(%)	0.10	0.46	0.09	0.31	0.41	0.42
AL203	(%)	3.9	16.4	3.5	13.2	15.2	16.7
CR203	(%)	0.00	0.00	0.00	0.00	0.00	0.00
FE203T	(%)	1.7	7.3	1.2	4.6	7.2	6.8
FE203	(%)	1.7	7.3	1.2	4.6	7.2	6.8
FEO	(%)						
MNO	(%)	0.10	0.11	0.13	0.45	0.19	0.04
MGO	(%)	0.30	0.83	0.12	1.26	2.03	1.56
CAO	(%)	2.47	4.47	2.68	7.44	6.47	0.77
NA2O	(%)	0.1	0.6	0.3	0.0	1.1	0.1
K2O	(%)	1.17	6.75	0.71	4.59	5.25	6.82
H2OT	(%)						
CO2T	(%)	3.0	3.2	2.1	5.9	4.9	0.0
P2O5	(%)	0.06	0.34	0.09	0.23	0.27	0.32
S	(%)	1.48	5.72	2.02	2.71	5.32	4.61
BA	(PPM)	3253.	2558.	13853.	2754.	1967.	4976.
NB	(PPM)	0.	0.	0.	0.	0.	0.
RB	(PPM)	0.	137.	0.	129.	156.	190.
SR	(PPM)	151.	130.	305.	202.	143.	83.
Y	(PPM)	0.	0.	0.	0.	0.	0.
ZR	(PPM)	11.	41.	21.	33.	41.	45.
TOTAL	(%)	99.6	99.9	98.2	99.2	101.0	99.6

COMMENTS:

* ALL ANALYSIS BY XRF, EXCEPT FEO, H2OT, CO2T, CO2, C AND S BY RAPID CHEMICAL METHODS.

* FE2O3 IS CALCULATED USING FE2O3 = FE2O3(XRF) - 1.11134*FEO(VOLUMETRIC).

GEOLOGICAL SURVEY OF CANADA
MINERAL RESOURCES DIVISION
ANALYTICAL CHEMISTRY SECTION REPORT OF XRF ANALYSIS DATE: 01-MAR-88
X-RAY FLUORESCENCE LABORATORY

SUBMITTER'S NAME: S. BALLANTYNE PROJECT: 790003 REPORT: 153-87

		129	129A	— *	KQ-87-129B	131	131A
LAB. NO.		61	62	63	64	65	66
SPL. NO.		104B-879 855	104B-879 856	104B-879 857	104B-879 858	104B-879 859	104B-879 860
SIO2	(%)	54.3	63.7	59.2	58.7	65.6	65.7
TIO2	(%)	0.55	0.35	1.04	0.39	0.52	0.54
AL203	(%)	17.8	14.6	12.9	16.8	16.2	16.4
CR203	(%)	0.00	0.00	0.06	0.00	0.00	0.00
FE203T	(%)	6.8	3.5	7.7	5.6	6.0	4.3
FE203	(%)	6.8	3.5	4.3	5.6	6.0	4.3
FEO	(%)			3.1			
MNO	(%)	0.21	0.14	0.14	0.14	0.01	0.02
MGO	(%)	2.06	1.54	6.15	2.02	0.59	0.85
CAO	(%)	3.04	3.65	4.19	2.67	0.30	0.29
NA2O	(%)	2.0	0.1	2.4	4.6	0.1	0.1
K2O	(%)	7.19	6.47	1.84	4.57	5.62	7.93
H2OI	(%)			3.3			
CO2T	(%)	1.7	2.3	1.8	1.5	0.0	0.0
P2O5	(%)	0.29	0.26	0.25	0.30	0.18	0.17
S	(%)	1.98	2.22	0.00	1.91	4.14	2.73
BA	(PPM)	5761.	5380.	738.	4704.	2304.	3195.
NB	(PPM)	0.	0.	9.	0.	0.	0.
RB	(PPM)	161.	175.	112.	89.	174.	233.
SR	(PPM)	248.	177.	441.	241.	72.	85.
Y	(PPM)	0.	0.	70.	0.	0.	0.
ZR	(PPM)	52.	48.	166.	58.	86.	94.
TOTAL	(%)	99.3	99.4	100.9	99.7	99.6	99.3

COMMENTS:

* ALL ANALYSIS BY XRF, EXCEPT FEO, H2OI, CO2T, CO2, C AND S BY RAPID CHEMICAL METHODS.

* FE203 IS CALCULATED USING FE203 = FE203(XRF) - 1.11134*FEO(VOLUMETRIC).

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X-RAY FLUORESCENCE LABORATORY

SUBMITTER'S NAME: S. BALLANTYNE — PROJECT: 790003 — REPORT: 153-87

			131B	131C	KQ-87-132	132A	132B
LAB. NO.		67	68	69	70	71	72
SPL. NO.		104B-879 861	104B-879 862	104B-879 863	104B-879 864	104B-879 865	104B-879 866
SIO2	(%)	58.9	62.3	57.9	58.7	68.4	62.6
TIO2	(%)	0.53	0.41	0.52	0.53	0.49	0.60
AL2O3	(%)	16.3	12.1	16.3	16.1	16.0	19.0
CR2O3	(%)	0.00	0.00	0.00	0.00	0.00	0.00
FE2O3T	(%)	5.0	9.6	5.4	5.0	3.8	4.8
FE2O3	(%)	0.5	9.6	5.4	0.4	3.8	4.8
FEO	(%)	4.0			4.1		
MNO	(%)	0.14	0.01	0.14	0.14	0.01	0.01
MGO	(%)	1.96	0.58	1.29	1.96	0.62	0.54
CAO	(%)	4.43	1.83	3.76	4.41	0.39	0.35
NA2O	(%)	2.8	0.0	3.5	2.8	0.2	0.3
K2O	(%)	3.53	5.62	4.65	3.55	5.76	6.54
H2OT	(%)	2.9			2.8		
CO2T	(%)	3.3	0.1	3.5	3.3	0.1	0.0
P2O5	(%)	0.18	1.46	0.18	0.18	0.17	0.21
S	(%)	0.28	6.80	2.53	0.29	2.73	3.30
BA	(PPM)	1587.	2495.	2147.	1628.	1740.	1796.
NB	(PPM)	0.	0.	0.	0.	0.	0.
RB	(PPM)	106.	166.	146.	105.	166.	187.
SR	(PPM)	201.	76.	242.	207.	35.	37.
Y	(PPM)	0.	0.	0.	0.	0.	15.
ZR	(PPM)	94.	63.	89.	94.	100.	125.
TOTAL	(%)	100.0	101.2	99.9	99.5	98.9	98.6

COMMENTS:

* ALL ANALYSIS BY XRF, EXCEPT FEO, H2OT, CO2T, CO2, C AND S BY RAPID CHEMICAL METHODS.

* FE2O3 IS CALCULATED USING FE2O3 = FE2O3(XRF) - 1.11134*FEO(VOLUMETRIC).

GEOLOGICAL SURVEY OF CANADA
MINERAL RESOURCES DIVISION
ANALYTICAL CHEMISTRY SECTION — REPORT OF XRF ANALYSIS — DATE: 01-MAR-88
X-RAY FLUORESCENCE LABORATORY

SUBMITTER'S NAME: S. BALLANTYNE — PROJECT: 790003 — REPORT: 153-87

		— *	133	KQ-87-135	136	136A	137
LAB. NO.		73	74	75	76	77	78
SPL. NO.		104B-879 867	104B-879 868	104B-879 869	104B-879 870	104B-879 872	104B-879 873
SIO2	(%)	58.7	71.8	56.2	74.9	60.9	56.8
TIO2	(%)	1.06	0.34	0.43	0.45	0.60	0.50
AL2O3	(%)	13.9	10.6	16.1	12.7	15.9	16.1
CR2O3	(%)	0.06	0.00	0.00	0.00	0.00	0.00
FE2O3T	(%)	7.7	4.0	4.5	2.1	4.2	5.8
FE2O3	(%)	4.2	4.0	1.1	0.1	0.0	1.1
FEO	(%)	3.2		3.1	1.8	3.8	4.2
MNO	(%)	0.14	0.06	0.16	0.00	0.08	0.19
MGO	(%)	6.15	0.60	1.60	0.54	2.69	3.20
CAO	(%)	4.21	2.11	6.76	0.09	3.01	5.49
NA2O	(%)	2.4	0.4	1.3	0.1	3.3	3.2
K2O	(%)	1.85	3.19	3.98	6.55	3.45	2.76
H2OT	(%)	3.3		3.1	1.8	2.8	3.0
CO2T	(%)	1.7	1.5	5.2	0.2	3.8	3.9
P2O5	(%)	0.25	0.12	0.19	0.02	0.21	0.20
S	(%)	0.01	1.90	0.16	0.88	0.79	0.39
BA	(PPM)	732.	1176.	2701.	1746.	854.	1902.
NB	(PPM)	22.	0.	0.	0.	0.	0.
RB	(PPM)	112.	91.	119.	169.	105.	77.
SR	(PPM)	435.	147.	392.	42.	197.	348.
Y	(PPM)	64.	0.	0.	0.	0.	0.
ZR	(PPM)	168.	66.	98.	94.	104.	82.
TOTAL	(%)	100.3	96.7	99.6	100.4	100.3	100.4

COMMENTS:

* ALL ANALYSIS BY XRF, EXCEPT FEO, H2OT, CO2T, CO2, C AND S BY RAPID CHEMICAL METHODS.

* FE2O3 IS CALCULATED USING FE2O3 = FE2O3(XRF) - 1.11134*FEO(VOLUMETRIC).

GEOLOGICAL SURVEY OF CANADA
MINERAL RESOURCES DIVISION
ANALYTICAL CHEMISTRY SECTION — REPORT OF XRF ANALYSIS — DATE: 01-MAR-88
X-RAY FLUORESCENCE LABORATORY

SUBMITTER'S NAME: S. BALLANTYNE — PROJECT: 790003 — REPORT: 153-87

		138	139	KQ-87-139A	—	139B	139C
LAB. NO.		79	80	81	82	83	84
SPL. NO.		104B-879 874	104B-879 875	104B-879 876	104B-879 877	104B-879 878	104B-879 879
SIO2	(%)	84.7	75.1	57.8	59.3	54.5	57.4
TIO2	(%)	0.23	0.28	0.60	1.05	0.58	0.62
AL2O3	(%)	7.9	9.7	18.0	12.9	15.7	17.7
CR2O3	(%)	0.00	0.00	0.00	0.06	0.00	0.00
FE2O3T	(%)	2.5	6.4	6.4	7.7	5.8	6.3
FE2O3	(%)	2.5	6.4	6.4	4.1	5.8	6.3
FEO	(%)				3.2		
MNO	(%)	0.01	0.04	0.12	0.14	0.16	0.19
MGO	(%)	0.46	0.69	2.30	6.14	1.51	2.24
CAO	(%)	0.00	0.65	1.24	4.18	5.55	2.60
NA2O	(%)	0.1	0.2	4.6	2.4	4.1	5.3
K2O	(%)	3.10	2.73	4.79	1.84	3.32	3.11
H2OT	(%)				3.3		
CO2T	(%)	0.1	0.3	0.0	1.7	3.7	0.8
P2O5	(%)	0.00	0.07	0.34	0.26	0.34	0.35
S	(%)	1.42	4.73	3.09	0.01	3.64	1.19
BA	(PPM)	2324.	1555.	2753.	742.	1191.	2214.
NB	(PPM)	0.	0.	0.	11.	0.	0.
RB	(PPM)	77.	66.	93.	110.	60.	54.
SR	(PPM)	42.	66.	436.	437.	290.	681.
Y	(PPM)	0.	0.	7.	57.	0.	0.
ZR	(PPM)	59.	48.	86.	170.	69.	88.
TOTAL	(%)	100.8	100.9	99.6	100.8	99.1	98.1

COMMENTS:

* ALL ANALYSIS BY XRF, EXCEPT FEO, H2OT, CO2T, CO2, C AND S BY RAPID CHEMICAL METHODS.

* FE2O3 IS CALCULATED USING FE2O3 = FE2O3(XRF) - 1.11134*FEO(VOLUMETRIC).

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X-RAY FLUORESCENCE LABORATORY

SUBMITTER'S NAME: S. BALLANTYNE — PROJECT: 790003 — REPORT: 153-87

		140 —	KQ-87-140A	140B	140C	140D
LAB. NO.		85	86	87	88	89	90
SPL. NO.		104B-879 880	104B-879 881	104B-879 882	104B-879 883	104B-879 884	104B-879 885
SIO2	(%)	65.9	55.2	53.8	60.5	58.5	53.7
TIO2	(%)	0.42	0.57	0.63	0.64	0.63	0.58
AL203	(%)	16.5	15.8	16.9	17.6	17.6	15.5
CR203	(%)	0.00	0.00	0.00	0.00	0.00	0.00
FE203T	(%)	3.3	6.8	6.7	4.1	7.1	7.3
FE203	(%)	3.3	6.8	6.7	4.1	7.1	7.3
FEO	(%)						
MNO	(%)	0.02	0.25	0.13	0.11	0.15	0.26
MGO	(%)	1.45	3.37	2.47	1.69	2.54	3.27
CAO	(%)	0.38	5.19	4.07	2.36	1.67	5.41
NA2O	(%)	2.4	4.2	3.7	4.4	3.2	4.0
K2O	(%)	4.44	2.01	3.97	3.44	3.39	2.09
H2OT	(%)						
CO2T	(%)	0.1	3.4	2.4	1.2	0.5	3.6
P2O5	(%)	0.19	0.32	0.34	0.37	0.37	0.33
S	(%)	2.38	3.38	3.73	1.56	2.08	3.78
BA	(PPM)	3668.	1164.	1108.	4880.	1979.	1200.
NB	(PPM)	0.	0.	0.	0.	0.	0.
RB	(PPM)	99.	42.	86.	67.	91.	39.
SR	(PPM)	255.	330.	276.	360.	169.	320.
Y	(PPM)	0.	1.	0.	0.	0.	4.
ZR	(PPM)	58.	66.	82.	81.	83.	71.
TOTAL	(%)	97.8	99.4	98.9	98.5	97.9	98.0

COMMENTS:

* ALL ANALYSIS BY XRF, EXCEPT FEO, H2OT, CO2T, CO2, C AND S BY RAPID CHEMICAL METHODS.

* FE2O3 IS CALCULATED USING FE2O3 = FE2O3(XRF) - 1.11134*FEO(VOLUMETRIC).

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X RAY FLUORESCENCE LABORATORY

SUBMITTER'S NAME: S. BALLANTYNE — PROJECT: 790003 — REPORT: 153-87

		140F	— *	KQ87-141	141A	141B	141C
LAB. NO.		91	92	93	94	95	96
SPL. NO.		104B-879 886	104B-879 887	104B-879 888	104B-879 889	104B-879 890	104B-879 892
SIO2	(%)	59.1	58.8	60.1	88.0	57.4	57.7
TIO2	(%)	0.61	1.05	0.44	0.22	0.48	0.55
AL2O3	(%)	16.6	13.8	15.1	3.0	14.0	17.7
CR2O3	(%)	0.00	0.06	0.00	0.00	0.00	0.00
FE2O3T	(%)	8.8	7.7	7.1	3.5	9.5	6.8
FE2O3	(%)	8.8	4.3	7.1	3.5	9.5	6.8
FEO	(%)		3.1				
MNO	(%)	0.06	0.14	0.20	0.05	0.25	0.13
MGO	(%)	1.08	6.15	1.88	0.21	1.13	0.26
CAO	(%)	0.78	4.22	2.52	0.80	2.72	2.20
NA2O	(%)	0.4	2.4	3.0	0.0	1.4	0.2
K2O	(%)	4.24	1.84	3.28	0.98	4.57	4.58
H2OT	(%)		3.3				
CO2T	(%)	0.2	1.7	1.8	0.4	1.9	1.5
P2O5	(%)	0.35	0.25	0.24	0.03	0.26	0.26
S	(%)	5.82	0.01	2.30	2.75	4.67	4.35
BA	(PPM)	2331.	736.	2135.	747.	4416.	1773.
NB	(PPM)	0.	7.	0.	0.	0.	0.
RB	(PPM)	99.	107.	82.	47.	96.	109.
SR	(PPM)	78.	444.	176.	98.	483.	61.
Y	(PPM)	0.	68.	0.	0.	0.	0.
ZR	(PPM)	74.	163.	53.	34.	70.	55.
TOTAL	(%)	99.0	100.2	98.3	100.1	99.1	98.5

COMMENTS:

* ALL ANALYSIS BY XRF, EXCEPT FEO, H2OT, CO2T, CO2, C AND S BY RAPID CHEMICAL METHODS.

* FE2O3 IS CALCULATED USING FE2O3 = FE2O3(XRF) - 1.11134*FEO(VOLUMETRIC).

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X-RAY FLUORESCENCE LABORATORY

SUBMITTER'S NAME: S. BALLANTYNE PROJECT: 790003 REPORT: 153-87

		141D	142	KQ-87-142A	142B	—*	142C
LAB. NO.		97	98	99	100	101	102
SPL. NO.		104B-879 893	104B-879 894	104B-879 895	104B-879 896	104B-879 897	104B-879 898
SIO2	(%)	49.3	51.9	57.8	65.5	59.0	78.9
TIO2	(%)	0.30	0.54	0.61	0.61	1.05	0.27
AL2O3	(%)	10.7	15.2	17.4	15.4	13.9	13.5
CR2O3	(%)	0.00	0.00	0.00	0.00	0.06	0.00
FE2O3T	(%)	19.2	6.1	6.2	7.0	7.7	2.2
FE2O3	(%)	19.2	6.1	6.2	7.0	4.2	2.2
FEO	(%)					3.2	
MNO	(%)	0.27	0.34	0.28	0.00	0.14	0.00
MGO	(%)	1.55	3.82	3.01	0.60	6.15	0.14
CAO	(%)	2.98	6.31	3.54	0.66	4.19	0.16
NA2O	(%)	0.1	1.5	0.6	0.5	2.4	0.3
K2O	(%)	2.44	2.73	3.57	3.97	1.85	1.65
H2OT	(%)					3.3	
CO2T	(%)	3.2	4.7	3.5	0.0	1.8	0.0
P2O5	(%)	0.14	0.31	0.36	0.45	0.25	0.07
S	(%)	12.94	2.70	1.56	5.13	0.00	1.38
BA	(PPM)	809.	15966.	2419.	1550.	723.	907.
NB	(PPM)	0.	0.	0.	0.	4.	0.
RB	(PPM)	42.	61.	90.	121.	113.	99.
SR	(PPM)	23.	1059.	126.	57.	434.	69.
Y	(PPM)	0.	0.	0.	48.	72.	0.
ZR	(PPM)	44.	82.	85.	70.	167.	48.
TOTAL	(%)	102.1	96.9	97.8	99.9	100.7	98.3

COMMENTS:

* ALL ANALYSIS BY XRF, EXCEPT FEO, H2OT, CO2T, CO2, C AND S BY RAPID CHEMICAL METHODS.

* FE2O3 IS CALCULATED USING FE2O3 = FE2O3(XRF) - 1.11134*FEO(VOLUMETRIC).

GEOLOGICAL SURVEY OF CANADA
MINERAL RESOURCES DIVISION
ANALYTICAL CHEMISTRY SECTION — REPORT OF XRF ANALYSIS — DATE: 01-MAR-88
X-RAY FLUORESCENCE LABORATORY

SUBMITTER'S NAME: S. BALLANTYNE — PROJECT: 790003 — REPORT: 153-87

		143	143A	—	KQ-87-143B	144	144A
LAB. NO.		103	104	105	106	107	108
SPL. NO.		104B-879 899	104B-879 900	104B-879 901	104B-879 902	104B-879 903	104B-879 904
SIO2	(%)	57.9	59.9	64.2	58.3	69.4	66.8
TIO2	(%)	0.68	0.61	0.67	0.62	0.51	0.46
AL2O3	(%)	16.4	17.5	17.1	17.4	13.3	14.0
CR2O3	(%)	0.00	0.00	0.01	0.00	0.00	0.00
FE2O3T	(%)	7.8	7.9	6.5	7.4	6.1	6.1
FE2O3	(%)	7.8	7.9	6.5	7.4	6.1	6.1
FEO	(%)						
MNO	(%)	0.06	0.16	0.00	0.29	0.05	0.00
MGO	(%)	2.20	3.37	1.01	4.40	2.22	0.43
CAO	(%)	0.71	0.61	0.32	1.71	0.43	0.13
NA2O	(%)	0.3	0.3	0.4	0.2	0.2	0.3
K2O	(%)	4.44	3.50	3.25	3.15	2.64	3.56
H2OT	(%)						
CO2T	(%)	0.1	0.1	0.0	0.9	0.0	0.0
P2O5	(%)	0.38	0.35	0.22	0.36	0.29	0.09
S	(%)	5.33	3.65	4.97	2.42	2.74	6.39
BA	(PPM)	2151.	2035.	1216.	1823.	3094.	1890.
NB	(PPM)	0.	0.	0.	0.	0.	0.
RB	(PPM)	109.	88.	65.	86.	65.	91.
SR	(PPM)	50.	63.	116.	53.	97.	112.
Y	(PPM)	9.	0.	0.	0.	0.	0.
ZR	(PPM)	84.	79.	127.	77.	61.	85.
TOTAL	(%)	98.5	98.2	98.9	97.4	98.2	100.5

COMMENTS:

* ALL ANALYSIS BY XRF, EXCEPT FEO, H2OT, CO2T, CO2, C AND S BY RAPID CHEMICAL METHODS.

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GEOLOGICAL SURVEY OF CANADA
MINERAL RESOURCES DIVISION
ANALYTICAL CHEMISTRY SECTION — REPORT OF XRF ANALYSIS — DATE: 01-MAR-88
X-RAY FLUORESCENCE LABORATORY

SUBMITTER'S NAME: S. BALLANTYNE — PROJECT: 790003 — REPORT: 153-87

		145	145A	—*	KQ-87-145B	Oster Side Bornite Zone 146 Lower in trench	148A
LAB. NO.		109	110	111	112	113	114
SPL. NO.		104B-879 905	104B-879 906	104B-879 907	104B-879 908	104B-879 909	104B-879 910
SIO2	(%)	66.3	63.2	59.0	64.2	54.4	48.6
TIO2	(%)	0.48	0.61	1.04	0.67	0.42	0.54
AL2O3	(%)	10.6	16.7	12.8	17.2	15.4	14.9
CR2O3	(%)	0.00	0.00	0.06	0.01	0.00	0.02
FE2O3T	(%)	7.6	7.3	7.7	6.5	8.3	8.2
FE2O3	(%)	7.6	7.3	4.1	6.5	8.3	8.2
FEO	(%)			3.2			
MNO	(%)	0.11	0.07	0.14	0.00	0.16	0.10
MGO	(%)	1.37	0.94	6.13	1.01	1.64	3.87
CAO	(%)	0.61	0.84	4.16	0.33	2.90	7.65
NA2O	(%)	0.1	0.3	2.4	0.4	3.0	2.5
K2O	(%)	2.61	2.11	1.83	3.23	6.18	3.12
H2OT	(%)			3.3			
CO2T	(%)	0.3	0.3	1.8	0.0	2.1	4.5
P2O5	(%)	0.28	0.38	0.25	0.23	0.26	0.39
S	(%)	5.24	5.66	0.01	4.97	1.52	1.57
BA	(PPM)	1419.	5181.	738.	1191.	2414.	3481.
NB	(PPM)	0.	0.	12.	0.	0.	0.
RB	(PPM)	53.	33.	111.	64.	88.	81.
SR	(PPM)	51.	595.	440.	117.	177.	398.
Y	(PPM)	0.	20.	64.	0.	0.	0.
ZR	(PPM)	62.	83.	158.	132.	51.	68.
TOTAL	(%)	98.9	98.9	100.5	98.8	96.6	98.5

COMMENTS:

* ALL ANALYSIS BY XRF, EXCEPT FEO, H2OT, CO2T, CO2, C AND S BY RAPID CHEMICAL METHODS.

* FE2O3 IS CALCULATED USING FE2O3 = FE2O3(XRF) - 1.11134*FEO(VOLUMETRIC).

GEOLOGICAL SURVEY OF CANADA
MINERAL RESOURCES DIVISION
ANALYTICAL CHEMISTRY SECTION REPORT OF XRF ANALYSIS DATE: 01-MAR-88
X-RAY FLUORESCENCE LABORATORY

SUBMITTER'S NAME: S. BALLANTYNE PROJECT: 790003 REPORT: 153-87

		148B	150	150A	KQ-87-151	152	—
LAB. NO.		115	116	117	118	119	120
SPL. NO.		104B-879 912	104B-879 913	104B-879 914	104B-879 915	104B-879 916	104B-879 917
SIO2	(%)	52.9	62.1	83.4	63.8	68.1	59.2
TIO2	(%)	0.63	0.71	0.40	0.35	0.36	1.05
AL2O3	(%)	12.9	14.3	7.8	14.9	13.6	13.9
CR2O3	(%)	0.01	0.00	0.00	0.00	0.00	0.06
FE2O3T	(%)	5.8	7.8	3.0	3.3	4.4	7.7
FE2O3	(%)	5.8	7.8	3.0	0.3	4.4	4.1
FEO	(%)				2.7		3.2
MNO	(%)	0.39	0.01	0.01	0.17	0.16	0.14
MGO	(%)	2.32	0.45	0.50	2.80	1.87	6.15
CAO	(%)	8.40	0.09	0.09	4.21	1.82	4.15
NA2O	(%)	0.2	0.1	0.1	0.6	1.1	2.4
K2O	(%)	6.83	9.32	3.47	3.91	3.77	1.85
H2OT	(%)				3.3		3.3
CO2T	(%)	6.1	0.0	0.0	3.4	1.6	1.8
P2O5	(%)	0.34	0.03	0.03	0.11	0.09	0.26
S	(%)	1.27	5.70	2.25	0.16	1.33	0.00
BA	(PPM)	4225.	2799.	754.	782.	885.	741.
NB	(PPM)	0.	0.	0.	0.	0.	18.
RB	(PPM)	134.	284.	114.	142.	131.	118.
SR	(PPM)	265.	109.	34.	113.	103.	439.
Y	(PPM)	0.	0.	0.	0.	0.	65.
ZR	(PPM)	55.	72.	38.	63.	66.	170.
TOTAL	(%)	98.5	101.0	101.1	100.8	98.1	100.8

COMMENTS:

* ALL ANALYSIS BY XRF, EXCEPT FEO, H2OT, CO2T, CO2, C AND S BY RAPID CHEMICAL METHODS.

* FE2O3 IS CALCULATED USING FE2O3 = FE2O3(XRF) - 1.11134*FEO(VOLUMETRIC).

GEOLOGICAL SURVEY OF CANADA
MINERAL RESOURCES DIVISION
ANALYTICAL CHEMISTRY SECTION REPORT OF XRF ANALYSIS DATE: 01-MAR-88
X-RAY FLUORESCENCE LABORATORY

SUBMITTER'S NAME: S. BALLANTYNE PROJECT: 790003 REPORT: 153-87

		152A	153	KQ-87-154	—	156	Duplicate →
LAB. NO.		121	122	123	124	125	126
SPL. NO.		104B-879	104B-879	104B-879	104B-879	104B-879	153-87-1
		918	919	920	921	922	25
							Lab 4 -3
SIO2	(%)	72.6	70.1	55.4	58.7	58.7	60.4
TIO2	(%)	0.28	0.32	0.48	0.56	0.55	0.68
AL203	(%)	13.1	14.0	14.2	17.1	17.0	17.1
CR203	(%)	0.00	0.00	0.00	0.00	0.00	0.00
FE203T	(%)	3.3	3.5	4.6	5.8	5.7	6.9
FE203	(%)	0.8	0.8	0.7	1.1	1.1	1.5
FEO	(%)	2.2	2.4	3.5	4.3	4.2	4.9
MNO	(%)	0.13	0.08	0.18	0.17	0.17	0.18
MGO	(%)	1.25	1.38	2.04	2.48	2.43	1.85
CAO	(%)	1.11	1.92	8.50	3.74	3.73	3.61
NA2O	(%)	0.3	2.9	1.4	1.1	1.1	0.4
K2O	(%)	3.87	2.37	2.94	4.19	4.16	3.46
H2OT	(%)	2.7	2.3	3.2	3.7	3.7	3.9
CO2T	(%)	1.1	1.4	7.0	2.8	2.8	2.6
P2O5	(%)	0.08	0.12	0.10	0.22	0.22	0.27
S	(%)	0.57	0.08	0.00	0.17	0.18	0.12
BA	(PPM)	997.	682.	874.	1585.	1554.	1658.
NB	(PPM)	0.	0.	0.	0.	0.	0.
RB	(PPM)	141.	72.	107.	149.	143.	95.
SR	(PPM)	66.	181.	405.	81.	83.	123.
Y	(PPM)	0.	0.	0.	0.	0.	0.
ZR	(PPM)	56.	57.	118.	83.	86.	78.
TOTAL	(%)	100.3	100.1	99.8	100.4	100.2	100.6

COMMENTS:

* ALL ANALYSIS BY XRF, EXCEPT FEO, H2OT, CO2I, CO2, C AND S BY RAPID CHEMICAL METHODS.

* FE2O3 IS CALCULATED USING FE2O3 = FE2O3(XRF) - 1.11134*FEO(VOLUMETRIC).

GEOLOGICAL SURVEY OF CANADA
MINERAL RESOURCES DIVISION
ANALYTICAL CHEMISTRY SECTION — REPORT OF XRF ANALYSIS — DATE: 01-MAR-88
X-RAY FLUORESCENCE LABORATORY

SUBMITTER'S NAME: S. BALLANTYNE — PROJECT: 790003 — REPORT: 153-87

			*		*	
LAB. NO.		127	128	129	130	131
SPL. NO.		153-87-1	153-87-1	153-87-1	153-87-1	153-87-1
		~~27~~ 43	~~28~~ 63	~~29~~ 81	~~30~~ 101	~~31~~ 108
SIO2	(%)	53.2	58.7	57.8	59.4	67.1
TIO2	(%)	0.98	1.05	0.60	1.05	0.45
AL203	(%)	16.7	13.9	18.0	13.9	13.9
CR203	(%)	0.01	0.06	0.00	0.06	0.00
FE203T	(%)	9.8	7.7	6.4	7.6	8.1
FE203	(%)	7.3	4.2	6.4	4.0	8.1
FEO	(%)	2.2	3.2		3.3	
MNO	(%)	0.26	0.14	0.12	0.14	0.00
MGO	(%)	5.85	6.16	2.29	6.13	0.42
CAO	(%)	2.31	4.18	1.24	4.18	0.13
NA2O	(%)	3.2	2.4	4.5	2.4	0.3
K2O	(%)	2.27	1.85	4.82	1.85	3.56
H2OT	(%)	3.9	3.3		3.3	
CO2T	(%)	1.5	1.0	0.0	1.7	0.0
P2O5	(%)	0.25	0.25	0.35	0.25	0.09
S	(%)	0.00	0.01	3.18	0.01	6.42
BA	(PPM)	1370.	750.	2760.	726.	1867.
NB	(PPM)	0.	15.	0.	7.	0.
RB	(PPM)	42.	107.	95.	112.	67.
SR	(PPM)	168.	436.	429.	433.	115.
Y	(PPM)	0.	28.	0.	74.	0.
ZR	(PPM)	91.	166.	86.	170.	82.
TOTAL	(%)	100.2	100.3	99.7	100.9	100.6

COMMENTS:

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* FE2O3 IS CALCULATED USING FE2O3 = FE2O3(XRF) - 1.11134*FEO(VOLUMETRIC).