FALCONBRIDGE LIMITED EXPLORATION

GEOLOGY OF THE FENN PROPERTY ASSESSMENT REPORT

Strathy Township
Sudbury Mining Division
NTS 31M4

Chelmsford Office

Maria Gabriel
December 1st, 1993

SUMMARY

The following report describes the work performed, during the summer of 1993, on the Fenn project.

The property is located in the Temagami Greenstone Belt, between Temagami and Temagami North, in Strathy Township, NTS 31M4. It covers one patented claim numbered WD 271. This claim is equivalent in size to six claims.

The work done consisted of line-cutting (10.75 Km) and geological mapping (10.75 Km) on 100 meters spaced lines. A total of 157 litho and economic geochemical samples were taken.

Geologically, the property consists of mainly pillowed/massive tholeiitic basalts with local outcrops of felsic intrusives. A major North - South trending altered zone occurs on the western half of the property and is referred to as the " Big Dan Shear zone".

A DEEPEM survey is recommended over the property followed by possible drilling.

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LIST OF APPENDICES

1. INTRODUCTION

This report outlines the work performed by Falconbridge Ltd. on the Fenn Property in 1993. Mapping was performed on 100 meter spaced grid lines at a scale of 1:2000. A total of 157 samples were collected at 50 m intervals along the 100 m spaced grid lines.

2. PROPERTY DESCRIPTION, LOCATION AND ACCESS

The Fenn property is located in Strathy township, 31M4, approximately 120 Km NE of Sudbury. It is between the towns of Temagami and Temagami North and lies just east of highway 11(fig.1).

Road, railway and transmission line are just near by.

3. CLAIM STATUS

Property consist of a patented claim optioned from Mr. A. Fenn. The number for this patented claim is WD 271.

4. REGIONAL GEOLOGY

This property is located within the Temagami Greenstone Belt. This belt is divided into two major cyclic sequences (Fyon & Crocket, 1986):

1) an older felsic volcanic complex (OVC) and
2) a younger volcanic complex (YVC) mainly mafic.

This property is located within the YVC. This sequence was further subdivided into four formations which, from north to south and up stratigraphy are:

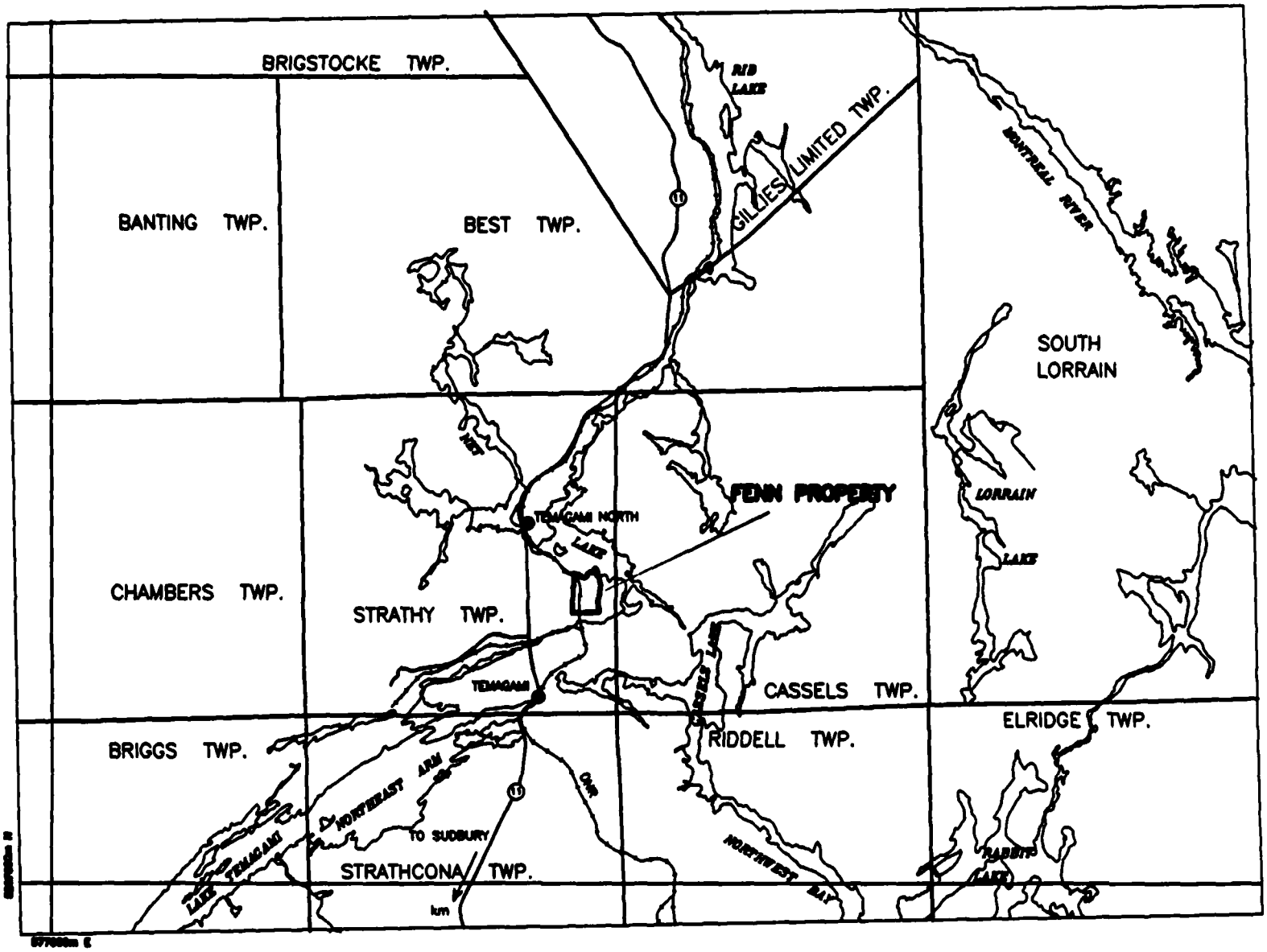
i) the Arsenic Lake Formation
ii) the Link Lake Formation
iii) the Turtle Lake Formation and
iv) the Upper Formation

This property is only underlained by the Arsenic Lake Formation.

5. EXPLORATION HISTORY

Several reports were written by the Ontario Geological Survey on the Temagami area.

Several companies have also previously performed work on the property. This work is



FALCONBRIDGE EXPLORATION

FENN PROPERTY

LOCATION MAP **Fig 1**

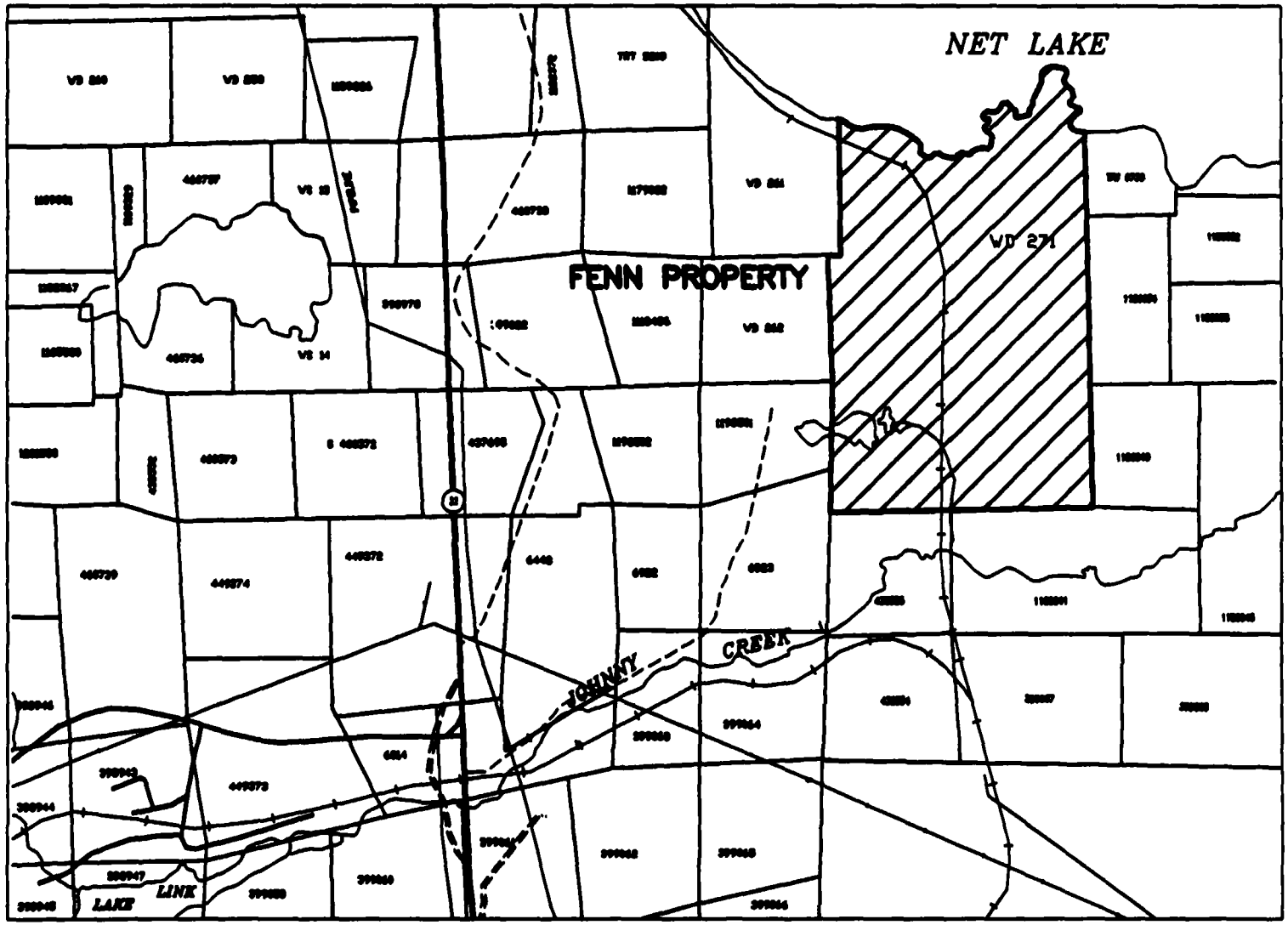


Figure 2.

FALCONBRIDGE EXPLORATION
FENN PROPERTY
CLAIM MAP

Fig 2

summarized in the following table (table 1).

TABLE 1

YEAR	COMPANY	GDIF NO.	TYPE OF WORK
1899-1906	Temagami & Milling	20	Trenching, stripping & underground work
1948-49	Big Dan Mines Ltd.	20	Geological, trenching Mag Survey
1930's	Murphy & Briden	20	Drilling (9 holes for 673 m) Drilling (no logs available)
1965	United Reef Petroleums	58	Geological & prospecting

6. FALCONBRIDGE WORK (1993)

6.1 *GENERAL*

In spring of 1993 a grid totalling 10.75 Km was cut over the property. Grid lines were cut at 100 m spacing perpendicular to the base line which is at an azimuth of 340 degrees. The contract was given to N. McBride Staking and Line Cutting of Notre Dame du Nord.

The entire area was then mapped at a scale of 1: 2,000. A total of 157 samples were collected. Mapping and sampling was done by M. Gabriel, senior field geologist of Falconbridge, with the assistance of P. Lessard of University of Montreal and occasionally K. Wells. All the work was completed by the first week of September. J. Cecchetto, senior project geologist with Falconbridge supervised the program.

6.2 GEOLOGICAL MAPPING

6.2.1 Introduction

The property is underlained by rocks of the Younger volcanic Complex (Fyon & Crocket, 1986). A North - South trending altered zone crosses the western side of the property. This zone is mineralized with anomalous values in Au, Cu and Zn. The rocks in area are strongly silicified.
The metamorphic grade of the property is of the green schist facies except for the amphibolite facies developed near the Strathy-Chambers Batholith. Tops are facing south. One main unit was observed within this property: Fe rich tholeiitic basalts Less abundant are felsic intrusives.

6.2.2 Lithological Descriptions

i) Fe-rich tholeiitic basalts

This unit is the lower most unit on the property. Rocks are dark green, massive to pillowed basalts. Primary features such as amygdules, variolites, pillow breccias were well preserved. At TL 4+00N a feldspar Phyric pillowed basalt was evident extending from L20E to L24E. This unit was referred to as "Bird shit flows". In two areas felsic intrusives were at the contact with the mafic volcanics. A North - South shear zone run through this contact. In both cases the contact, as well as both rock types, were mineralized.

Structure

A shear zone trending North - South was present between line 15E and 17E from 4+00N to BL00. This shear was usually less than 30cm wide and mineralized.

This shear zone is believed to be contemporaneous to volcanism due to the higher density of felsic dykes concentrated in this zone. These dykes are only present north of the Link Lake shear zone , therefore they are believed to be feeders to the felsic flows to the south.

Alteration and Mineralization

Alterations discussed here will only be the visual ones, therefore as they were mapped.

Silicification was the most observed alteration mostly in the pervasive mode.

At L24E/7+00N a shaft was found capped with cement. No work has been previously reported. Mineralized boulders with up to 40% (Po, Sp, Cp) were found. The closest outcrop was 20 m east of the shaft and was described as a massive basalt, strongly silicified, not mineralized. One of these boulders was sent for analysis and assay results were 2180 ppm Cu and 7100 ppm Zn. At L16+25E/4+00N a shaft also capped with cement was located. This is probably the north shaft of Big Dan showing. A NS trending shear zone crosses the middle of the shaft separating a massive basalt to the west from a felsic intrusive to the east. Both rocks are mineralized. Quartz veins were seen mainly in blocks. Values obtained from the felsic intrusive were 244 ppm Cu, 104 ppm Zn, from the mafic volcanics were 483 ppm Cu, 262 ppm Zn and from a block with 5% quartz veining were 2800 ppm Cu, 6560 ppm Zn and 3980 ppb Au. Thirty meters north of this shaft a small trench still at the contact of the same felsic intrusive and mafic flows returned <5 ppm Cu, 815 ppm Zn and 7.9 g/t Au. At 16E/3+00N in a mineralized open cut with mostly Po and some Cp. Anomalous Cu and Zn values were obtained at 15E/0+20N another mineralized open cut with sulphides up to 20% (Py,Po,Cp). Values obtained within this area were 6120 ppm Cu, 3280 ppm Zn, 5280 ppb Au; 1820 ppm Cu, 515 ppm Zn and 641ppm Cu, 1070 ppm Zn.

6.3 *LITHOGEOCHEMISTRY*

6.3.1 Introduction

A total of 157 samples were taken on the property. The geochemical results are tabulated in Appendix A.

6.3.2. Description of procedures

Samples were sent to X-Ray laboratories. The sample analysis consisted of whole rock (SiO_2, Al_2O_3, CaO, MgO, Na_2O, K_2O, Fe_2O_3, MnO, Cr_2O_3, P_2O_5, TiO_2, LOI) plus the following economic or trace elements (Ba, Rb, Y, Zr, Cu, Zn, Ni, Co, Ag, Au). The description of the methods used is attached in appendix B.

6.3.3. Discussion of the results

A discussion of the economic geochemistry results have been made in section 62.4. of this report.

From the lithogeochemistry results only Na2O has been plotted. An area with Na2O less than 1% is present from L15E to L17E and from 4+00N to BL00. This zone is coincident with a north-south "shear" zone which is mineralized.

7. CONCLUSIONS AND RECOMMENDATIONS

The mapping program outlined one main rock type, Fe-rich tholeiitic basalts.

Tops were evident in several outcrops outside of this property to be facing south.

A major N-S trending shear zone, occurs in the western side of the property. This zone is Na2O depleted (<1%) and anomalous in Cu, Zn and Au.

The following work is recommended:

1) Deep penetrating geophysics covering the entire property.

2) Drilling following the geophysics, if good conductors are obtained.

APPENDIX A

Sample no	SiO2 %	Al2O3 %	CaO %	MgO %	Na2O %	K2O %	Fe2O3 %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	LOI %	SUM %
SA38765	61.6	15.5	3.89	1.77	2.97	2.56	6.11	.752	.14	.14	<.01	4.90	100.4
SA38766	46.9	13.9	9.95	6.23	1.29	.92	16.7	1.29	.13	.51	.02	2.55	99.4
SA38767	51.0	13.9	9.93	6.12	2.14	.40	12.7	1.15	.11	.23	.03	2.05	99.8
SA30268	56.6	14.8	1.61	3.05	.25	3.29	13.3	1.79	.45	.15	.01	5.05	100.5
SA38780	77.3	11.2	.09	.42	.05	3.50	3.94	.139	.03	.02	.02	2.90	99.7
SA38781	48.0	13.2	.89	5.36	.02	.88	23.3	1.25	.10	.32	.04	6.40	99.8
SA38787	48.8	14.7	10.3	4.00	3.88	.40	8.19	1.10	.10	.27	.04	8.30	100.1
SA18039	49.4	14.5	7.91	4.89	1.94	.16	13.5	1.28	.11	.33	.03	5.40	99.5
SA18040	67.5	14.4	3.21	.90	4.22	2.16	3.03	.353	.10	.07	<.01	3.45	99.5
SA18041	44.6	13.7	8.71	4.59	2.92	.17	13.9	1.20	.10	.29	.02	8.85	99.1
SA18042	44.5	8.44	2.14	2.50	.11	1.48	24.9	.768	.07	.16	.02	10.5	95.7
SA18043	49.9	11.6	9.24	7.83	2.06	1.38	13.8	.888	.08	.30	.02	2.20	99.4
SA18044	42.9	14.4	3.34	6.41	.21	.72	22.7	1.24	.11	.49	.02	7.40	100.0
SA27797	48.0	15.4	11.1	4.66	1.83	.47	15.2	1.33	.12	.47	.03	1.40	100.0
SA27799	47.8	13.9	11.9	4.00	1.43	.18	15.8	1.26	.11	.38	.03	2.30	99.1
SA49021	51.47	13.41	8.95	5.58	2.43	1.08	13.08	1.35	0.18	0.26	0.08	1.58	99.44
SA49022	42.95	13.17	0.52	5.83	0.07	0.14	28.54	1.03	0.12	0.34	0.03	4.84	97.58
SA49023	46.80	6.53	9.33	18.33	0.19	0.04	13.15	0.86	0.14	0.29	0.19	2.99	98.85
SA49202	49.56	15.65	8.91	6.55	3.25	0.86	11.05	1.14	0.14	0.26	0.05	0.97	98.39
SA49203	49.65	14.56	9.90	5.12	2.31	0.26	12.60	1.22	0.16	0.31	0.06	2.02	98.17
SA51215	68.28	14.61	2.03	1.40	0.62	4.34	3.23	0.29	0.12	0.03	0.13	3.15	98.21
SA51216	74.84	12.60	1.78	0.39	4.48	1.78	2.31	0.17	0.04	0.02	0.20	1.57	100.16
SA51217	57.15	15.26	4.16	4.15	4.06	0.88	10.77	1.75	0.20	0.28	0.12	1.83	100.60
SA51219	55.30	18.36	3.86	2.96	4.44	1.60	7.14	1.59	0.18	0.17	0.10	2.10	97.79
SA30298	48.0	15.1	10.8	4.78	1.53	.71	13.0	1.17	.11	.35	.02	3.30	98.9
SA30299	49.8	13.9	8.03	6.42	2.71	.92	13.4	1.24	.12	.33	.02	2.25	99.2
SA30300	49.4	14.3	9.93	5.71	2.31	.80	13.1	1.19	.11	.35	.03	1.80	99.1
SA30276	50.2	14.0	8.87	4.85	2.56	.98	13.5	1.31	.12	.27	.01	2.80	99.5
SA30277	49.7	13.7	9.56	6.46	2.03	.88	14.3	1.23	.11	.23	.01	2.30	99.6
SA30278	49.9	13.1	8.58	6.15	1.84	1.23	15.0	1.28	.12	.26	.01	2.15	99.7
SA30279	51.7	13.6	10.4	4.51	1.90	.49	13.3	1.35	.14	.36	.01	2.10	99.9
SA30280	53.3	14.5	8.30	4.03	2.45	.98	12.0	1.36	.12	.25	.02	2.10	99.5
SA30281	49.2	13.4	10.1	4.95	2.08	.49	14.8	1.25	.11	.28	.02	2.15	98.9
SA30282	52.4	12.9	8.22	4.90	4.54	.77	12.5	1.50	.15	.29	.01	2.20	98.4
SA30283	49.9	14.7	8.04	5.26	3.18	1.24	12.0	1.29	.12	.30	.03	2.70	98.8
SA30284	51.6	15.0	8.64	5.77	3.23	.72	10.7	1.31	.12	.27	.03	2.10	99.5
SA30289	54.2	13.3	7.59	4.37	2.95	1.11	12.8	1.51	.15	.23	<.01	1.75	100.0
SA30290	52.9	13.1	7.49	5.50	4.04	.58	12.4	1.40	.13	.31	.02	1.90	99.8
SA30291	48.2	13.1	8.47	6.89	1.94	.69	15.5	1.38	.13	.23	.02	2.55	99.1
SA30292	49.6	14.3	9.70	4.49	2.49	.62	13.2	1.32	.12	.26	.02	2.30	98.5
SA30293	54.6	14.8	6.51	3.70	2.87	.56	11.3	1.45	.27	.15	.01	3.30	99.6
SA30294	48.8	13.5	9.00	5.99	1.78	1.19	14.4	1.24	.11	.23	.01	2.45	98.8
SA30295	53.9	14.3	8.04	5.03	2.75	.40	11.2	1.38	.12	.19	.03	2.25	99.6
SA30296	51.3	14.1	9.18	4.32	2.33	.59	13.7	1.34	.12	.30	.03	2.30	99.7
SA30297	56.1	15.7	5.62	3.72	3.74	1.06	9.58	1.46	.14	.27	.03	1.80	99.3
SA19879	50.3	15.0	9.44	5.29	1.90	.16	11.8	1.11	.09	.26	.02	3.55	98.9
SA21896	57.0	16.2	6.92	3.08	2.91	.57	8.99	1.48	.13	.25	.03	3.05	100.7
SA19882	50.1	14.7	9.12	4.25	2.26	.55	13.6	1.46	.12	.30	.03	3.05	99.6
SA19883	57.1	16.4	6.17	2.63	3.69	.36	8.58	1.13	.11	.16	.02	3.10	99.5
SA19884	50.4	15.0	9.45	5.20	2.61	.65	11.1	1.30	.16	.29	.02	1.95	98.2
SA19885	51.9	13.9	9.76	5.06	2.94	.34	12.9	1.30	.15	.27	.03	1.50	100.1
SA21876	51.4	14.5	8.69	4.99	3.24	.42	10.8	1.37	.16	.22	.02	2.40	98.3
SA21877	50.7	13.7	10.5	5.56	2.01	.57	13.6	1.27	.14	.31	.03	1.80	100.2
SA21878	50.7	13.2	9.96	5.46	2.27	.23	14.6	1.27	.10	.37	.04	1.60	99.8
SA21895	51.7	13.5	8.84	5.13	2.91	.63	12.1	1.36	.16	.28	.02	2.85	99.5
SA28483	50.9	14.2	9.36	5.55	1.92	.99	13.1	1.26	.12	.31	.04	2.20	100.0
SA28484	46.6	15.1	6.69	6.34	1.26	.05	16.6	1.52	.12	.35	.04	4.35	99.0
SA28485	50.5	14.4	9.32	5.30	1.99	.58	13.8	1.27	.13	.29	.04	1.80	99.5
SA28486	51.2	15.8	2.96	5.14	4.32	.11	11.9	1.60	.14	.28	.03	5.15	98.7
SA28487	47.7	13.4	7.82	4.85	2.27	.45	13.1	1.30	.12	.30	.02	8.35	99.7
SA28490	51.5	14.6	5.84	4.40	1.93	1.65	12.5	1.41	.13	.28	.02	5.35	99.7
SA28491	64.4	14.8	1.14	2.15	.34	5.57	5.71	.716	.20	.11	<.01	3.35	98.6
SA21249	45.1	7.39	8.75	16.4	.16	.45	14.6	1.09	.14	.31	.16	4.20	98.8
SA19880	52.1	14.7	4.59	6.88	3.29	.08	10.9	.710	.30	.27	.05	6.30	100.2
SA19881	49.8	15.8	10.9	3.73	2.57	.32	11.4	1.19	.10	.28	.04	2.60	98.8

Sample no	SiO2 %	Al2O3 %	CaO %	MgO %	Na2O %	K2O %	Fe2O3 %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	LOI %	SUM %
SA21241	51.4	14.3	9.62	4.02	2.44	.79	12.7	1.22	.11	.32	.03	2.85	99.9
SA21242	57.1	17.5	8.15	3.23	.80	1.45	7.78	.751	.11	.17	<.01	3.55	100.7
SA21244	59.7	17.0	2.82	3.66	4.63	1.46	6.54	.659	.14	.09	<.01	3.55	100.3
SA21248	53.5	14.1	7.98	4.53	1.59	.12	11.5	1.21	.10	.24	.02	5.40	100.3
SA38760	56.7	13.7	6.92	5.28	5.47	.47	8.95	1.12	.10	.16	.02	1.55	100.5
SA38762	51.9	11.3	7.85	7.56	2.86	1.70	11.9	.917	.09	.23	.02	2.45	98.9
SA38763	52.0	16.3	4.40	4.08	.05	3.18	10.4	1.46	.13	.19	.03	7.35	99.6
SA38764	56.1	15.1	9.08	2.89	2.54	.81	9.58	1.46	.13	.28	.04	1.75	99.8
SA38768	49.3	13.7	11.1	5.14	1.69	.29	14.2	1.32	.12	.26	.02	1.80	99.0
SA38769	43.6	12.2	11.1	5.73	.33	.13	21.8	1.19	.11	.52	.02	2.65	99.4
SA38770	50.2	15.7	6.21	4.41	3.57	.34	11.5	1.17	.10	.30	.03	6.35	99.9
SA38771	42.2	16.4	9.85	7.09	.09	.06	15.4	1.34	.10	.34	.04	6.50	99.4
SA38788	59.0	15.3	4.66	3.42	4.47	1.17	6.72	1.63	.15	.19	.05	2.10	98.9
SA30924	49.0	15.4	6.26	4.97	.51	1.32	12.2	1.04	.11	.28	.03	8.90	100.1
SA30925	19.4	16.4	6.68	3.74	1.24	2.69	17.4	1.30	.26	.32	<.01	8.60	78.1
SA30926	56.7	17.0	5.11	3.41	3.20	1.32	7.94	.932	.09	.16	.04	4.60	100.5
SA19886	48.5	15.0	11.2	4.20	1.91	.33	14.9	1.14	.09	.37	.03	1.70	99.4
SA19887	50.4	15.0	9.61	5.77	2.40	.73	12.3	1.20	.11	.28	.02	2.20	100.1
SA21893	48.6	14.1	7.70	6.97	2.73	.65	14.6	1.17	.10	.30	.02	3.20	100.2
SA21894	50.6	14.8	9.44	4.75	3.74	.33	12.4	1.18	.11	.28	.02	2.20	99.9
SA21234	49.8	15.1	9.55	4.66	3.06	.50	13.2	1.20	.11	.26	.03	2.50	100.0
SA21235	51.6	14.5	9.42	4.50	2.57	.27	12.8	1.22	.10	.22	.04	3.25	100.5
SA21236	52.8	14.7	10.0	3.35	2.47	.54	12.7	1.33	.11	.30	.02	1.45	99.8
SA21237	51.5	15.0	7.99	4.79	3.15	.56	13.3	1.28	.11	.35	.02	2.35	100.4
SA21238	57.6	15.9	5.86	3.10	4.19	.66	7.78	1.71	.15	.30	.05	2.65	100.0
SA21239	49.4	13.6	9.11	4.75	2.07	.46	14.9	1.36	.11	.38	.03	2.65	98.9
SA21240	53.4	15.0	9.15	3.97	4.13	.67	10.3	1.30	.13	.29	.02	1.70	100.1
SA21250	46.6	5.61	9.79	17.1	.16	.09	14.0	.957	.10	.32	.13	3.70	98.6
SA38756	50.3	15.0	8.50	5.35	3.63	.73	11.5	1.20	.12	.26	.03	2.50	99.2
SA38757	49.9	13.9	10.7	5.11	2.32	.40	12.7	1.16	.11	.32	.02	2.85	99.5
SA38758	56.4	14.5	7.83	3.62	3.46	.37	10.3	1.35	.12	.30	.04	1.85	100.2
SA38759	56.0	17.1	1.75	3.74	.03	3.67	10.5	1.68	.14	.24	.03	4.60	99.6
SA38789	55.4	15.3	9.14	2.84	1.92	.61	10.7	1.37	.26	.26	.04	1.75	99.6
SA38790	41.9	11.9	12.4	6.08	.48	.30	22.5	1.06	.10	.60	.03	1.65	99.0
SA38791	48.8	13.9	8.91	5.86	2.67	1.15	14.2	1.24	.11	.33	.04	1.55	98.9
SA38792	50.0	13.3	9.79	4.15	1.39	.27	16.2	1.24	.12	.40	.04	1.95	98.9
SA38793	55.3	14.5	8.46	2.34	2.84	.27	10.6	1.36	.12	.20	.05	1.65	97.5
SA38794	41.4	10.7	9.15	6.13	.94	.40	24.2	.931	.10	.43	.01	2.50	96.9
SA30269	49.9	14.3	8.54	6.32	2.66	.34	12.6	1.27	.11	.26	.03	2.65	99.0
SA30285	53.3	14.2	9.55	4.45	2.50	.39	12.3	1.16	.10	.26	.03	1.65	99.9
SA30286	51.3	14.9	10.1	4.16	2.35	.67	12.3	1.25	.12	.31	.03	1.90	99.4
SA30287	48.9	14.1	9.66	6.06	1.95	.55	14.0	1.26	.12	.36	.03	2.05	99.1
SA30288	54.7	16.9	8.76	3.37	2.88	1.08	8.07	1.42	.12	.21	.03	1.85	99.4
SA30922	51.5	16.2	2.32	5.10	2.74	.78	14.8	1.25	.13	.35	.02	4.15	99.4
SA30923	61.0	15.2	7.42	2.19	4.13	.31	6.58	1.26	.13	.24	.04	1.65	100.2
SA48925	50.50	15.07	8.65	5.48	4.02	0.32	13.15	1.21	0.14	0.32	0.06	1.52	100.44
SA48926	53.94	16.39	6.34	3.87	4.38	0.34	9.50	1.49	0.16	0.22	0.08	2.74	99.47
SA48927	53.36	13.59	7.01	5.54	3.29	0.16	12.37	1.28	0.16	0.32	0.09	1.95	99.12
SA48928	51.42	13.88	7.89	6.27	3.22	0.92	12.58	1.22	0.14	0.23	0.14	1.52	99.44
SA48929	55.57	14.27	7.61	3.39	3.54	0.20	12.56	1.20	0.14	0.28	0.09	1.47	100.30
SA30274	57.2	15.8	4.39	2.61	5.02	.77	7.66	1.25	.15	.16	.01	4.05	99.1
SA30265	49.6	13.6	8.56	6.62	2.04	.61	14.6	1.29	.12	.20	.02	2.15	99.4
SA30263	49.9	12.8	8.10	6.67	1.86	1.09	14.3	1.17	.11	.25	.03	2.70	99.0
SA30264	49.4	13.4	7.06	6.95	1.64	.85	15.3	1.33	.12	.21	.03	3.55	99.9
SA30266	49.6	13.8	8.85	6.07	2.55	.76	13.7	1.31	.12	.30	.03	2.40	99.5
SA30267	50.6	13.7	9.69	5.11	2.29	.57	13.6	1.46	.12	.29	.04	2.05	99.6
SA38795	50.6	14.3	7.96	4.81	2.56	.51	13.0	1.38	.13	.33	.03	3.25	98.9
SA38796	52.1	14.4	9.22	4.54	2.55	.43	13.0	1.35	.12	.28	.02	1.70	99.7
SA38797	49.0	14.0	8.70	5.96	2.05	.78	13.9	1.22	.11	.26	.03	2.35	98.4
SA38800	43.1	11.8	11.2	5.19	.43	.21	21.5	1.41	.13	.55	.02	2.55	98.1
SA30270	50.6	13.2	8.89	5.26	1.93	1.10	14.6	1.42	.13	.29	.02	2.20	99.7
SA30271	49.5	13.5	10.5	5.40	2.13	.71	13.8	1.18	.11	.23	.02	2.40	99.5
SA30272	56.0	15.1	6.71	3.25	3.72	1.17	8.27	.670	.11	.13	<.01	5.40	100.6
SA30273	53.6	13.3	3.94	4.12	.22	1.44	16.4	1.26	.22	.25	<.01	4.45	99.3
SA30275	76.5	12.4	.39	.33	4.24	3.81	1.18	.130	.02	.02	.02	1.15	100.3

Sample no	SiO2 %	Al2O3 %	CaO %	MgO %	Na2O %	K2O %	Fe2O3 %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	LOI %	SUM %
SA38775	47.9	14.3	9.47	4.58	1.50	.17	13.1	1.36	.13	.20	.02	6.70	99.6
SA38776	55.1	11.0	.12	3.90	.05	.99	20.6	1.15	.11	.19	.03	7.30	100.6
SA21565	52.1	14.6	7.39	4.52	2.93	.20	13.7	1.37	.13	.38	.03	2.65	100.0
SA21566	43.5	11.9	10.0	5.88	.63	.20	21.5	1.10	.11	.51	.03	3.35	98.7
SA21570	58.8	15.3	5.28	3.78	5.16	.57	7.35	1.48	.14	.19	.04	2.20	100.3
SA21571	55.7	15.7	.14	2.53	.02	3.37	15.8	1.02	.11	.17	<.01	5.65	100.3
SA38774	51.3	14.3	.15	3.53	.05	1.76	20.6	1.51	.14	.21	.03	6.40	100.1
SA38782	41.5	10.1	.29	3.94	<.01	.24	35.9	1.03	.09	.32	.03	6.85	100.3
SA38783	48.3	14.1	7.84	6.30	1.89	.36	14.6	1.16	.10	.38	.04	3.25	98.4
SA38784	53.5	14.4	6.60	5.64	1.70	.44	12.6	1.07	.11	.27	.06	3.65	100.1
SA38785	60.7	12.7	.95	3.75	<.01	2.20	13.3	1.04	.11	.23	.05	4.45	99.5
SA38786	51.5	14.1	8.47	4.51	2.65	1.25	12.4	1.34	.13	.27	.04	2.25	99.0

Sample_no	Y_ppm	Zr_ppm	Ba_ppm	Cu_ppm	Zn_ppm	Pb_ppm	Ni_ppm	Au_ppb	Ag_ppm	Cr_ppm	ROCK_TYPE	Rb_ppm	CO_ppm
SA38765	20	168	512	3.1	43.2		5	15	<.1		2pl?	76	
SA38766	23	78	376	9.9	70.5		38	<5	.3		2a	20	
SA38767	20	102	108	5.2	43.4		26	6	<.1		7mb	19	
SA30268	36	331	749	137.	79.2	-	13	26	.2		2a	105	
SA38780	21	143	675	244.	104.	-	<1	74	1.4		9meq	107	
SA38781	<10	75	282	483.	262.	-	35	32	2.9		2ma	26	
SA38787	12	65	130	5.9	175.	-	58	33	<.1		2ma	13	
SA18039	21	84	108	33.9	113.	-	68	12	<.1		2p	18	
SA18040	<10	171	403	6.6	21.9	-	8	<5	<.1		9mb	75	
SA18041	14	82	81	121.	166.	-	89	<5	<.1		2a	<10	
SA18042	<10	24	601	<.5	815.	-	73	7920	43.0		2	26	
SA18043	<10	68	359	133.	51.1	-	120	10	<.1		7mb	43	
SA18044	<10	82	234	21.3	220.	-	79	14	<.1		2p?	13	
SA27797	20	76	114	72.5	76.9	-	46	<5	<.1		2a	15	
SA27799	13	79	80	105.	58.5	-	69	22	<.1		2p?	<10	
SA49021	38	126	316	155	205		70				2b		156
SA49022	26	80	60	60	19600		60				2a		4
SA49023	12	86	14	670	295		1050				2p		26
SA49202	22	76	192	30	95		100				2b		146
SA49203	32	96	72	<5	105		80				2a		182
SA51215	8	154	580	215	25		30						22
SA51216	32	162	376	30	30		30						64
SA51217	34	126	278	100	<5		20						120
SA51219	34	116	272	<5	<5		60						92
SA30298	<10	83	223	9.4	75.2	-	36	7	<.1		2a	20	
SA30299	15	86	257	5.2	59.8	-	30	12	<.1		2p?	26	
SA30300	43	79	384	8.1	46.8	-	17	18	<.1		2p	15	
SA30276	21	83	219	27.9	67.4	-	26	6	<.1		2ma	42	
SA30277	22	85	220	65.3	55.0	-	30	6	<.1		7ma	26	
SA30278	16	77	314	75.9	42.1	-	25	<5	<.1		7ma	48	
SA30279	30	122	158	60.4	37.3	-	19	8	<.1		2ma	17	
SA30280	20	97	328	36.3	34.3	-	29	6	<.1		2p	32	
SA30281	27	79	145	28.3	37.5	-	19	<5	<.1		7mb	17	
SA30282	23	146	267	16.2	27.9	-	14	6	<.1		2ma	<10	
SA30283	22	77	572	8.9	439.	-	29	6	<.1		2ma	54	
SA30284	18	71	253	72.2	146.	-	28	9	<.1		2p	25	
SA30289	41	152	394	45.7	80.7	-	12	28	<.1		2ma	41	
SA30290	24	111	185	49.2	50.9	-	11	13	<.1		2p	15	
SA30291	27	98	183	66.2	65.7	-	24	7	<.1		7ma-b	25	
SA30292	20	91	230	128.	45.9	-	33	21	<.1		2mae	20	
SA30293	23	195	220	22.0	59.4	-	35	24	<.1		2ma	13	
SA30294	21	97	317	91.0	79.6	-	22	<5	<.1		7ma-b	50	
SA30295	11	110	180	94.7	63.8	-	26	16	<.1		2p	11	
SA30296	16	95	203	12.3	33.9	-	21	13	.2		2a	23	
SA30297	28	112	278	127.	28.8	-	33	18	<.1		2ma	50	
SA19879	14	51	99	163.	68.5	-	51	14	.1		2ma	<10	
SA21896	13	98	300	3.0	64.5	-	59	14	<.1		2ma	12	
SA19882	20	85	221	10.2	70.3	-	55	14	<.1		2p	24	
SA19883	15	112	188	60.0	50.8	-	40	12	<.1		7mab	<10	
SA19884	29	75	199	6.8	32.5	-	25	10	<.1		2pD	27	
SA19885	28	134	141	40.9	41.4	-	20	12	<.1		2an	<10	
SA21876	30	133	155	60.8	38.4	-	32	12	<.1		2p?m	18	
SA21877	30	122	167	95.9	41.5	-	22	14	<.1		7mbP	22	
SA21878	<10	82	143	155.	46.5	-	40	11	<.1		2pa	13	
SA21895	34	137	230	8.6	37.5	-	26	12	<.1		2a	<10	
SA28483	24	78	313	23.7	79.2	-	28	10	<.1		2mb	41	
SA28484	20	132	83	43.9	132.	-	46	8	.3		2p	<10	
SA28485	27	93	197	147.	46.4	-	32	10	<.1		7ma-b	<10	
SA28486	25	109	130	7.2	101.	-	58	9	<.1		2a	<10	
SA28487	21	100	180	35.7	321.	-	51	5	<.1		2ma	18	
SA28490	37	94	407	26.9	263.	-	57	8	<.1		2ma	42	
SA28491	20	191	941	19.9	130.	-	6	9	.2		2ma	211	
SA21249	17	109	267	45.5	104.		425	23	.2		2p	17	
SA19880	14	89	103	46.7	130.	-	55	12	<.1		2p	23	
SA19881	30	61	103	39.3	34.3	-	64	13	<.1		2ap?	<10	

Sample no	Y ppm	Zr ppm	Ba ppm	Cu ppm	Zn ppm	Pb ppm	Ni ppm	Au ppb	Ag ppm	Cr ppm	ROCK TYPE	Rb ppm	CO ppm
SA21241	17	77	324	106.	123.		54	<5	.4		2p	17	
SA21242	22	116	422	1.9	51.5		38	11	.2		2a	46	
SA21244	18	148	422	1.6	63.9		58	19	<.1		2p?	39	
SA21248	30	64	91	96.6	83.6		42	10	<.1		2a	15	
SA38780	19	47	347	92.5	31.2		26	10	<.1		2p	19	
SA38762	14	102	778	10.5	48.9		115	15	.2		7mb	13	
SA38763	18	111	334	14.1	122.		69	10	<.1		2a	118	
SA38764	27	83	279	6.4	69.2		31	16	<.1		2a	20	
SA38768	23	99	152	63.8	48.3		50	5	<.1		2ma	<10	
SA38769	13	82	77	79.3	85.5		40	<5	.7		2abx	<10	
SA38770	27	69	115	87.8	242.		104	<5	.7		2p	12	
SA38771	<10	71	70	184.	213.		67	<5	.3		2p	<10	
SA38788	35	121	323	7.2	42.7	-	78	22	<.1		2a	31	
SA30924	26	75	176	185.	137.	-	93	10	<.1		2p	51	
SA30925	13	123	367	3380.	<.5	-	100	68	9.2			61	
SA30926	21	66	248	129.	353.	-	128	6	.2		2p	53	
SA19886	12	75	98	129.	53.3	-	54	13	<.1		2pD	16	
SA19887	16	78	236	87.0	44.0	-	45	12	<.1		2p	27	
SA21893	15	64	204	228.	37.8	-	42	15	<.1		2ma	15	
SA21894	<10	87	116	99.2	25.3	-	25	16	<.1		2p	19	
SA21234	33	77	179	87.6	36.8		56	19	<.1		2ma	15	
SA21235	28	80	69	128.	37.5		59	12	<.1		2ma	<10	
SA21236	29	93	190	139.	245.		40	15	<.1		2p	14	
SA21237	18	78	293	18.6	76.8		39	15	<.1		2p	15	
SA21238	38	125	186	22.6	49.1		28	18	<.1		7mb	19	
SA21239	17	99	288	278.	332.		45	23	.5		2p	23	
SA21240	12	83	219	19.7	27.9		37	<5	<.1		2p	<10	
SA21250	<10	71	80	217.	78.8		370	21	.3		7mc	<10	
SA38756	28	68	297	13.7	83.9		44	18	<.1		2a	18	
SA38757	20	79	233	222.	56.5		54	20	.5		2pD	15	
SA38758	25	94	149	4.2	38.1		41	16	<.1		2a	<10	
SA38759	<10	107	478	60.9	93.9		54	26	.3		2ap?	125	
SA38789	36	173	249	54.0	93.2	-	44	11	<.1		2aq	26	
SA38790	15	93	103	94.9	65.9	-	55	26	<.1		2p	<10	
SA38791	25	85	680	19.0	55.0	-	42	22	<.1		2aq	26	
SA38792	22	118	121	350.	77.0	-	55	13	<.1		2bx	12	
SA38793	35	86	159	1620.	264.	-	110	13	2.3		2p	<10	
SA38794	23	61	197	2450.	131.	-	67	13	2.3		2p	<10	
SA30269	26	85	143	40.0	50.8	-	32	6	<.1		2pe	<10	
SA30285	20	67	138	344.	25.3	-	35	14	.3		2ma	12	
SA30286	28	83	190	18.5	40.6	-	20	10	<.1		2p?	24	
SA30287	<10	81	183	111.	31.6	-	29	7	<.1		7?mb	30	
SA30288	38	88	248	14.9	23.2	-	16	13	<.1		7mb	45	
SA30922	26	99	273	80.9	209.	-	67	52	1.1		7ma	20	
SA30923	26	100	142	44.3	107.	-	48	18	.2		2a	<10	
SA48925	36	92	114	140	165		80				2p		138
SA48926	34	106	82	85	180		80				2tb		140
SA48927	30	88	78	210	305		90				2p		278
SA48928	30	86	428	85	200		90				2bx		200
SA48929	28	80	52	60	175		60				2p		136
SA30274	<10	131	358	23.0	80.4	-	27	<5	<.1		2ma	23	
SA30265	<10	88	167	103.	54.7	-	37	7	<.1		2ma	38	
SA30263	14	76	375	74.9	68.5	-	48	12	.2		2ma	42	
SA30264	14	103	302	39.1	73.0	-	31	11	<.1		2ma	38	
SA30266	28	93	267	61.8	76.1	-	25	7	<.1		2ma	27	
SA30267	21	106	207	15.5	42.3	-	17	<5	<.1		2p	<10	
SA38795	21	96	284	75.5	150.	-	41	10	.2		2ma	<10	
SA38796	23	95	197	99.4	63.8	-	33	14	<.1		2ma	<10	
SA38797	22	82	239	37.5	89.5	-	36	13	<.1		2mae	17	
SA38800	<10	92	69	258.	1020.	-	57	10	1.3		2a	<10	
SA30270	<10	110	399	128.	128.	-	16	<5	.3		2a	41	
SA30271	17	89	198	125.	71.2	-	25	7	<.1		7ma	31	
SA30272	16	112	361	3.3	49.5	-	23	7	<.1		2ma	<10	
SA30273	92	461	512	87.7	82.1	-	11	10	<.1		2ma	37	
SA30275	72	122	737	1.7	9.9	-	2	<5	<.1		9mb	117	

Sample no	Y ppm	Zr ppm	Ba ppm	Cu ppm	Zn ppm	Pb ppm	Ni ppm	Au ppb	Ag ppm	Cr ppm	ROCK TYPE	Rb ppm	CO ppm
SA38775	19	83	60	86.6	140.		65	<5	<.1		2p	<10	
SA38776	<10	76	389	254.	507.		58	251	3.8		2a	<10	
SA21565	22	91	115	16.7	74.8	-	54	10	.3		2ma	10	
SA21566	26	74	70	40.2	88.6	-	55	6	.2		2fbx	<10	
SA21570	37	116	197	3.7	40.3	-	20	8	<.1		2ma	17	
SA21571	<10	136	568	200.	109.	-	11	20	1.0		2a	88	
SA38774	38	106	438	104.	269.		35	17	1.5		2a	35	
SA38782	<10	73	171	840.	247.	-	63	36	3.0		2a	<10	
SA38783	28	72	150	119.	129.	-	58	16	.2		2ma	<10	
SA38784	14	95	176	13.0	150.	-	57	17	<.1		2ma	20	
SA38785	27	95	366	43.9	135.	-	22	14	.4		2a	61	
SA38786	32	106	364	52.0	117.	-	29	20	.2		2ma	11	

Sample no	Cu ppm	Zn ppm	Pb ppm	Ni ppm	Au ppb	Ag ppm	CO ppm	ROCK TYPE
SA51218	710.00	1180.0	199.00	135.00	10.000	6.6000		
SA49022	77.000	019500	1.0000	48.000	7.0000	1.1000		
SA21572	226.	3440.	9	40	30	2.5	-	2a
SA28488	5.8	183.	9	3	21	<.1	-	9mb
SA28489	2180.	7100.	8	43	76	7.7	-	MSS
SA21350	2800.	6560.	90	72	3977	34.6	-	2a
SA32049	1820.	515.	<2	25	56	4.1	-	
SA32050	641.	1070.	<2	92	22	2.6	-	
SA49021	167.00	162.00	2.0000	42.000	<5	0.6000		
SA49023	779.00	253.00	1.0000	656.00	7.0000	0.9000		
SA49451	6880.0	6870.0	387.00	77.000	10354	111.60		

APPENDIX B

XRAL **X-Ray Assay Laboratories**
A Division of SGS Supervision Services Inc.

Whole Rock Analysis by X-Ray Fluroescence Spectrometry

Description:

A 2 gram sample, after roasting at 950 degrees for 1 hour, is fused with 7.7 grams of lithium tetraborate and the melt is cast into a 40 mm button.

The button is analyzed on a Philips PW1600 simultaneous x-ray fluorescence spectrometer. This system is calibrated using more than 40 reference materials, most of them being tabulated in K. Govindaraju "referred" values compilation.*

Counting time on major elements is 60 seconds and each of them is analyzed for through its own fixed channel. Trace elements in this package are run as counts are accumulated for the majors using a scanner.

L.O.I. is obtained from the roasting mentioned above. All elements determined are added and any samples with a sum of less than 98% or higher than 101% are automatically repeated. This gives us control over the button preparation. Instrument precision on most elements is better than 0.5%. Only on lower count rates would one experience errors of 1-2%.

Elements:

Major Oxides		Minor Elements	
SiO_2	0.01%	Ba	10 ppm
AL_2O_3	0.01%	Nb	10 ppm
CaO	0.01%	Rb	10 ppm
MgO	0.01%	Sr	10 ppm
Na_2O	0.01%	Y	10 ppm
K2O	0.01%	Zr	10 ppm
Fe_2O_3	0.01%	Cr*	10 ppm
MNO	0.01%		
Cr_2O_3	0.01%		
P_2O_5	0.01%		
TiO_2	0.01%		
LOI	0.01%		

* 10 ppm detection limit cannot be achieved if samples are milled in chrome steel pots.

Prepared by	Approved by	Date

XRAL **X-Ray Assay Laboratories**
A Division of SGS Supervision Services Inc.

Geochemical Gold , Platinum and Palladium by Lead Fire Assay
Assay Gold, Platinum, Palladium and Silver by Lead Fire Assay

Description:

A. Sample Preparation

Primary reduction is achieved by a two stage crushing facility which employs a 6" x 8" jaw crusher for the first stage followed by a smaller crusher as second stage. The product from this system is typically 45% minus 1/8" and 99% minus 1/4".

A subsample is withdrawn from this crusher product by means of a 3/8" Jones sample splitter. The subsample will vary in size depending on the size of the original sample but will normally represent not less than 1/8 of the original. Samples of less than 1/2 pound are normally not split.

Secondary reduction is achieved by means of either a Braun disc pulverizer or an oscillatory swing mill. The former is normally used for the larger samples associated with assessment work, with the swing mills being reserved for geochemical applications. The Braun pulverizer product is 100% minus 100 mesh whereas the swing mill product is minus 200 mesh. The unused portion of the crusher product (crusher reject) is stored for possible future use free of charge for 90 days or is disposed of as per the client's instructions. The pulverized subsample (or assay pulp) is sent on for assay. Any material which remains after assay work is complete is put in storage for 180 days as above.

A clean quartz sample is placed at the beginning and end of each batch of samples processed. This cleaner is carried through all the sample preparation steps and is analysed along with the samples. The purpose of the cleaner is to spot contamination that might be carried over from the previous sample batch. To avoid cross contamination from samples within the batch a sample of clean quartz is milled between each sample.

XRAL has two separate primary crushing facilities backed by eight swing mill stations and two Braun pulverizers.

B. Fire Assay (Gold, Platinum & Palladium)

XRAL fire assay facilities consist of 5 - 32 pot electric assay furnaces, four of which are used for the fusions with the other employed exclusively for cupellation work.

The assay procedure follows the classical lines of the lead-silver collection. The flux used for this purpose is prepared from the highest purity reagents available, being comprised of the normal proportions of litharge, soda-ash, borax and silica. Adjustments to the flux to compensate for abnormal sulphide or carbonate content of samples are made at time of assay. For such samples a pilot assay is required which utilizes a small aliquot of sample and provides the information required to make these adjustments properly. This practice assures the best composition necessary for a good collection during the fusion.

Prepared by	Approved by	Date

XRAL **X-Ray Assay Laboratories**
A Division of SGS Supervision Services Inc.

Geochemical Gold , Platinum and Palladium by Lead Fire Assay
Assay Gold, Platinum, Palladium and Silver by Lead Fire Assay

Our quality control includes the following procedures:

1. The cleaner sample which was crushed before the samples is analysed along with the samples.

2. A standard reference sample doped with cobalt and copper is run with each tray. The position of this standard is varied systematically from one tray to the next. This serves as a check to identify each batch through to the final cupellation and as a monitor of the final measurement of gold content.

3. Every tenth sample is run in duplicate. The second run is made at a different time from the first.

4. anomalous samples are repeated.

The routine involves weighing of a 15 or 30 gram aliquot of sample on a top loader electronic balance to_+_ 0.01 grams tolerance. This is added to a assay crucible which has been pre-charged with 100-200 grams of flux. A fixed amount of reducing agent is then added to ensure production of a 30-50 gram lead button during fusion. Finally for gold assays five milligrams of silver is added and the sample and flux are mixed together.

The fusion is carried out at an average temperature of about 1000 degrees celsius for about 1 hour. Melts are poured and when the slag has cooled the lead buttons are recovered, deslagged, and placed in preheated cupels in the cupellation furnace. Cupellation takes about 1 hour and is carried out at about 960 degrees celsius. The silver bead recovered after cupellation can be treated in several ways to determine the gold content as indicated below.

1. Plasma spectrometry: Requires digestion of the bead with aqua regia followed by measurement of the gold content in the solution. Platinum and palladium may also be determined on this solution (XRAL Group 02-1).

2. Neutron activation analysis: This requires only an irradiation of the bead followed by measurement of the gold content by gamma spectrometry. It is normally used for the analysis of gold only.

3. For high grade samples the gold can be parted from the silver and weighed as per the classical technique.

Atomic absorption is seldom used as the sensitivity is not quite adequate for the low levels required for geochemical applications.

Silver analyses follow the same path as gold samples except that the final measurement is always gravimetric and no silver is added to the pot.

Elements:

Au to 1 ppb detection limit

Prepared by	Approved by	Date

XRAL **X-Ray Assay Laboratories**
A Division of SGS Supervision Services Inc.

Digestion of Silver prills for fire assay

Description:

Place the silver prill in a test tube and add 1 ml of 1:1 HNO_3:H_2O . Heat on a hot plate until the silver prill disappeared (approximately 20 minutes). Once the silver has disappeared add 1 ml of 1:3 HNO_3:HCl and heat 15-20 minutes. Shake and heat another 15-20 minutes before making up to volume (5ml geochem, 10ml assay) with distilled water. Shake and let stand before analysis

Limitations:

Prills from samples with high gold content may not digest. If the prill refuses to digest place it in some lead along with some more silver and re-cupell.

Elements:

Au Pt Pd

Comments:

The silver prill will contain roughly 10mg silver.

Prepared by	Approved by	Date

XRAL **X-Ray Assay Laboratories**
A Division of SGS Supervision Services Inc.

Acid Extraction, determination by DCP Spectroscopy - Up to 16 elements

Description:

A quarter gram sample is digested with 2 ml of nitric acid for one half hour in a water bath, then 1 ml of hydrochloric acid is added and the digestion continues for another 2 hours. Test tubes are shaken at regular intervals.

In house standards and previously analysed samples are run to monitor proper digestion procedures. Synthetic standards are used to calibrate the instrument.

Limitations:

The nitric aqua regia extraction will not completely extract Cr.

Elements:

Cd	1ppm	Pb	2ppm	Ag	0.5ppm
Ca	100ppm	Mg	100ppm	Na	100ppm
Cr	2ppm	Mn	2ppm	Ti	10ppm
Co	1ppm	Mo	1ppm	Zn	.5ppm
Cu	.5ppm	Ni	1ppm		
Fe	100ppm	P	10ppm		

Prepared by	Approved by	Date

APPENDIX C

SAMPLE \ PPM	RB	Y	ZR	BA
SA19872	<10	22	64	94
SA19873	<10	26	61	175
SA19874	<10	24	60	133
SA19875	57	25	105	638
SA19878	18	12	59	150
SA19879	<10	14	51	99
SA19880	23	14	89	103
SA19881	<10	30	61	103
SA19882	24	20	85	221
SA19883	<10	15	112	188
SA19884	27	29	75	199
SA19885	<10	28	134	141
SA19886	16	12	75	98
SA19887	27	16	78	236
SA19888	75	14	140	405
SA19889	29	19	152	425
SA19890	150	19	187	807
SA19891	26	17	168	340
SA19892	55	19	173	532
SA19893	18	14	160	238
SA21865	12	24	164	248
SA21866	<10	19	74	106
SA21867	13	22	46	185
SA21868	90	<10	50	359
SA21869	131	<10	69	341
SA21870	17	36	74	178
SA21871	<10	19	52	76
SA21872	15	15	60	85
SA21873	<10	14	136	154
SA21874	<10	21	95	117
SA21875	26	<10	151	206
SA21876	18	30	133	155
SA21877	22	30	122	167
SA21878	13	<10	82	143
SA21879	17	24	82	183
SA21880	<10	28	55	95
SA21881	<10	22	75	104
SA21882	<10	11	55	194
SA21883	20	22	42	145
SA21884	22	26	156	86
SA21885	25	24	172	122
SA21886	28	18	53	297
SA21887	16	14	67	124

SAMPLE \ %	SIO2	AL203	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA21888	53.0	13.4	7.47	3.95	1.32	1.74	8.90	.18	1.15	.09	.02	8.70	100.0
SA21889	59.0	15.4	3.91	2.69	3.54	1.57	7.52	.11	.951	.23	.01	4.40	99.4
SA21890	63.0	14.7	2.21	2.73	4.74	.35	7.96	.11	.993	.26	<.01	2.90	100.0
SA21891	58.7	15.0	2.94	3.96	2.16	1.03	10.1	.12	1.02	.27	<.01	3.90	99.3
SA21892	46.1	11.8	7.33	9.41	.15	.05	12.9	.14	.806	.23	.10	10.5	99.5
SA21893	48.6	14.1	7.70	6.97	2.73	.65	14.6	.30	1.17	.10	.02	3.20	100.2
SA21894	50.6	14.8	9.44	4.75	3.74	.33	12.4	.28	1.18	.11	.02	2.20	99.9
SA21895	51.7	13.5	8.84	5.13	2.91	.63	12.1	.28	1.36	.16	.02	2.85	99.5
SA21896	57.0	16.2	6.92	3.08	2.91	.57	8.99	.25	1.48	.13	.03	3.05	100.7
SA21897	43.3	14.3	8.91	5.87	.73	.11	20.6	.64	1.05	.08	.03	4.35	100.0
SA21898	58.9	15.9	2.70	4.12	2.16	2.33	7.74	.15	1.35	.10	.03	4.50	100.0
SA21899	59.7	15.0	7.28	3.74	3.92	.29	6.22	.18	1.23	.10	.04	2.20	99.9
SA21900	53.1	15.0	10.7	4.31	.89	.03	10.1	.21	1.17	.10	.03	4.10	99.8
SA44048	53.2	15.0	9.04	4.63	.82	1.05	11.3	.30	1.33	.12	.02	3.10	100.0
SA44049	56.0	16.1	8.72	3.24	3.08	.86	7.59	.21	1.46	.14	.03	2.75	100.2
SA44050	51.3	13.6	9.55	5.30	2.30	.35	12.9	.28	1.40	.13	.02	2.30	99.5

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA19872	53.5	13.3	7.14	5.28	3.30	.10	11.4	.27	1.29	.11	.02	2.60	98.3
SA19873	49.9	12.9	7.61	8.50	3.40	.32	10.4	.27	.701	.26	.06	3.90	98.2
SA19874	52.9	14.9	4.76	5.28	2.67	.07	11.8	.28	1.24	.10	.02	5.15	99.2
SA19875	62.0	13.6	1.73	3.64	.26	2.10	8.69	.07	1.02	.15	<.01	5.05	98.4
[illegible]	57.5	14.7	7.81	3.56	3.63	.36	7.39	.18	1.24	.10	.04	2.15	98.7
SA19879	50.3	15.0	9.44	5.29	1.90	.16	11.8	.26	1.11	.09	.02	3.55	98.9
SA19880	52.1	14.7	4.59	6.88	3.29	.08	10.9	.27	.710	.30	.05	6.30	100.2
SA19881	49.8	15.8	10.9	3.73	2.57	.32	11.4	.28	1.19	.10	.04	2.60	98.8
SA19882	50.1	14.7	9.12	4.25	2.26	.55	13.6	.30	1.46	.12	.03	3.05	99.6
SA19883	57.1	16.4	6.17	2.63	3.69	.36	8.58	.16	1.13	.11	.02	3.10	99.5
SA19884	50.4	15.0	9.45	5.20	2.61	.65	11.1	.29	1.30	.16	.02	1.95	98.2
SA19885	51.9	13.9	9.76	5.06	2.94	.34	12.9	.27	1.30	.15	.03	1.50	100.1
SA19886	48.5	15.0	11.2	4.20	1.91	.33	14.9	.37	1.14	.09	.03	1.70	99.4
SA19887	50.4	15.0	9.61	5.77	2.40	.73	12.3	.28	1.20	.11	.02	2.20	100.1
SA19888	54.3	15.9	3.57	4.91	1.54	1.91	8.97	.18	.995	.19	.02	7.10	99.7
SA19889	59.5	17.9	1.49	1.87	2.79	1.59	7.83	.13	1.18	.21	.03	5.00	99.6
SA19890	56.4	16.3	2.39	3.59	1.32	4.15	8.02	.09	.927	.18	<.01	5.10	98.6
SA19891	61.4	15.6	1.88	2.40	6.59	1.21	6.63	.06	.952	.19	<.01	2.50	99.5
SA19892	60.8	15.7	4.24	2.66	5.20	1.59	5.87	.09	.766	.17	<.01	2.90	100.1
SA19893	58.6	15.2	7.02	3.50	2.20	.78	7.88	.12	.877	.17	<.01	3.60	100.0
SA21865	52.5	13.8	6.08	6.60	2.78	.62	10.7	.20	1.21	.21	.03	3.60	98.4
SA21866	48.0	16.2	7.76	4.66	2.19	.32	11.6	.27	1.28	.11	.03	5.80	98.2
SA21867	54.9	17.8	6.13	3.89	5.03	.66	5.27	.14	1.18	.09	.04	4.20	99.4
SA21868	49.5	14.4	9.09	3.71	1.08	2.35	6.86	.16	1.23	.10	.03	11.0	99.6
SA21869	54.8	16.5	6.07	2.37	1.64	3.19	4.45	.12	1.41	.11	.03	7.90	98.7
SA21870	55.2	16.0	6.06	4.86	3.90	.55	7.46	.18	1.32	.18	.04	3.85	99.6
SA21871	40.6	12.5	12.5	6.32	.43	.18	21.9	.54	1.09	.08	.03	3.50	99.7
SA21872	52.0	14.3	9.61	4.96	2.25	.28	9.90	.24	1.18	.10	.02	3.75	98.6
SA21873	55.2	14.0	2.73	6.75	2.35	.16	11.1	.18	.968	.33	.05	5.20	99.1
SA21874	53.6	15.9	4.68	6.01	3.06	.06	10.3	.12	1.04	.18	.02	4.05	99.1
SA21875	57.7	14.5	3.58	3.59	3.36	.58	10.3	.12	.794	.11	.01	5.40	100.1
SA21876	51.4	14.5	8.69	4.99	3.24	.42	10.8	.22	1.37	.16	.02	2.40	98.2
SA21877	50.7	13.7	10.5	5.56	2.01	.57	13.6	.31	1.27	.14	.03	1.80	100.2
SA21878	50.7	13.2	9.96	5.46	2.27	.23	14.6	.37	1.27	.10	.04	1.60	99.8
SA21879	46.8	12.6	11.1	5.73	.97	.49	19.4	.45	1.14	.10	.03	2.05	100.1
SA21880	49.0	15.2	8.98	6.13	1.80	.21	13.3	.32	1.09	.10	.03	3.65	99.8
SA21881	50.4	16.2	9.49	5.68	2.84	.26	10.2	.23	1.19	.11	.04	2.60	99.3
SA21882	44.9	14.7	8.17	8.03	1.40	.26	15.7	.32	1.18	.08	.04	4.05	98.8
SA21883	46.7	15.0	7.46	7.56	2.46	.41	12.3	.24	.969	.08	.03	6.90	100.1
SA21884	53.8	14.2	8.20	5.35	2.61	.14	10.5	.22	1.18	.24	.04	3.40	99.9
SA21885	53.0	14.5	4.61	5.98	2.92	.31	11.2	.25	1.25	.25	.04	4.50	98.8
SA21886	55.8	15.1	4.57	6.58	3.23	.82	8.64	.20	1.22	.09	.04	3.30	99.6
SA21887	54.8	14.9	8.94	3.53	1.42	.27	11.0	.22	1.22	.10	.04	3.70	100.2

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA21887	43	65.4	.2	43	16	98.7	--
SA21888	42	86.1	<.1	31	17	76.2	--
SA21889	19	13.8	<.1	16	12	79.5	--
SA21890	21	4.1	<.1	19	18	93.0	--
SA21891	35	58.3	<.1	30	17	126	--
SA21892	86	2.2	<.1	36	15	114	--
SA21893	42	228	<.1	23	15	37.8	--
SA21894	25	99.2	<.1	13	16	25.3	--
SA21895	26	8.6	<.1	22	12	37.5	--
SA21896	59	3.0	<.1	29	14	64.5	--
SA21897	45	47.6	.2	28	16	77.4	--
SA21898	42	1.9	<.1	21	14	66.8	--
SA21899	40	40.6	<.1	25	16	26.0	--
SA21900	52	116	<.1	36	17	204	--
SA44048	33	7.0	<.1	20	15	65.2	--
SA44049	39	7.7	<.1	21	14	48.5	--
SA44050	35	161	<.1	34	16	42.9	--

D - QUALITY CONTROL DUPLICATE

SAMPLE	MO PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA19872	26	35.0	<.1	24	14	73.3	--
SA19873	57	33.8	<.1	25	16	76.6	--
SA19874	50	21.2	<.1	38	14	95.8	--
SA19875	64	2.5	<.1	24	12	104	--
SA19878	59	65.9	.1	36	11	58.3	--
SA19879	51	163	.1	39	14	68.5	--
SA19880	55	46.7	<.1	39	12	130	--
SA19881	64	39.3	<.1	39	13	34.3	--
SA19882	55	10.2	<.1	40	14	70.3	--
SA19883	40	60.0	<.1	25	12	50.8	--
SA19884	25	6.8	<.1	15	10	32.5	--
SA19885	20	40.9	<.1	15	12	41.4	--
SA19886	54	129	<.1	25	13	53.3	--
SA19887	45	87.0	<.1	25	12	44.0	--
SA19888	119	21.4	<.1	35	12	112	--
SA19889	69	7.8	<.1	20	10	83.0	--
SA19890	46	3.4	<.1	20	12	80.8	--
SA19891	26	66.9	<.1	18	15	34.8	--
SA19892	56	110	<.1	14	17	43.0	--
SA19893	51	5.4	<.1	19	14	67.3	--
SA21864	63	401	.5	--	15	117	3
SA21865	102	33.3	<.1	24	12	85.0	--
SA21866	110	46.9	<.1	42	13	146	--
SA21867	98	12.6	<.1	34	13	142	--
SA21868	67	5.4	<.1	48	14	87.8	--
SA21869	45	81.9	<.1	27	11	85.3	--
SA21870	46	7.8	<.1	30	13	62.2	--
SA21871	27	102	.5	61	14	52.8	--
SA21872	37	29.3	<.1	26	12	73.4	--
SA21873	64	6.7	<.1	30	10	148	--
SA21874	117	9.5	<.1	33	10	92.5	--
SA21875	126	70.6	<.1	31	14	116	--
SA21876	32	60.8	<.1	16	12	38.4	--
SA21877	22	95.9	<.1	12	14	41.5	--
SA21878	40	155	<.1	25	11	46.5	--
SA21879	53	114	<.1	32	9	54.3	--
SA21880	83	131	<.1	40	14	79.3	--
SA21881	72	65.6	<.1	30	14	69.8	--
SA21882	81	230	<.1	52	15	195	--
SA21883	82	5.9	<.1	34	14	81.5	--
SA21884	93	46.8	<.1	26	16	56.6	--
SA21885	133	3.3	<.1	28	15	108	--
SA21886	51	14.5	<.1	42	14	58.8	--

SAMPLE \ PPM	RB	Y	ZR	BA
SA19897	39	11	146	252
SA19898	27	13	147	316
SA19899	93	35	155	562
SA19900	26	13	130	284
SA199[illegible]				
SA199[illegible]				
SA199[illegible]				
SA199[illegible]				
SA19998	93	30	166	485
SA19999	55	<10	194	305
SA20000	39	12	129	326
SA32014	50	18	177	573
SA32016	184	18	185	1110
SA32017	23	13	165	316
SA32018	45	<10	136	300
SA32019	43	29	173	374
SA32020	75	<10	132	507
SA32021	<10	27	156	272
SA32022	104	<10	161	683
SA32023	95	30	164	560
SA32024	34	16	126	509
SA32025	<10	18	65	276
SA32026	67	<10	123	212
SA32027	11	21	150	127
SA32028	35	30	185	767
SA32029	<10	16	115	95
SA32030	19	<10	83	54
SA32031	20	<10	102	64
SA32032	133	<10	166	659
SA32033	95	39	390	1060
SA32034	100	11	161	539
SA32036	101	<10	163	467
SA32037	73	16	158	546
SA32038	143	<10	195	752
SA32039	48	14	155	288
SA32040	59	19	167	455
SA32041	<10	23	139	407
SA32042	100	16	224	569
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SA32045	13	21	138	412
SA32046	78	24	183	537
SA32047	71	<10	162	532
SA32048	66	23	222	537

D - QUALITY CONTROL DUPLICATE

SAMPLE \ PPM	RB	Y	ZR	BA
SA15367	92	26	176	609
SA15368	19	41	216	292
SA15369	20	16	142	216
SA15370	27	28	199	199
SA15372	15	25	122	143
SA15373	28	12	66	191
SA15374	79	32	228	616
SA15375	46	27	155	430
SA15376	62	23	135	459
SA15377	30	33	198	318
SA15378	35	<10	109	267
SA15379	52	20	132	433
SA15380	<10	22	91	<50
SA15383	19	12	136	293
SA15384	40	37	256	368
SA15385	56	27	196	294
SA15386	62	21	141	411
SA15388	46	16	97	326
SA15393	<10	24	98	59
SA15394	132	18	179	666
SA15395	153	16	182	839
SA15396	<10	<10	115	124
SA15397	85	<10	149	510
SA15398	58	16	142	665
SA15399	31	16	143	242
SA15400	93	<10	168	490
SA19817	68	17	133	409
SA19818	90	29	165	598
SA19823	79	20	96	366
SA19824	49	20	89	481
SA19825	98	52	164	240
SA19826	128	38	134	263
SA19894	60	12	155	461

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA19897	60.0	15.6	1.33	3.75	5.84	1.11	6.79	.06	.743	.13	.02	3.05	98.5
SA19898	57.8	16.0	5.43	3.44	3.88	1.04	7.74	.12	.761	.15	.01	4.10	100.5
SA19899	60.3	18.6	.30	2.69	2.79	3.14	6.98	.06	1.25	.23	.03	4.05	100.5
SA19900	62.1	15.0	5.37	2.90	4.20	1.03	4.75	.10	.859	.17	.03	3.00	99.6
SA19998	61.7	17.0	.84	2.01	2.93	2.91	7.19	.12	.916	.15	.02	4.15	100.0
SA19999	64.2	17.0	1.16	2.02	4.71	1.63	5.62	.07	.722	.14	.02	2.85	100.2
SA20000	65.4	17.3	.71	1.96	4.53	1.25	5.28	.08	.568	.09	.01	3.30	100.5
SA32014	62.9	14.5	3.52	1.95	5.15	1.56	6.92	.11	.834	.20	.01	2.50	100.2
SA32016	57.9	16.4	1.68	3.83	1.57	4.38	8.76	.09	.894	.19	<.01	4.05	99.9
SA32017	62.5	14.5	3.31	3.12	4.58	1.03	7.57	.10	.793	.16	.02	2.50	100.2
SA32018	60.0	15.9	5.92	3.36	3.96	1.03	6.42	.11	.735	.14	.02	2.60	100.3
SA32019	67.5	14.6	3.12	1.50	4.86	1.19	4.60	.08	.660	.13	.03	1.70	100.0
SA32020	58.0	16.5	6.00	3.90	3.46	2.48	6.67	.10	.704	.13	.01	2.55	100.6
SA32021	58.6	17.1	5.47	3.38	4.63	.64	7.09	.11	.794	.15	.01	2.50	100.5
SA32022	57.3	16.9	3.27	3.22	3.24	2.84	7.38	.10	.873	.14	<.01	4.10	99.5
SA32023	56.8	14.8	4.82	3.70	2.57	2.54	8.31	.13	.805	.21	.02	5.75	100.6
SA32024	57.6	15.7	6.77	3.02	3.50	2.06	7.08	.11	.714	.14	.01	3.20	100.0
SA32025	49.1	13.1	6.02	8.53	2.04	1.27	10.4	.21	.652	.24	.07	8.50	100.2
SA32026	56.8	15.0	6.93	2.05	3.14	1.95	6.09	.16	.914	.19	.03	6.80	100.1
SA32027	53.6	16.5	6.41	2.68	2.87	.46	12.6	.22	1.12	.21	.03	3.25	100.0
SA32028	59.9	15.4	3.62	3.01	4.70	1.75	7.33	.09	.919	.23	.02	3.10	100.2
SA32029	53.9	15.1	9.72	3.27	1.51	.33	11.0	.19	.910	.16	.06	3.90	100.1
SA32030	48.9	5.41	9.86	16.7	.43	.17	13.0	.22	.979	.11	.16	4.35	100.3
SA32031	46.6	6.02	8.96	17.8	.44	.27	13.6	.20	1.04	.13	.16	4.55	99.8
SA32032	58.4	16.4	2.51	3.55	2.18	3.53	7.67	.13	.777	.16	<.01	4.90	100.3
SA32033	45.5	13.1	6.97	4.29	2.73	2.66	17.8	.25	3.66	1.22	<.01	1.15	99.5
SA32034	61.5	19.5	1.56	1.23	3.81	3.15	3.84	.04	1.06	.19	.03	3.75	99.7
SA32036	64.3	15.0	3.11	1.50	2.63	3.31	4.85	.07	.866	.16	.02	4.40	100.3
SA32037	59.0	15.2	4.42	3.98	1.86	2.11	9.08	.13	.832	.18	.03	3.45	100.4
SA32038	58.1	16.6	1.67	3.92	1.34	4.24	8.71	.11	.880	.19	.01	4.65	100.5
SA32039	57.4	16.1	3.32	3.45	4.68	.89	9.80	.17	.738	.15	.02	3.15	99.1
SA32040	63.8	13.2	4.47	2.23	2.90	2.01	5.79	.11	.651	.14	.01	4.95	100.3
SA32041	60.8	14.1	2.33	3.15	4.33	1.37	8.55	.13	.953	.13	<.01	3.50	99.4
SA32042	54.7	16.7	3.70	4.20	1.96	2.84	10.1	.17	.964	.23	.01	4.80	100.4
SA32045	57.4	14.2	3.58	5.41	4.15	1.08	7.78	.15	.728	.13	.03	5.30	100.0
SA32046	66.6	14.3	1.85	2.33	2.73	2.36	5.81	.09	.746	.15	.01	3.30	100.4
SA32047	54.3	16.5	3.57	4.05	3.15	2.12	8.64	.13	.788	.15	.01	5.20	98.7
SA32048	54.6	17.5	3.91	4.31	2.89	1.85	9.82	.14	.995	.21	.01	3.90	100.2
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D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA15367	65.7	16.9	1.24	1.83	2.35	3.13	5.22	.07	.640	.12	.01	3.15	100.5
SA15368	57.1	16.1	3.77	4.43	3.58	.81	8.68	.11	.932	.22	.02	4.00	99.8
SA15369	57.8	15.6	5.46	3.00	4.11	.80	6.68	.10	.761	.13	.01	4.45	98.9
SA15370	54.7	15.4	5.64	3.65	4.09	.59	8.82	.14	.893	.23	.02	5.45	99.7
SA15372	47.9	14.0	5.97	7.00	2.48	.35	9.49	.18	.881	.16	.04	11.6	100.1
SA15373	45.4	9.98	9.11	6.09	1.32	.93	10.7	.47	.641	.26	.18	15.2	100.3
SA15374	65.8	14.7	.47	2.72	2.45	2.56	6.88	.07	.873	.17	.03	3.60	100.4
SA15375	58.5	17.0	2.39	4.00	3.51	1.71	7.39	.08	.815	.13	.01	4.45	100.1
SA15376	60.3	17.0	4.53	1.27	4.19	2.14	5.11	.12	.793	.14	.01	4.75	100.4
SA15377	56.0	15.8	5.12	4.63	3.00	.73	9.29	.13	.901	.23	.02	4.35	100.3
SA15378	57.6	17.5	2.49	3.74	5.47	.93	7.32	.08	.781	.18	.02	4.50	100.7
SA15379	64.1	14.4	1.36	2.99	3.33	1.63	6.42	.11	.608	.15	.04	3.95	99.2
SA15382	50.3	12.4	9.81	5.21	1.44	.11	16.3	.22	1.65	.22	.02	2.75	100.5
SA15383	55.1	17.3	5.39	2.41	3.96	1.26	4.22	.20	.803	.17	.01	8.55	99.4
SA15384	72.5	12.1	2.58	1.33	1.47	1.37	2.98	.12	.293	.04	.02	5.35	100.2
SA15385	71.2	11.1	2.31	1.77	.60	2.01	5.22	.17	.213	.04	.02	5.40	100.1
SA15386	55.7	15.8	3.92	2.59	1.38	2.78	8.46	.17	.755	.15	<.01	8.70	100.5
SA15388	71.1	13.3	1.81	.87	2.99	1.86	3.71	.04	.753	.05	.03	3.70	100.3
SA15393	47.0	13.6	7.59	6.21	3.24	.16	15.9	.21	1.64	.15	.01	3.15	98.9
SA15394	57.4	18.0	2.56	3.33	2.43	3.57	6.60	.06	.990	.15	<.01	4.20	99.4
SA15395	58.3	18.7	1.49	3.00	2.65	4.47	5.55	.05	1.03	.16	<.01	4.30	99.8
SA15396	54.1	11.2	.92	14.1	.17	.06	10.0	.11	.695	.33	.17	7.18	99.1
SA15397	56.2	16.6	4.84	3.58	2.92	2.46	7.17	.10	.769	.14	<.01	5.25	100.1
SA15398	55.1	16.0	5.81	3.38	2.83	2.36	6.95	.12	.729	.13	<.01	6.85	100.4
SA15399	57.5	15.9	5.42	3.70	3.60	.91	7.22	.11	.733	.13	<.01	4.30	99.6
SA15400	58.6	15.9	2.88	2.92	1.38	3.11	8.88	.07	.897	.14	.03	4.95	99.8
SA19817	57.1	16.2	5.32	3.72	3.08	2.24	5.76	.14	.747	.15	<.01	6.05	100.6
SA19818	60.8	17.7	.78	2.95	2.20	2.60	7.58	.09	.859	.14	.01	3.80	99.6
SA19823	50.9	15.6	7.11	3.93	1.76	2.03	8.95	.23	1.51	.12	.03	8.10	100.3
SA19824	48.4	14.3	6.44	5.79	.18	1.50	12.4	.24	1.26	.08	.03	8.45	99.1
SA19825	71.2	12.3	1.66	1.66	.24	2.64	6.02	.12	.153	.02	.02	3.60	99.7
SA19826	77.4	11.6	1.52	.51	.27	3.37	1.23	.07	.121	.02	<.01	3.25	99.4
SA19894	58.7	16.8	3.19	3.36	3.98	2.28	6.55	.10	.819	.16	.01	3.05	99.1

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA32046	53	35.9	.2	16	7	75.8	--
SA32047	55	70.3	<.1	23	9	89.4	--
SA32048	60	34.6	.3	22	5	102	--

D - QUALITY CONTROL DUPLICATE

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA19897	64	22.2	.3	20	9	32.2	--
SA19898	54	133	<.1	23	6	77.0	--
SA19899	65	29.5	.4	24	9	58.7	--
SA19900	89	21.5	.1	17	7	47.8	--
SA19998	47	67.1	.3	30	11	91.1	--
SA19999	43	28.3	.7	18	6	85.2	--
SA20000	18	10.0	<.1	9	10	53.2	--
SA32014	23	18.1	<.1	10	9	56.4	--
SA32015	6	25.8	.7	--	13	8.9	13
SA32016	42	3.8	.6	14	9	56.5	--
SA32017	49	13.4	.4	23	8	41.4	--
SA32018	46	12.0	<.1	14	15	38.9	--
SA32019	21	24.0	.2	11	15	29.2	--
SA32020	45	20.3	<.1	14	8	37.7	--
SA32021	45	21.1	<.1	21	24	58.6	--
SA32022	27	74.4	.4	26	19	64.7	--
SA32023	56	53.3	.1	19	11	67.4	--
SA32024	39	14.6	.3	13	18	40.9	--
SA32025	85	10.1	.2	32	10	115	--
SA32026	107	5.8	.6	21	12	58.8	--
SA32027	77	16.5	.4	22	27	84.0	--
SA32028	39	15.5	<.1	18	26	37.0	--
SA32029	176	15.1	<.1	30	14	60.2	--
SA32030	294	91.3	.4	30	9	47.3	--
SA32031	522	28.3	.3	47	6	55.2	--
SA32032	72	5.2	.3	18	7	75.0	--
SA32033	25	38.0	<.1	33	10	97.7	--
SA32034	82	89.6	.4	20	14	42.2	--
SA32035	39	417	.7	--	15	35.8	7
SA32036	23	20.9	.2	10	10	27.6	--
SA32037	51	15.2	.3	19	6	83.6	--
SA32038	53	15.9	<.1	18	70	85.0	--
SA32039	62	30.9	.4	20	8	105	--
SA32040	45	37.8	.4	14	14	66.1	--
SA32041	32	50.6	<.1	19	36	86.2	--
SA32042	63	19.2	<.1	22	8	98.4	--
SA32045	119	25.4	<.1	23	14	79.8	--

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA15367	35	25.2	.2	14	6	54.6	--
SA15368	118	50.1	.2	40	7	96.2	--
SA15369	44	7.0	.3	19	13	63.7	--
SA15370	65	26.2	.5	24	10	82.1	--
SA15371	152	147	2.3	--	232	160	61
SA15372	167	5.6	.8	30	26	110	--
SA15373	456	17.3	.5	49	6	115	--
SA15374	68	34.3	<.1	19	19	86.3	--
SA15375	49	35.1	.1	21	9	76.5	--
SA15376	29	29.5	.5	13	10	53.7	--
SA15377	80	52.0	<.1	37	12	114	--
SA15378	46	42.8	<.1	12	10	69.5	--
SA15379	81	33.5	.2	21	11	90.5	--
SA15380	58	101	.5	33	15	[illegible]	
[illegible]	[illegible]	[illegible]	.6	10	15	47.2	--
SA15384	7	5.4	.4	3	8	28.4	--
SA15385	68	6.3	.5	18	11	60.6	--
SA15386	52	25.1	.1	22	10	81.7	--
SA15387	50	36.3	1.9	--	39	39.2	38
SA15388	78	10.5	.4	12	8	50.4	--
SA15393	38	70.1	<.1	32	14	64.7	--
SA15394	57	110	.3	21	18	36.2	--
SA15395	61	20.8	.3	19	13	44.3	--
SA15396	508	2.8	<.1	43	8	100	--
SA15397	51	61.8	<.1	21	10	76.0	--
SA15398	44	7.5	<.1	17	11	66.9	--
SA15399	48	13.0	<.1	20	12	67.1	--
SA15400	120	86.5	<.1	32	15	140	--
SA19817	43	9.2	.2	16	15	75.5	--
SA19818	57	24.1	<.1	22	18	86.1	--
SA19823	63	122	.6	44	12	85.9	--
SA19824	75	24.2	.3	44	18	131	--
SA19825	19	9.2	.1	2	10	95.5	--
SA19826	2	5.1	.2	1	9	20.1	--
SA19894	45	10.5	.4	10	11	48.4	--

SAMPLE \ PPM	RB	Y	ZR	BA
SA48177	100	18	104	485
SA48178	34	22	166	312

D - QUALITY CONTROL DUPLICATE

SAMPLE \ PPM	RB	Y	ZR	BA
SA05734	<10	18	63	99
SA05735	68	12	136	570
SA05736	47	13	128	549
SA05737	57	<10	133	415
SA05740	44	14	162	456
SA05741	26	<10	153	161
SA05743	62	<10	166	341
SA05744	133	<10	143	998
SA05745	58	15	167	570
SA05747	43	26	183	502
SA05749	35	<10	106	340
SA05750	<10	35	200	108
SA16890	92	28	207	600
SA16891	90	27	158	538
SA16892	23	16	172	184
SA16897	17	13	155	253
SA16898	<10	<10	95	104
SA16899	156	<10	156	1080
SA16900	33	<10	130	249
SA17850	80	<10	200	562
SA32335	<10	25	54	101
SA32337	49	17	149	351
SA32338	46	20	156	386
SA32339	<10	28	153	93
SA32340	<10	23	117	115
SA32341	<10	41	158	103
SA32342	<10	42	153	114
SA32343	<10	29	150	95
SA32344	<10	30	88	90
SA32345	<10	31	99	104
SA32346	13	29	122	271
SA32348	84	12	158	1270
SA32349	23	15	64	101
SA32350	<10	19	118	59

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA48177	63.1	15.0	3.29	1.96	3.10	2.66	5.51	.09	.377	.09	.01	4.68	99.9
SA48178	61.4	14.8	1.73	4.04	4.00	1.20	7.63	.10	.826	.18	.02	4.00	100.0

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA05734	44.4	14.5	6.74	5.10	1.68	.05	20.8	.66	1.15	.10	.04	4.90	100.1
SA05735	54.3	15.4	4.60	4.79	2.50	1.79	9.15	.20	.836	.17	.03	6.25	100.1
SA05736	58.3	15.5	4.14	4.75	2.88	1.92	5.11	.11	.787	.16	.03	5.65	99.4
SA05737	60.7	16.7	1.78	2.89	5.33	1.65	5.60	.06	.848	.17	.04	3.70	99.5
SA05740	60.7	15.0	2.95	3.19	3.18	1.62	7.51	.10	.784	.17	.03	4.10	99.4
SA05741	62.9	13.9	2.89	2.72	5.43	.38	5.88	.11	.713	.16	.02	3.45	98.6
SA05743	54.8	14.9	5.13	2.98	4.55	1.58	7.70	.12	.768	.17	.02	6.15	98.9
SA05744	57.5	17.0	1.13	3.84	.81	4.66	8.27	.09	.793	.15	.02	4.70	99.1
SA05745	65.2	14.4	1.87	2.02	2.98	2.35	6.16	.10	.729	.15	.02	3.75	99.8
SA05747	65.7	13.4	2.20	2.41	3.16	1.93	5.86	.09	.686	.14	.02	3.55	99.2
SA05749	62.3	19.8	.89	1.36	8.89	1.26	2.18	.04	.297	.07	.02	2.25	99.4
SA05750	51.2	13.5	7.45	5.20	3.60	.12	9.05	.17	.794	.45	.02	7.50	99.1
SA16890	65.4	14.6	.97	2.45	2.66	2.71	6.25	.07	.753	.15	.02	3.30	99.4
SA16891	68.9	12.4	2.50	1.64	2.15	2.47	4.91	.09	.645	.14	.03	3.40	99.4
SA16892	59.6	15.8	4.34	3.44	4.21	.51	7.94	.12	.812	.18	.02	3.05	100.1
SA16897	55.6	16.9	3.63	4.75	4.82	.72	6.98	.14	.920	.19	.04	4.45	99.2
SA16898	53.0	12.9	6.08	7.59	2.89	.21	7.52	.18	.693	.21	.07	8.10	99.5
SA16899	63.1	16.9	2.79	1.50	3.20	4.31	3.33	.05	.451	.15	.02	3.70	99.7
SA16900	56.7	14.9	4.21	5.39	4.55	.78	6.31	.13	.792	.15	.04	5.65	99.7
SA17850	64.7	13.8	2.16	2.56	2.33	2.65	5.95	.09	.671	.14	.02	4.25	99.4
SA32335	43.9	14.0	7.63	7.49	1.46	.26	14.6	.23	1.15	.09	.03	7.55	98.4
SA32337	56.9	14.9	4.71	3.81	3.78	1.39	7.89	.15	.705	.14	.02	5.95	100.4
SA32338	65.3	13.0	1.90	2.75	3.26	1.56	6.40	.10	.653	.12	.03	4.15	99.3
SA32339	42.9	14.0	6.68	5.96	1.90	.14	17.4	.23	2.05	.22	.03	6.70	98.2
SA32340	48.0	13.5	9.33	5.64	2.01	.27	16.0	.22	1.65	.16	.03	3.35	100.2
SA32341	46.7	13.3	7.84	6.80	1.81	.23	17.7	.23	1.95	.23	.02	3.55	99.6
SA32342	46.3	13.4	7.32	6.61	2.71	.25	16.0	.21	1.71	.23	.03	3.70	98.5
SA32343	47.0	13.0	6.31	4.66	1.70	.16	19.0	.31	2.19	.21	.02	5.55	100.1
SA32344	46.2	13.2	8.48	6.80	2.03	.25	17.1	.23	1.70	.16	.02	3.25	99.4
SA32345	48.0	12.5	7.57	7.33	2.29	.27	15.1	.20	1.66	.16	.01	3.55	98.7
SA32346	47.8	13.0	5.84	5.89	3.03	.82	17.8	.22	1.87	.26	.02	2.70	99.3
SA32348	61.1	15.6	1.59	3.31	4.07	4.01	5.57	.09	.591	.19	.04	3.20	99.5
SA32349	48.9	14.8	8.76	4.44	1.71	.21	13.8	.24	1.31	.11	.03	4.35	98.7
SA32350	47.9	10.6	10.2	8.30	1.28	.04	8.61	.21	.645	.40	.08	11.3	99.6

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA32337	43	44.6	.3	19	22	69.0	--
SA32346	38	59.2	<.1	30	31	83.6	--
SA32347	20	107	<.1	--	30	260	<2
SA32348	43	9.7	<.1	11	17	79.1	--
SA32349	80	70.0	.1	47	22	137	--
SA32350	216	18.5	.3	28	21	164	--
SA48177	29	39.3	.2	9	26	50.5	--
SA48178	49	32.0	<.1	20	18	68.3	--

D - QUALITY CONTROL DUPLICATE

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA05734	42	157	.4	42	11	163	--
SA05735	93	7.3	<.1	19	8	90.2	--
SA05736	91	19.4	<.1	18	6	68.9	--
SA05737	76	29.0	<.1	20	22	57.4	--
SA05738	69	24.3	.1	--	30	44.7	<2
SA05739	51	32.4	.2	--	118	41.0	<2
SA05740	45	9.7	<.1	20	9	74.9	--
SA05741	37	33.2	<.1	14	8	68.8	--
SA05742	13	21.9	<.1	--	57	7.6	7
SA05743	43	5.6	<.1	16	26	57.1	--
SA05744	46	5.3	<.1	16	9	65.7	--
SA05745	35	18.0	<.1	12	20	55.7	--
SA05746	17	22.9	<.1	--	21	13.0	5
SA05747	45	55.3	<.1	23	14	62.7	--
SA05748	11	18.2	.2	--	53	19.3	<2
SA05749	10	9.9	<.1	4	11	27.6	--
SA05750	35	50.3	.3	21	7	90.3	--
SA16890	45	43.8	.5	21	14	53.8	--
SA16891	41	49.1	.3	18	11	45.1	--
SA16892	48	26.9	<.1	18	8	75.8	--
SA16893	12	11.4	<.1	--	5	15.7	<2
SA16894	24	52.9	.3	--	36	48.7	5
SA16895	30	4.6	.2	--	6	25.2	4
SA16896	128	77.9	.2	--	9	73.7	<2
SA16897	90	48.2	.2	23	10	76.6	--
SA16898	167	3.9	<.1	27	9	93.4	--
SA16899	20	10.7	<.1	14	12	11.0	--
SA16900	112	77.3	<.1	22	7	82.5	--
SA17850	47	45.7	.2	17	25	70.1	--
SA32049	25	1820	4.1	--	56	515	<2
SA32050	92	641	2.6	--	22	1070	<2
SA32335	103	57.3	.3	46	28	123	--
SA32336	38	44.9	<.1	--	130	49.9	<2

SAMPLE \ PPM	RB	Y	ZR	BA
SA19830	58	10	87	288
SA19831	<10	15	58	69
SA19832	111	41	157	327
SA19833	120	31	131	305
SA19834	157	17	143	464
SA19835	48	<10	157	409
SA19836	53	29	135	439
SA19837	81	43	234	660
SA19838	<10	27	235	156
SA19839	61	47	311	421
SA19840	41	14	197	518

D - QUALITY CONTROL DUPLICATE

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA19830	51.2	16.4	6.46	4.65	1.24	1.37	8.92	.21	1.22	.11	.03	8.20	100.1
SA19831	47.8	13.7	7.23	7.57	1.87	.03	10.9	.20	1.12	.10	.03	9.20	99.8
SA19832	71.6	13.1	.88	1.73	.20	2.81	6.32	.08	.133	.03	.01	3.25	100.2
SA19833	78.1	10.5	1.51	.91	.20	2.97	1.67	.08	.086	.02	.01	3.25	99.4
SA19834	64.7	17.2	1.04	.90	.38	4.35	5.92	.07	.520	.06	<.01	4.10	99.3
SA19835	57.0	15.6	3.69	3.98	2.54	1.65	7.98	.12	.993	.35	.02	5.70	99.7
SA19836	56.7	16.9	3.37	4.36	3.20	1.76	6.59	.08	.585	.11	<.01	5.30	99.0
SA19837	54.0	13.3	6.39	3.08	.12	2.42	9.70	.15	2.82	.40	<.01	6.55	99.1
SA19838	52.5	14.5	4.20	5.36	2.99	.19	12.0	.13	1.84	.34	.01	5.60	99.7
SA19839	65.8	13.2	3.33	1.92	.93	2.56	5.53	.12	.592	.14	<.01	6.10	100.3
SA19840	55.1	14.9	3.49	3.70	1.78	2.00	9.81	.12	1.10	.26	<.01	7.05	99.4

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM
SA19830	107	91.5	.3	71	<5	109
SA19831	50	63.5	.1	39	<5	114
SA19832	11	24.0	.1	5	<5	116
SA19833	3	5.6	.4	2	<5	16.3
SA19834	35	35.6	.3	11	5	45.7
SA19835	67	60.7	<.1	21	5	197
SA19836	70	3.2	.2	20	13	60.5
SA19837	68	48.4	.3	33	12	94.1
SA19838	44	9.1	<.1	25	11	77.9
SA19839	3	18.0	<.1	7	<5	64.8
SA19840	28	51.1	<.1	23	<5	118

D - QUALITY CONTROL DUPLICATE

SAMPLE \ PPM	RB	Y	ZR	BA
SA18039	18	21	84	108
SA18040	75	<10	171	403
SA18041	<10	14	82	81
SA18042	26	<10	24	601
SA18043	43	<10	68	359
SA18044	13	<10	82	234
SA27791	86	28	199	571
SA27793	32	15	161	350
SA27794	<10	24	182	256
SA27797	15	20	76	114
SA27799	<10	13	79	80
SA48179	93	<10	152	391
SA48180	139	<10	179	769
SA48181	<10	27	60	115
SA48182	13	26	107	124
SA48192	121	30	194	455
SA48193	123	29	184	804
SA48194	81	13	161	512
SA48195	77	<10	149	512
SA48196	67	19	164	453
SA48197	54	<10	144	488
SA48198	12	33	156	235
SA48199	<10	22	114	102
SA48200	69	<10	159	644

XRAL

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA18039	49.4	14.5	7.91	4.89	1.94	.16	13.5	.33	1.28	.11	.03	5.40	99.5
SA18040	67.5	14.4	3.21	.90	4.22	2.16	3.03	.07	.353	.10	<.01	3.45	99.5
SA18041	44.6	13.7	8.71	4.59	2.92	.17	13.9	.29	1.20	.10	.02	8.85	99.1
SA18042	44.5	8.44	2.14	2.50	.11	1.48	26.9	.16	.768	.07	.02	10.5	95.7
SA18043	49.9	11.6	9.24	7.83	2.06	1.38	13.8	.30	.888	.08	.02	2.20	99.3
SA18044	42.9	14.4	3.34	6.41	.21	.72	22.7	.49	1.24	.11	.02	7.40	100.0
SA27791	61.2	18.3	1.04	2.22	2.61	2.88	5.70	.08	.983	.15	<.01	3.50	98.8
SA27793	63.0	16.7	1.82	2.49	4.96	1.17	5.34	.08	.696	.13	<.01	2.45	98.9
SA27794	62.5	15.4	2.50	2.85	4.51	.66	6.31	.08	.779	.16	<.01	2.50	98.3
SA27797	48.0	15.4	11.1	4.66	1.83	.47	15.2	.47	1.33	.12	.03	1.40	100.0
SA27799	47.8	13.9	11.9	4.00	1.43	.18	15.8	.38	1.26	.11	.03	2.30	99.1
SA48179	61.3	16.4	1.80	2.69	2.52	2.32	6.94	.07	.663	.13	<.01	3.70	98.6
SA48180	58.6	17.4	1.43	2.58	2.01	3.51	8.26	.09	.944	.15	<.01	3.35	98.4
SA48181	45.8	15.0	12.2	4.38	2.03	.48	15.0	.26	1.33	.11	.02	2.90	99.5
SA48182	48.3	12.8	8.31	6.13	1.83	.44	16.0	.22	1.63	.23	<.01	3.50	99.4
SA48192	64.6	15.3	2.10	1.23	5.12	2.49	5.17	.05	.622	.20	<.01	2.05	99.0
SA48193	60.5	18.1	1.54	2.23	3.01	3.63	6.82	.07	.947	.15	<.01	2.90	99.2
SA48194	63.6	16.9	.90	2.51	3.96	2.57	4.92	.05	.654	.12	<.01	2.90	99.2
SA48195	60.9	16.9	2.20	2.67	4.08	2.39	5.36	.07	.600	.13	<.01	3.15	98.5
SA48196	59.5	16.6	2.09	3.15	2.64	2.50	7.25	.09	.852	.20	.01	4.55	99.5
SA48197	62.8	16.7	2.46	2.04	4.97	1.74	4.52	.08	.551	.11	<.01	3.15	99.2
SA48198	60.0	13.6	5.41	2.82	3.97	.79	6.38	.14	.803	.20	<.01	6.15	100.3
SA48199	52.7	14.2	7.53	4.91	4.29	.31	6.45	.14	.750	.15	.02	7.90	99.4
SA48200	62.0	18.4	1.05	2.09	3.61	2.75	4.97	.07	.716	.13	<.01	3.10	99.0

SAMPLE	AU PPB	CO PPM	NI PPM	CU PPM	ZN PPM	AG PPM	PB PPM
SA48197	<5	15	32	27.3	66.4	<.1	--
SA48198	8	18	40	124	86.2	<.1	--
SA48199	<5	17	88	17.1	82.5	<.1	--
SA48200	<5	17	41	20.7	77.9	<.1	--

D - QUALITY CONTROL DUPLICATE

SAMPLE	AU PPB	CO PPM	NI PPM	CU PPM	ZN PPM	AG PPM	PB PPM
SA18039	12	42	68	33.9	113	<.1	--
SA18040	<5	7	8	6.6	21.9	<.1	--
SA18041	<5	62	89	121	166	<.1	--
SA18042	7920	77	73	<.5	815	43.0	--
SA18043	10	30	120	133	51.1	<.1	--
SA18044	14	43	79	21.3	220	<.1	--
SA18045	110	--	28	3700	135	49.0	60
SA18046	22	--	47	687	135	12.2	14
SA18047	6	--	315	113	286	<.1	<2
SA18048	10	--	44	15.5	91.2	<.1	<2
SA18049	10	--	130	14.7	133	<.1	<2
SA19840	198	--	73	222	120	6.2	74
SA19841	6	--	90	10.8	78.6	<.1	4
SA19842	14	--	57	1.9	96.0	<.1	<2
SA27791	<5	9	45	18.6	82.8	<.1	--
SA27792	<5	--	35	9.5	77.9	<.1	56
SA27793	8	16	46	17.8	81.7	<.1	--
SA27796	8	20	47	14.9	94.1	<.1	--
SA27797	<5	29	46	72.5	76.9	<.1	--
							--
SA27799	22	33	69	105	58.5	<.1	--
SA48179	8	19	54	24.5	101	<.1	--
SA48180	6	24	58	23.4	94.2	<.1	--
SA48181	6	48	64	97.6	92.3	<.1	--
SA48182	<5	35	60	50.4	112	<.1	--
SA48192	<5	7	<1	4.4	16.3	<.1	--
SA48193	6	22	52	24.2	59.7	<.1	--
SA48194	<5	17	48	10.3	83.8	<.1	--
SA48195	6	15	47	21.1	75.2	<.1	--
SA48196	6	21	78	15.2	117	<.1	--

SAMPLE \ PPM	RB	Y	ZR	BA
44145	23	<10	75	190
44146	120	<10	147	943
44147	97	13	153	833
44148	92	50	250	732
44149	112	12	115	756
44150	<10	20	57	99

D - QUALITY CONTROL DUPLICATE

SAMPLE \ PPM	RB	Y	ZR	BA
06094	<10	29	113	140
06095	<10	25	105	125
06096	<10	36	131	112
06097	30	21	79	364
06098	62	<10	125	390
06099	89	15	158	819
16100	76	16	146	438
19843	43	27	60	245
19844	71	<10	144	355
19845	76	23	158	521
19846	<10	16	69	101
19847	<10	<10	59	155
19848	51	20	42	598
19849	43	<10	43	340
30922	20	26	99	273
30923	<10	26	100	142
30924	51	26	75	176
30925	61	13	123	367
30926	53	21	66	248
30927	89	<10	189	571
30928	84	31	287	595
30929	<10	14	100	143
30930	<10	18	79	109
32276	<10	26	80	120
32277	<10	24	108	89
32278	<10	24	92	106
32279	<10	19	93	163
32280	10	14	95	105
32281	<10	25	93	111
32282	<10	25	70	111
32283	<10	34	102	113
32284	<10	33	94	110
32285	<10	25	66	134
32286	<10	17	76	57
32288	<10	<10	42	<50
44141	97	<10	146	981
44142	14	<10	92	310
44143	43	12	112	295
44144	<10	33	206	138

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
44145	45.8	7.96	4.07	19.8	.09	.05	9.80	.12	.415	.28	.27	11.5	100.2
44146	70.3	14.8	.23	1.08	.23	4.83	2.52	.03	.216	.07	<.01	2.85	97.3
44147	61.5	16.9	2.32	2.76	1.99	3.26	6.70	.09	.719	.14	.02	3.80	100.3
44148	68.6	15.0	2.02	.71	4.10	2.83	4.16	.05	.575	.18	<.01	1.80	100.2
44149	64.4	16.8	3.04	1.21	2.83	3.80	3.35	.07	.344	.10	<.01	4.05	100.1
44150	50.7	12.5	8.91	7.22	2.85	.13	13.7	.21	1.11	.10	.06	2.35	99.9

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
06094	47.8	13.4	7.67	5.82	2.00	.24	17.0	.26	1.61	.16	<.01	4.35	100.3
06095	51.5	13.5	6.66	4.94	3.87	.17	13.8	.20	1.48	.15	.02	3.15	99.5
06096	49.5	12.9	8.14	5.58	2.80	.19	16.2	.23	1.57	.19	.02	2.50	99.8
06097	48.4	14.9	6.28	4.63	2.75	.65	16.9	.27	1.21	.11	.03	4.00	100.2
06098	69.6	16.0	1.15	.56	7.25	1.48	2.15	.04	.218	.07	<.01	1.30	99.9
06099	64.5	17.3	1.42	2.08	4.40	2.74	4.44	.06	.505	.12	<.01	2.80	100.5
16100	58.8	15.3	4.54	3.64	2.55	2.14	6.79	.10	.622	.13	<.01	5.25	99.9
19843	56.5	15.3	5.51	3.08	2.36	1.66	7.92	.19	.932	.09	.02	6.60	100.2
19844	69.5	15.0	2.07	1.07	3.35	2.32	2.56	.06	.312	.10	<.01	3.30	99.7
19845	69.8	14.8	2.10	1.21	2.64	2.45	3.71	.05	.318	.10	<.01	3.05	100.3
19846	48.7	13.1	6.82	7.10	1.30	.09	12.8	.18	.955	.09	.01	8.85	100.0
19847	47.1	13.0	7.77	6.69	.88	.59	12.5	.20	.953	.10	.01	9.30	99.1
30922	51.5	16.2	2.32	5.18	2.74	.78	14.8	.35	1.25	.13	.02	4.15	99.4
30923	61.0	15.2	7.42	2.19	4.13	.31	6.58	.24	1.26	.13	.04	1.65	100.2
30924	49.0	15.4	6.26	4.97	.51	1.32	12.2	.28	1.04	.11	.03	8.90	100.1
30925	19.4	16.4	6.68	3.74	1.24	2.69	17.4	.32	1.30	.26	<.01	8.60	78.1
30926	56.7	17.0	5.11	3.41	3.20	1.32	7.94	.16	.932	.09	.04	4.60	100.5
30927	61.9	19.2	.52	2.91	1.37	2.56	6.64	.04	.712	.18	<.01	3.90	100.0
30928	68.5	14.4	1.16	2.08	.49	2.77	6.24	.05	.673	.17	<.01	3.70	100.4
30929	51.5	14.0	6.23	6.37	2.36	.26	10.8	.22	.671	.30	.04	7.45	100.2
30930	60.3	12.5	2.44	5.17	2.62	.12	9.98	.15	1.03	.12	.01	3.70	98.2
32276	51.3	14.9	9.48	4.50	1.22	.22	13.0	.24	1.20	.11	.03	3.85	100.1
32277	48.8	13.1	10.3	5.46	1.64	.15	16.4	.23	1.45	.16	.02	2.35	100.1
32278	48.0	11.6	9.78	5.47	1.73	.24	17.1	.26	1.37	.14	<.01	4.15	99.9
32279	51.7	12.6	8.68	4.55	1.58	.62	14.3	.18	1.31	.13	.01	4.05	99.7
32280	47.5	13.2	9.13	6.00	1.65	.33	16.8	.24	1.41	.14	<.01	3.10	99.5
32281	50.1	14.8	5.82	5.24	3.85	.19	14.3	.23	1.34	.11	.02	3.20	99.2
32282	45.3	14.3	10.4	6.88	2.10	.29	16.1	.23	1.22	.12	.02	2.35	99.3
32283	50.0	12.3	7.69	6.08	2.08	.17	16.6	.22	1.51	.15	<.01	3.60	100.4
32284	48.5	13.0	9.14	6.33	2.05	.30	16.1	.22	1.47	.15	.02	2.60	99.9
32285	51.3	14.6	6.63	3.71	2.90	.13	14.6	.21	1.32	.12	.02	4.10	99.7
32286	43.5	10.1	12.0	8.99	.88	.02	8.87	.23	.509	.36	.08	14.0	99.6
32288	39.8	7.15	10.5	13.4	.13	.04	8.68	.25	.382	.25	.19	18.9	99.7
44141	73.3	14.3	.50	.71	3.18	3.10	2.24	.04	.203	.07	.02	1.95	99.7
44142	51.5	11.0	6.81	7.19	2.47	.55	7.88	.23	.421	.17	.12	11.8	100.2
44143	53.5	14.0	5.53	5.01	1.01	1.42	9.48	.14	.695	.13	.01	8.40	99.3
44144	52.2	13.1	5.12	4.17	2.60	.10	14.3	.16	1.94	.37	<.01	6.45	100.6

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE	AU PPB	CO PPM	NI PPM	CU PPM	ZN PPM	AG PPM	PB PPM
40448	23	--	132	437	1550	.6	11
40449	11	--	246	240	298	.1	<2
44141	11	7	6	6.1	17.1	.2	--
44142	8	23	191	2.2	136	<.1	--
44143	6	30	112	18.7	135	<.1	--
44144	5	32	25	18.0	154	<.1	--
44145	<5	34	287	<.5	68.2	.1	--
44146	<5	2	5	.9	20.5	<.1	--
44147	8	26	59	90.8	73.3	<.1	--
44148	6	7	5	18.0	16.5	<.1	--
44149	9	13	10	34.3	31.9	<.1	--
44150	7	33	41	101	61.8	.1	--

D - QUALITY CONTROL DUPLICATE

SAMPLE	AU PPB	CO PPM	NI PPM	CU PPM	ZN PPM	AG PPM	PB PPM
06094	8	47	50	122	134	<.1	--
06095	6	40	62	95.1	96.7	.1	--
06096	8	35	44	63.5	90.9	<.1	--
06097	9	60	88	151	114	<.1	--
06098	51	5	10	14.1	8.6	<.1	--
06099	<5	19	40	34.6	65.5	<.1	--
16100	8	20	48	21.7	83.8	<.1	--
19843	<5	33	83	126	129	<.1	--
19844	8	5	6	1.4	62.1	<.1	--
19845	7	5	5	1.4	57.3	<.1	--
19846	<5	31	45	103	194	<.1	--
19847	<5	18	47	41.5	193	<.1	--
21349	5280	--	25	6120	3280	86.6	319
21350	3980	--	72	2800	6560	34.6	90
30922	52	34	67	80.9	209	1.1	--
30923	18	44	48	44.3	107	.2	--
30924	10	28	93	185	137	<.1	--
30925	68	86	100	3380	<.5	9.2	--
30926	6	33	128	129	353	.2	--
30927	<5	19	66	26.5	421	.2	--
30928	<5	12	10	5.6	123	<.1	--
30929	7	31	42	8.3	196	<.1	--
30930	12	54	50	50.5	138	.8	--
30931	33	--	63	131	205	1.7	74
32276	5	60	87	131	114	<.1	--
32277	<5	33	53	67.3	94.2	<.1	--
32278	5	34	34	45.8	91.8	.1	--
32279	10	40	51	56.6	108	<.1	--
32280	7	40	49	97.3	87.1	<.1	--
32281	14	46	76	110	97.7	<.1	--
32282	<5	35	62	112	74.8	.1	--
32283	<5	39	41	50.7	110	<.1	--
32284	<5	30	47	40.4	89.6	.2	--
32285	<5	57	82	96.0	130	<.1	--
32286	5	34	275	<.5	175	<.1	--
32287	25	--	25	21.6	113	<.1	<2
32288	<5	37	440	26.4	161	.3	--

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA-32272	51.3	14.2	6.26	5.53	2.14	2.43	6.40	.16	.417	.10	.02	11.2	100.2
SA-32273	74.7	14.0	.96	.90	.67	3.80	2.17	.05	.176	.06	<.01	2.50	100.0
SA-32274	51.0	15.5	7.30	3.91	.97	1.57	9.38	.28	.967	.08	.04	9.25	100.2
SA-32275	76.7	11.7	1.02	.60	.44	3.20	3.61	.16	.074	.03	<.01	2.55	100.1
SA-39701	76.4	12.3	1.64	.53	.86	3.29	1.84	.05	.092	.04	<.01	3.05	100.1
SA-39702	77.7	10.0	1.17	1.14	.30	2.50	4.55	.08	.050	.03	<.01	2.70	100.2
SA-39703	75.5	9.20	3.21	1.51	.33	2.64	2.32	.11	.031	.03	.02	5.25	100.2
SA-39704	60.7	9.98	.32	4.35	.15	.13	18.2	.06	.551	.08	.04	4.95	99.5
SA-39705	75.6	11.3	2.31	.79	.35	2.95	2.62	.12	.129	.05	.01	3.75	100.0
SA-39706	50.3	13.7	3.88	5.04	2.45	.38	15.1	.14	2.08	.47	<.01	6.80	100.3
SA-39707	62.0	11.5	5.23	2.92	1.77	2.04	6.25	.19	.391	.12	.01	7.90	100.3
SA-39708	46.1	15.0	3.14	5.81	2.70	.10	17.6	.16	2.30	.45	.01	7.05	100.4
SA-39709	61.8	15.2	2.35	2.72	3.98	1.67	6.84	.14	.567	.13	.01	5.05	100.5
SA-39713	45.0	12.4	8.04	5.13	.69	2.37	11.6	.46	1.12	.10	.02	13.4	100.3
SA-39714	55.3	11.1	8.13	2.51	.29	3.45	6.31	.35	.268	.37	<.01	11.0	99.1
SA-39715	76.9	12.5	.98	.79	.31	3.71	1.98	.06	.049	.03	<.01	3.05	100.4
SA-39716	60.3	9.70	6.87	3.06	.24	2.94	5.31	.25	.193	.05	<.01	10.3	99.2
SA-39717	79.9	11.3	.61	.47	.29	3.36	1.36	.04	.054	.04	<.01	1.95	99.4
SA-39718	77.4	13.3	.34	.54	.32	4.08	.98	.04	.074	.03	<.01	2.55	99.7
SA-39719	77.5	12.3	.96	.90	.31	3.72	1.58	.05	.073	.03	.01	2.85	100.3
SA-39720	75.9	11.8	.88	.90	.26	3.60	2.16	.08	.076	.03	<.01	2.55	98.2
SA-39721	76.2	10.6	.24	1.84	.23	2.80	5.15	.03	.452	.07	.01	2.60	100.2
SA-39722	66.5	14.2	1.26	3.26	.22	3.60	5.91	.10	.597	.14	<.01	4.25	100.0
SA-39723	58.2	19.5	.30	3.00	.28	4.95	7.31	.07	1.25	.10	.05	4.30	99.3
SA-39724	60.6	10.9	4.27	4.05	.20	1.89	11.6	.23	.303	.04	<.01	6.20	100.3
SA-39725	76.5	10.6	.92	1.47	.21	3.04	2.52	.06	.038	.03	<.01	2.70	98.1
SA-39726	76.5	12.2	.88	1.39	.23	3.62	2.03	.07	.049	.02	<.01	2.80	99.8
SA-39727	77.3	11.2	1.88	.84	.26	3.47	1.82	.05	.068	.02	<.01	2.35	99.3
SA-39728	77.3	12.4	.20	1.50	.27	3.55	2.41	.04	.112	.03	<.01	2.25	100.1
SA-39729	80.2	12.7	.19	.54	.27	3.84	.69	.03	.062	.03	<.01	1.90	100.1

SAMPLE	Y PPM	ZR PPM	AG PPM	BA PPM	PB PPM
SA-32272	13	94	.6	426	--
SA-32273	21	175	.3	399	--
SA-32274	20	69	.3	310	--
SA-32275	48	166	.4	295	--
SA-39701	43	133	.3	445	--
SA-39702	31	101	<.1	270	--
SA-39703	52	122	.2	269	--
SA-39704	16	73	13.6	128	--
SA-39705	13	139	.2	341	--
SA-39706	49	225	.6	250	--
SA-39707	15	94	.3	345	--
SA-39708	43	242	.5	229	--
SA-39709	18	129	.1	322	--
SA-39710	--	--	8.9	--	113
SA-39711	--	--	10.7	--	111
SA-39712	--	--	.7	--	7
SA-39713	25	78	.7	325	--
SA-39714	27	130	.4	228	--
SA-39715	41	161	<.1	170	--
SA-39716	34	121	.3	185	--
SA-39717	34	150	<.1	167	--
SA-39718	37	166	<.1	168	--
SA-39719	37	158	.1	186	--
SA-39720	42	149	<.1	193	--
SA-39721	17	120	<.1	194	--
SA-39722	28	158	<.1	279	--
SA-39723	23	81	<.1	361	--
SA-39724	33	122	.4	196	--
SA-39725	36	139	.1	173	--
SA-39726	39	158	<.1	214	--
SA-39727	37	139	<.1	235	--
SA-39728	39	158	<.1	213	--
SA-39729	33	162	.1	195	--
SA-39730	--	--	<.1	--	5
SA-39731	--	--	.2	--	2
SA-39732	--	--	<.1	--	<2
D SA-32272	13	92	.5	412	--

SAMPLE	AU PPB	CO PPM	NI PPM	CU PPM	ZN PPM	RB PPM
SA-32272	6	23	114	54.8	85.7	63
SA-32273	<5	3	2	36.3	19.9	114
SA-32274	<5	46	105	97.1	222	52
SA-32275	<5	4	13	18.2	112	103
SA-39701	<5	<1	3	5.0	29.7	106
SA-39702	<5	4	8	14.0	33.7	78
SA-39703	<5	2	6	1.8	21.1	84
SA-39704	83	48	193	1860	278	4
SA-39705	<5	1	7	11.4	34.0	85
SA-39706	<5	29	55	86.7	248	12
SA-39707	<5	16	45	13.5	85.0	60
SA-39708	<5	35	76	71.8	315	9
SA-39709	<5	21	59	38.0	112	52
SA-39710	97	--	31	50.5	67.3	--
SA-39711	348	--	48	80.9	98.3	--
SA-39712	15	--	22	20.4	48.7	--
SA-39713	<5	20	35	102	70.5	63
SA-39714	<5	10	31	19.6	22.1	106
SA-39715	<5	1	6	<.5	48.1	125
SA-39716	<5	8	28	19.2	142	88
SA-39717	<5	<1	3	.9	15.7	116
SA-39718	<5	<1	2	1.7	17.5	129
SA-39719	<5	<1	4	1.6	21.6	120
SA-39720	<5	1	3	14.7	31.5	116
SA-39721	<5	8	14	26.3	34.7	91
SA-39722	<5	12	34	14.3	60.8	111
SA-39723	<5	36	106	24.6	60.0	144
SA-39724	<5	21	36	45.0	63.2	57
SA-39725	<5	1	6	4.8	107	97
SA-39726	<5	<1	3	<.5	46.9	116
SA-39727	<5	<1	1	1.6	11.8	110
SA-39728	<5	2	9	2.8	22.4	110
SA-39729	6	2	4	7.9	6.8	127
SA-39730	8	--	2	5.3	21.2	--
SA-39731	6	--	7	65.8	52.1	--
SA-39732	8	--	36	45.2	46.3	--

SAMPLE \ PPM	RB	Y	ZR	BA
SA29566	73	13	178	612
SA29567	66	<10	162	512
SA29568	107	<10	168	700
SA29569	80	12	175	565
SA29570	68	<10	95	479
SA29571	36	<10	125	290
SA29572	<10	18	155	145
SA29573	<10	17	71	117
SA29574	<10	18	87	128
SA29575	<10	13	55	244
SA29576	<10	24	96	92
SA29577	66	21	190	568
SA29579	36	33	210	323
SA29580	131	<10	102	670
SA29587	79	12	196	557
SA29588	87	26	217	619
SA29589	116	31	205	563
SA29590	82	25	201	575
SA29591	64	21	177	336
SA29592	69	16	153	523
SA29593	117	<10	156	681
SA29594	<10	<10	131	247
SA29595	<10	12	120	84
SA29596	<10	<10	176	119
SA29597	<10	<10	97	68
SA29598	49	23	190	447
SA34387	105	30	176	797
SA34388	75	23	190	526
SA34389	33	<10	157	417
SA34390	79	<10	174	534

SAMPLE \ PPM	RB	Y	ZR	BA
SA09485	32	13	125	321
SA09486	60	10	129	287
SA09487	<10	21	140	120
SA09490	42	46	240	420
SA09491	37	42	195	397
SA19970	96	27	183	214
SA19971	145	65	161	469
SA19972	100	29	87	406
SA19973	14	17	38	107
SA19976	43	22	162	415
SA19977	38	<10	160	440
SA19978	<10	35	206	113
SA19979	41	21	192	488
SA19980	57	28	190	349
SA19981	<10	28	145	98
SA19982	66	<10	121	512
SA19983	210	33	186	313
SA19984	49	26	89	459
SA19985	14	32	235	304
SA19986	41	27	153	327
SA19987	101	<10	161	613
SA19988	22	15	88	107
SA19989	<10	<10	52	97
SA19990	73	11	84	290
SA19991	21	15	86	164
SA23537	48	26	134	425
SA23538	74	<10	128	455
SA23539	63	17	137	493
SA23540	<10	37	76	85
SA23541	10	22	103	124
SA23542	11	22	85	133
SA23543	26	31	66	367
SA23544	14	24	99	132
SA23545	<10	28	70	50
SA23546	<10	<10	65	73
SA23547	73	<10	137	431
SA23548	70	15	194	462
SA23549	58	17	177	428
SA23550	79	19	129	498
SA29564	<10	23	96	76
SA29565	32	<10	163	332

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA29566	65.0	16.9	1.30	1.97	4.26	2.13	4.62	.05	.668	.13	<.01	3.10	100.2
SA29567	70.2	14.8	1.53	.86	3.95	1.92	1.55	.04	.326	.09	<.01	4.75	100.1
SA29568	56.1	16.9	3.01	3.98	1.36	3.25	7.88	.13	.816	.15	<.01	6.30	100.0
SA29569	64.6	13.6	3.25	2.40	2.70	2.25	5.72	.09	.681	.14	<.01	4.60	100.1
SA29570	59.6	17.0	3.99	2.68	2.89	2.51	5.16	.09	.457	.12	<.01	5.45	100.0
SA29571	61.2	16.1	2.32	2.60	3.45	1.15	7.52	.11	.721	.13	<.01	4.80	100.2
SA29572	51.8	15.5	1.92	6.20	3.41	.04	14.5	.20	1.47	.18	<.01	4.90	100.2
SA29573	46.9	13.3	9.22	6.30	2.83	.21	15.9	.27	1.43	.15	.01	3.65	100.2
SA29574	49.4	12.4	8.68	5.73	2.45	.19	16.1	.23	1.49	.15	<.01	2.90	99.7
SA29575	49.2	14.1	7.56	5.60	3.03	.70	12.4	.24	1.12	.10	<.01	4.50	98.6
SA29576	44.6	12.1	7.95	5.74	.72	.03	18.6	.27	1.69	.18	.01	7.90	99.8
SA29577	61.9	17.2	1.08	3.01	3.52	1.83	7.09	.08	.990	.16	.01	3.45	100.4
SA29579	74.1	13.5	.62	.45	5.73	1.20	2.46	.04	.230	.06	<.01	1.85	100.3
SA29580	66.8	17.0	1.51	1.01	3.22	3.85	2.96	.04	.337	.09	<.01	2.95	99.9
SA29587	64.5	15.1	1.58	2.55	2.71	2.55	6.23	.08	.759	.15	<.01	4.10	100.4
SA29588	63.1	16.0	1.29	2.73	2.02	2.94	7.18	.08	.815	.16	<.01	4.10	100.5
SA29589	70.2	14.0	.74	1.61	.64	3.47	5.04	.06	.728	.14	.02	3.30	100.1
SA29590	66.9	14.0	.95	2.48	2.47	2.42	6.57	.07	.778	.15	<.01	3.10	100.0
SA29591	56.8	16.7	3.42	4.11	4.19	1.46	7.30	.13	.811	.16	.03	4.85	100.0
SA29592	60.2	17.3	1.96	3.04	4.72	1.84	5.12	.12	.787	.14	<.01	3.45	98.8
SA29593	57.8	18.4	.25	4.13	.43	3.45	9.28	.06	1.10	.17	.01	4.85	100.0
SA29594	55.2	16.9	2.14	5.15	3.95	.76	9.26	.07	.977	.14	<.01	5.15	99.7
SA29595	46.6	15.6	4.17	9.13	3.06	.11	12.7	.18	.996	.16	.04	7.80	100.6
SA29596	71.5	14.5	.59	1.54	7.92	.04	2.63	.04	.372	.10	<.01	.75	100.0
SA29597	47.2	16.1	4.23	8.90	3.35	.05	12.6	.16	1.02	.17	.03	6.35	100.2
SA29598	54.3	15.6	3.08	5.36	2.44	1.34	11.1	.13	1.08	.39	<.01	5.60	100.5
SA34387	61.5	16.2	2.42	2.26	1.52	3.32	7.03	.07	.965	.23	<.01	4.45	100.1
SA34388	60.7	18.2	.37	2.63	2.71	2.27	7.38	.09	.965	.15	<.01	3.40	99.0
SA34389	65.3	15.6	2.17	2.00	5.76	1.38	4.34	.07	.628	.13	<.01	2.30	99.7
SA34390	64.6	17.3	1.39	1.09	4.45	2.99	4.38	.06	.579	.15	<.01	2.40	100.3

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA09485	63.4	15.2	5.66	1.07	2.04	1.13	3.40	.08	.919	.18	.02	7.20	100.4
SA09486	60.5	15.0	4.33	3.05	4.31	.93	5.68	.11	.821	.15	.02	5.05	100.0
SA09487	63.5	14.3	5.46	2.68	3.88	.19	6.63	.10	.731	.16	.01	2.70	100.4
SA09490	51.0	18.9	3.93	4.95	3.48	1.20	10.5	.14	1.06	.23	.01	3.95	99.4
SA09491	58.8	15.9	4.46	3.19	4.19	1.02	7.96	.12	.991	.26	<.01	3.00	100.0
SA19970	39.5	15.1	8.51	5.18	.28	2.75	13.5	.41	1.24	.32	<.01	13.8	100.7
SA19971	73.7	13.3	1.71	.82	.23	3.72	1.43	.09	.085	.03	<.01	4.45	99.7
SA19972	57.9	15.6	3.85	3.55	.52	2.28	8.15	.15	1.34	.11	.01	6.25	99.8
SA19973	49.0	14.0	7.91	5.89	2.91	.05	10.4	.22	1.17	.09	.03	8.40	100.1
SA19976	51.6	13.6	6.31	5.00	.20	1.90	10.7	.19	1.12	.23	.04	9.15	100.1
SA19977	60.3	17.0	1.74	3.81	4.31	1.24	6.75	.07	.658	.12	<.01	3.50	99.6
SA19978	47.2	13.1	4.94	6.03	1.04	.06	17.0	.17	2.81	.30	<.01	7.60	100.3
SA19979	54.3	14.6	4.55	3.53	2.06	1.50	9.84	.15	1.08	.28	<.01	8.20	100.2
SA19980	53.6	11.6	6.42	3.18	.44	1.80	10.3	.19	1.79	.50	<.01	10.6	100.5
SA19981	50.3	15.8	6.59	6.75	2.22	.05	11.9	.16	1.37	.22	.03	4.50	99.9
SA19982	58.0	17.1	3.01	3.80	4.00	1.48	6.78	.08	.658	.13	<.01	5.00	100.1
SA19983	72.0	17.5	.02	.38	.34	5.06	1.24	.02	.099	.02	<.01	2.80	99.6
SA19984	45.4	13.2	8.31	5.60	2.09	1.55	8.82	.19	.768	.31	.02	13.8	100.1
SA19985	51.8	15.2	2.39	4.48	3.43	.57	13.0	.13	3.09	.42	<.01	5.05	99.6
SA19986	58.0	13.3	5.44	3.01	1.98	1.22	9.22	.11	.697	.20	<.01	7.05	100.3
SA19987	57.5	17.0	2.78	4.13	1.69	2.51	7.31	.07	.671	.13	<.01	6.00	99.9
SA19988	47.2	14.9	9.71	5.48	1.48	.71	11.1	.23	1.05	.09	.02	8.15	100.1
SA19989	47.0	13.4	6.70	7.70	1.64	.06	12.1	.25	1.09	.10	.03	9.75	99.8
SA19990	53.7	15.7	4.61	3.97	.78	1.74	9.95	.21	1.17	.11	.03	8.05	100.1
SA19991	39.3	12.7	11.8	5.31	.16	.70	15.2	.34	1.16	.12	.02	13.3	100.3
SA23537	59.0	16.9	4.76	2.83	3.35	1.49	6.20	.18	1.05	.20	.03	4.25	100.3
SA23538	60.0	15.7	7.14	1.62	1.43	2.33	3.85	.09	.988	.18	.02	6.55	100.0
SA23539	60.9	15.2	3.56	2.99	3.09	1.96	7.95	.12	.908	.21	<.01	2.70	98.9
SA23548	60.7	18.5	.47	2.99	2.62	2.18	7.75	.09	1.00	.16	.02	3.50	100.1
SA23549	55.0	17.0	3.36	4.45	4.22	1.18	8.89	.18	.837	.17	<.01	4.75	100.1
SA23550	56.1	15.8	5.71	3.57	2.99	2.39	5.77	.15	.703	.14	<.01	6.95	100.4
SA29564	46.6	13.5	7.63	5.81	3.62	.12	15.5	.20	1.72	.15	<.01	3.60	98.5
SA29565	64.6	15.4	2.10	2.17	5.28	1.20	5.02	.09	.606	.12	.01	3.25	99.9

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA29564	24	29.6	<.1	22	17	39.6	--
SA29565	34	19.1	.2	12	9	77.3	--
SA29566	30	29.5	<.1	10	10	59.2	--
SA29567	6	4.4	<.1	5	12	19.5	--
SA29568	58	9.1	<.1	19	9	74.5	--
SA29569	39	40.6	.3	17	16	48.4	--
SA29578	2	3.0	.1	--	265	32.1	6
SA29579	<1	3.3	.3	3	66	30.3	--
SA29580	11	36.4	.1	5	6	15.1	--
SA29587	48	20.8	<.1	14	14	79.6	--
SA29588	54	3.8	<.1	19	15	89.9	--
SA29589	46	34.5	<.1	14	16	55.3	--
SA29590	49	38.4	.3	21	10	68.6	--
SA29591	70	33.1	.2	19	11	79.8	--
SA29592	42	2.5	.6	18	12	67.2	--
SA29593	122	90.8	<.1	31	14	59.1	--
SA29594	97	1.1	.1	30	15	73.5	--
SA29595	206	85.3	.3	45	12	79.1	--
SA29596	14	24.5	.2	10	15	18.4	--
SA29597	187	15.8	<.1	43	13	73.5	--
SA29598	90	5.8	<.1	32	16	216	--
SA34387	28	7.2	.5	16	17	64.9	--
SA34388	50	25.8	.3	25	18	71.8	--
SA34389	27	11.9	.2	12	28	25.6	--

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA09485	122	22.6	.2	33	17	38.4	--
SA09486	83	29.8	.2	29	19	65.4	--
SA09487	39	31.8	<.1	17	26	72.1	--
SA09490	65	16.2	.4	30	23	123	--
SA09491	39	48.5	.1	16	28	90.2	--
SA19970	28	16.9	.8	12	22	298	--
SA19971	1	3.9	.4	1	20	13.1	--
SA19972	50	163	.5	33	28	99.2	--
SA19973	50	72.8	<.1	34	26	76.6	--
SA19974	84	39.4	3.5	--	248	110	109
SA19975	52	261	8.5	--	312	353	3290
SA19976	185	33.2	<.1	32	29	769	--
SA19977	48	1.8	<.1	19	26	59.2	--
SA19978	69	3.7	<.1	41	18	124	--
SA19979	30	3.2	<.1	21	20	112	--
SA19980	55	58.7	.1	29	17	146	--
SA19981	50	34.5	<.1	29	19	86.4	--
SA19982	51	1.5	<.1	19	24	63.1	--
SA19983	<1	9.9	.2	<1	19	8.5	--
SA19984	29	34.1	.5	25	22	108	--
SA19985	29	80.9	.2	58	47	122	--
SA19986	57	15.3	<.1	22	15	99.2	--
SA19987	48	16.3	.3	21	13	96.3	--
SA19988	49	131	.2	38	32	99.8	--
SA19989	51	112	.6	34	16	133	--
SA19990	98	56.9	.4	69	14	117	--
SA19991	62	27.4	.2	42	14	190	--
SA23537	130	24.5	1.1	31	<5	138	--
SA23538	76	14.7	.3	24	7	40.2	--
SA23539	37	17.6	<.1	17	7	31.8	--
SA23548	50	10.8	<.1	16	8	71.5	--
SA23549	69	7.1	.4	26	7	91.4	--
SA23550	48	6.3	<.1	25	12	61.1	--

SAMPLE \ PPM	RB	Y	ZR	BA
SA35585	29	36	282	235
SA35586	26	<10	89	96
SA35587	17	21	205	106
SA35588	16	51	329	101
SA35589	87	19	48	276
SA35590	56	<10	94	263
SA35600	<10	30	89	63
SA44187	116	42	91	758
SA44188	35	38	281	178
SA44189	99	<10	127	306
SA44190	148	16	197	423
SA44191	126	45	133	322
SA44192	37	10	50	192
SA44193	<10	28	72	146
SA44194	95	<10	78	337
SA44195	<10	12	47	<50

D - QUALITY CONTROL DUPLICATE

SAMPLE \ PPM	RB	Y	ZR	BA
SA09480	91	26	156	440
SA09481	85	12	173	451
SA09482	100	44	147	819
SA09483	64	<10	141	449
SA09484	73	15	146	528
SA35517	31	18	78	117
SA35518	<10	<10	49	84
SA35519	85	10	76	317
SA35520	123	36	122	354
SA35521	<10	54	301	84
SA35522	82	<10	165	387
SA35523	27	23	107	71
SA35524	39	25	151	299
SA35525	152	53	148	479
SA35526	101	26	143	802
SA35527	12	13	169	66
SA35528	13	<10	117	174
SA35529	100	15	162	516
SA35530	38	11	135	349
SA35531	69	15	117	346
SA35532	41	31	185	180
SA35533	121	20	138	313
SA35534	110	38	150	447
SA35535	63	12	76	295
SA35536	46	23	191	338
SA35537	13	28	103	93
SA35538	47	<10	97	159
SA35541	26	26	95	128
SA35542	54	32	95	343
SA35543	64	17	59	297
SA35544	122	20	66	329
SA35545	110	49	125	241
SA35546	17	<10	107	196
SA35547	14	<10	104	117
SA35548	89	16	174	654
SA35549	13	34	162	195
SA35550	49	13	169	277
SA35581	22	24	71	115
SA35582	32	27	90	175
SA35583	101	45	323	476
SA35584	86	29	256	601

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA35585	54.5	14.0	4.68	3.29	3.12	.86	10.2	.17	2.05	.42	.02	7.15	100.5
SA35586	42.1	11.7	3.61	14.7	<.01	.01	16.7	.19	.909	.07	.11	10.0	100.1
SA35587	45.2	12.8	4.12	6.34	.77	.07	18.3	.14	3.24	.33	.13	7.35	98.8
SA35588	50.5	13.0	5.62	4.14	2.14	.09	14.2	.21	2.60	.41	<.01	7.75	100.5
SA35589	46.9	14.6	9.72	3.80	.48	1.90	10.7	.38	.991	.10	.04	10.5	100.2
SA35590	53.0	17.0	2.71	5.34	3.41	.84	10.6	.19	1.45	.13	.04	5.15	99.9
SA35600	50.7	13.6	9.08	4.52	2.46	.03	11.0	.27	1.35	.12	.03	7.00	100.2
SA44187	76.2	12.5	1.46	.63	1.23	3.18	1.50	.05	.078	.02	.01	3.15	100.1
SA44188	53.2	13.7	4.27	3.48	1.88	.80	13.2	.12	2.24	.41	.01	6.45	99.8
SA44189	57.5	11.1	6.40	3.69	.13	2.55	7.12	.25	.486	.12	<.01	11.0	100.4
SA44190	63.3	15.6	1.58	1.99	.15	3.52	8.92	.10	.865	.19	.01	4.00	100.3
SA44191	79.9	10.8	1.20	.64	.14	3.16	1.11	.06	.102	.02	.01	2.95	100.2
SA44192	50.4	14.5	6.16	3.58	2.85	.81	11.5	.20	1.03	.08	.03	9.15	100.3
SA44193	49.6	13.0	7.24	4.04	2.22	.24	13.1	.20	1.30	.11	.02	9.15	100.2
SA44194	54.7	15.1	7.22	3.26	.46	2.70	5.86	.22	1.24	.11	.04	8.70	99.7
SA44195	44.7	8.63	12.9	4.66	<.01	<.01	15.7	.62	.628	.08	.02	10.2	98.2

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA09480	58.2	13.8	5.83	2.83	2.18	2.34	6.59	.13	.735	.16	.02	7.25	100.1
SA09481	63.5	14.5	2.21	2.74	2.44	2.20	7.13	.12	.896	.23	.02	4.00	100.1
SA09482	56.6	17.0	5.22	2.79	.43	3.31	6.25	.14	1.11	.20	.04	7.10	100.3
SA09483	60.8	16.9	6.03	.90	3.48	1.64	2.07	.10	1.09	.17	.03	6.70	100.0
SA09484	63.8	17.4	3.91	.84	3.46	2.18	2.03	.07	1.07	.22	.02	5.05	100.1
SA35517	51.7	15.2	6.83	4.63	2.91	.39	10.2	.23	1.15	.10	.05	7.05	100.5
SA35518	46.8	14.7	6.38	5.73	2.41	.05	13.9	.36	.957	.07	.04	8.75	100.2
SA35519	48.4	14.1	6.30	5.40	.15	1.45	13.5	.30	1.16	.09	.04	9.60	100.5
SA35520	78.8	11.7	.10	.30	.16	3.31	1.86	.04	.158	.03	.97	2.15	99.7
SA35521	50.3	13.1	4.88	4.26	2.07	.02	15.6	.15	2.50	.53	<.01	6.75	100.2
SA35522	70.9	15.6	.80	1.09	2.92	2.37	3.07	.04	.360	.10	<.01	2.70	100.0
SA35523	54.7	15.7	4.01	3.89	5.06	.08	9.01	.10	.978	.15	.04	6.00	99.7
SA35524	48.1	14.2	6.12	5.99	.04	1.22	13.7	.14	1.19	.24	.03	9.35	100.4
SA35525	79.5	11.7	.68	.38	.11	3.47	.88	.03	.078	.02	.01	2.50	99.4
SA35526	56.3	16.1	1.88	4.92	.03	2.61	11.8	.11	.951	.17	.02	5.35	100.4
SA35527	48.2	13.8	6.58	6.08	1.99	.08	13.2	.16	1.62	.30	.03	8.20	100.3
SA35528	52.9	15.3	4.46	6.13	3.45	.31	9.04	.12	.858	.12	.02	7.20	99.9
SA35529	60.7	14.1	4.76	2.73	1.45	2.35	5.77	.11	.722	.10	.01	7.30	100.2
SA35530	54.3	14.6	4.86	4.63	2.25	.95	8.72	.14	.782	.11	.02	9.05	100.5
SA35531	55.5	12.2	6.87	3.71	.81	1.60	6.96	.12	.636	.09	.02	11.9	100.5
SA35532	45.6	11.6	7.74	4.46	.02	1.05	15.4	.19	2.58	.29	.01	10.5	99.5
SA35533	81.6	11.1	.31	.41	.11	3.17	.71	.02	.090	.02	.01	2.30	99.9
SA35534	56.2	13.9	7.21	2.27	.33	2.53	7.81	.21	.856	.11	<.01	8.70	100.2
SA35535	52.2	15.8	8.28	2.16	3.05	1.69	6.40	.18	1.12	.10	.05	9.05	100.1
SA35536	56.8	14.0	5.49	3.38	2.80	1.15	8.98	.16	1.10	.22	<.01	6.20	100.4
SA35537	50.5	15.0	4.58	5.72	1.84	.04	15.2	.36	1.48	.13	.04	5.00	99.9
SA35538	59.6	14.9	4.85	3.05	3.76	.48	7.48	.17	1.39	.13	.03	3.10	99.0
SA35541	48.5	13.2	7.32	4.99	1.77	.31	14.0	.38	1.29	.13	.03	8.15	100.1
SA35542	44.9	13.8	9.44	4.74	.03	1.88	12.5	.37	1.33	.13	.03	11.1	100.3
SA35543	46.4	13.0	8.66	5.53	.05	1.18	12.7	.33	1.05	.08	.04	11.0	100.1
SA35544	55.6	15.6	3.77	3.12	.08	2.93	10.7	.28	.993	.09	.02	5.90	99.1
SA35545	75.0	9.90	3.57	.83	.11	2.52	2.98	.11	.077	.02	<.01	4.95	100.1
SA35546	55.0	14.6	8.56	2.07	4.61	.73	4.70	.14	.913	.18	.02	8.45	100.0
SA35547	53.9	13.4	8.81	3.24	4.34	.32	5.37	.21	.845	.17	.02	9.85	100.5
SA35548	59.2	15.4	4.05	2.57	1.99	2.79	7.02	.14	.894	.21	<.01	5.75	100.1
SA35549	60.7	15.8	4.13	3.73	3.68	.61	6.84	.13	.760	.15	.02	3.65	100.2
SA35550	54.2	15.5	6.80	2.58	3.96	1.42	7.33	.15	.790	.18	.02	7.15	100.1
SA35581	45.6	11.7	8.34	4.88	<.01	.44	16.9	.40	1.17	.10	.02	10.7	100.3
SA35582	74.8	8.07	3.08	2.17	.74	.59	5.41	.12	.084	.02	<.01	5.70	100.0
SA35583	73.7	14.8	.24	.81	.65	2.91	3.26	.03	.662	.14	.01	3.00	100.3
SA35584	68.2	12.9	2.28	1.91	.46	2.57	4.77	.08	.432	.09	.54	5.35	99.7

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM
SA35585	21	3.1	<.1	18	12	103
SA35586	413	8.8	.6	69	11	132
SA35587	56	91.7	.9	37	19	312
SA35588	19	43.0	.5	29	10	277
SA35589	88	85.7	.5	56	16	135
SA35590	118	36.6	.4	54	12	122
SA35600	64	110	.6	42	12	97.7
SA44187	3	1.8	1.3	1	10	9.3
SA44188	25	32.5	.7	29	12	163
SA44189	13	3.1	1.1	11	11	78.3
SA44190	64	55.3	2.2	33	38	142
SA44191	2	1.1	.8	1	12	82.9
SA44192	68	204	1.8	37	10	144
SA44193	46	70.4	.6	43	12	149
SA44194	66	53.7	.9	48	10	100
SA44195	34	181	1.5	31	45	139

D - QUALITY CONTROL DUPLICATE

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM
SA09480	41	23.0	.3	17	22	76.6
SA09481	32	20.2	.2	18	22	78.4
SA09482	124	11.4	<.1	27	21	67.6
SA09483	47	15.4	.4	14	12	25.3
SA09484	66	19.3	<.1	25	18	32.5
SA35517	88	83.1	<.1	30	18	95.3
SA35518	106	26.4	.1	48	16	134
SA35519	57	34.7	.7	42	15	114
SA35520	<1	2.1	.3	1	9	6.1
SA35521	19	28.8	.3	30	6	170
SA35522	4	1.8	<.1	5	7	30.3
SA35523	62	32.1	.2	26	9	110
SA35524	132	3.4	.4	32	11	176
SA35525	<1	4.1	.3	1	10	26.7
SA35526	81	9.9	.4	28	14	113
SA35527	94	5.9	.2	34	16	128
SA35528	99	1.5	.8	28	11	68.0
SA35529	26	34.2	1.0	14	32	51.2
SA35530	120	4.0	1.1	28	21	102
SA35531	80	56.9	.7	9	26	64.7
SA35532	44	61.9	1.0	30	10	188
SA35533	4	17.6	.9	<1	11	11.9
SA35534	8	34.0	1.0	15	36	60.5
SA35535	86	76.7	1.0	30	15	68.1
SA35536	41	7.8	.9	17	13	80.7
SA35537	63	56.5	.9	27	16	123
SA35538	[illegible]	[illegible]	[illegible]	[illegible]	11	59.9
SA35541	48	92.3	.8	42	29	120
SA35542	63	78.6	.3	47	12	404
SA35543	50	130	.5	35	9	108
SA35544	39	20.4	.7	22	8	119
SA35545	8	2.4	.3	2	12	38.7
SA35546	101	8.7	.7	25	<5	54.7
SA35547	98	11.5	.4	23	8	60.4
SA35548	34	26.8	.2	16	11	77.6
SA35549	69	34.9	.2	19	11	78.2
SA35550	54	58.6	>	16	10	87.5
SA35581	45	38.1	.4	36	11	374
SA35582	44	11.6	.6	11	17	40.5
SA35583	17	14.6	.3	6	14	66.9
SA35584	20	80.1	.5	8	14	105

SAMPLE \ PPM	RB	Y	ZR	BA
SA30298	20	<10	83	223
SA30299	26	15	86	257
SA30300	15	43	79	384
SA44027	61	36	138	410
SA44028	<10	29	78	192
SA44030	52	<10	116	376
SA44031	<10	17	144	380
SA44032	127	<10	204	694
SA44033	43	23	203	394
SA44035	84	<10	142	638
SA44036	102	19	146	672
SA44037	29	<10	115	342
SA44038	106	19	155	804
SA44039	18	14	104	193
SA44040	39	<10	138	445
SA44041	<10	33	133	125
SA44042	34	20	159	1050
SA44043	<10	16	101	115
SA44044	<10	<10	74	98
SA44045	<10	29	96	113
SA44046	15	14	71	419

D - QUALITY CONTROL DUPLICATE

SAMPLE \ PPM	RB	Y	ZR	BA
SA28483	41	24	78	313
SA28484	<10	20	132	83
SA28485	<10	27	93	197
SA28486	<10	25	109	130
SA28487	18	21	100	180
SA28490	42	37	94	407
SA28491	211	20	191	941
SA28493	132	10	139	507
SA28494	10	22	82	129
SA28495	<10	27	102	186
SA28496	<10	21	65	129
SA28497	17	23	170	549
SA28498	43	20	186	524
SA28499	20	38	78	124
SA28500	59	26	139	530
SA30269	<10	26	85	143
SA30270	41	<10	110	399
SA30271	31	17	89	198
SA30272	<10	16	112	361
SA30273	37	92	461	512
SA30274	23	<10	131	358
SA30275	117	72	122	737
SA30276	42	21	83	219
SA30277	26	22	85	220
SA30278	48	16	77	314
SA30279	17	30	122	158
SA30280	32	20	97	328
SA30281	17	27	79	145
SA30282	<10	23	146	267
SA30283	54	22	77	572
SA30284	25	18	71	253
SA30285	12	20	67	138
SA30286	24	28	83	190
SA30287	30	<10	81	183
SA30288	45	38	88	248
SA30289	41	41	152	394
SA30290	15	24	111	185
SA30291	25	27	98	183
SA30292	20	20	91	230
SA30293	13	23	195	220
SA30294	50	21	97	317
SA30295	11	11	110	180
SA30296	23	16	95	203
SA30297	50	28	112	278

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA30298	48.0	15.1	10.8	4.78	1.53	.71	13.0	.35	1.17	.11	.02	3.30	98.9
SA30299	49.8	13.9	8.03	6.42	2.71	.92	13.4	.33	1.24	.12	.02	2.25	99.2
SA30300	49.4	14.3	9.93	5.71	2.31	.80	13.1	.35	1.19	.11	.03	1.80	99.1
SA44027	52.9	14.5	8.97	4.15	2.71	1.14	11.9	.25	1.33	.15	.03	1.85	100.0
SA44028	50.5	15.8	11.8	4.64	1.76	.60	11.2	.30	1.29	.11	.04	1.90	100.0
SA44030	59.6	14.6	6.68	1.61	3.69	1.80	4.04	.13	.783	.15	.02	6.85	100.0
SA44031	56.9	14.6	5.75	3.35	4.70	.88	7.16	.12	.688	.14	.03	4.05	98.4
SA44032	73.2	13.5	1.42	1.21	2.34	3.55	2.07	.04	.239	.05	<.01	2.70	100.4
SA44033	70.4	12.9	1.66	1.26	4.78	1.42	4.25	.06	.242	.05	<.01	1.70	98.8
SA44035	56.1	15.3	4.28	4.06	3.07	2.09	7.26	.08	.721	.13	<.01	6.10	99.3
SA44036	62.5	14.7	3.94	1.85	2.70	3.29	4.35	.07	.526	.13	.02	5.20	99.4
SA44037	70.6	15.6	1.40	.63	7.35	1.05	1.54	.05	.260	.07	<.01	2.00	100.6
SA44038	60.9	17.4	1.92	2.25	3.33	3.44	5.06	.06	.624	.13	.02	4.25	99.5
SA44039	46.8	12.9	7.36	3.49	4.31	.30	14.5	.27	1.90	.19	.02	6.60	98.7
SA44040	66.2	15.0	2.09	1.64	5.38	1.46	3.86	.07	.540	.15	<.01	2.90	99.4
SA44041	46.0	13.5	6.55	5.10	2.19	.09	17.5	.25	2.05	.20	.02	4.90	98.4
SA44042	56.3	15.8	1.87	4.99	4.42	2.14	8.34	.12	.775	.31	.07	3.50	98.8
SA44043	48.8	12.6	8.58	5.60	2.18	.22	16.3	.22	1.75	.16	.02	3.00	99.5
SA44044	48.3	12.7	9.92	6.61	2.08	.21	14.2	.20	1.33	.12	.03	3.00	98.7
SA44045	47.3	12.7	8.33	6.39	2.11	.26	16.1	.25	1.66	.15	.02	3.70	99.0
SA44046	46.8	13.7	7.64	6.41	2.33	.28	16.1	.24	1.41	.11	.02	3.85	98.9

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA28483	50.9	14.2	9.36	5.55	1.92	.99	13.1	.31	1.26	.12	.04	2.20	100.0
SA28484	46.6	15.1	6.69	6.34	1.26	.05	16.6	.35	1.52	.12	.04	4.35	99.1
SA28485	50.5	14.4	9.32	5.30	1.99	.58	13.8	.29	1.27	.13	.04	1.80	99.5
SA28486	51.2	15.8	2.96	5.14	4.32	.11	11.9	.28	1.60	.14	.03	5.15	98.7
SA28487	47.7	13.4	7.82	4.85	2.27	.45	13.1	.30	1.30	.12	.02	8.35	99.7
SA28490	51.5	14.6	5.84	4.40	1.93	1.65	12.5	.28	1.41	.13	.02	5.35	99.7
SA28491	64.4	14.8	1.14	2.15	.34	5.57	5.71	.11	.716	.20	<.01	3.35	98.6
SA28493	56.1	15.2	3.36	4.25	.37	3.23	9.31	.20	.964	.16	.01	6.70	99.9
SA28494	50.9	14.5	9.64	4.92	2.33	.34	12.2	.30	1.24	.12	.02	2.55	99.1
SA28495	51.7	13.9	10.4	5.02	2.01	.60	11.8	.28	1.43	.13	.04	1.65	99.0
SA28496	50.1	14.7	12.1	4.15	1.87	.39	12.6	.34	1.10	.09	.04	2.10	99.6
SA28497	57.8	15.9	4.18	2.98	4.09	.99	8.75	.13	1.10	.23	.01	3.10	99.3
SA28498	57.9	16.8	1.62	3.30	3.99	1.30	9.87	.12	1.16	.25	<.01	3.40	99.8
SA28499	54.0	14.5	10.7	4.14	1.85	.49	10.1	.27	1.22	.11	.04	1.90	99.3
SA28500	52.0	14.2	4.12	6.84	3.04	1.32	11.6	.28	1.16	.24	.03	4.30	99.2
SA30269	49.9	14.3	8.54	6.32	2.66	.34	12.6	.26	1.27	.11	.03	2.65	99.0
SA30270	50.6	13.2	8.89	5.26	1.93	1.10	14.6	.29	1.42	.13	.02	2.20	99.7
SA30271	49.5	13.5	10.5	5.40	2.13	.71	13.8	.23	1.18	.11	.02	2.40	99.5
SA30272	56.0	15.1	6.71	3.25	3.72	1.17	8.27	.13	.670	.11	<.01	5.40	100.6
SA30273	53.6	13.3	3.96	4.12	.22	1.44	16.4	.25	1.26	.22	<.01	4.45	99.3
SA30274	57.2	15.8	4.39	2.61	5.02	.77	7.66	.16	1.25	.15	.01	4.05	99.1
SA30275	76.5	12.4	.39	.33	4.24	3.81	1.18	.02	.130	.02	.02	1.15	100.3
SA30276	50.2	14.0	8.87	4.85	2.56	.98	13.5	.27	1.31	.12	.01	2.80	99.5
SA30277	49.7	13.7	9.56	5.46	2.03	.88	14.3	.23	1.23	.11	.01	2.30	99.6
SA30278	49.9	13.1	8.58	6.15	1.84	1.23	15.0	.26	1.28	.12	.01	2.15	99.7
SA30279	51.7	13.6	10.4	4.51	1.90	.49	13.3	.36	1.35	.14	.01	2.10	99.9
SA30280	53.3	14.5	8.30	4.03	2.45	.98	12.0	.25	1.36	.12	.02	2.10	99.5
SA30281	49.2	13.4	10.1	4.95	2.08	.49	14.8	.28	1.25	.11	.02	2.15	98.9
SA30282	52.4	12.9	6.22	4.90	4.54	.77	12.5	.29	1.50	.15	.01	2.20	98.4
SA30283	49.9	14.7	8.04	5.26	3.18	1.24	12.0	.30	1.29	.12	.03	2.70	98.8
SA30284	51.6	15.0	8.64	5.77	3.23	.72	10.7	.27	1.31	.12	.03	2.10	99.5
SA30285	53.3	14.2	9.55	4.45	2.50	.39	12.3	.26	1.16	.10	.03	1.65	99.9
SA30286	51.3	14.9	10.1	4.16	2.35	.67	12.3	.31	1.25	.12	.03	1.90	99.4
SA30287	48.9	14.1	9.66	6.06	1.95	.55	14.0	.36	1.26	.12	.03	2.05	99.1
SA30288	54.7	16.9	8.76	3.37	2.88	1.08	8.07	.21	1.42	.12	.03	1.85	99.4
SA30289	54.2	13.3	7.59	4.37	2.95	1.11	12.8	.23	1.51	.15	<.01	1.75	100.0
SA30290	52.9	13.1	7.49	5.50	4.04	.58	12.4	.31	1.40	.13	.02	1.90	99.8
SA30291	48.2	13.1	8.47	6.89	1.94	.69	15.5	.23	1.38	.13	.02	2.55	99.1
SA30292	49.6	14.3	9.70	4.49	2.49	.62	13.2	.26	1.32	.12	.02	2.30	98.5
SA30293	54.6	14.8	6.51	3.70	2.87	.56	11.3	.15	1.45	.27	.01	3.30	99.6
SA30294	48.8	13.5	9.00	5.99	1.78	1.19	14.4	.23	1.24	.11	.01	2.45	98.8
SA30295	53.9	14.3	8.04	5.03	2.75	.40	11.2	.19	1.38	.12	.03	2.25	99.6
SA30296	51.3	14.1	9.18	4.32	2.33	.59	13.7	.30	1.34	.12	.03	2.30	99.7
SA30297	56.1	15.7	5.62	3.72	3.74	1.06	9.58	.27	1.46	.14	.03	1.80	99.3

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA30296	21	12.3	.2	15	13	33.9	--
SA30297	33	127	<.1	26	18	28.8	--
SA30298	36	9.4	<.1	21	7	75.2	--
SA30299	30	5.2	<.1	16	12	59.8	--
SA30300	17	8.1	<.1	11	18	46.8	--
SA44027	20	7.8	<.1	14	16	34.7	--
SA44028	30	48.8	<.1	19	20	68.7	--
SA44029	81	1720	2.2	--	16	116	2
SA44030	50	28.1	<.1	11	24	45.0	--
SA44031	42	154	<.1	22	24	44.2	--
SA44032	3	6.8	.1	<1	10	11.5	--
SA44033	3	37.2	<.1	5	9	17.0	--
SA44034	75	94.8	2.7	--	97	18.7	129
SA44035	59	10.1	.2	22	8	42.7	--
SA44036	28	28.5	<.1	13	27	28.2	--
SA44037	8	73.9	<.1	4	15	22.5	--
SA44038	30	15.9	<.1	12	16	75.6	--
SA44039	56	47.4	<.1	37	7	112	--
SA44040	18	13.8	.2	6	8	30.9	--
SA44041	63	82.9	<.1	49	17	120	--
SA44042	87	10.3	<.1	23	13	85.0	--
SA44043	27	86.9	<.1	26	17	66.5	--
SA44044	43	96.4	.3	24	8	47.7	--
SA44045	38	58.4	<.1	27	9	72.8	--
SA44046	52	58.2	<.1	25	9	73.6	--
SA44047	181	307	3.0	--	29	68.5	34

D - QUALITY CONTROL DUPLICATE

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA28483	28	23.7	<.1	15	10	79.2	--
SA28484	46	43.9	.3	32	8	132	--
SA28485	32	147	<.1	20	10	46.4	--
SA28486	58	7.2	<.1	42	9	101	--
SA28487	51	35.7	<.1	35	5	321	--
SA28488	3	5.8	<.1	--	21	183	9
SA28489	43	2180	7.7	--	76	7100	8
SA28490	57	26.9	<.1	39	8	263	--
SA28491	6	19.9	.2	8	9	130	--
SA28493	69	17.0	.2	24	11	209	--
SA28494	32	56.4	<.1	18	8	50.7	--
SA28495	23	54.8	<.1	14	6	40.1	--
SA28496	44	46.2	<.1	24	7	55.2	--
SA28497	22	27.1	<.1	18	6	89.0	--
SA28498	24	240	<.1	23	<5	92.4	--
SA28499	39	443	.6	21	26	81.1	--
SA28500	121	61.0	<.1	25	<5	70.4	--
SA30269	32	40.0	<.1	19	6	50.8	--
SA30270	16	128	.3	13	<5	128	--
SA30271	25	125	<.1	12	7	71.2	--
SA30272	23	3.3	<.1	15	7	49.5	--
SA30273	11	87.7	<.1	29	10	82.1	--
SA30274	27	23.0	<.1	20	<5	80.4	--
SA30275	2	1.7	<.1	<1	<5	9.9	--
SA30276	26	27.9	<.1	19	6	67.4	--
SA30277	30	65.3	<.1	16	6	55.0	--
SA30278	25	75.9	<.1	17	<5	42.1	--
SA30279	19	60.4	<.1	12	8	37.3	--
SA30280	29	36.3	<.1	18	6	34.3	--
SA30281	19	28.3	<.1	13	<5	37.5	--
SA30282	14	16.2	<.1	23	6	27.9	--
SA30283	29	8.9	<.1	14	6	439	--
SA30284	28	72.2	<.1	14	9	146	--
SA30285	35	344	.3	25	14	25.3	--
SA30286	20	18.5	<.1	12	10	40.6	--
SA30287	29	111	<.1	18	7	31.6	--
SA30288	16	14.9	<.1	10	13	23.2	--
SA30289	12	45.7	<.1	13	28	80.7	--
SA30290	11	49.2	<.1	9	13	58.9	--
SA30291	24	66.2	<.1	18	7	65.7	--
SA30292	33	128	<.1	23	21	45.9	--
SA30293	35	22.0	<.1	19	24	59.4	--
SA30294	22	91.0	<.1	13	<5	79.6	--
SA30295	26	94.7	<.1	17	16	63.8	--

SAMPLE \ PPM	RB	Y	ZR	BA
SA36487	77	53	120	523
SA36488	61	35	185	306
SA36489	91	53	87	518
SA36490	88	34	176	610
SA36491	21	49	169	206
SA36498	22	<10	102	307
SA36499	34	21	214	231
SA36500	76	48	105	420
SA38522	47	19	111	308
SA38530	43	14	216	291
SA38531	81	20	189	555
SA51337	22	12	121	202
SA51339	96	42	80	486
SA51340	115	35	199	459
SA51341	54	25	50	378
SA51342	18	11	105	191
SA51343	35	33	209	265
SA51345	74	26	143	353
SA51346	<10	28	171	177
SA51347	42	13	89	261
SA51350	18	14	120	207
D SA36487	80	51	117	536

D - QUALITY CONTROL DUPLICATE

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA36487	79.4	13.0	.25	.24	.63	3.04	1.00	.05	.103	.03	<.01	2.55	100.4
SA36488	44.8	13.3	7.96	4.96	.33	2.32	11.1	.21	1.67	.29	<.01	11.9	98.9
SA36489	80.7	11.3	.74	.53	.41	2.82	1.07	.08	.099	.03	<.01	2.40	100.3
SA36490	56.6	14.4	1.09	.70	.68	3.44	13.9	.20	1.14	.19	.01	7.85	100.3
SA36491	46.0	13.5	6.11	5.87	2.32	.69	12.3	.19	1.59	.28	.02	10.9	99.8
SA36498	48.2	13.0	8.03	4.39	1.16	1.13	9.20	.16	.827	.14	.02	13.3	99.6
SA36499	50.9	12.5	6.89	3.38	1.05	1.14	10.0	.15	1.77	.39	<.01	11.0	99.2
SA36500	80.5	11.3	.80	.36	.36	2.96	.82	.03	.091	.03	<.01	2.30	99.6
SA38522	63.8	12.3	4.04	2.32	.67	1.41	7.21	.15	.535	.12	.03	6.95	99.6
SA38530	65.9	14.5	3.48	2.07	3.98	1.23	3.47	.07	.906	.18	<.01	3.65	99.5
SA38531	62.9	14.2	4.69	1.68	1.66	2.61	6.00	.08	.849	.15	<.01	5.25	100 ?
SA51337	42.0	14.9	7.24	4.91	.76	.59	16.2	.15	.912	.14	<.01	11.6	99.4
SA51339	73.0	11.0	2.51	1.25	.28	3.05	2.88	.18	.099	.03	<.01	4.00	98.4
SA51340	43.7	15.1	5.89	2.61	.41	3.92	12.9	.26	1.77	.32	.01	8.20	95.2
SA51341	56.8	7.09	1.89	.97	.13	2.00	19.0	.16	.083	.03	<.01	10.8	99.0
SA51342	49.2	10.9	7.58	6.36	1.94	.73	9.82	.31	.655	.33	.05	10.7	98.6
SA51343	50.6	12.1	7.10	3.62	.52	1.33	11.6	.17	1.72	.40	<.01	10.0	99.2
SA51345	54.1	13.5	5.75	3.59	.23	2.85	7.99	.20	1.02	.20	<.01	8.65	98.2
SA51346	46.6	15.0	4.61	5.32	2.90	.29	13.4	.11	1.81	.30	.01	8.30	98.7

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SAS1350	50	2.2	.3	24	21	57.7	--

D - QUALITY CONTROL DUPLICATE

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA36487	4	5.2	.5	2	25	20.5	--
SA36488	28	59.9	1.1	28	6	310	--
SA36489	6	7.2	.5	2	27	37.4	--
SA36490	216	216	5.9	90	25	85.7	--
SA36491	67	6.8	.8	26	13	158	--
SA36498	159	7.3	<.1	29	<5	107	--
SA36499	106	40.7	.4	31	16	188	--
SA36500	9	18.8	.9	3	9	28.6	--
SA38522	92	56.5	1.6	25	23	86.9	--
SA38530	12	3.4	.3	7	<5	29.2	--
SA38531	11	16.3	.3	12	8	42.5	--
SAS1337	239	578	1.9	73	6	215	--
SAS1339	7	7.8	.7	4	10	36.7	--
SAS1340	85	151	3.8	58	9	67.4	--
SAS1341	61	93.8	24.5	27	598	48.1	--
SAS1342	208	4.3	.6	30	42	79.8	--
SAS1343	104	48.1	.7	23	27	224	--
SAS1344	61	233	47.0	--	<5	130	332
SAS1345	55	26.8	.7	21	24	255	--
SAS1346	71	5.1	.2	35	27	157	--
SAS1347	82	5.9	.6	18	19	71.1	--

SAMPLE \ PPM	RB	Y	ZR	BA
SA38765	76	20	168	512
SA38766	20	23	78	376
SA38767	19	20	102	108
SA38768	<10	23	99	152
SA38769	<10	13	82	77
SA38770	12	27	69	115
SA38771	<10	<10	71	70
SA38772	32	14	67	159
SA38773	<10	37	79	120
SA38774	35	38	106	438
SA38775	<10	19	83	60
SA38776	<10	<10	76	389
SA38777	116	23	130	463
SA38778	86	<10	66	595
SA38779	<10	21	103	87

D - QUALITY CONTROL DUPLICATE

SAMPLE \ PPM	RB	Y	ZR	BA
SA21215	11	34	148	100
SA21216	72	<10	144	482
SA21217	16	19	44	101
SA21218	11	18	76	156
SA21219	62	21	92	325
SA21220	20	14	119	230
SA21228	98	15	101	504
SA21229	20	16	99	294
SA21230	<10	18	79	156
SA21231	83	<10	55	383
SA21232	65	<10	67	302
SA21233	103	<10	176	542
SA21234	15	33	77	179
SA21235	<10	28	80	69
SA21236	14	29	93	190
SA21237	15	18	78	293
SA21238	19	38	125	186
SA21239	23	17	99	288
SA21240	<10	12	83	219
SA21241	17	17	77	324
SA21242	46	22	116	422
SA21243	<10	20	149	108
SA21244	39	18	148	422
SA21245	<10	<10	86	76
SA21246	<10	<10	88	220
SA21247	44	26	187	637
SA21248	15	30	64	91
SA21249	17	17	109	267
SA21250	<10	<10	71	80
SA38756	18	28	68	297
SA38757	15	20	79	233
SA38758	<10	25	94	149
SA38759	125	<10	107	478
SA38760	19	19	47	347
SA38761	<10	16	71	80
SA38762	13	14	102	778
SA38763	118	18	111	334
SA38764	20	27	83	279

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA38765	61.6	15.5	3.89	1.77	2.97	2.56	6.11	.14	.752	.14	<.01	4.90	100.4
SA38766	46.9	13.9	9.95	5.23	1.29	.92	16.7	.51	1.29	.13	.02	2.55	99.4
SA38767	51.0	13.9	9.93	6.12	2.14	.40	12.7	.23	1.15	.11	.03	2.05	99.8
SA38768	49.3	13.7	11.1	5.14	1.69	.29	14.2	.26	1.32	.12	.02	1.80	99.0
SA38769	43.6	12.2	11.1	5.73	.33	.13	21.8	.52	1.19	.11	.02	2.65	99.4
SA38770	50.2	15.7	6.21	4.41	3.57	.34	11.5	.30	1.17	.10	.03	6.35	99.9
SA38771	42.2	16.4	9.85	7.09	.09	.06	15.4	.34	1.34	.10	.04	6.50	99.4
SA38772	48.0	13.3	8.75	5.82	1.41	.82	10.2	.19	1.15	.10	.01	10.2	100.0
SA38773	56.8	16.0	3.18	5.00	5.29	.14	7.52	.16	1.30	.10	.04	4.05	99.6
SA38774	51.3	14.3	.15	3.53	.05	1.76	20.6	.21	1.51	.14	.03	6.40	100.1
SA38775	47.9	14.3	9.47	4.58	1.50	.17	13.1	.30	1.36	.13	.02	6.70	99.6
SA38776	55.1	11.0	.12	3.90	.05	.99	20.6	.19	1.15	.11	.03	7.30	100.6
SA38777	68.3	11.8	3.01	1.78	1.32	2.31	5.34	.11	.382	.04	.01	3.70	98.2
SA38778	50.2	15.1	7.71	4.15	.06	3.05	8.83	.21	1.13	.10	.03	8.95	99.6
SA38779	47.8	13.0	7.70	6.62	1.68	.16	12.7	.27	.970	.33	.06	8.60	99.9

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA21215	49.1	16.5	2.97	6.34	3.74	.14	12.9	.12	1.66	.24	.04	5.65	99.4
SA21216	54.0	16.0	6.73	3.28	.91	2.29	8.12	.15	.838	.12	.02	8.30	100.8
SA21217	48.0	12.1	9.16	5.89	1.45	.49	10.6	.24	.990	.09	.04	10.3	99.4
SA21218	54.9	16.0	6.11	3.50	3.96	.29	9.31	.20	1.21	.10	.04	4.15	99.8
SA21219	48.6	15.7	8.04	3.44	2.35	1.93	9.15	.23	1.31	.13	.03	9.25	100.2
SA21220	49.4	11.8	6.34	4.57	.81	.68	15.8	.32	1.60	.16	.01	8.05	99.6
SA21228	57.6	16.3	2.50	3.24	1.34	2.87	9.65	.21	1.51	.13	.04	5.10	100.6
SA21229	50.8	14.4	7.11	3.80	2.23	.51	13.2	.33	1.41	.13	.04	5.15	99.2
SA21230	51.1	14.3	5.94	5.55	1.52	.27	13.7	.31	1.26	.09	.04	5.45	99.6
SA21231	62.2	14.4	2.39	3.51	.22	2.44	8.28	.20	.924	.07	.05	5.60	100.3
SA21232	54.6	16.3	4.36	3.43	2.48	1.84	8.10	.18	1.13	.09	.04	6.75	99.3
SA21233	62.3	14.5	6.55	.90	2.10	2.93	3.29	.08	.353	.23	.03	6.60	100.0
SA21234	49.8	15.1	9.55	4.66	3.06	.50	13.2	.26	1.20	.11	.03	2.50	100.0
SA21235	51.6	14.5	9.42	4.50	2.57	.27	12.8	.22	1.22	.10	.04	3.25	100.5
SA21236	52.8	14.7	10.0	3.35	2.47	.54	12.7	.30	1.33	.11	.02	1.45	99.8
SA21237	51.5	15.0	7.99	4.79	3.15	.56	13.3	.35	1.28	.11	.02	2.35	100.4
SA21238	57.6	15.9	5.86	3.10	4.19	.66	7.78	.30	1.71	.15	.05	2.65	100.0
SA21239	49.4	13.6	9.11	4.75	2.07	.46	14.9	.38	1.36	.11	.03	2.65	98.9
SA21240	53.4	15.0	9.15	3.97	4.13	.67	10.3	.29	1.30	.13	.02	1.70	100.1
SA21241	51.4	14.3	9.62	4.02	2.44	.79	12.7	.32	1.22	.11	.03	2.85	99.8
SA21242	57.1	17.5	8.15	3.23	.80	1.45	7.78	.17	.751	.11	<.01	3.55	100.7
SA21243	52.9	15.7	1.64	9.57	4.26	.17	8.46	.13	.761	.16	<.01	5.30	99.1
SA21244	59.7	17.0	2.82	3.66	4.63	1.46	6.54	.09	.659	.14	<.01	3.55	100.3
SA21245	51.5	11.6	9.64	7.59	2.55	.13	12.6	.18	.975	.09	.01	2.20	99.1
SA21246	52.0	11.8	8.62	7.69	2.72	.16	12.9	.18	.957	.09	.01	2.25	99.4
SA21247	58.5	16.5	2.39	3.28	4.14	1.18	8.89	.11	1.16	.24	<.01	3.45	99.9
SA21248	53.5	14.1	7.98	4.53	1.59	.12	11.5	.24	1.21	.10	.02	5.40	100.3
SA21249	45.1	7.39	8.75	16.4	.16	.45	14.6	.31	1.09	.14	.16	4.20	98.8
SA21250	46.6	5.61	9.79	17.1	.16	.09	14.0	.32	.957	.10	.13	3.70	98.6
SA38756	50.3	15.0	8.50	5.35	3.63	.73	11.5	.26	1.20	.12	.03	2.50	99.2
SA38757	49.9	13.9	10.7	5.11	2.32	.40	12.7	.32	1.16	.11	.02	2.85	99.5
SA38758	56.4	14.5	7.83	3.62	3.46	.37	10.3	.30	1.35	.12	.04	1.85	100.2
SA38759	56.0	17.1	1.75	3.74	.03	3.67	10.5	.24	1.68	.14	.03	4.60	99.6
SA38760	56.7	13.7	6.92	5.28	5.47	.47	8.95	.16	1.12	.10	.02	1.55	100.5
SA38761	51.0	13.5	8.08	6.34	1.86	.11	12.3	.29	1.17	.10	.02	5.10	99.9
SA38762	51.9	11.3	7.85	7.56	2.86	1.70	11.9	.23	.917	.09	.02	2.45	98.9
SA38763	52.0	16.3	4.40	4.08	.05	3.18	10.4	.19	1.46	.13	.03	7.35	99.6
SA38764	56.1	15.1	9.08	2.89	2.54	.81	9.58	.28	1.46	.13	.04	1.75	99.8

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM
SA38765	5	3.1	<.1	13	15	43.2
SA38766	38	9.9	.3	25	<5	70.5
SA38767	26	5.2	<.1	20	6	43.4
SA38768	50	63.8	<.1	29	5	48.3
SA38769	40	79.3	.7	33	<5	85.5
SA38770	104	87.8	.7	36	<5	242
SA38771	67	184	.3	55	<5	213
SA38772	47	104	<.1	37	9	139
SA38773	77	123	<.1	49	5	97.4
SA38774	35	104	1.5	9	17	269
SA38775	65	86.6	<.1	40	<5	140
SA38776	58	254	3.8	34	251	507
SA38777	15	28.9	<.1	10	11	73.9
SA38778	92	73.6	.2	37	12	135
SA38779	66	40.6	<.1	40	9	173

D - QUALITY CONTROL DUPLICATE

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM
SA21215	54	5.0	<.1	33	12	99.3
SA21216	104	58.3	<.1	22	<5	123
SA21217	50	132	.4	42	<5	306
SA21218	88	77.4	.2	34	7	70.2
SA21219	84	212	<.1	54	<5	80.3
SA21220	22	130	<.1	39	11	117
SA21228	76	33.4	<.1	28	19	82.7
SA21229	73	45.8	<.1	31	15	112
SA21230	87	159	.3	46	25	179
SA21231	106	10.4	<.1	52	14	180
SA21232	96	142	.4	50	17	147
SA21233	10	19.8	.6	8	391	29.9
SA21234	56	87.6	<.1	24	19	36.8
SA21235	59	128	<.1	33	12	37.5
SA21236	40	139	<.1	27	15	245
SA21237	39	18.6	<.1	26	15	76.8
SA21238	28	22.6	<.1	27	18	49.1
SA21239	45	278	.5	41	23	332
SA21240	37	19.7	<.1	19	<5	27.9
SA21241	54	106	.4	30	<5	123
SA21242	38	1.9	.2	23	11	51.5
SA21243	80	8.9	.6	30	8	112
SA21244	58	1.6	<.1	19	19	63.9
SA21245	100	148	<.1	40	22	49.8
SA21246	110	210	.2	40	11	53.8
SA21247	27	16.2	<.1	24	6	93.8
SA21248	42	96.6	<.1	32	10	83.6
SA21249	425	45.5	.2	48	23	104
SA21250	370	217	.3	35	21	78.8
SA38756	44	13.7	<.1	20	18	83.9
SA38757	54	222	.5	33	20	56.5
SA38758	41	4.2	<.1	16	16	38.1
SA38759	54	60.9	.3	53	26	93.9
SA38760	26	92.5	<.1	26	10	31.2
SA38761	45	95.9	<.1	41	12	113
SA38762	115	10.5	.2	30	15	48.9
SA38763	69	14.1	<.1	43	10	122
SA38764	31	6.4	<.1	20	16	69.2

SAMPLE \ PPM	RB	Y	ZR	BA
SA44183	18	40	267	140
SA44184	25	<10	76	405
SA44185	56	<10	74	511
SA44186	61	49	274	539

D - QUALITY CONTROL DUPLICATE

SAMPLE \ PPM	RB	Y	ZR	BA
SA30263	42	14	76	375
SA30264	38	14	103	302
SA30265	38	<10	88	167
SA30266	27	28	93	267
SA30267	<10	21	106	207
SA30268	105	36	331	749
SA38535	<10	35	111	130
SA38536	<10	29	88	81
SA38537	18	<10	119	303
SA38540	49	39	143	404
SA38541	100	33	142	573
SA38542	54	<10	94	374
SA38543	157	27	69	383
SA38544	62	44	85	300
SA38546	54	32	137	324
SA38547	50	15	49	387
SA38548	102	33	133	431
SA38549	65	33	117	230
SA38550	77	22	146	284
SA38780	107	21	143	675
SA38781	26	<10	75	282
SA38782	<10	<10	73	171
SA38783	<10	28	72	150
SA38784	20	14	95	176
SA38785	61	27	95	366
SA38786	11	32	106	364
SA38787	13	12	65	130
SA38788	31	35	121	323
SA38789	26	36	173	249
SA38790	<10	15	93	103
SA38791	26	25	85	680
SA38792	12	22	118	121
SA38793	<10	35	86	159
SA38794	<10	23	61	197
SA38795	<10	21	90	284
SA38796	<10	23	95	197
SA38797	17	22	82	239
SA38800	<10	<10	92	69
SA44180	60	26	194	259
SA44182	113	18	150	437

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA44183	48.4	13.9	3.84	4.75	2.56	.55	14.1	.18	2.07	.41	.02	8.00	98.8
SA44184	57.8	11.1	3.18	8.60	.07	.82	9.30	.10	.443	.08	.05	8.60	100.2
SA44185	45.0	9.91	8.80	9.03	.22	.69	9.86	.16	.693	.32	.15	15.2	100.1
SA44186	70.7	13.2	1.67	.84	.70	2.49	4.82	.15	.642	.15	.02	3.95	99.4

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA30263	49.9	12.8	8.10	6.67	1.86	1.09	14.3	.25	1.17	.11	.03	2.70	99.0
SA30264	49.4	13.4	7.06	6.95	1.64	.85	15.3	.21	1.33	.12	.03	3.55	99.9
SA30265	49.6	13.6	8.56	6.62	2.04	.61	14.6	.20	1.29	.12	.02	2.15	99.4
SA30266	49.6	13.8	8.85	6.07	2.55	.76	13.7	.30	1.31	.12	.03	2.40	99.5
SA30267	50.6	13.7	9.69	5.11	2.29	.57	13.6	.29	1.46	.12	.04	2.05	99.6
SA30268	56.6	14.8	1.61	3.05	.25	3.29	13.3	.15	1.79	.45	.01	5.05	100.5
SA38535	38.3	13.0	3.93	7.00	.25	.13	23.0	.68	1.57	.15	<.01	10.0	98.0
SA38536	49.9	13.4	6.70	4.43	3.54	.09	11.9	.33	1.12	.10	.02	7.95	99.5
SA38537	42.7	12.7	9.67	6.98	1.70	.95	12.8	.31	.975	.44	.08	10.3	99.7
SA38540	58.5	15.4	4.73	2.89	3.20	1.64	5.97	.09	.658	.14	.02	6.30	99.6
SA38541	53.8	15.8	4.69	3.24	.29	3.13	9.20	.14	.966	.16	.02	8.35	99.9
SA38542	52.2	13.2	5.61	6.49	1.85	1.67	6.97	.16	.478	.09	.04	11.2	100.0
SA38543	47.7	15.2	7.53	5.35	.56	2.55	11.3	.25	1.20	.10	.03	8.00	99.8
SA38544	51.0	12.5	3.05	6.05	.02	1.22	16.8	.33	1.31	.13	.02	6.55	99.0
SA38546	55.7	14.5	6.25	3.02	1.30	1.95	7.92	.20	.804	.12	.02	7.30	99.2
SA38547	45.9	16.0	7.73	4.50	.37	2.12	10.9	.27	.955	.07	.04	10.1	99.0
SA38548	79.4	11.3	1.48	.28	.88	2.89	1.13	.06	.090	.02	.02	2.70	100.3
SA38549	62.8	9.02	4.63	2.15	.08	1.70	10.5	.40	.165	.02	.01	5.75	97.3
SA38550	68.9	11.1	2.21	1.41	.19	2.32	7.40	.18	.370	.05	.01	4.35	98.6
SA38780	77.3	11.2	.09	.42	.05	3.50	3.94	.02	.139	.03	.02	2.90	99.7
SA38781	48.0	13.2	.89	5.36	.02	.88	23.3	.32	1.25	.10	.04	6.40	99.8
SA38782	41.5	10.1	.29	3.94	<.01	.24	35.9	.32	1.03	.09	.03	6.85	100.3
SA38783	48.3	14.1	7.84	6.30	1.89	.36	14.6	.38	1.16	.10	.04	3.25	98.3
SA38784	53.5	14.4	6.60	5.64	1.70	.44	12.6	.27	1.07	.11	.06	3.65	100.1
SA38785	60.7	12.7	.95	3.75	<.01	2.20	13.3	.23	1.04	.11	.05	4.45	99.5
SA38786	51.5	14.1	8.47	4.51	2.65	1.25	12.4	.27	1.34	.13	.04	2.25	99.0
SA38787	48.8	14.7	10.3	4.00	3.88	.40	8.19	.27	1.10	.10	.04	8.30	100.1
SA38788	59.0	15.3	4.66	3.42	4.47	1.17	6.72	.19	1.63	.15	.05	2.10	98.9
SA38789	55.4	15.3	9.14	2.84	1.92	.61	10.7	.26	1.37	.26	.04	1.75	99.7
SA38790	41.9	11.9	12.4	6.08	.48	.30	22.5	.60	1.06	.10	.03	1.65	99.0
SA38791	48.8	13.9	8.91	5.86	2.67	1.15	14.2	.33	1.24	.11	.04	1.55	98.8
SA38792	50.0	13.3	9.79	4.15	1.39	.27	16.2	.40	1.24	.12	.04	1.95	98.9
SA38793	55.3	14.5	8.46	2.34	2.64	.27	10.6	.20	1.36	.12	.05	1.65	97.5
SA38794	41.4	10.7	9.15	6.13	.94	.40	24.2	.43	.931	.10	.01	2.50	96.9
SA38795	50.6	14.3	7.96	4.81	2.56	.51	13.0	.33	1.38	.13	.03	3.25	98.9
SA38796	52.1	14.4	9.22	4.54	2.55	.43	13.0	.28	1.35	.12	.02	1.70	99.7
SA38797	49.0	14.0	8.70	5.96	2.05	.78	13.9	.26	1.22	.11	.03	2.35	98.4
SA44180	78.7	8.31	.09	.25	.13	2.19	6.69	.02	.461	.04	.04	3.65	100.6
SA44182	76.6	11.6	1.32	.59	.22	3.10	1.72	.06	.221	.05	.02	3.05	98.6

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA44182	2	59.2	.2	3	21	88.2	--
SA44183	63	92.6	.6	34	<5	284	--
SA44184	214	47.2	<.1	39	<5	161	--
SA44185	220	48.8	.3	36	18	165	--
SA44186	5	28.0	.1	5	26	83.4	--

D - QUALITY CONTROL DUPLICATE

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA30263	48	74.9	.2	26	12	68.5	--
SA30264	31	39.1	<.1	26	11	73.0	--
SA30265	37	103	<.1	25	7	54.7	--
SA30266	25	61.8	<.1	19	7	76.1	--
SA30267	17	15.5	<.1	13	<5	42.3	--
SA30268	13	137	.2	14	26	79.2	--
SA38535	71	55.7	.6	58	6	185	--
SA38536	50	57.5	.2	32	17	101	--
SA38537	90	79.1	<.1	45	21	161	--
SA38540	35	3.6	<.1	16	22	88.0	--
SA38541	73	47.1	.2	24	17	105	--
SA38542	165	2.8	<.1	28	8	129	--
SA38543	64	83.9	.1	33	7	98.9	--
SA38544	46	43.8	<.1	40	22	183	--
SA38546	17	17.5	<.1	18	5	188	--
SA38547	115	47.0	.5	50	<5	288	--
SA38548	4	4.9	<.1	1	<5	39.9	--
SA38549	14	57.7	.4	10	8	103	--
SA38550	7	30.8	1.1	5	18	69.1	--
SA38780	<1	244	1.4	4	74	104	--
SA38781	35	483	2.9	22	32	262	--
SA38782	63	840	3.0	30	36	247	--
SA38783	58	119	.2	38	16	129	--
SA38784	57	13.0	<.1	29	17	150	--
SA38785	22	43.9	.4	6	14	135	--
SA38786	29	52.0	.2	20	20	117	--
SA38787	58	5.9	<.1	28	33	175	--
SA38788	78	7.2	<.1	67	22	42.7	--
SA38789	44	54.0	<.1	23	11	93.2	--
SA38790	55	94.9	<.1	35	26	65.9	--
SA38791	42	19.0	<.1	19	22	55.0	--
SA38792	55	350	<.1	58	13	77.0	--
SA38793	110	1620	2.3	132	13	264	--
SA38794	67	2450	2.3	117	13	131	--
SA38795	41	75.5	.2	33	10	150	--
SA38796	33	99.4	<.1	25	14	63.8	--
SA38797	36	37.5	<.1	23	13	89.5	--
SA38800	57	258	1.3	41	10	1020	--
SA44180	4	33.6	13.2	3	622	39.1	--
SA44181	46	5830	4.0	--	12	156	<2

SAMPLE \ PPM	RB	Y	ZR	BA
SA37993	110	34	126	628
SA37994	<10	33	215	182
SA37995	<10	37	191	142
SA37996	18	20	106	139
SA37997	96	20	220	292
SA37998	<10	25	96	62
SA37999	13	43	123	251
SA38000	<10	18	98	131
SA47379	40	13	67	160
SA47380	62	<10	38	224
SA47381	112	46	153	321
SA47382	107	16	79	288
SA47383	24	10	63	149
SA47384	14	13	76	134
SA47385	53	14	56	209
SA47386	14	22	49	154
SA47387	122	32	136	300
SA47388	133	38	126	486
SA47396	27	13	63	264
SA47397	22	37	111	185
SA47398	16	24	69	192
SA47399	21	14	100	165
SA47400	<10	29	108	143

D - QUALITY CONTROL DUPLICATE

SAMPLE \ PPM	RB	Y	ZR	BA
SA36471	32	15	90	372
SA36472	<10	24	118	84
SA36473	<10	19	141	192
SA36474	42	12	100	372
SA36475	17	25	93	270
SA36476	37	19	91	183
SA36477	43	46	105	326
SA36478	<10	21	87	188
SA36479	34	21	119	583
SA36480	19	<10	102	400
SA36481	42	<10	145	334
SA36482	44	38	140	337
SA36483	<10	29	83	234
SA36484	57	31	187	436
SA36485	12	22	134	303
SA36486	<10	18	95	155
SA37965	<10	13	105	70
SA37966	31	<10	68	344
SA37967	33	<10	65	356
SA37968	45	13	63	358
SA37969	48	29	97	458
SA37978	<10	22	70	101
SA37979	<10	15	109	105
SA37980	<10	<10	92	<50
SA37981	<10	25	87	121
SA37982	121	12	110	1260
SA37983	60	18	121	442
SA37986	<10	17	99	192
SA37987	<10	33	150	150
SA37988	<10	28	79	96
SA37989	<10	12	64	165
SA37990	33	20	56	209
SA37991	34	28	72	262
SA37992	<10	15	163	169

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA37996	44.0	13.4	6.97	4.60	1.77	.38	16.1	.46	1.25	.12	.05	8.25	97.4
SA37997	73.1	12.8	.83	1.65	.25	3.36	3.27	.06	.226	.04	.03	3.35	99.0
SA37998	44.1	12.3	7.77	5.96	1.64	.04	16.0	.35	1.13	.11	.03	10.2	99.7
SA37999	45.2	14.1	8.39	4.66	2.56	.95	11.2	.31	1.33	.13	.03	9.85	98.8
SA38000	50.8	13.6	8.15	6.28	2.08	.17	13.6	.21	1.18	.11	.04	3.00	99.3
SA47379	38.0	12.1	8.75	6.67	.07	1.43	16.4	.45	1.12	.10	.02	14.4	99.5
SA47380	50.7	7.92	10.0	4.48	.10	1.96	9.18	.33	.772	.07	.01	12.2	97.8
SA47381	77.1	12.2	.67	.67	.09	3.55	1.84	.07	.126	.02	<.01	2.70	99.1
SA47382	50.4	14.7	5.95	4.17	.08	3.37	8.92	.31	1.33	.11	.02	10.6	100.0
SA47383	46.5	12.4	9.55	4.72	.86	.94	12.6	.32	1.11	.09	.01	11.0	100.1
SA47384	51.6	13.3	6.57	4.82	2.13	.65	11.2	.20	1.26	.10	.01	8.30	100.2
SA47385	46.0	15.1	8.20	3.60	1.18	1.66	13.0	.34	.938	.08	.03	9.95	100.1
SA47386	49.9	16.5	5.75	4.13	4.02	.56	10.6	.26	1.02	.09	.04	7.65	100.5
SA47387	71.7	11.3	4.49	.85	.04	3.39	1.97	.11	.114	.02	<.01	5.30	99.3
SA47388	82.9	10.2	.04	.69	.04	2.99	1.28	.02	.128	.02	<.01	1.95	100.3
SA47396	48.7	15.4	2.68	4.85	1.08	.76	18.5	.34	.952	.08	.03	6.80	100.2
SA47397	35.2	17.5	6.82	7.12	2.01	.84	16.8	.35	1.63	.14	.03	10.4	98.9
SA47398	47.6	15.7	6.94	4.28	3.37	.69	10.4	.32	.993	.08	.04	8.70	99.2
SA47399	52.0	13.5	5.95	5.63	3.68	.33	13.1	.45	1.29	.16	.02	2.70	98.8
SA47400	51.0	13.3	6.29	5.40	2.72	.42	14.9	.45	1.30	.14	.01	3.85	99.8

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA36471	41.9	11.7	8.63	5.12	.21	1.04	18.7	.55	1.15	.10	.03	10.8	100.0
SA36472	49.4	14.0	7.37	4.23	3.07	.11	12.4	.31	1.38	.14	.03	7.20	99.7
SA36473	48.4	13.5	4.89	4.58	2.08	.68	15.8	.35	1.33	.13	.03	7.50	99.3
SA36474	48.6	13.2	6.51	3.96	.02	2.04	14.2	.49	1.22	.12	.03	9.25	99.7
SA36475	46.8	13.6	6.54	5.01	2.05	.46	15.7	.36	1.26	.10	.03	8.55	100.5
SA36476	47.9	12.1	5.84	5.94	1.60	.73	17.4	.41	1.06	.09	.03	5.40	98.5
SA36477	51.2	14.4	4.92	5.32	2.01	1.49	11.3	.23	1.28	.12	.02	7.30	99.7
SA36478	45.0	13.6	8.87	4.89	2.48	.70	11.8	.33	1.17	.11	.01	10.7	99.7
SA36479	43.3	15.5	4.20	6.85	.10	2.12	17.0	.30	1.46	.13	.03	8.85	99.9
SA36480	42.8	11.1	4.10	4.70	1.03	.59	27.7	.37	1.20	.11	.03	6.25	100.0
SA36481	52.0	14.6	3.98	4.65	3.00	.77	12.5	.20	1.57	.16	.02	5.85	99.4
SA36482	54.7	15.6	4.77	2.93	4.20	1.52	7.45	.20	1.54	.13	.04	6.85	100.0
SA36483	44.4	12.9	9.33	4.75	1.93	.66	13.9	.40	1.28	.14	.02	10.4	100.2
SA36484	50.5	14.2	5.64	4.43	2.15	1.54	12.2	.24	1.68	.29	.02	7.40	100.4
SA36485	54.0	15.1	3.46	5.39	4.04	.53	10.7	.18	1.34	.13	.03	4.55	99.5
SA36486	48.9	15.3	8.79	5.86	2.00	.22	13.7	.20	1.23	.11	.04	3.75	100.1
SA37965	46.9	12.9	8.07	4.58	2.82	.04	13.3	.34	1.25	.14	.02	8.95	99.3
SA37966	42.4	14.6	9.98	4.31	1.87	1.29	12.1	.48	1.18	.11	.04	11.9	100.3
SA37967	47.9	15.1	4.70	4.07	1.44	1.04	16.9	.40	.984	.08	.04	7.80	100.5
SA37968	47.0	12.4	9.57	4.36	.61	1.34	12.1	.43	1.14	.09	.02	11.4	100.5
SA37969	52.1	12.1	5.47	4.21	<.01	1.71	14.4	.36	1.13	.13	.02	7.80	99.5
SA37978	49.4	13.4	6.15	4.42	3.02	.09	14.0	.38	1.12	.10	.04	8.10	100.2
SA37979	50.1	13.1	7.09	5.48	1.74	.07	13.6	.22	1.27	.13	.03	6.65	99.5
SA37980	41.6	5.88	12.2	15.2	.15	.03	13.2	.32	.937	.11	.25	8.80	98.7
SA37981	51.1	11.0	1.37	13.7	<.01	<.01	13.6	.23	1.21	.11	.02	7.20	99.6
SA37982	54.8	15.9	1.98	4.90	.02	3.16	11.5	.19	1.54	.14	.03	5.95	100.3
SA37983	49.5	13.9	6.78	4.32	1.65	1.25	13.3	.30	1.29	.13	.02	7.95	100.5
SA37986	47.0	15.6	8.55	7.13	1.90	.23	12.9	.20	.980	.11	.03	4.45	99.1
SA37987	54.4	15.0	3.66	3.97	4.93	.16	10.7	.20	1.52	.14	.03	4.75	99.5
SA37988	44.7	12.1	5.89	7.32	.61	.07	18.8	.42	1.21	.10	.03	8.95	100.2
SA37989	35.1	10.0	11.1	5.42	.05	.24	24.5	.41	.923	.09	.02	12.4	100.3
SA37990	46.0	16.3	7.19	5.45	1.15	1.35	11.3	.24	1.08	.09	.04	10.1	100.3
SA37991	47.3	13.5	8.18	4.25	.50	1.69	11.9	.24	1.23	.10	.02	10.3	99.3

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM
SA37996	70	148	.4	67	30	121
SA37997	9	6.1	.3	5	15	35.8
SA37998	74	78.8	.1	44	14	122
SA37999	73	163	.5	52	15	92.8
SA38000	52	79.1	.3	30	14	69.8
SA47379	53	112	.8	45	22	114
SA47380	68	67.0	.9	33	18	27.0
SA47381	5	1.9	<.1	2	20	15.5
SA47382	45	46.0	.7	31	16	80.2
SA47383	38	52.1	.3	31	17	100
SA47384	70	139	.5	53	20	102
SA47385	116	75.7	.3	52	14	102
SA47386	112	55.2	.1	47	11	86.5
SA47387	5	1.4	.2	3	16	17.1
SA47388	5	10.5	.3	1	22	9.5
SA47396	89	3.6	.5	39	16	118
SA47397	87	183	.1	59	15	140
SA47398	106	118	.5	53	16	75.9
SA47399	33	29.8	.5	18	7	45.8
SA47400	36	33.3	.4	23	9	70.7

D - QUALITY CONTROL DUPLICATE

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM
SA36471	55	71.0	.5	36	13	127
SA36472	60	101	.3	41	21	94.6
SA36473	45	41.8	.1	30	20	121
SA36474	51	29.6	.4	31	13	87.4
SA36475	71	40.4	.3	38	12	126
SA36476	87	326	.5	62	18	139
SA36477	54	64.9	<.1	41	24	110
SA36478	62	89.4	.4	33	14	82.9
SA36479	79	68.4	.7	45	11	129
SA36480	52	29.9	.4	45	15	129
SA36481	46	19.0	.1	43	14	137
SA36482	40	89.6	<.1	27	21	76.8
SA36483	52	91.0	.6	40	16	103
SA36484	61	44.6	<.1	31	19	90.4
SA36485	33	86.9	.2	37	23	107
SA36486	61	71.2	<.1	31	27	70.3
SA37964	50	71.2	.3	54	17	93.1
SA37965	31	39.6	.4	24	17	63.9
SA37966	49	55.9	.3	27	14	56.5
SA37967	73	15.4	.4	22	16	88.3
SA37968	41	140	.5	33	18	89.6
SA37969	69	89.8	.6	47	32	101
SA37978	51	70.0	.1	36	27	82.5
SA37979	45	41.8	<.1	39	10	140
SA37980	536	138	.5	57	13	77.1
SA37981	44	3.3	.4	69	20	116
SA37982	74	54.4	.2	55	24	106
SA37983	57	53.0	.2	37	15	93.5
SA37984	65	84.6	.5	59	15	143
SA37985	56	96.3	.2	43	18	121
SA37986	104	80.6	<.1	40	20	87.1
SA37987	66	78.0	.2	46	16	99.7
SA37988	78	54.1	.8	52	25	133
SA37989	77	47.7	.6	58	23	136
SA37990	112	87.9	.2	54	16	118
SA37991	40	56.9	.4	33	15	96.5

SAMPLE \ PPM	RB	Y	ZR	BA
SA21591	10	49	281	250
SA21592	<10	25	122	81
SA21593	<10	22	99	105
SA21594	<10	20	98	103
SA21595	<10	<10	94	130
SA21596	97	<10	171	686
SA21597	70	<10	85	531
SA21598	<10	11	79	75
SA21599	59	22	171	443
SA21600	62	14	139	331
SA26799	84	45	187	651
SA26800	56	33	101	398

D - QUALITY CONTROL DUPLICATE

SAMPLE \ PPM	RB	Y	ZR	BA
SA21201	73	13	155	600
SA21202	14	29	115	65
SA21203	32	21	169	321
SA21204	<10	40	112	120
SA21205	<10	19	63	<50
SA21206	<10	23	100	71
SA21207	<10	10	96	85
SA21208	<10	12	78	74
SA21211	89	<10	96	507
SA21212	<10	31	156	80
SA21213	10	30	52	107
SA21214	18	24	61	301
SA21559	<10	20	61	250
SA21560	21	19	91	239
SA21564	40	23	102	267
SA21565	10	22	91	115
SA21566	<10	26	74	70
SA21567	12	11	92	166
SA21568	<10	19	89	107
SA21569	<10	10	50	95
SA21570	17	37	116	197
SA21571	88	<10	136	568
SA21573	11	12	86	52
SA21574	112	33	112	546
SA21577	39	21	90	476
SA21578	<10	14	67	50
SA21579	33	22	197	301
SA21580	59	<10	113	474
SA21581	35	<10	116	346
SA21582	<10	21	165	109
SA21583	107	10	69	642
SA21584	48	13	116	243
SA21585	94	18	96	569
SA21587	<10	25	172	165
SA21588	50	29	155	530
SA21589	48	10	167	361
SA21590	94	<10	174	384

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA21591	52.7	10.7	3.20	2.42	3.22	.28	20.3	.22	2.46	.32	.02	2.65	98.6
SA21592	48.3	12.7	8.06	5.53	2.38	.13	16.8	.22	1.73	.16	.02	2.65	98.7
SA21593	49.4	13.3	8.50	6.18	2.16	.20	15.5	.22	1.51	.14	.02	2.65	99.8
SA21594	51.2	11.6	8.71	5.30	1.52	.26	14.2	.20	1.33	.12	.03	4.85	99.3
SA21595	51.3	13.0	7.12	5.50	2.91	.23	13.7	.21	1.28	.11	.03	3.70	99.1
SA21596	64.2	15.1	2.28	1.98	.98	3.52	6.41	.07	.888	.20	.03	4.20	100.0
SA21597	61.7	12.3	9.35	.66	2.64	2.72	2.11	.20	.118	.04	.02	8.25	100.2
SA21598	64.2	11.1	12.3	.53	1.27	.20	6.81	.25	.102	.04	.05	3.25	100.1
SA21599	66.0	16.4	2.66	1.80	5.66	1.57	3.82	.07	.631	.12	.02	1.55	100.4
SA21600	59.9	15.1	4.69	3.03	4.05	1.89	5.60	.09	.691	.13	.01	5.20	100.4
SA26799	75.9	12.5	1.35	.59	3.63	2.54	1.56	.03	.156	.03	.04	1.85	100.3
SA26800	54.4	15.2	5.34	4.07	1.92	1.31	11.5	.26	1.51	.14	.04	4.40	100.2

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	O5	P2O5	LOI	SUM
SA21201	61.4	14.9	4.07	2.06	4.46	1.91	5.62	.09	.645	.16	<.01	4.40	99.8
SA21202	44.1	12.4	6.97	6.61	1.83	.10	16.4	.23	1.75	.16	.02	8.50	99.1
SA21203	62.4	15.1	1.90	1.76	6.77	.80	7.00	.09	1.02	.30	<.01	2.25	99.4
SA21204	45.1	13.2	8.10	6.84	2.13	.40	16.4	.22	1.68	.16	.02	4.30	98.6
SA21205	48.8	12.4	13.6	5.24	.66	.15	13.3	.19	1.10	.11	.02	4.20	99.8
SA21206	48.4	13.0	9.39	5.78	1.91	.16	16.2	.21	1.62	.15	.02	2.90	99.8
SA21207	46.8	12.5	8.81	5.57	2.19	.25	15.8	.22	1.49	.14	.02	6.35	100.2
SA21208	45.5	13.9	8.92	6.78	2.32	.22	16.7	.25	1.41	.12	.01	3.20	99.3
													3
													7
SA21211	62.6	15.2	1.18	2.88	2.40	2.55	8.24	.13	1.42	.12	.05	3.60	100.4
SA21212	52.0	12.4	7.80	7.70	2.54	.12	8.05	.19	.903	.61	.05	7.90	100.3
SA21213	48.7	15.3	11.4	3.45	1.98	.58	8.62	.22	.945	.09	.04	8.65	100.0
SA21214	55.1	16.9	4.96	4.20	2.75	1.11	8.54	.18	1.09	.08	.04	5.00	100.0
SA21559	46.7	11.2	9.81	10.3	2.19	.44	10.2	.28	.591	.30	.08	7.70	99.8
SA21560	52.7	15.5	5.67	3.56	1.86	.96	13.3	.29	1.44	.13	.03	4.50	100.0
SA21564	50.5	17.1	4.64	4.39	2.56	.88	12.8	.34	1.51	.14	.03	4.25	99.2
SA21565	52.1	14.6	7.39	4.52	2.93	.20	13.7	.38	1.37	.13	.03	2.65	100.0
SA21566	43.5	11.9	10.0	5.88	.63	.20	21.5	.51	1.10	.11	.03	3.35	98.7
SA21569	48.9	14.0	8.18	7.13	2.80	.31	13.5	.21	1.13	.09	.03	2.55	98.8
SA21570	58.8	15.3	5.28	3.78	5.16	.57	7.35	.19	1.48	.14	.04	2.20	100.3
SA21571	55.7	15.7	.14	2.53	.02	3.37	15.8	.17	1.02	.11	<.01	5.65	100.3
SA21573	51.2	14.7	7.15	5.48	4.03	.11	9.79	.19	1.23	.11	.05	5.40	99.5
SA21574	52.9	14.9	7.64	3.32	.79	3.23	6.70	.19	.654	.11	.02	9.25	99.8
SA21577	50.1	14.3	6.98	4.09	1.95	1.72	10.2	.26	1.27	.12	.03	7.85	98.9
SA21578	50.0	13.7	11.0	5.56	1.69	.07	10.9	.22	1.12	.09	.05	5.85	100.3
SA21579	50.7	14.5	4.83	4.38	1.49	1.15	12.6	.16	1.85	.29	.02	7.75	99.8
SA21580	49.4	14.9	6.49	4.70	1.84	1.78	8.90	.14	.865	.13	.03	11.3	100.5
SA21581	52.3	15.3	6.03	4.26	3.32	1.13	9.16	.11	.865	.13	.02	7.65	100.3
SA21582	51.5	16.2	3.74	5.84	2.81	.11	12.6	.12	1.66	.25	.03	4.95	99.8
SA21583	61.8	13.8	1.82	3.90	.62	2.53	9.52	.20	1.02	.09	.04	4.45	99.9
SA21584	57.5	14.7	1.60	4.64	2.65	.82	12.0	.23	1.46	.12	.04	4.00	99.8
SA21585	57.7	15.8	3.66	3.12	3.30	2.17	6.62	.17	1.28	.12	.03	5.25	99.3
SA21587	48.8	16.3	1.75	5.56	2.16	.37	17.3	.08	.885	.17	.03	5.30	98.8
SA21588	58.7	15.7	3.88	3.80	4.15	1.56	6.98	.10	.736	.14	.02	4.55	100.4
SA21589	57.6	16.9	5.57	3.92	2.81	1.50	7.65	.10	.790	.13	.01	3.10	100.1
SA21590	60.0	15.5	3.88	2.53	3.90	2.34	6.04	.07	.856	.15	<.01	4.80	100.1

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA21590	15	5.8	<.1	18	16	40.8	--
SA21591	1	16.7	<.1	30	9	120	--
SA21592	33	78.3	<.1	30	8	77.2	--
SA21593	46	78.5	.1	29	<5	69.8	--
SA21594	39	71.0	<.1	33	<5	83.8	--
SA21595	60	105	.2	39	21	80.1	--
SA21596	25	24.0	<.1	16	10	76.1	--
SA21597	4	4.8	<.1	3	10	13.2	--
SA21598	5	4.9	.2	2	11	27.5	--
SA21599	24	39.6	<.1	17	10	30.4	--
SA21600	39	119	.1	12	8	37.7	--
SA26799	3	10.6	.1	2	9	6.1	--
SA26800	58	78.4	<.1	35	<5	100	--

D - QUALITY CONTROL DUPLICATE

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA21201	32	10.0	.3	24	27	49.5	--
SA21202	55	100	<.1	45	6	110	--
SA21203	<1	17.2	<.1	10	12	82.2	--
SA21204	58	90.4	<.1	36	8	90.9	--
SA21205	34	85.1	.2	23	<5	44.0	--
SA21206	41	82.0	.1	30	7	64.6	--
SA21207	48	51.7	.1	34	<5	95.2	--
SA21208	29	75.6	.2	31	5	67.3	--
SA21211	66	8.2	<.1	32	6	85.6	--
SA21212	56	92.5	<.1	30	<5	125	--
SA21213	116	104	.4	43	7	88.3	--
SA21214	129	90.8	.4	46	11	94.3	--
SA21559	53	61.7	<.1	25	11	99.8	--
SA21560	85	66.8	.3	50	9	170	--
SA21564	88	85.1	.4	43	12	117	--
SA21565	54	16.7	.3	35	10	74.8	--
SA21566	55	40.2	.2	43	6	88.6	--
SA21569	45	76.4	<.1	23	13	64.7	--
SA21570	20	3.7	<.1	18	8	40.3	--
SA21571	11	200	1.0	8	20	109	--
SA21572	40	226	2.5	--	30	3440	9
SA21573	58	108	<.1	40	<5	91.2	--
SA21574	39	215	.4	16	<5	69.0	--
SA21577	59	75.3	.2	38	5	107	--
SA21578	50	132	<.1	29	<5	78.6	--
SA21579	29	49.3	<.1	30	6	166	--
SA21580	88	36.4	<.1	27	8	90.1	--
SA21581	93	5.3	<.1	28	5	67.3	--
SA21582	49	15.4	.1	30	<5	109	--
SA21583	89	88.3	.1	48	6	97.1	--
SA21584	67	22.5	<.1	42	7	130	--
SA21585	55	75.3	.3	28	6	68.2	--
SA21587	207	114	.3	89	8	279	--
SA21588	41	64.5	.1	21	11	71.7	--
SA21589	51	6.0	<.1	21	9	50.4	--

SAMPLE \ PPM	RB	Y	ZR	BA
SA48092	33	<10	73	221
SA48093	67	30	93	511
SA48094	49	35	98	254
SA48095	39	11	104	232
SA48096	65	17	120	293
SA48097	64	35	49	365
SA48098	<10	32	241	168
SA48099	96	<10	140	610
SA48100	26	<10	94	296

D - QUALITY CONTROL DUPLICATE

SAMPLE \ PPM	RB	Y	ZR	BA
SA44000	31	28	69	305
SA47377	11	20	75	117
SA47378	20	<10	62	215
SA48054	17	16	55	126
SA48055	75	<10	171	639
SA48056	43	32	199	421
SA48057	57	21	156	387
SA48058	128	40	152	405
SA48059	<10	24	63	90
SA48060	114	44	122	261
SA48061	<10	12	66	111
SA48062	45	<10	62	588
SA48063	46	15	78	399
SA48064	48	24	66	354
SA48065	<10	29	79	115
SA48066	16	<10	85	195
SA48070	<10	13	80	117
SA48071	<10	26	59	170
SA48072	<10	18	57	117
SA48073	<10	26	51	103
SA48074	45	14	61	380
SA48075	13	20	35	133
SA48076	14	11	96	74
SA48077	22	45	106	224
SA48078	<10	28	79	77
SA48079	<10	16	83	160
SA48080	90	28	143	664
SA48081	14	23	81	89
SA48082	11	20	86	114
SA48083	<10	18	106	108
SA48084	61	20	73	635
SA48085	20	<10	174	384
SA48086	10	<10	73	120
SA48088	65	30	69	336
SA48089	119	39	170	499
SA48090	39	<10	79	185
SA48091	98	29	157	331

SAMPLE \ PPM	RB	Y	ZR	BA
SA37526	35	<10	100	300
SA37527	<10	22	64	206
SA37528	<10	<10	72	110
SA37529	72	<10	73	366
SA37530	53	<10	50	188
SA37531	50	<10	63	351
SA37532	24	40	83	376
SA37533	<10	15	89	128
SA37534	<10	16	90	142
SA37535	19	30	98	359
SA37536	76	20	234	551
SA37537	76	<10	88	700
SA37538	41	<10	108	482
SA37539	69	<10	120	520
SA37540	74	40	80	413
SA37541	<10	13	86	133
SA37542	<10	11	62	126
SA37543	<10	15	71	119
SA37544	41	36	304	241
SA37545	<10	39	67	81
SA37546	44	12	93	496
SA37547	61	24	103	762
SA37548	100	<10	48	778
SA37549	37	14	59	217
SA37550	<10	21	67	143

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA48092	53.1	12.3	5.92	4.76	1.04	.88	12.2	.19	1.11	.09	.02	8.30	99.9
SA48093	53.1	14.8	6.60	4.22	1.56	2.57	11.2	.30	1.36	.11	.02	4.55	100.5
SA48100	50.2	15.7	6.51	4.03	3.66	1.04	8.86	.12	.902	.14	.02	7.95	99.2

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA44000	44.9	12.9	9.11	4.67	.05	1.38	13.4	.38	1.20	.10	.01	11.3	99.4
SA47377	48.6	13.6	5.52	6.95	1.42	.18	13.9	.19	1.21	.10	.03	8.50	100.2
SA47378	52.4	14.7	5.12	4.51	3.23	.48	11.2	.20	1.20	.09	.05	6.90	100.1
SA48054	45.8	12.5	8.86	5.54	1.46	.33	13.3	.25	1.04	.08	.04	11.0	100.2
SA48055	62.1	14.1	4.76	2.11	1.20	2.59	5.93	.09	.873	.17	.02	6.55	100.4
SA48060	78.3	11.8	.92	.44	.12	3.62	1.47	.07	.130	.02	.02	2.95	99.9
SA48061	45.9	13.0	5.96	5.94	1.33	.01	16.0	.36	1.11	.09	.03	9.20	98.9
SA48062	48.3	13.7	8.68	3.44	1.26	1.39	10.8	.31	.878	.08	.03	10.3	99.3
SA48063	54.6	15.3	3.51	4.48	1.81	1.42	10.8	.14	1.35	.11	.04	6.75	100.4
SA48064	52.2	16.7	3.82	3.53	3.90	1.47	8.73	.24	1.30	.11	.04	6.90	99.0
SA48065	44.2	12.7	10.1	4.37	2.86	.19	11.0	.42	1.29	.13	.03	11.3	98.6
SA48066	50.2	13.0	2.19	5.28	.01	.34	20.5	.27	1.27	.11	.03	6.65	99.9
SA48070	48.9	13.2	6.65	5.44	3.39	.06	11.8	.24	1.25	.10	.02	8.10	99.2
SA48071	54.0	13.1	5.03	3.84	3.88	.10	10.7	.23	1.32	.10	.04	6.35	98.7
SA48072	50.2	13.3	8.71	3.49	4.14	.12	9.43	.26	1.25	.10	.03	8.92	100.0
SA48073	46.8	12.6	6.08	5.79	1.45	.02	15.7	.36	1.08	.09	.03	9.20	99.2
SA48074	51.3	15.2	6.79	3.35	2.78	1.09	9.31	.25	.979	.08	.04	8.45	99.7
SA48075	41.2	12.2	9.15	4.90	.48	.69	16.5	.55	.763	.07	.04	12.8	99.4
SA48076	46.7	12.6	8.78	4.25	2.82	.06	12.6	.42	1.19	.13	.02	9.85	99.4
SA48077	53.3	15.2	3.43	4.10	4.39	.39	10.5	.17	1.60	.14	.04	6.10	99.4
SA48078	45.9	12.7	7.73	5.02	2.15	.04	15.5	.32	1.26	.12	.02	9.40	100.2
SA48079	41.6	12.2	8.16	5.42	<.01	.46	19.4	.33	1.23	.11	.03	11.3	100.3
SA48080	57.1	15.6	3.61	4.66	.19	2.77	8.35	.12	.738	.16	.01	7.00	100.4
SA48081	42.7	13.4	7.60	6.65	1.86	.06	15.2	.39	1.15	.12	.03	9.80	99.0
SA48082	46.2	12.6	6.34	5.90	1.69	.08	15.2	.30	1.23	.13	.03	9.40	99.1
SA48083	46.6	12.7	6.60	6.01	1.71	.08	15.7	.30	1.25	.13	.02	9.55	100.5
SA48084	52.6	14.0	4.43	3.68	.30	2.67	11.4	.25	1.34	.11	.02	9.30	100.2
SA48085	67.5	15.4	2.02	.80	8.29	.63	2.79	.08	.310	.15	.02	1.70	99.8
SA48086	48.9	12.8	7.33	5.05	1.69	.22	13.3	.18	1.20	.10	.03	9.20	100.0
SA48088	45.1	11.9	8.41	4.34	.12	2.46	11.8	.43	1.11	.09	.02	13.2	99.0
SA48089	61.8	13.6	.12	.47	.23	4.03	8.93	.02	.788	.04	.05	10.3	100.5
SA48090	47.1	10.9	5.05	4.66	.02	1.26	18.3	.68	.763	.07	.01	8.55	97.4
SA48091	70.8	11.6	1.66	1.99	.14	2.93	5.49	.13	.276	.03	.04	3.80	99.0

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ %	SIO2	AL203	CAO	MGO	NA2O	K2O	FE203	MNO	TIO2	P2O5	CR203	LOI	SUM
SA37526	55.3	17.6	4.75	4.26	4.57	1.03	5.68	.09	.480	.09	.02	6.05	100.0
SA37527	49.2	13.3	5.30	5.72	2.01	.27	14.0	.18	1.25	.10	.02	8.45	99.8
SA37528	46.7	12.4	9.00	5.02	2.49	.11	12.6	.24	1.18	.10	.02	10.1	100.0
SA37529	47.1	13.3	5.83	5.51	.41	2.06	13.1	.27	1.25	.10	.02	11.2	100.2
SA37530	43.3	12.1	6.91	5.51	.38	1.42	15.9	.47	1.01	.08	.03	12.9	100.0
SA37531	45.9	15.4	7.78	4.37	.34	1.87	12.8	.32	.950	.08	.03	10.3	100.2
SA37532	50.4	14.1	6.06	4.14	2.26	1.12	11.2	.29	1.39	.12	.03	8.15	99.3
SA37533	41.4	12.7	7.37	5.35	.44	.13	20.6	.50	1.32	.14	.02	10.6	100.6
$	.					...	....	.—	....				
SA37535	55.2	14.6	3.59	4.50	3.11	.85	10.4	.18	1.39	.12	.02	6.20	100.2
SA37536	67.3	15.7	.54	2.22	1.15	2.82	4.66	.05	.975	.18	.02	3.50	99.2
SA37537	60.4	17.7	1.43	3.46	2.31	2.68	6.37	.07	.477	.09	.01	4.80	99.9
SA37538	56.6	16.6	3.20	4.54	3.66	1.50	7.40	.09	.468	.09	.03	5.90	100.2
SA37539	59.8	17.0	2.31	3.51	3.79	2.10	6.25	.06	.620	.11	.01	4.70	100.3
SA37540	58.0	14.2	3.75	2.65	3.17	2.32	6.17	.18	1.37	.11	.03	6.85	98.9
SA37541	47.9	12.4	6.58	6.03	2.20	.09	13.9	.19	1.21	.09	.02	9.05	99.7
SA37542	44.2	13.1	5.29	7.21	.51	.02	18.5	.38	1.16	.09	.04	9.70	100.2
SA37543	49.2	13.7	5.81	5.40	2.61	.09	13.5	.31	1.19	.10	.03	7.55	99.5
SA37544	58.3	12.6	4.85	2.70	1.75	.89	11.1	.29	.530	.16	<.01	6.95	100.2
SA37545	47.5	14.5	8.60	4.37	2.76	.02	13.0	.34	1.11	.10	.03	8.05	100.4
SA37546	53.4	14.8	5.27	3.34	1.99	1.52	10.7	.31	1.34	.13	.03	7.45	100.4
SA37547	54.8	14.9	2.35	4.36	.12	2.11	13.4	.29	1.33	.09	.03	6.45	100.3
SA37548	48.6	19.5	6.75	2.97	2.52	3.22	6.49	.22	.769	.07	.02	8.80	100.0
SA37549	44.7	15.3	7.27	4.15	1.85	.97	14.7	.35	.981	.08	.03	10.0	100.4
SA37550	48.0	12.8	6.36	5.34	1.94	.07	14.6	.32	1.22	.11	.01	8.85	99.7

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA48091	23	13.0	.2	10	6	66.0	--
SA48092	53	61.3	.3	49	<5	156	--
SA48093	34	115	.2	30	<5	56.0	--
SA48100	53	3.6	<.1	25	10	96.2	--

D - QUALITY CONTROL DUPLICATE

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA44000	39	50.9	.2	40	<5	110	--
SA47377	61	7.3	.1	47	<5	136	--
SA47378	66	209	.1	53	<5	102	--
SA48054	52	77.1	<.1	39	<5	147	--
SA48055	13	22.6	<.1	13	<5	41.2	--
SA48060	9	5.0	<.1	6	8	13.4	--
SA48061	61	128	.4	48	<5	154	--
SA48062	93	75.1	.5	48	9	81.3	--
SA48063	55	75.9	.2	43	14	104	--
SA48064	74	125	.2	63	<5	66.4	--
SA48065	53	94.6	.3	42	<5	96.0	--
SA48066	92	52.6	<.1	55	<5	175	--
SA48070	45	126	.2	54	<5	135	--
SA48071	31	165	.2	23	8	89.5	--
SA48072	41	133	.1	31	10	76.9	--
SA48073	50	24.2	.4	40	<5	153	--
SA48074	116	137	.5	59	<5	87.7	--
SA48075	135	107	.8	38	8	108	--
SA48076	45	52.6	.4	29	7	89.9	--
SA48077	53	44.0	<.1	41	9	121	--
SA48078	60	30.4	.2	46	8	119	--
SA48079	62	93.3	.5	52	13	141	--
SA48080	113	3.0	.2	33	8	107	--
SA48081	81	99.1	.3	46	9	105	--
SA48082	68	82.2	.4	48	6	95.4	--
SA48083	53	45.6	.2	44	7	121	--
SA48084	43	102	.3	34	13	118	--
SA48085	10	25.0	.5	8	135	21.6	--
SA48086	48	96.0	.2	45	6	163	--
SA48087	60	559	2.3	--	108	317	60
SA48088	44	116	.4	50	<5	146	--
SA48089	74	42.2	.5	94	27	72.4	--
SA48090	29	35.2	.7	27	<5	157	--

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA37526	73	3.8	<.1	20	5	56.0	--
SA37527	44	90.6	<.1	49	<5	162	--
SA37528	42	150	<.1	48	17	124	--
SA37529	43	132	<.1	40	17	130	--
SA37530	53	85.3	.3	46	6	186	--
SA37531	122	49.0	.4	59	9	151	--
SA37532	53	94.6	.2	47	13	98.3	--
SA37533	59	12.4	.5	49	6	139	--
SA37535	50	68.9	<.1	44	<5	112	--
SA37536	10	4.9	<.1	10	9	38.5	--
SA37537	61	16.5	<.1	19	10	52.0	--
SA37538	101	3.6	.2	22	10	55.1	--
SA37539	56	29.9	.2	20	8	55.4	--
SA37540	39	49.0	.2	31	9	50.4	--
SA37541	37	68.3	<.1	39	9	108	--
SA37542	62	48.6	.3	36	9	234	--
SA37543	49	61.7	.2	39	7	112	--
SA37544	21	28.5	.4	9	9	71.2	--
SA37545	87	91.1	.3	48	<5	98.1	--
SA37546	71	49.4	.3	33	8	88.0	--
SA37547	65	31.8	.5	53	8	89.3	--
SA37548	58	40.7	.4	28	10	65.2	--
SA37549	122	39.6	.3	47	8	98.9	--
SA37550	39	48.7	.2	51	8	172	--

SAMPLE \ PPM	RB	Y	ZR	BA
SA23695	24	42	58	238
SA23696	49	12	168	401
SA23697	51	28	139	518
SA23699	<10	34	82	74
SA23700	<10	11	70	65
SA26760	<10	47	61	129
SA26761	31	11	145	366
SA26762	18	26	111	158
SA26768	<10	24	90	81
SA26769	21	18	143	141
SA26770	107	27	128	434
SA26771	76	20	96	461
SA26772	14	<10	77	296
SA26773	69	28	166	509
SA26774	96	70	128	340
SA26775	<10	38	281	128
SA26776	61	36	127	574
SA26777	<10	20	60	284
SA26778	54	17	96	379
SA26779	<10	44	87	94
SA26780	86	35	129	560
SA26781	41	23	88	277
SA26782	122	33	186	662
SA26783	<10	23	125	149
SA26784	136	10	40	784
SA26785	22	<10	152	316
SA26786	<10	21	140	158
SA26787	79	<10	165	627
SA26788	74	20	128	625
SA26789	12	15	126	105
SA26790	23	11	220	304
SA26791	80	17	170	655
SA26792	18	<10	122	423
SA26793	131	<10	173	826
SA26794	130	<10	166	807
SA26795	60	17	161	522
SA26796	88	20	62	919
SA26798	<10	22	102	90

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA23695	52.6	14.3	9.11	5.09	2.48	.72	11.8	.32	1.16	.10	.04	2.25	100.0
SA23696	52.3	14.9	4.49	4.80	2.71	1.14	11.6	.27	1.25	.25	.04	4.90	98.7
SA23697	53.8	14.3	1.83	5.39	2.17	1.72	13.6	.28	1.39	.16	.03	4.40	99.2
SA23699	49.7	14.3	10.8	6.29	2.27	.12	11.9	.30	1.17	.10	.04	2.80	99.8
SA23700	49.4	14.2	10.8	6.25	2.26	.10	11.8	.30	1.15	.10	.04	2.80	99.2
SA26760	56.3	16.0	8.93	3.81	2.86	.39	8.02	.26	1.18	.09	.05	2.30	100.2
SA26761	59.4	15.7	5.62	2.86	3.15	.78	7.95	.13	.799	.18	.04	3.25	99.9
SA26762	52.0	16.0	6.23	3.77	3.83	.37	10.5	.24	1.63	.15	.03	4.10	98.9
SA26768	43.7	12.1	7.83	5.79	.51	.05	18.6	.48	1.14	.10	.02	9.80	100.1
SA26769	50.7	13.9	2.13	5.95	1.71	.03	17.4	.36	1.13	.27	.02	5.60	99.2
SA26770	76.8	12.0	.67	.46	1.18	3.13	2.32	.04	.140	.02	.02	2.25	99.1
SA26771	50.1	15.0	6.47	3.53	1.02	2.29	10.9	.28	1.45	.13	.03	7.65	98.9
SA26772	53.7	16.1	5.46	3.67	4.77	.71	7.25	.15	1.24	.11	.04	5.55	98.8
SA26773	61.5	15.2	4.15	1.71	1.48	2.83	6.95	.13	.749	.14	.02	5.55	100.5
SA26774	75.3	10.2	.29	1.54	.15	2.37	5.44	.07	.278	.04	.04	2.90	98.7
SA26775	48.9	13.3	5.89	4.51	2.94	.13	12.6	.16	2.19	.50	.02	7.80	99.0
SA26776	56.5	13.2	7.82	3.04	.68	2.24	7.42	.13	.662	.16	<.01	8.80	100.7
SA26777	49.6	14.2	.30	5.36	.18	1.09	19.0	.23	1.16	.10	.04	6.95	98.2
SA26778	55.6	15.8	4.14	4.25	2.64	1.75	7.37	.16	1.38	.12	.04	5.80	99.1
SA26779	49.9	14.4	8.05	4.37	1.47	.08	13.4	.30	1.34	.11	.03	5.90	99.4
SA26780	78.2	12.4	.08	.41	2.89	2.65	1.45	.02	.137	.02	.03	1.95	100.3
SA26781	53.7	12.8	6.51	3.59	2.03	.94	11.1	.26	1.37	.12	.03	7.20	99.7
SA26782	74.8	13.3	.27	.82	1.99	3.35	2.67	.04	.202	.03	.02	2.05	99.7
SA26783	54.1	15.4	4.57	5.73	3.61	.19	9.16	.22	.806	.28	.03	5.35	99.5
SA26784	50.1	20.9	3.96	2.94	2.64	3.47	8.03	.22	.792	.07	.01	6.35	99.6
SA26785	59.4	16.7	.88	3.96	5.72	.56	7.19	.07	.676	.12	.01	3.35	98.7
SA26786	43.7	14.2	5.55	8.43	.30	.51	15.2	.15	1.41	.24	.08	9.35	99.2
SA26787	70.4	15.2	.69	1.20	3.28	2.44	2.93	.02	.380	.10	.02	2.65	99.4
SA26788	51.9	14.5	6.35	4.07	.74	2.77	7.39	.19	.759	.11	.01	11.2	100.1
SA26789	44.5	13.4	6.24	9.68	.92	.06	13.1	.14	1.13	.19	.06	10.5	99.9
SA26790	50.6	14.6	5.34	3.80	2.84	.48	12.2	.16	1.92	.31	<.01	7.05	99.4
SA26791	69.3	15.2	1.44	1.38	2.00	2.96	3.16	.04	.386	.10	.02	3.70	99.8
SA26792	48.7	16.7	4.23	6.20	2.63	.77	11.4	.12	1.01	.16	.02	7.45	99.5
SA26793	69.0	15.7	2.56	.56	.43	4.22	2.33	.09	.386	.11	.01	4.55	100.1
SA26794	70.5	15.7	.61	1.09	.42	3.83	3.26	.03	.420	.11	<.01	3.00	99.1
SA26795	59.0	15.0	1.12	5.77	.27	1.74	10.2	.08	.783	.18	.02	5.35	99.6
SA26796	58.3	15.7	2.44	3.51	.21	2.75	8.72	.18	1.22	.10	.02	5.65	98.9
SA26798	50.9	14.4	6.81	4.54	4.02	.06	9.72	.22	1.56	.15	<.01	6.90	99.3

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA26798	63	112	1.5	65	<5	131	--

D - QUALITY CONTROL DUPLICATE

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA23695	40	87.5	1.5	28	<5	73.7	--
SA23696	113	283	2.5	50	<5	106	--
SA23697	158	9.8	1.4	39	<5	165	--
SA23699	34	56.6	1.0	28	<5	80.4	--
SA23700	93	9.8	1.0	37	<5	69.2	--
SA26760	73	7.7	1.1	30	<5	54.2	--
SA26761	67	29.0	1.0	26	<5	152	--
SA26762	74	119	1.6	59	<5	112	--
SA26768	92	65.9	.9	62	<5	229	--
SA26769	134	5.9	.6	45	<5	291	--
SA26770	7	8.0	<.5	3	<5	51.1	--
SA26771	86	92.3	.7	46	<5	287	--
SA26772	116	86.0	1.3	67	<5	96.4	--
SA26773	10	6.0	.6	16	<5	82.0	--
SA26774	73	16.1	<.5	11	<5	73.5	--
SA26775	54	6.6	<.5	32	<5	171	--
SA26776	65	33.2	<.5	28	<5	110	--
SA26777	79	126	1.6	39	10	6340	--
SA26778	105	56.5	.6	49	<5	157	--
SA26779	93	91.2	1.2	39	<5	188	--
SA26780	5	7.2	<.5	2	<5	137	--
SA26781	79	84.9	.9	52	<5	164	--
SA26782	5	9.1	<.5	3	<5	32.3	--
SA26783	33	22.4	.6	34	<5	150	--
SA26784	60	78.5	<.5	25	<5	101	--
SA26785	91	8.0	<.5	24	<5	86.7	--
SA26786	512	117	.6	22	6	183	--
SA26787	8	35.6	<.5	7	<5	29.0	--
SA26788	107	13.8	<.5	28	<5	78.1	--
SA26789	334	6.3	<.5	61	<5	150	--
SA26790	39	4.4	<.5	35	<5	134	--
SA26791	8	3.6	<.5	7	<5	37.9	--
SA26792	150	2.4	<.5	44	<5	155	--
SA26793	11	10.3	<.5	7	10	16.8	--
SA26794	11	14.6	<.5	7	18	54.6	--
SA26795	82	5.2	<.5	35	6	168	--
SA26796	103	34.0	<.5	47	<5	154	--
SA26797	107	337	<.5	--	<5	220	<2

SAMPLE \ PPM	RB	Y	ZR	BA
SA37512	104	<10	106	641
SA37513	15	25	91	273
SA37514	<10	12	50	87
SA37515	<10	18	53	85
SA37516	58	<10	54	281
SA37517	40	15	35	196
SA37518	70	16	63	226
SA37519	<10	16	87	102
SA37520	30	19	100	289
SA37521	64	40	285	423
SA37522	41	19	71	206
SA37523	63	22	92	746
SA37524	11	<10	79	105
SA37525	53	20	84	248

SAMPLE \ PPM	RB	Y	ZR	BA
SA27898	26	16	83	152
SA27899	21	20	75	144
SA27999	73	41	209	875
SA28000	126	29	227	849

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA37512	51.7	18.6	6.90	3.24	.64	3.41	5.77	.10	.457	.10	<.01	9.25	100.3
SA37513	54.8	14.2	5.74	6.23	2.30	1.08	7.12	.10	.469	.09	.03	8.20	100.4
SA37514	45.8	12.0	9.10	5.13	1.50	.25	13.9	.24	1.11	.09	.01	10.9	100.0
SA37515	47.0	12.2	5.76	6.48	1.30	.02	17.0	.39	1.19	.09	.01	8.65	100.1
SA37516	48.8	15.8	6.51	3.92	1.09	2.23	11.3	.31	1.01	.08	.04	8.60	99.7
SA37517	45.1	14.0	7.16	4.80	.12	1.35	15.0	.38	.899	.07	.04	10.3	99.3
SA37518	51.5	15.7	5.95	3.82	3.14	1.47	8.40	.19	1.17	.10	.03	7.90	99.4
SA37519	45.1	13.1	8.67	5.24	2.46	.06	13.2	.34	1.18	.11	.03	10.5	100.0
SA37520	57.5	16.3	2.61	3.74	4.78	1.08	6.75	.14	1.57	.13	.04	4.55	99.2
SA37521	70.6	12.5	3.21	.76	3.10	2.18	3.17	.11	.497	.15	.03	3.90	100.3
SA37522	42.4	11.9	11.8	4.27	.21	1.22	14.3	.47	1.07	.11	.02	12.6	100.4
SA37523	44.6	16.3	1.24	7.15	.06	1.48	20.4	.33	1.47	.15	.02	6.95	100.3
SA37524	45.7	13.3	8.20	5.18	2.63	.17	12.6	.31	1.17	.11	.02	10.3	99.7
SA37525	46.9	14.1	8.90	4.65	2.05	1.28	9.99	.27	1.24	.11	.03	10.6	100.2

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA27898	52.6	14.7	10.2	3.76	2.20	.76	12.4	.20	1.37	.13	.04	1.15	99.5
SA27899	51.1	14.2	10.9	5.57	2.04	.74	12.4	.27	1.23	.11	.04	1.15	99.8

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA27899	49	223	1.0	28	<5	51.6	--
SA37509	9	9.6	.9	2	2450	13.6	--
SA37510	13	8.1	1.6	7	1530	82.7	--
SA37511	83	7.6	<.5	35	6	129	--
SA37512	75	2.9	.5	19	7	47.1	--
SA37513	174	3.2	<.5	34	<5	78.1	--
SA37514	52	73.7	<.5	49	<5	178	--
SA37515	60	25.7	1.0	58	<5	197	--
SA37516	132	80.9	.7	64	8	117	--
SA37517	140	138	.6	48	<5	212	--
SA37518	80	40.6	<.5	47	<5	117	--
SA37519	87	79.0	<.5	51	<5	132	--
SA37520	77	157	.5	46	<5	105	--
SA37521	10	9.7	<.5	7	9	24.7	--
SA37522	66	81.5	<.5	45	<5	150	--
SA37523	128	30.3	<.5	61	<5	153	--
SA37524	82	90.3	<.5	48	<5	138	--
SA37525	78	109	.6	52	<5	115	--

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA27898	81	245	1.0	51	<5	55.9	--

SAMPLE \ PPM	RB	Y	ZR	BA
SA28082	16	42	169	173
SA28083	30	34	158	208
SA28084	62	18	88	388
SA28085	22	29	97	220
SA28086	<10	25	129	78
SA28087	21	55	283	152
SA28088	31	41	114	216
SA28089	48	21	77	321
SA28090	26	24	97	283
SA28091	11	12	79	206
SA28092	11	17	86	202
SA28093	25	22	101	332
SA28094	37	18	81	235
SA28095	142	21	154	522
SA28096	49	17	104	269
SA28097	35	<10	95	209
SA28098	<10	37	167	112
SA28099	<10	23	84	114
28100	<10	15	86	84

D - QUALITY CONTROL DUPLICATE

SAMPLE \ PPM	RB	Y	ZR	BA
SA26831	25	28	90	176
SA26832	11	41	125	94
SA26833	<10	<10	103	94
SA26834	<10	27	81	135
SA26835	81	42	86	494
SA26836	46	28	88	287
SA26837	<10	20	105	90
SA26838	67	10	103	648
SA26839	14	26	120	261
SA26840	<10	15	107	115
SA26841	33	<10	99	298
SA26842	17	<10	122	212
SA26843	49	58	320	338
SA26844	44	13	110	323
SA26845	89	29	201	602
SA26846	129	11	149	696
SA26847	85	<10	169	621
SA26848	48	24	121	412
SA26849	25	18	94	295
SA26850	29	<10	188	308
SA28057	<10	22	54	64
SA28058	<10	33	51	52
SA28059	57	18	186	515
SA28060	24	25	81	302
SA28061	<10	21	113	147
SA28064	11	17	101	110
SA28065	<10	21	68	63
SA28066	13	18	80	281
SA28067	128	<10	55	475
SA28068	44	<10	93	483
SA28069	26	25	111	264
SA28070	10	25	57	65
SA28074	<10	21	78	106
SA28075	<10	19	79	124
SA28076	19	31	77	273
SA28077	<10	14	32	73
SA28078	<10	<10	64	58
SA28079	<10	29	66	112
SA28080	<10	19	65	139
SA28081	<10	15	68	215

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA28082	52.2	13.7	5.62	4.92	3.05	.39	11.2	.21	1.41	.16	.02	7.15	100.1
SA28083	53.3	14.3	6.22	3.77	2.98	1.16	8.39	.23	1.34	.16	.02	7.75	99.7
SA28084	46.4	15.3	8.67	3.91	2.37	1.72	9.95	.33	1.29	.11	.03	10.0	100.1
SA28085	49.5	14.0	6.54	4.70	2.70	.67	11.0	.22	1.26	.12	.03	8.65	99.4
SA28086	48.1	13.0	6.97	5.79	2.59	.03	13.0	.28	1.37	.14	.01	8.80	100.1
SA28087	54.3	11.3	6.50	3.26	2.79	.50	12.3	.21	1.34	.27	.02	7.55	100.4
SA28088	50.8	14.0	6.25	4.01	2.70	.81	11.8	.31	1.34	.13	.02	8.05	100.3
SA28089	53.4	11.1	9.01	3.60	.52	1.55	9.34	.33	1.02	.10	.02	10.0	100.0
SA28090	48.1	12.7	6.40	6.69	1.51	.58	17.7	.41	1.34	.11	.03	4.20	99.8
SA28091	48.7	13.3	7.86	6.82	1.25	.51	15.1	.38	1.21	.12	.03	4.60	99.9
SA28092	52.7	17.2	3.97	4.77	4.46	.41	9.61	.19	1.33	.11	.04	4.20	99.0
SA28093	50.7	13.2	5.90	5.11	1.51	.98	14.0	.35	1.30	.10	.03	7.10	100.3
SA28094	49.7	12.3	7.36	4.81	.85	.90	13.2	.39	1.22	.10	.02	9.35	100.2
SA28095	62.7	16.0	3.18	1.65	2.65	3.07	4.27	.12	.813	.16	.03	4.35	99.1
SA28096	57.0	16.6	4.14	2.83	5.06	1.40	5.68	.15	1.52	.13	.03	5.55	100.1
SA28097	44.8	12.8	7.31	5.21	.39	.76	17.1	.41	1.21	.11	.02	10.2	100.4
SA28098	44.5	12.8	5.39	5.42	1.31	.03	19.1	.44	1.32	.17	.02	8.05	98.6
SA28099	44.7	13.7	6.05	6.08	1.87	.05	17.0	.39	1.26	.11	.02	8.75	100.0
28100	47.8	9.05	7.49	5.39	.47	.04	18.4	.50	1.01	.09	.01	9.25	99.5

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA26831	47.8	14.8	3.32	5.71	2.37	.23	17.7	.35	1.38	.10	.03	5.85	99.7
SA26832	46.3	11.6	6.80	5.84	1.46	<.01	16.7	.36	1.35	.14	<.01	8.55	99.1
SA26833	49.1	14.5	5.69	6.09	2.17	.02	13.9	.28	1.25	.11	.02	5.60	98.8
SA26834	48.6	13.4	4.82	5.03	2.13	.13	16.2	.40	1.33	.11	.02	7.50	99.7
SA26835	77.0	12.6	.33	.54	3.42	2.38	2.10	.03	.136	.03	.03	1.60	100.3
SA26836	49.2	13.7	5.80	4.50	.71	1.56	13.9	.37	1.35	.12	.02	8.30	99.6
SA26837	49.8	13.7	5.69	6.27	1.99	.03	14.0	.29	1.31	.13	.03	7.20	100.5
SA26838	55.4	17.6	4.11	3.65	2.96	2.12	7.14	.10	.628	.10	.02	5.90	99.8
SA26839	52.4	16.0	3.77	5.26	3.56	.68	9.65	.10	.990	.15	.02	6.75	99.4
SA26840	55.1	14.1	.92	10.7	2.11	.03	9.87	.12	.557	.10	.05	6.20	99.9
SA26841	52.5	16.9	7.33	3.10	2.55	1.40	6.90	.14	.410	.08	.01	8.95	100.3
SA26842	53.7	14.8	4.20	5.15	3.08	.50	10.3	.13	.982	.15	<.01	6.80	99.8
SA26843	48.9	12.1	5.59	5.14	.15	1.32	14.9	.24	1.56	.52	.01	9.60	100.1
SA26844	44.7	13.1	7.47	6.12	.62	1.28	11.9	.23	1.25	.27	.02	13.3	100.3
SA26845	76.1	12.6	.31	.35	.56	2.93	3.00	.14	.229	.05	.02	2.80	99.2
SA26846	58.0	17.1	2.75	4.26	.24	3.37	7.41	.09	.664	.13	<.01	6.15	100.3
SA26847	73.3	14.0	.89	.75	3.13	2.56	1.98	.03	.206	.06	.01	2.45	99.5
SA26848	52.7	16.3	5.06	3.97	3.71	1.31	8.36	.11	.881	.13	.01	6.85	99.5
SA26849	49.0	13.7	5.13	10.8	.36	.73	13.9	.23	.774	.17	.04	5.25	100.1
SA26850	63.7	13.8	2.07	3.88	3.36	.92	6.41	.10	.872	.15	.02	3.90	99.2
SA28057	37.8	2.13	11.5	5.09	<.01	.02	26.7	.59	.123	.04	<.01	13.4	97.4
SA28058	47.9	1.48	8.89	2.80	<.01	<.01	28.5	.65	.078	.04	.02	9.35	99.7
SA28059	54.4	14.7	5.16	4.23	3.02	1.67	11.6	.21	1.34	.32	.02	2.60	99.4
SA28060	49.0	15.9	4.81	4.96	2.68	.74	13.1	.29	1.22	.11	.03	6.10	99.0
SA28061	50.3	14.9	2.16	5.93	2.57	.10	15.5	.30	1.51	.14	.03	4.85	98.3
SA28064	46.4	12.9	3.26	6.30	<.01	<.01	21.9	.44	1.35	.09	.03	7.85	100.5
SA28065	41.6	10.9	11.2	6.09	<.01	.02	17.2	.38	.975	.10	.02	11.8	100.3
SA28066	54.1	15.1	5.48	3.92	3.01	.79	9.60	.25	1.18	.10	.04	5.70	99.3
SA28067	76.9	13.6	.61	.64	.19	3.77	1.28	.03	.095	.04	<.01	2.55	99.8
SA28068	55.1	16.6	3.90	5.81	2.98	1.58	6.23	.08	.446	.09	.02	6.95	99.9
SA28069	52.8	12.7	4.93	4.10	1.23	1.07	12.6	.24	1.44	.13	<.01	7.90	99.2
SA28070	48.6	8.70	11.9	4.60	<.01	.38	11.4	.38	.866	.08	.02	12.7	99.7
SA28074	45.9	11.8	5.17	6.22	<.01	.02	19.6	.54	1.21	.10	.02	9.00	99.6
SA28075	45.4	12.2	6.35	7.05	.16	.23	17.0	.35	1.25	.11	.02	10.0	100.1
SA28076	57.0	16.1	4.10	4.03	5.45	.61	6.53	.13	1.37	.11	.04	4.45	100.0
SA28077	45.0	11.3	8.66	6.57	.52	.12	15.2	.41	.945	.08	.02	10.7	99.5
SA28078	45.5	11.5	6.79	6.22	.77	.02	17.0	.38	1.09	.10	.02	9.65	99.1
SA28079	44.6	12.6	6.91	7.61	.59	.06	15.8	.37	1.11	.09	.03	10.5	100.3
SA28080	50.1	11.3	4.47	5.68	.43	.24	17.1	.35	1.00	.08	.03	6.50	97.3
SA28081	43.8	11.6	8.47	6.44	.12	.18	16.9	.35	1.07	.10	.02	11.0	100.1

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM
SA28082	53	130	.7	39	<5	102
SA28083	54	137	.5	44	<5	91.7
SA28084	93	84.3	<.5	51	<5	84.2
SA28085	62	68.4	.5	45	<5	140
SA28086	56	85.3	.8	50	<5	139
SA28087	34	12.9	<.5	28	<5	103
SA28088	77	50.0	.5	50	<5	104
SA28089	56	94.2	<.5	31	<5	97.9
SA28090	72	63.0	.9	50	<5	54.3
SA28091	62	35.6	.8	41	<5	75.9
SA28092	81	80.0	.9	58	<5	129
SA28093	81	35.5	1.0	51	<5	143
SA28094	69	76.8	.5	50	16	136
SA28095	27	539	.8	28	7	43.7
SA28096	79	134	.5	41	<5	68.1
SA28097	88	9.5	<.5	47	<5	168
SA28098	66	74.1	.8	56	5	151
SA28099	99	71.4	.7	57	<5	147
28100	65	223	1.0	62	5	133

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM
SA26831	113	63.1	1.1	81	<5	225
SA26832	57	127	1.0	52	<5	165
SA26833	93	125	1.2	55	<5	123
SA26834	95	99.1	.6	67	<5	136
SA26835	6	13.6	.5	3	<5	18.5
SA26836	85	61.8	.6	57	<5	151
SA26837	74	25.2	1.0	49	<5	142
SA26838	59	3.8	<.5	23	<5	64.2
SA26839	84	15.5	.6	34	<5	139
SA26840	311	26.1	<.5	47	<5	96.4
SA26841	101	3.9	<.5	18	<5	513
SA26842	69	3.1	<.5	34	<5	139
SA26843	7	18.7	<.5	24	9	182
SA26844	245	453	2.5	48	14	225
SA26845	8	5.6	<.5	5	<5	72.0
SA26846	62	3.9	<.5	23	<5	100
SA26847	5	3.5	<.5	4	<5	26.9
SA26848	70	5.4	<.5	28	<5	99.7
SA26849	365	3.1	<.5	52	<5	158
SA26850	30	4.1	<.5	21	12	116
SA28057	113	8.6	2.7	31	435	58.9
SA28058	135	9.1	1.4	36	110	33.3
SA28059	56	25.5	.7	33	<5	49.8
SA28060	125	111	.8	55	<5	135
SA28061	95	26.6	.7	65	<5	150
SA28064	80	61.8	<.5	58	<5	190
SA28065	74	90.0	.7	47	<5	164
SA28066	102	81.1	.8	54	<5	110
SA28067	6	6.1	<.5	3	<5	25.5
SA28068	127	37.1	<.5	27	<5	192
SA28069	53	104	.9	52	<5	213
SA28070	56	84.0	<.5	47	<5	125
SA28074	73	118	.6	51	<5	220
SA28075	80	73.8	.9	54	<5	203
SA28076	105	86.8	1.4	59	<5	115
SA28077	71	58.4	1.1	55	6	175
SA28078	80	101	<.5	65	<5	173
SA28079	84	41.4	<.5	47	<5	192
SA28080	90	39.0	1.2	81	20	185
SA28081	79	36.3	.6	52	<5	163

SAMPLE \ PPM	RB	Y	ZR	BA
SA23847	14	13	198	227

D - QUALITY CONTROL DUPLICATE

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA23847	64.5	16.3	1.76	1.58	7.66	.41	4.39	.08	.904	.20	.02	1.95	99.8

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM
SA23847	40	83.2	<.5	14	<5	54.3

D - QUALITY CONTROL DUPLICATE

SAMPLE \ PPM	RB	Y	ZR	BA
SA27891	84	17	198	496
SA27914	60	24	270	423
SA27915	66	17	109	416
SA27916	48	20	112	364
SA27917	54	24	124	372
SA27918	80	20	187	575
SA27919	74	20	99	438
SA27920	60	52	342	429
SA27921	70	25	229	619
SA27922	<10	15	92	85
SA27923	<10	13	139	96
SA27924	124	<10	159	843
SA27925	12	31	141	81
SA27926	102	<10	151	562
SA27927	<10	23	134	269
SA27928	81	37	197	592
SA27929	40	20	123	280
SA27930	18	22	82	294
SA27931	89	38	335	633
SA27932	108	<10	159	1500
SA27933	16	34	164	197
SA27934	13	35	96	152
SA27935	74	<10	163	384
SA27936	37	28	162	256
SA27937	32	<10	68	270
SA27938	63	37	77	405
SA27939	32	41	211	277
SA27940	77	13	137	416
SA27941	108	70	123	609
SA27942	72	34	191	320
SA27943	116	52	90	692
SA27944	27	<10	24	132
SA27945	101	35	324	939
SA27946	66	15	141	308
SA27947	71	31	93	429
SA27948	95	<10	141	437
SA27949	33	24	232	278
SA27950	36	62	223	223
D SA27375	78	<10	171	428
D SA27387	52	19	117	381
D SA27399	97	31	151	531
D SA27878	32	25	156	229

D - QUALITY CONTROL DUPLICATE

SAMPLE \ PPM	RB	Y	ZR	BA
SA27375	73	16	165	450
SA27377	96	<10	107	748
SA27378	24	<10	96	279
SA27379	112	64	542	489
SA27380	67	16	79	375
SA27381	25	30	64	206
SA27382	<10	<10	64	68
SA27383	<10	<10	63	104
SA27384	11	24	65	129
SA27385	23	14	68	186
SA27386	<10	16	69	86
SA27387	60	<10	127	374
SA27388	114	22	89	679
SA27389	54	<10	141	387
SA27390	35	10	140	322
SA27391	81	23	169	581
SA27392	126	21	173	669
SA27393	108	21	196	611
SA27394	124	<10	187	704
SA27399	91	22	148	547
SA27400	53	<10	126	301
SA27868	38	27	118	359
SA27872	115	<10	187	635
SA27873	<10	30	164	121
SA27874	56	19	185	540
SA27875	33	32	160	329
SA27876	40	<10	130	368
SA27877	38	21	109	237
SA27878	28	<10	134	227
SA27879	32	29	184	361

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA27891	59.2	16.3	3.48	1.92	1.83	2.23	8.01	.13	1.26	.23	.01	5.70	100.4
SA27914	63.1	14.4	3.52	3.12	1.34	1.94	5.78	.08	.683	.11	.02	5.25	99.4
SA27915	74.1	12.6	1.33	1.20	1.38	2.38	2.57	.04	.249	.07	.04	3.10	99.1
SA27916	54.3	15.5	6.60	3.79	2.68	1.56	6.74	.10	.610	.10	<.01	8.00	100.0
SA27917	56.0	15.2	6.04	3.21	3.14	1.66	6.10	.12	.577	.12	<.01	7.35	99.6
SA27918	61.8	14.8	3.15	3.13	.59	2.49	6.63	.12	.717	.13	.01	6.35	100.0
SA27919	55.8	17.1	5.03	3.66	.92	2.21	7.07	.10	.522	.11	.01	7.90	100.5
SA27920	65.9	13.4	2.54	2.96	.43	2.04	6.24	.10	.933	.22	<.01	5.00	99.9
SA27921	73.3	11.6	.01	.72	.22	2.75	6.41	.03	.293	.06	.02	3.70	99.2
SA27922	57.2	11.7	4.26	8.55	1.60	.04	8.69	.15	.463	.09	.04	7.55	100.4
SA27923	45.1	12.6	2.41	12.2	<.01	<.01	16.0	.11	1.43	.22	.07	8.55	98.7
SA27924	60.3	16.1	3.05	2.58	.66	5.36	6.52	.35	.803	.11	<.01	2.75	98.7
SA27925	51.2	15.3	5.48	5.61	4.97	.07	9.59	.15	1.17	.21	.03	6.75	100.6
SA27926	70.2	15.1	1.22	.92	3.27	2.71	2.78	.04	.308	.09	.03	2.80	99.6
SA27927	46.6	12.4	5.18	11.6	2.31	.76	13.7	.17	1.23	.20	.07	3.90	98.2
SA27928	67.3	13.5	3.48	2.35	1.28	3.02	5.49	.15	.317	.09	.02	2.85	99.9
SA27929	50.6	14.0	6.18	3.19	.95	1.26	12.3	.32	.882	.15	.02	10.7	100.6
SA27930	64.9	12.9	4.67	.87	1.58	.99	6.57	.15	.706	.11	.03	6.85	100.4
SA27931	70.0	16.4	.38	.87	1.35	2.46	4.48	.08	.514	.10	.02	3.40	100.2
SA27932	63.7	14.8	3.66	1.61	.77	3.36	3.52	.13	.270	.16	.01	6.65	98.8
SA27933	49.5	13.2	5.23	4.17	1.54	1.14	13.3	.19	1.95	.24	.02	9.05	99.6
SA27934	51.0	14.8	3.69	8.16	2.32	.35	10.7	.15	.764	.13	.04	8.20	100.3
SA27935	53.8	14.2	5.63	3.99	1.80	2.12	7.60	.15	.743	.10	<.01	9.95	100.2
SA27936	43.4	12.7	8.37	5.73	.61	1.43	11.3	.27	1.59	.25	.01	14.3	100.0
SA27937	39.4	10.7	11.6	6.94	.38	1.76	9.83	.21	.547	.25	.09	18.5	100.2
SA27938	73.0	8.93	3.86	1.52	.34	2.08	2.96	.14	.137	.04	.01	6.30	99.4
SA27939	49.9	13.1	4.54	4.50	1.77	1.04	12.2	.16	2.46	.47	<.01	8.85	99.1
SA27940	49.8	14.0	9.06	2.50	.92	2.46	8.14	.31	.685	.13	<.01	12.3	100.4
SA27941	75.4	13.1	.95	.67	.49	3.19	1.45	.08	.098	.03	.01	2.95	98.5
SA27942	46.3	14.2	6.76	3.75	.47	2.25	11.5	.30	1.77	.30	<.01	11.8	99.5
SA27943	78.4	12.2	.05	.23	.60	2.75	3.16	.03	.133	.04	.01	2.60	100.3
SA27944	62.5	4.16	8.97	3.40	.21	.81	6.32	.40	.078	.02	.04	13.1	100.0
SA27945	67.5	16.6	.60	1.46	1.37	4.07	4.05	.06	.511	.11	.01	3.10	99.6
SA27946	52.8	13.2	7.15	3.66	.58	2.58	7.02	.20	.611	.09	<.01	12.1	100.1
SA27947	74.5	12.1	.56	1.24	.39	2.35	5.18	.12	.089	.03	.02	2.90	99.6
SA27948	50.9	13.8	8.04	3.15	.55	3.22	5.99	.34	.671	.12	<.01	11.7	98.6
SA27949	48.6	11.9	8.27	2.72	.69	1.22	12.6	.31	2.02	.45	.01	11.4	100.3
SA27950	45.0	11.7	8.66	4.35	.48	1.26	12.3	.33	1.82	.42	.01	13.4	99.8

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA27375	54.5	14.0	6.80	2.61	.59	2.90	6.68	.34	.730	.10	.02	11.1	100.5
SA27377	55.8	19.6	1.37	5.94	.20	3.76	7.15	.07	.558	.10	.02	5.75	100.4
SA27378	54.4	14.3	4.69	6.25	2.28	1.13	8.07	.12	.501	.10	.04	7.65	99.6
SA27379	68.4	14.4	1.35	.99	1.10	3.43	6.34	.07	.476	.11	.02	3.50	100.3
SA27380	53.6	13.7	3.94	3.77	1.24	2.18	11.6	.32	1.29	.11	.03	7.95	99.8
SA27381	46.0	14.1	5.93	5.58	1.94	.73	14.4	.33	1.19	.10	.03	8.90	99.3
SA27382	44.7	13.0	4.98	7.20	.89	.02	18.8	.41	1.12	.08	.03	8.80	100.0
SA27383	44.6	12.2	5.98	6.77	.15	.04	19.1	.52	1.07	.09	.03	9.70	100.3
SA27384	52.3	15.3	4.53	5.40	4.04	.09	10.4	.22	1.32	.10	.04	5.25	99.0
SA27385	48.3	13.1	6.20	5.67	1.15	.74	14.7	.38	1.11	.09	.03	8.70	100.2
SA27386	49.1	12.4	6.02	6.10	1.93	.02	14.4	.38	1.21	.10	.02	8.65	100.4
SA27387	57.2	15.6	4.03	4.48	3.53	1.66	6.22	.10	.574	.11	.02	6.15	99.7
SA27388	55.6	20.2	2.79	3.71	.43	4.25	5.85	.12	.495	.10	<.01	6.45	100.1
SA27389	59.6	18.1	4.10	1.52	2.00	1.59	5.45	.11	1.10	.20	.03	6.35	100.2
SA27390	51.3	14.5	2.35	5.47	.14	1.10	16.7	.24	.822	.15	.03	5.45	98.3
SA27391	58.6	16.4	5.13	2.01	2.15	2.43	6.59	.12	1.03	.24	.02	5.20	100.0
SA27392	59.0	16.1	5.22	1.85	.20	4.03	5.60	.12	.939	.23	<.01	6.90	100.3
SA27393	58.1	17.2	1.46	3.56	3.12	2.66	7.88	.10	.928	.20	.01	3.80	99.1
SA27394	63.2	17.0	1.91	1.85	4.21	3.01	3.60	.07	.947	.20	.02	3.10	99.2
SA27399	63.6	15.8	3.72	1.01	1.84	3.09	4.55	.11	.749	.15	.01	5.35	100.1
SA27400	56.6	15.4	6.32	2.38	3.07	1.18	6.65	.12	1.01	.23	.03	7.15	100.2
SA27868	64.3	15.2	3.29	1.86	2.40	1.43	5.63	.10	1.02	.25	.04	4.95	100.5
SA27872	65.7	17.6	1.38	1.16	5.01	2.96	2.67	.03	.969	.19	.02	2.05	99.8
SA27873	63.5	14.3	4.30	2.92	4.29	.20	7.00	.11	.762	.17	.02	2.55	100.2
SA27874	59.0	17.5	4.54	2.21	3.41	1.79	6.98	.10	1.06	.24	.02	3.25	100.2
SA27875	53.9	15.2	9.84	2.15	3.76	1.35	4.66	.15	1.03	.24	<.01	8.00	100.3
SA27876	60.9	15.7	3.26	2.74	4.30	1.26	6.05	.10	.825	.16	.05	4.15	99.6
SA27877	60.9	14.4	4.81	2.58	2.96	.89	6.77	.12	.927	.21	.03	5.75	100.4
SA27878	59.5	16.9	2.36	2.76	5.95	.68	5.92	.10	.964	.17	.03	4.10	99.5
SA27879	59.6	16.5	4.03	2.60	3.62	1.40	7.52	.12	.996	.25	.01	3.70	100.4

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA27891	57	20.5	<.5	23	<5	114	--
SA27914	56	349	.7	20	5	162	--
SA27915	12	50.2	<.5	6	<5	51.5	--
SA27916	59	83.6	<.5	24	<5	294	--
SA27917	55	32.1	<.5	25	<5	285	--
SA27918	47	87.0	<.5	20	<5	284	--
SA27919	82	5.9	<.5	21	<5	358	--
SA27920	26	55.7	.8	9	16	328	--
SA27921	8	46.3	1.3	8	<5	544	--
SA27922	255	71.9	.6	41	<5	217	--
SA27923	412	4.6	<.5	78	<5	191	--
SA27924	48	46.5	1.2	25	7	339	--
SA27925	145	70.1	1.1	43	<5	106	--
SA27926	9	5.5	<.5	6	<5	56.0	--
SA27927	352	3.1	<.5	43	<5	56.0	--
SA27928	9	9.6	<.5	6	<5	41.9	--
SA27929	121	35.5	.8	30	<5	208	--
SA27930	91	41.2	.7	22	<5	167	--
SA27931	24	9.6	<.5	6	10	67.6	--
SA27932	11	32.3	2.1	7	<5	160	--
SA27933	96	17.7	.7	38	<5	230	--
SA27934	230	4.8	.6	46	<5	114	--
SA27935	43	12.2	<.5	23	<5	99.7	--
SA27936	47	10.3	.6	30	<5	160	--
SA27937	102	4.8	.6	34	<5	132	--
SA27938	15	5.7	<.5	5	<5	29.9	--
SA27939	13	64.0	<.5	40	<5	189	--
SA27940	60	50.7	1.0	22	8	119	--
SA27941	6	7.9	1.1	3	7	639	--
SA27942	30	10.5	.6	24	<5	425	--
SA27943	6	13.0	.8	4	24	98.8	--
SA27944	12	9.9	.6	5	6	65.7	--
SA27945	13	22.9	1.0	8	<5	108	--
SA27946	39	5.5	.6	18	<5	176	--
SA27947	44	551	6.6	17	<5	210	--
SA27948	80	105	2.0	31	26	416	--
SA27949	78	82.4	.8	41	5	229	--
SA27950	74	22.2	.7	29	<5	289	--

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA27375	40	30.3	.6	22	<5	114	--
SA27377	136	7.7	2.7	27	55	188	--
SA27378	169	9.1	2.8	36	29	193	--
SA27379	8	34.6	.6	5	20	69.1	--
SA27380	62	158	.7	50	21	155	--
SA27381	87	98.1	.6	61	6	156	--
SA27382	88	44.9	.7	54	<5	232	--
SA27383	73	32.5	.5	44	<5	272	--
SA27384	76	168	1.1	53	<5	131	--
SA27385	74	51.8	.8	47	<5	128	--
SA27386	61	45.2	<.5	47	<5	130	--
SA27387	89	90.0	<.5	24	<5	73.7	--
SA27388	96	16.2	<.5	26	<5	68.6	--
SA27389	203	75.5	<.5	45	<5	71.5	--
SA27390	176	51.2	<.5	34	7	196	--
SA27391	33	20.1	<.5	17	<5	75.0	--
SA27392	31	38.5	<.5	15	<5	69.8	--
SA27393	63	12.3	.5	29	<5	108	--
SA27394	57	73.1	.6	18	<5	63.1	--
SA27399	28	57.0	<.5	8	<5	52.7	--
SA27400	157	34.7	.7	35	6	104	--
SA27868	141	14.9	.8	40	6	82.3	--
SA27872	43	36.8	.7	10	5	31.4	--
SA27873	54	25.9	.8	25	<5	91.6	--
SA27874	42	37.8	.8	24	<5	90.3	--
SA27875	55	18.2	.9	24	<5	80.1	--
SA27876	96	34.5	.5	21	<5	76.7	--
SA27877	158	25.1	.7	43	<5	94.9	--
SA27878	111	26.0	<.5	29	<5	106	--
SA27879	47	22.0	.7	26	<5	105	--

APPENDIX D

SUMMARY OF EXPENDITURES

Line Cutting

10.75 Km @ $220.00/Km $2,365.00

Analysis

157 Samples @ $21.00/Sample $3,297.00

Geological Mapping and Sampling

Senior Field Geologist
22 Days @ $250.00/Day $5,500.00

Junior Field Assistant
22 Days @ $150.00/Day $3,300.00

TOTAL $14,462.00

APPENDIX E

CERTIFICATE OF QUALIFICATIONS

I Maria Gabriel, of Sudbury, Ontario hereby certify that:

1. I gratuated from Concordia University, in Montreal, in 1983 with a Bachelor of Science Degree with Specialization in Geology.

2. I am a geologist permanent employee of Falconbridge Limited.

3. Since graduation I have been practising my profession in Quebec and Ontario.

4. I have no financial interest in the Fenn property claim group.

5. I personally conducted or supervised the work described in this report.

Dated at Sudbury this June day of 1st 1994

Maria Gabriel

Ministry of Northern Development and Mines
Ontario

Report of Work Conducted After Recording Claim

Mining Act

Transaction Number: W9470.00058

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used for correspondence. Questions about this collection should be directed to the Provincial Manager, Mining Lands, Ministry of Northern Development and Mines, Fourth Floor, 159 Cedar Street, Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.

2.155 288

Instructions:
- Please type or print and submit in duplicate.
- Refer to the Mining Act and Regulations for requir[ements …]
- Recorder.
- A separate copy of this form must be completed f[or …]
- Technical reports and maps must accompany this [form …]
- A sketch, showing the claims the work is assigne[d …]

31M04SW0038 2.15528 STRATHY

900

Recorded Holder(s): FALCONBRIDGE Ltd		Client No.: 130679
Address: Suite 1200, 95 Wellington St. W. TORONTO, M5J 2V4		Telephone No.: 416-956-5700
Mining Division: SUDBURY	Township/Area: STRATHY	M or G Plan No.: G-3451
Dates Work Performed From: MAY 93	To: August 93	

Work Performed (Check One Work Group Only)

Work Group	Type
Geotechnical Survey	Line Cutting - Geological Mapping - Lithogeochemistry
Physical Work, Including Drilling	
Rehabilitation	
Other Authorized Work	SECTION 18 ONLY
Assays	
Assignment from Reserve	

RECORDED
JUN 1 1994
Receipt

Total Assessment Work Claimed on the Attached Statement of Costs $ $14,462.00

Note: The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)

Name	Address
Norm McBride - Line Cutting	Box 112, Notre Dame du Nord, Quebec, J0Z 3B0
M Gabriel - Geol Mapping - Geochem Sampling	See address below
X-RAL (X RAY ASSAY LAB)	1885 Leslie St., Don Mills, Ontario, M3B 3J4

(attach a schedule if necessary)

Certification of Beneficial Interest * See Note No. 1 on reverse side

I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.	Date: May 26th, 94	Recorded Holder or Agent (Signature): [signature]

Certification of Work Report

I certify that I have a personal knowledge of the facts set forth in this Work report, having performed the work or witnessed same during and/or after its completion and annexed report is true.

Name and Address of Person Certifying: MARIA GABRIEL, 1977 McKENZIE Rd., RR #2, CHELMSFORD, ONT, P0M 1L0

Telepone No.	Date	Certified By (Signature)
705 855-0311	May 26th, 94	[signature]

For Office Use Only

Total Value Cr. Recorded	Date Recorded	Mining Recorder	Received Stamp
$14,462.00	JUNE 1 94	[signature]	SUDBURY RECEIVED JUN 1 1994 A.M. P.M.
	Deemed Approval Date: AUG 30/94	Date Approved	
	Date Notice for Amendments Sent		

Work Report Number for Applying Reserve	Claim Number (see Note 2)	Number of Claim Units	Value of Assessment Work Done on this Claim	Value Applied to this Claim	Value Assigned from this Claim	Reserve: Work to be Claimed at a Future Date
	WD271	14	14,462.00	0	~~14,222.00~~ 14,462.00	0
	1186027	1	0	$400.00	0	0
	1186028	1	0	$400.00	0	0
	1186029	1	0	$400.00	0	0
	1186030	1	0	$400.00	0	0
	1186031	1	0	$400.00	0	0
	1186042	2	0	$1,600.00	0	0
	1186043	6	0	$4,800.00	0	0
	1186045	1	0	$800.00	0	0
	1186033	1	0	$400.00	0	0
	1186035	1	0	$400.00	0	0
	1186036	1	0	$112.00	0	0
	1186037	1	0	$116.00	0	0
	1186044	1	0	$800.00	0	0
	494568	1	0	$400.00	0	0
	494567	1	0	$400.00	0	0
	494566	1	0	$400.00	0	0
	Total Number of Claims		Total Value Work Done	Total Value Work Applied	Total Assigned From	Total Reserve

See attached sheet

Credits you are claiming in this report may be cut back. In order to minimize the adverse effects of such deletions, please indicate from which claims you wish to priorize the deletion of credits. Please mark (✓) one of the following:

1. ☐ Credits are to be cut back starting with the claim listed last, working backwards.
2. ☐ Credits are to be cut back equally over all claims contained in this report of work.
3. ☐ Credits are to be cut back as priorized on the attached appendix.

In the event that you have not specified your choice of priority, option one will be implemented.

Note 1: Examples of beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with respect to the mining claims.

Note 2: If work has been performed on patented or leased land, please complete the following:

I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed

Signature: [signature]

Date: 1st June 94

0241 (03/91)

Work Report Number for Applying Reserve	Claim Number (see Note 2)	Number of Claim Units	Value of Assessment Work Done on this Claim	Value Applied to this Claim	Value Assigned from this Claim	Reserve: Work to be Claimed at a Future Date
	494565	1	0	$400.00	0	0
	444564	1	0	$400.00	0	0
	494573	1	0	$400.00	0	0
	494572	1	0	$400.00	0	0
	494571	1	0	~~$636.00~~ $634.00	0	0
				$14,462.00	$14,462.00	
	Total Number of Claims:		Total Value Work Done: 14,462.00	Total Value Work Applied: ~~$14,228.00~~	Total Assigned From: ~~$14,228.00~~	Total Reserve: 0

Credits you are claiming in this report may be cut back. In order to minimize the adverse effects of such deletions, please indicate from which claims you wish to priorize the deletion of credits. Please mark (✓) one of the following:

1. ☐ Credits are to be cut back starting with the claim listed last, working backwards.
2. ☐ Credits are to be cut back equally over all claims contained in this report of work.
3. ☐ Credits are to be cut back as priorized on the attached appendix.

In the event that you have not specified your choice of priority, option one will be implemented.

Note 1: Examples of beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with respect to the mining claims.

Note 2: If work has been performed on patented or leased land, please complete the following:

I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed	Signature	Date
	[signature]	[illegible] 1st 94

Ministry of Northern Development and Mines
Ministère du Développement du Nord et des mines
Ontario

Statement of Costs for Assessment Credit
État des coûts aux fins du crédit d'évaluation

Mining Act/Loi sur les mines

Transaction No./N° de transaction

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Minings Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.

Les renseignements personnels contenus dans la présente formule sont recueillis en vertu de la Loi sur les mines et serviront à tenir à jour un registre des concessions minières. Adresser toute quesiton sur la collece de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4e étage, Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7264.

1. Direct Costs/Coûts directs

Type	Description	Amount Montant	Totals Total global
Wages Salaires	Labour Main-d'oeuvre	8,800.00	
	Field Supervision Supervision sur le terrain		8,800.00
Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert-conseil	Type (linecutting) linecutting	2,365.00	
	Geophysics	3,297.00	
			5,662.00
Supplies Used Fournitures utilisées	Type		
Equipment Rental Location de matériel	Type		
		Total Direct Costs Total des coûts directs	14,462.00

2. Indirect Costs/Coûts indirects

** Note: When claiming Rehabilitation work Indirect costs are not allowable as assessment work.
Pour le remboursement des travaux de réhabilitation, les coûts indirects ne sont pas admissibles en tant que travaux d'évaluation.

Type	Description	Amount Montant	Totals Total global
Transportation Transport	Type		
Food and Lodging Nourriture et hébergement			
Mobilization and Demobilization Mobilisation et démobilisation			
		Sub Total of Indirect Costs Total partiel des coûts indirects	
Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excédant pas 20 % des coûts directs)			
Total Value of Assessment Credit (Total of Direct and Allowable Indirect costs)	Valeur totale du crédit d'évaluation (Total des coûts directs et indirects admissibles)		

Note: The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject for assessment work all or part of the assessment work submitted.

Note : Le titulaire enregistré sera tenu de vérifier les dépenses demandées dans le présent état des coûts dans les 30 jours suivant une demande à cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation présentés.

Filing Discounts

1. Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.
2. Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

Total Value of Assessment Credit		Total Assessment Claimed
	× 0.50 =	

Remises pour dépôt

1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.
2. Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Valeur totale du crédit d'évaluation		Évaluation totale demandée
	× 0,50 =	

Certification Verifying Statement of Costs

I hereby certify:
that the amounts shown are as accurate as possible and these costs were incurred while conducting assessment work on the lands shown on the accompanying Report of Work form.

that as [illegible handwriting] I am authorized
(Recorded Holder, Agent, Position in Company)

to make this certification

Attestation de l'état des coûts

J'atteste par la présente :
que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

Et qu'à titre de ____________ je suis autorisé
(titulaire enregistré, représentant, poste occupé dans la compagnie)

à faire cette attestation.

Signature: [signature] Date: [illegible]

Ontario

Ministry of Northern Development and Mines

Ministère du Développement du Nord et des Mines

Geoscience Approvals Office
933 Ramsey Lake Road
6th Floor
Sudbury, Ontario
P3E 6B5

Telephone: (705) 670-5853
Fax: (705) 670-5863

Our File: 2.15528
Transaction #: W9470.00058

August 31, 1994

Mining Recorder
Ministry of Northern Development
and Mines
933 Ramsey Lake, Road
3rd Floor
Sudbury, Ontario
P3E 6B5

Dear Mr. Denomme:

RE: Approval of Assessment Work on mining claims S 1186027 et al in Strathy Township.

The assessment credits for Geology, section 12 of the Mining Act Regulations, as listed on the original Report of Work, have been approved as of August 30, 1994.

Please indicate this approval on the claim record sheets.

If you have any questions concerning this submission please contact Dale Messenger at (705) 670-5858.

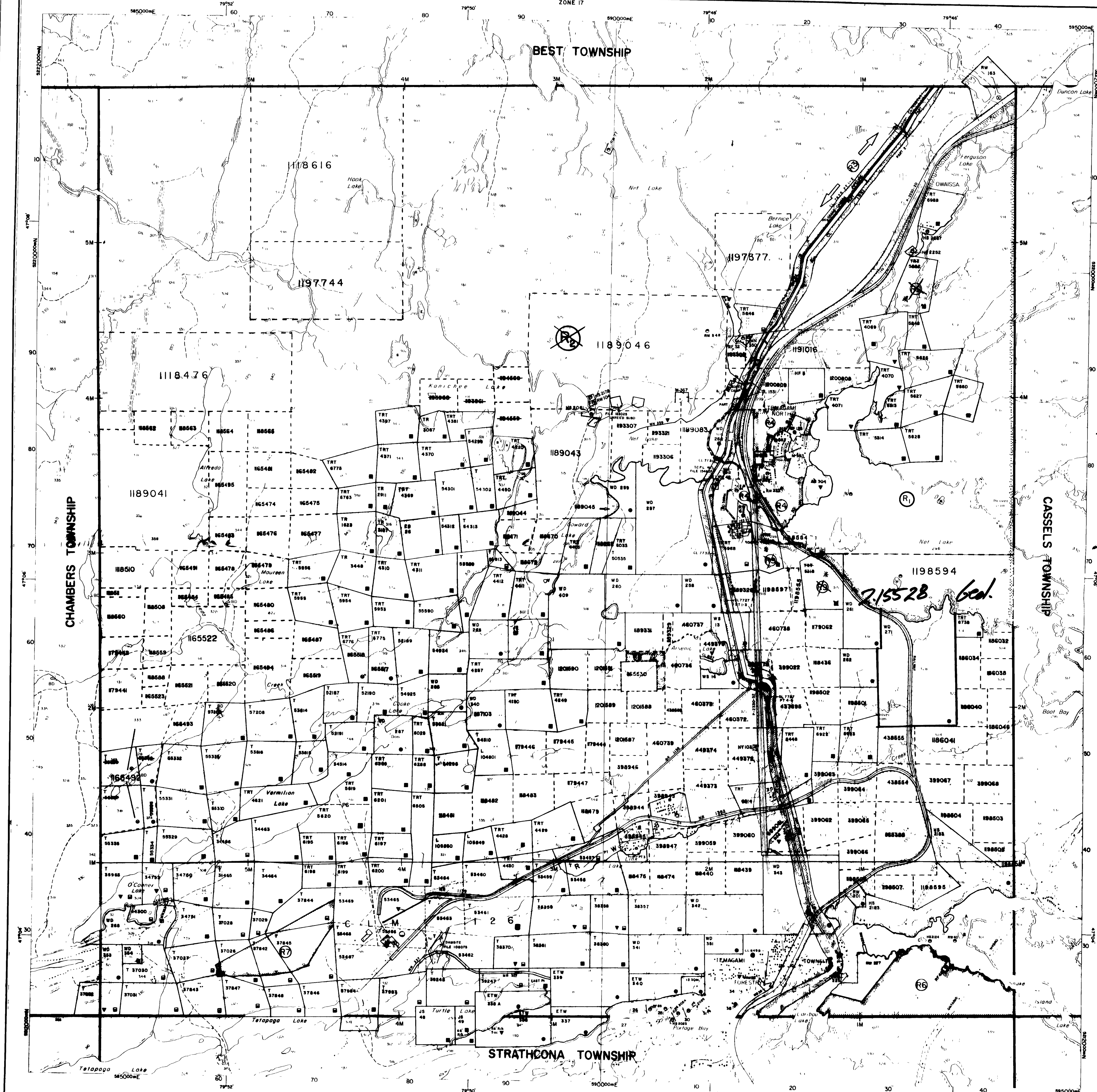
Yours sincerely,

Ron C. Gashinski
Senior Manager, Mining Lands Section
Mining and Land Management Branch
Mines and Minerals Division

DEM/jl
Enclosures:

cc: Assessment Files Office
Sudbury, Ontario

Resident Geologist
Sudbury, Ontario



Ministry of Natural Resources
Ministry of Northern Development and Mines
Ontario

PUT INTO SERVICE MARCH 23 1994

INDEX TO LAND DISPOSITION

PLAN
G-3451
TOWNSHIP
STRATHY

M.N.R. ADMINISTRATIVE DISTRICT
TEMAGAMI
MINING DIVISION
SUDBURY
LAND TITLES/REGISTRY DIVISION
NIPISSING

Scale 1:20 000

Contour Interval 10 Metres

SYMBOLS

Boundary
- Township, Meridian, Baseline
- Road allowance, surveyed
- shoreline
- Lot/Concession, surveyed
- unsurveyed
- Parcel, surveyed
- unsurveyed
- Right-of-way, road
- railway
- utility
- Reservation

Cliff, Pit, Pile
Contour
- Interpolated
- Approximate
- Depression

Control point (horizontal)
Flooded land
Mine head frame
Pipeline (above ground)
Railway, single track
- double track
- abandoned

Road; highway, county, township
- access
- trail, bush

Shoreline (original)
Transmission line
Wooded area.

AREAS WITHDRAWN FROM DISPOSITION

MRO - Mining Rights Only
SRO - Surface Rights Only
M + S - Mining and Surface Rights

	Description	Order No.	Date	Disposition	File
R1	36(a) R.S.O. 1960	OC 2022/66		SRO.	3996
~~R2~~	~~SEC.35/90~~	~~W.1/94~~	~~16/03/94~~	~~M. + S.~~	~~188540~~
R3		W-01/91/ONT	SEP.20/91	S.R.O.	LAND ROLL
R4	SEC.35/90	W-S-02/91 NER		M & S	195150
R6	PENDING DISPOSITION UNDER THE PUBLIC LANDS ACT LAND NOT OPEN FOR STAKING SUB-SECTION 30(B) OF THE MINING ACT R.S.O. 1990 NOTICE RECEIVED 92/JAN/06				
R7	PENDING DISPOSITION UNDER THE PUBLIC LANDS ACT LAND NOT OPEN FOR STAKING SUB-SECTION 30(B) OF THE MINING ACT R.S.O. 1990 NOTICE RECEIVED 92/JAN/06				
R8	SEC.35/90	W-S-30/94	April 15/94	M & S	195150
R9	~~SEC.35/90~~	~~W-S-79/94 GR~~	~~MAY 27, 1994~~	~~M & S~~	~~195150~~
	SEC.35/90	0-S-31/94	AUG.11/94	M&S	195150

DISPOSITION OF CROWN LANDS

Patent
- Surface & Mining Rights
- Surface Rights Only
- Mining Rights Only

Lease
- Surface & Mining Rights
- Surface Rights Only
- Mining Rights Only

Licence of Occupation
Order-in-Council OC
Cancelled
Reservation
Sand & Gravel

NOTES

ISLAND 27 BELONGS WITH STRATHCONA TWP.
ISLANDS in LAKE TEMAGAMI - NOT OPEN FOR STAKING

* JUNE 1, 1994 OPENINGS
ONTARIO GAZETTE-VOL.127-20
MAY 14, 1994 PAGE 1579

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON

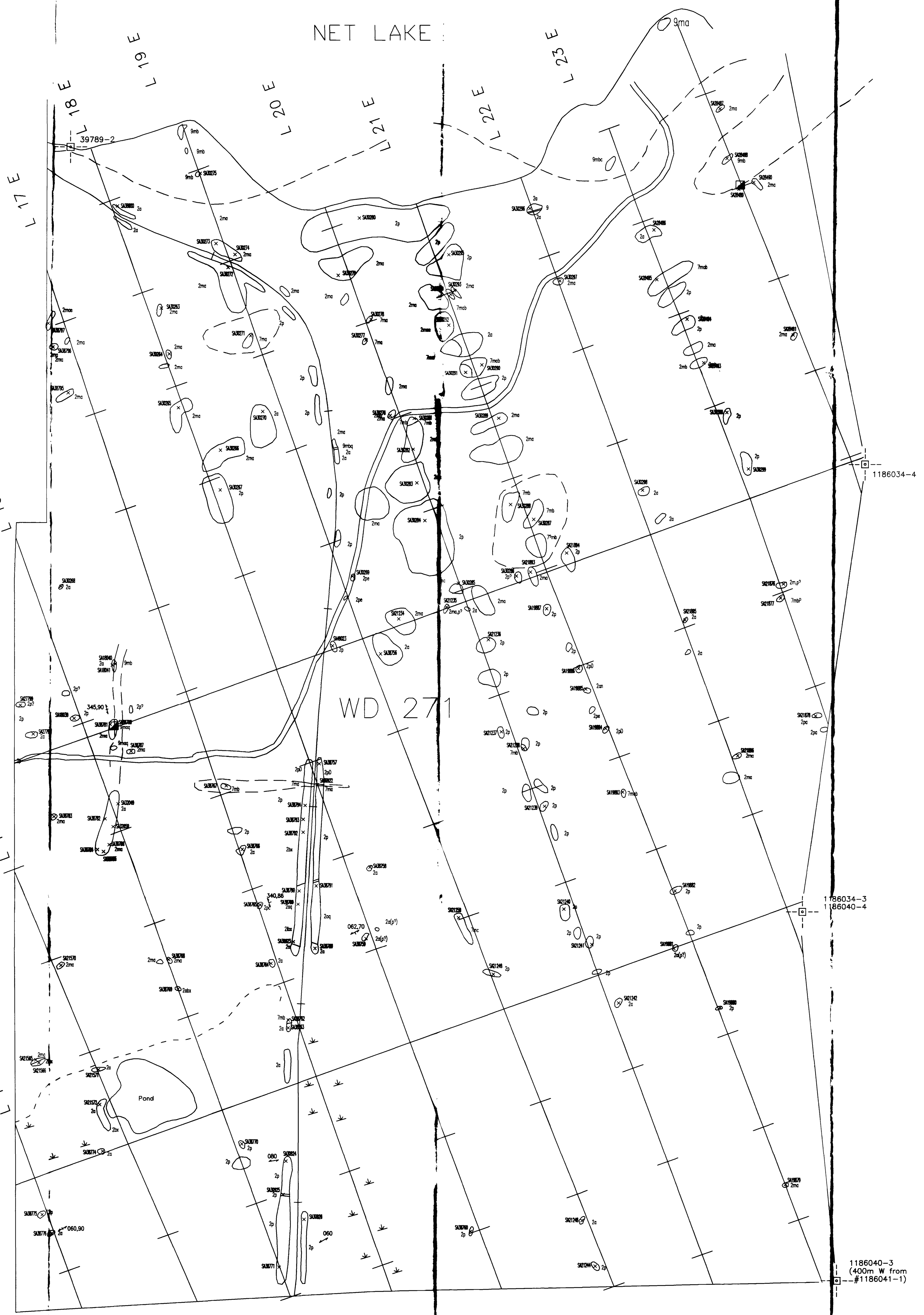
Map base and land disposition drafting by Surveys and Mapping Branch, Ministry of Natural Resources

The disposition of land, location of lot fabric and parcel boundaries on this index was compiled for administrative purposes only.

G-3451

STRATHY TOWNSHIP

G-3451



CULTURAL AND PHYSIOGRAPHIC FEATURES

Symbols

PHYSICAL WORK

ASTRONOMIC

N

LEGEND		
Code	Prismacolor	MAJOR ROCK DIVISIONS
12	932	NIPISSING DIABASE
11		HURONIAN SUPER GROUP
10	941	DIABASE
9	929	FELSIC INTRUSIVE ROCKS
8	928	INTERMEDIATE INTRUSIVE ROCKS
7	903	MAFIC INTRUSIVE ROCKS
6	902	ULTRAMAFIC INTRUSIVE ROCKS
5	964	SEDIMENTARY ROCKS
5r	935	Oxide Iron Formation
MSS	924	Massive Sulphides
4	915	FELSIC VOLCANIC ROCKS
3	920	INTERMEDIATE VOLCANIC ROCKS
2	909	MAFIC VOLCANIC ROCKS
1	956	ULTRAMAFIC VOLCANIC ROCKS

Code	Prismacolor	HURONIAN MODIFIERS
		COBALT GROUP
i	943	LORRAIN FORMATION
		GOWGANDA FORMATION
ii	945	Firstbrook Member
iii	947	Coleman Member
		QUIRKE LAKE GROUP
iv	934	SERPENT FORMATION
v	919	ESPANOLA FORMATION
vi	967	BRUCE FORMATION
		HOUGH LAKE GROUP
vii	936	MISSISSAGI FORMATION
viii		PECORS FORMATION
viiii		RAMSEY LAKE FORMATION
		ELLIOT LAKE GROUP
x		MCKIM FORMATION
xi		MATINENDA FORMATION

TEXTURAL/GEOCHEMICAL MODIFIERS

ALTERATION MODIFIERS

MINERAL OCCURRENCES

2.155 278

FALCONBRIDGE LIMITED

Exploration Division — Chelmsford ONTARIO

31 M/4
(STRATHY TWP.)

GEOLOGY & SAMPLE LOCATION MAP
FENN PROPERTY

TRACED: D.F	DATE: 04/94	NTS: 31M4	PROJECT:
DRAWN:	DATE:	MAP No:	FILE: FENN.DWG
SUPERVISED: M.G.	DATE: 04/94	SCALE 1:2000	
REVISED:	DATE:	0 50 100m	

wrong

210