Newfoundland Labrador

Natural Resources

Mines

GEOCHEMICAL DATA FROM THE STRANGE LAKE DEPOSIT, LABRADOR: REANALYZED DRILL CORE SAMPLES FROM 1979-1984 EXPLORATION

A. Kerr

Open File 24A/08/0039

St. John's, Newfoundland
October, 2013

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PROJECT OVERVIEW

From 2009 to 2011, there was strong exploration interest in deposits in Labrador that contain rare-earth elements (REE) and associated specialty or 'rare' metals (Y, Zr, Nb, Be, Hf). Several deposits of this type exist in Labrador, including some discoveries originally made in the 1950s. A review of REE and associated mineralization is provided by Kerr (2011) and also in reports from an earlier Geological Survey project in the 1980s (Miller, 1986, 1987, 1988).

The most significant resource is the Strange Lake deposit, which is located on the Labrador–Québec border region, about 125 km west of Nain. Exploration from 1979 to 1984 in this area by the Iron Ore Company of Canada (IOC) defined a large deposit hosted by peralkaline granites and associated pegmatite–aplite zones. These host rocks are enriched in several elements of interest over a wider area around the deposit. Most of the mineralization defined by IOC is located in Labrador, although the 'Main Zone' extends into adjacent Québec. In 2008, surrounding areas in Québec were staked by Quest Uranium (later Quest Rare Metals), who subsequently defined a second deposit of broadly similar character, which is now termed the 'B-zone'. This deposit is located entirely in Québec, and appears to be physically discrete from the original Main Zone deposit. The Main Zone deposit, in Labrador, has not received additional exploration work since the 1980s, because it is currently an exempt mineral land (EML). It acquired this status following expiration of the IOC mining leases, and its eventual designation as Labrador Inuit Lands (LIL). This status remains unchanged. Despite these restrictions, there is considerable interest in the deposit, as its exploration status may change.

Exploration by IOC in the 1980s did not routinely analyze for the REE, although Y, Zr and Nb were analyzed for virtually all samples. A subset of the samples were analyzed for individual REE or total REE, and the values for other samples (and the deposit) were estimated on this basis, or from other data (notably Y). Although it is widely understood that the deposit contains a significant REE resource, this is not accurately quantified. For this reason, estimation of the REE resource for the Main Zone deposit following the resurgence of exploration has proved difficult. In 1985, as part of their feasibility study, IOC estimated the total resource at 55.8 metric tonnes grading 2.99% ZrO_2, 0.38% Y_2O_3, 0.29% Nb_2O_5, and 0.08% BeO, and a suggested total REE oxide content (excluding Y_2O_3) of 0.54% (IOC, 1985).

In 2010, a study, aimed at reassessing the REE resource in the Strange Lake Main Zone deposit, was initiated as part of a wider project investigating REE mineralization and potential throughout the province (*see* Kerr, 2011; Kerr and Rafuse, 2012). The re-analysis of all drillcore samples acquired from earlier exploration for the REE is impractical and unaffordable. However, the REE behave in a very coherent manner, and it is known from previous unpublished data that most samples analyzed for complete REE at Strange Lake have closely similar REE patterns. There is a particularly marked correlation between many of the REE and the closely similar element yttrium (Y); the best correlations are between Y and the so-called 'heavy REE' (Gd, Dy, Tb, Ho, Er, Tm, Yb and Lu). On this basis, it was decided to re-analyze a subset of archived drillcore samples, and assess these geochemical results, with the objective of developing more reliable methods for estimation of REE abundances for other samples, using the 1980s data for Y as a starting point. The method used involved linear regression of individual REE data against yttri-

um. In total, 150 such samples were re-analyzed, as two batches. Essentially, the second batch was used to test prediction methods based on results from the first batch. Additional testing of methods used exploration data from Québec, provided by Quest Rare Minerals, who completed several new holes immediately adjacent to holes drilled by IOC in the 1980s. The results of this work are discussed in two reports. Kerr and Rafuse (2012) present analyses from Batch 1 and a general discussion of predictive methods. Kerr (2013) discusses the results of more rigorous testing using the second batch of analyses, and the Québec data. The results suggest that the methods are effective for overall resource estimation purposes, although not necessarily for prediction of REE contents at a sample level. *See* Kerr (2013) for further discussion.

This open file release contains the geochemical data that provided the basis for the reports by Kerr and Rafuse (2012) and Kerr (2013). In addition to the data for REE, Y, Nb, Zr and Be, the release includes major element oxides and numerous other trace elements. There is no additional discussion of geochemical trends or patterns for these data. The data files included as part of this release contain all of the data acquired through re-analysis, the locations and depths of the original IOC drillcore samples, and the IOC data for Y_2O_3, ZrO_3, $Nb2O_5$ and Be acquired during the original exploration programs. The coordinates for all the drillholes from which samples were taken are also included.

METHODS

In the late 1980s, a large collection of drillcore from the Strange Lake deposit was acquired by the Department of Natural Resources as part of its core-storage program. The donation by IOC was accompanied by partially crushed samples representing the leftover material from analyzed drillcores. This material is stored in large crates in the Core Storage Library in Goose Bay, but is not fully organized.

In 2010, 100 of these archived samples were selected, through unpacking of a single storage crate, which proved to contain material from a wide variety of drillholes. The crate contained over 300 samples. The selected samples were chosen to provide as wide a geographic representation as possible, and also to represent a spectrum of grades from low- to high-grade on the basis of the previous IOC data. There is virtually no 'barren' material within the drilled area, although there is wide grade variation, from <0.1% Y_2O_3 to >1.5% Y_2O_3. The same procedure was used for the selection of an additional 50 samples in 2011, but these came from a different packing crate.

The procedure of sampling cannot be regarded as completely random, although the distribution of samples within packing crates probably is random, based on my observations. However, the sample subset is considered to be as representative of the deposit as is feasible. For certain samples, there was sufficient material to allow a duplicate sample to be submitted, in most cases representing a separate storage bottle. The high-grade samples are generally represented by smaller amounts of material, and these are more difficult to duplicate. Five samples collected from outcrops in the highest grade part of the deposit were also analyzed, and were used as part of the research study. These are also included in the open file release.

The samples were submitted to the Activation Laboratories preparation facility in Goose Bay, Labrador, and were then analyzed for major elements, trace elements and rare-earth elements (REE) at their facilities in Ancaster, Ontario. The analytical packages used were as follows: major and trace elements: ICP-ES and ICP-MS (codes WRA and WRA4B2); REE: Code 8 REE assay package.

These correspond to the analysis techniques in common use by the exploration industry for REE exploration in Labrador during 2010 and 2011. The sample preparation involves a pre-digestion fusion process that guards against incomplete dissolution of refractory minor minerals that can be a problem for the REE, which generally substitute only at low levels in common silicates and oxides.

Activation Laboratories completed internal checks on the accuracy and precision of data, by analyzing reference materials and also by performing duplicate analyses of the submitted samples. The results for analyses of standards and internal duplicates are included in the original reports of analysis provided by Activation Laboratories, which are included in this open file.

The analyses completed by IOC in the 1980s were from an internal private laboratory using X-Ray Fluorescence methods (XRF). The information on analytical methods contained in assessment reports is very limited, but precision is estimated at ± 5% for Y and Nb, and ± 10% for Zr.

DIGITAL FILES AND THEIR CONTENTS

The data for this open file is also provided as Microsoft Excel (*.csv) files, and in the case of Appendix 5 as an Adobe pdf file..

DRILL CORE (APPENDIX 1)

This spreadsheet contains major and trace element data for all re-analyzed drillcore samples. Batch 1 consists of samples numbered as KC-10, and Batch 2 consists of samples numbered as KC-11. The descriptive information for samples includes the identity of the original IOC drillhole (SL-series) and the depth interval for the samples. The file includes several duplicates of specific intervals, which can be used to assess precision. Note that in the report of Kerr and Rafuse (2012), the dataset used for development of regression equations omitted sample duplicates, and used only the first analysis (*i.e.*, the lowest number in the KC-10 series) to represent that interval of drillcore.

OUTCROP (APPENDIX 2)

This smaller spreadsheet contains major and trace element data for 5 field samples collected in 2010 from the exploration trench excavated by IOC in 1983. There are no corresponding IOC samples for these samples. These samples were collected to provide representative high-grade material. Other than the inclusion of UTM coordinates rather than drillhole information, the format of this file is identical to that of the file containing data from reanalyzed drillcore samples. The UTM easting and northing values are based on Zone 20 and the NAD27 datum.

COMPARISON (APPENDIX 3)

This spreadsheet contains the original IOC analyses for the samples, and also contains the data from re-analysis, which are identical to the values in the two main datafiles. The original IOC analyses were reported as wt% oxide for Y (Y_2O_3), Zr (ZrO_2) and Nb (Nb_2O_5); the columns indicating ppm values were obtained by recalculation of the oxide results. The recalculated data are included to facilitate easier comparison with results from 2010 and 2011, which are listed in ppm.

DRILLHOLE LOCATIONS (APPENDIX 4)

This small spreadsheet contains the collar locations for the IOC drillholes from which the re-analyzed sample materials were obtained. These data were transcribed from the IOC assessment reports. The UTM easting and northing values are based on Zone 20 and the NAD27 datum.

ASSAY REPORTS (APPENDIX 5)

This document contains the original listings of analyses received from Activation Laboratories, with additional information on analyses of standard materials and internal duplicates of submitted samples. Note that the original batch of analyses included six unrelated samples collected elsewhere in Labrador; to avoid confusion these samples have been crossed out in the document.

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Appendix 1 - Drill Core

	Sample	IOC_DDH	From_m	To_m	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V
Unit					%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm
Detection					0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	1	1	5
Method					FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP		FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP
	KC-10-100	SL-168D	31.38	36.31	69.94	7.63	5.92	0.178	0.87	1.73	2.23	4.41	0.452	0.06	2.25	95.67	-1	219	6
	KC-10-101	SL-168D	36.31	37.49	68.92	8.71	5.74	0.174	1.10	1.65	2.89	4.20	0.315	0.04	2.30	96.04	-1	428	6
	KC-10-102	SL-168D	37.49	43.16	69.09	9.14	4.60	0.141	0.85	1.71	1.92	5.32	0.485	0.03	2.11	95.38	-1	440	8
	KC-10-103	SL-168D	53.88	58.62	70.86	8.53	5.45	0.156	0.65	1.55	2.52	4.51	0.445	0.05	1.83	96.54	-1	265	12
	KC-10-104	SL-168D	62.84	65.92	69.27	8.51	5.65	0.146	0.86	1.73	2.93	4.05	0.397	0.03	2.19	95.76	-1	264	7
	KC-10-105	SL-168D	65.92	69.13	70.50	8.56	5.26	0.135	0.83	1.03	3.21	4.67	0.348	0.04	1.72	96.31	-1	235	-5
	KC-10-106	SL-168D	70.32	73.26	72.05	8.53	5.51	0.143	0.35	0.99	3.58	4.15	0.370	0.03	1.04	96.75	-1	224	11
	KC-10-107	SL-168D	31.38	36.31	69.96	7.45	6.04	0.179	0.88	1.74	2.08	4.18	0.424	0.06	2.24	95.22	-1	209	-5
	KC-10-108	SL-168D	37.49	43.16	68.26	9.01	4.73	0.137	0.87	1.70	1.92	5.20	0.480	0.07	2.08	94.45	-1	439	6
	KC-10-109	SL-168D	53.88	58.62	70.99	8.51	5.39	0.156	0.64	1.62	2.50	4.51	0.477	0.04	1.84	96.66	-1	264	5
	KC-10-110	SL-169D	14.33	18.72	70.76	10.04	5.43	0.143	0.08	0.84	4.76	4.54	0.299	0.03	0.87	97.79	-1	129	-5
	KC-10-111	SL-169D	18.72	23.19	69.02	9.85	5.38	0.139	0.13	0.85	4.76	4.35	0.301	0.02	1.00	95.80	-1	152	-5
	KC-10-112	SL-169D	50.90	52.40	69.26	6.15	5.02	0.126	0.34	2.09	3.02	3.90	1.396	0.08	2.03	93.41	-1	528	-5
	KC-10-113	SL-169D	55.00	57.65	72.39	8.18	4.22	0.144	0.19	0.98	3.64	4.33	0.466	0.05	1.60	96.19	-1	220	6
	KC-10-114	SL-169D	14.33	18.72	70.57	9.87	5.59	0.144	0.08	0.86	4.71	4.50	0.312	0.03	0.75	97.43	-1	135	-5
	KC-10-115	SL-174D	10.73	12.81	68.03	9.04	3.79	0.062	0.42	2.43	0.56	6.50	0.509	0.09	2.86	94.28	-1	501	-5
	KC-10-116	SL-174D	31.94	35.98	71.69	8.18	4.49	0.175	0.52	1.53	2.98	4.11	0.403	0.03	1.75	95.87	-1	526	-5
	KC-10-117	SL-174D	55.69	60.05	71.42	8.45	4.33	0.126	0.25	1.07	3.45	4.30	0.392	0.03	1.43	95.24	-1	249	-5
	KC-10-118	SL-174D	64.48	69.05	71.10	8.13	4.76	0.148	0.40	1.13	3.36	4.20	0.357	0.05	1.46	95.10	-1	319	-5
	KC-10-119	SL-174D	77.08	81.48	70.01	9.01	4.38	0.141	0.25	1.16	3.68	4.30	0.380	0.03	1.31	94.64	-1	217	9
	KC-10-120	SL-174D	89.45	92.05	70.81	9.14	4.32	0.157	0.11	0.64	4.19	4.59	0.348	0.08	1.46	95.85	-1	160	6
	KC-10-121	SL-174D	55.69	60.05	70.57	8.47	4.29	0.127	0.24	1.07	3.51	4.34	0.396	0.03	1.36	94.40	-1	255	-5
	KC-10-122	SL-174D	77.08	81.48	71.19	9.25	4.37	0.143	0.25	1.16	3.77	4.40	0.378	0.05	1.27	96.24	-1	224	-5
	KC-10-123	SL-181D	41.76	44.00	68.78	5.50	5.93	0.166	0.44	4.43	1.78	4.28	1.228	-0.01	1.63	94.18	-1	266	-5
	KC-10-124	SL-181D	44.00	46.33	66.57	5.49	4.64	0.175	0.49	6.18	1.21	4.67	1.233	0.05	2.29	92.98	-1	286	-5
	KC-10-125	SL-181D	57.94	62.42	70.15	8.83	5.58	0.148	0.37	1.62	3.68	4.11	0.385	0.05	0.74	95.66	-1	167	-5
	KC-10-126	SL-168D	47.47	50.64	70.92	8.27	4.99	0.158	0.51	1.59	2.17	5.14	0.394	0.02	1.52	95.69	-1	283	6
	KC-10-127	SL-176D	4.88	9.58	70.23	8.77	4.72	0.138	0.44	1.17	2.46	4.73	0.398	0.04	1.97	95.07	-1	247	12
	KC-10-128	SL-176D	33.61	36.47	70.08	8.67	5.36	0.174	0.62	1.84	3.37	4.25	0.409	0.02	1.31	96.09	-1	249	8
	KC-10-129	SL-176D	38.42	39.42	70.62	7.32	5.84	0.166	1.07	1.56	3.03	3.71	0.311	0.05	1.74	95.41	-1	297	6
	KC-10-130	SL-176D	39.42	42.71	65.16	7.25	5.04	0.179	1.73	4.63	2.67	3.70	0.398	0.05	3.13	93.94	-1	235	6
	KC-10-131	SL-176D	42.71	44.13	66.36	8.44	3.40	0.193	1.46	4.00	2.50	4.36	0.396	0.03	3.36	94.48	-1	478	-5
	KC-10-132	SL-176D	51.01	53.03	72.50	8.37	4.97	0.135	0.21	0.81	3.92	3.83	0.376	0.03	1.31	96.47	-1	274	-5
	KC-10-133	SL-176D	53.03	57.47	70.03	5.89	7.54	0.220	0.26	1.41	3.48	3.58	0.543	0.04	1.43	94.42	-1	214	-5
	KC-10-134	SL-176D	66.84	68.10	70.57	7.98	5.01	0.154	0.33	1.11	3.56	4.18	0.586	0.04	1.50	95.01	-1	160	-5
	KC-10-135	SL-176D	4.88	9.58	70.61	8.86	4.81	0.139	0.44	1.17	2.48	4.72	0.397	0.03	2.03	95.69	-1	251	6
	KC-10-136	SL-253D	40.11	44.30	66.23	4.96	5.77	0.177	1.12	5.67	1.44	3.67	0.800	0.03	3.47	93.35	-1	1014	5
	KC-10-137	SL-197D	31.48	35.96	69.98	10.27	5.44	0.145	0.12	0.88	5.14	4.28	0.265	0.03	0.99	97.52	-1	122	-5
	KC-10-138	SL-197D	40.45	44.81	70.76	10.00	4.99	0.138	0.27	0.77	4.50	4.33	0.337	0.03	0.91	97.04	-1	175	-5
	KC-10-139	SL-231D	59.61	62.98	66.24	6.57	5.20	0.194	0.20	2.83	3.70	4.68	0.778	0.06	2.70	93.14	-1	193	-5
	KC-10-140	SL-192D	16.41	19.90	71.46	8.91	5.66	0.135	0.41	1.42	3.73	4.19	0.285	0.03	0.93	97.15	-1	146	-5
	KC-10-141	SL-189D	75.49	78.33	71.70	8.28	5.49	0.170	0.27	1.26	3.54	4.02	0.353	0.02	1.15	96.26	-1	287	-5
	KC-10-142	SL-187D	88.55	91.57	70.93	9.97	4.29	0.120	0.25	0.53	4.26	4.46	0.239	0.03	1.04	96.11	-1	191	7
	KC-10-143	SL-179D	4.87	8.07	70.57	7.66	4.19	0.091	0.31	3.99	0.45	5.05	0.419	0.05	2.99	95.77	-1	513	-5
	KC-10-144	SL-179D	4.87	8.07	70.10	7.50	4.09	0.088	0.31	4.00	0.47	5.03	0.415	0.03	3.14	95.17	-1	507	6
	KC-10-145	SL-182D	15.45	19.47	69.06	9.44	5.80	0.137	0.24	1.30	4.13	4.80	0.358	0.04	1.32	96.62	-1	161	-5
	KC-10-146	SL-182D	23.93	28.48	70.75	9.72	6.00	0.148	0.09	0.97	4.80	4.33	0.318	0.04	0.99	98.14	-1	165	10
	KC-10-147	SL-182D	28.48	32.92	68.42	8.76	7.01	0.185	0.09	0.99	4.52	4.34	0.341	0.05	1.04	95.75	-1	155	-5
	KC-10-148	SL-182D	48.38	52.67	70.66	9.93	4.22	0.099	0.69	0.73	3.60	4.84	0.393	0.04	1.67	96.89	-1	192	-5
	KC-10-149	SL-182D	50.96	53.54	68.72	6.41	3.75	0.119	0.18	2.27	2.24	5.78	1.096	0.24	2.26	93.07	2	1121	-5
	KC-10-150	SL-182D	77.00	81.38	69.80	9.25	5.48	0.151	0.09	1.08	4.89	4.50	0.457	0.02	1.22	96.93	-1	185	6
	KC-10-151	SL-182D	81.38	85.67	69.12	9.14	5.70	0.144	0.10	0.96	4.51	4.26	0.343	0.03	1.12	95.42	-1	180	-5

Appendix 1 - Drill Core

Sample	IOC_DDH	From_m	To_m	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V
Unit				%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm
Detection				0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	1	1	5
Method				FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP		FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP
KC-10-152	SL-182D	85.67	88.20	71.24	9.20	5.43	0.136	0.11	1.03	4.13	4.47	0.376	0.02	1.40	97.56	-1	217	10
KC-10-153	SL-182D	23.93	28.48	69.17	9.32	5.87	0.147	0.09	0.96	4.73	4.44	0.299	0.03	0.94	95.99	-1	166	8
KC-10-154	SL-182D	81.38	85.67	69.95	9.12	5.19	0.131	0.09	0.93	4.35	4.26	0.367	0.03	1.20	95.60	-1	161	-5
KC-10-155	SL-187D	16.57	19.03	70.54	8.23	5.14	0.131	0.44	2.48	2.42	4.53	0.465	0.06	1.76	96.19	-1	216	-5
KC-10-156	SL-187D	21.16	24.67	69.21	8.64	3.96	0.125	0.88	2.74	3.16	3.40	1.088	0.02	1.76	94.99	-1	337	-5
KC-10-157	SL-187D	24.67	29.06	69.01	9.06	4.82	0.163	0.47	1.87	2.89	4.60	0.438	0.05	1.29	94.67	-1	303	7
KC-10-158	SL-187D	70.51	74.96	71.34	10.31	4.25	0.103	0.38	0.58	4.01	4.46	0.281	0.02	1.40	97.12	-1	163	6
KC-10-159	SL-187D	83.87	88.55	71.01	9.46	4.43	0.118	0.32	0.58	4.05	4.18	0.263	0.01	1.35	95.77	-1	148	-5
KC-10-160	SL-187D	88.55	91.57	70.76	9.74	4.30	0.120	0.25	0.51	4.54	4.73	0.238	0.02	1.22	96.42	-1	198	9
KC-10-161	SL-187D	91.97	94.03	70.27	8.26	4.75	0.119	0.44	0.74	3.82	3.99	0.543	0.01	1.76	94.70	-1	116	-5
KC-10-162	SL-189D	64.05	68.61	71.64	8.24	5.74	0.156	0.16	1.25	3.42	4.06	0.368	0.03	0.90	95.96	-1	242	14
KC-10-163	SL-189D	75.49	78.33	70.71	8.16	5.54	0.170	0.27	1.28	3.53	3.89	0.364	0.03	1.42	95.37	-1	277	9
KC-10-164	SL-189D	59.09	64.05	71.67	8.06	5.82	0.156	0.16	1.18	3.43	3.97	0.324	0.02	1.01	95.81	-1	259	11
KC-10-165	SL-192D	16.41	19.90	70.07	8.65	5.83	0.148	0.42	1.45	3.71	4.10	0.287	0.03	1.18	95.86	-1	152	-5
KC-10-166	SL-192D	21.35	23.78	69.97	8.53	6.67	0.156	0.56	1.12	3.51	4.55	0.291	0.03	1.00	96.39	-1	138	8
KC-10-167	SL-192D	35.23	36.22	71.11	8.91	5.51	0.135	0.40	1.51	3.79	3.98	0.317	0.03	0.97	96.65	-1	115	-5
KC-10-168	SL-192D	36.22	37.38	69.76	8.79	6.00	0.162	0.63	1.55	4.02	3.50	0.305	0.03	1.33	96.08	-1	127	-5
KC-10-169	SL-192D	40.39	43.22	68.02	5.89	5.42	0.086	0.92	3.92	1.50	4.73	0.940	-0.01	2.42	93.85	-1	351	9
KC-10-170	SL-192D	43.22	44.56	64.56	6.09	6.07	0.167	1.49	3.93	1.54	4.74	0.753	0.07	3.23	92.64	-1	295	8
KC-10-171	SL-192D	44.56	46.96	66.85	6.13	5.51	0.147	0.99	3.64	1.98	4.36	0.785	0.03	2.39	92.82	-1	283	-5
KC-10-172	SL-231D	59.61	62.98	67.18	6.47	5.33	0.201	0.20	2.83	3.63	4.71	0.773	0.05	2.58	93.96	-1	190	-5
KC-10-173	SL-231D	67.01	69.94	71.03	7.88	4.98	0.157	0.25	0.72	4.78	3.43	0.541	0.04	1.70	95.52	-1	145	10
KC-10-174	SL-248D	30.27	34.67	71.41	8.20	4.97	0.151	0.46	2.47	3.26	4.14	0.324	0.03	1.22	96.63	-1	201	-5
KC-10-175	SL-248D	34.67	38.11	71.31	8.20	5.80	0.153	0.24	1.91	3.51	3.88	0.284	0.03	0.83	96.16	-1	189	7
KC-10-176	SL-253D	3.24	6.57	69.10	7.56	4.61	0.186	0.56	3.76	3.10	3.18	0.784	0.05	1.73	94.63	-1	212	-5
KC-10-177	SL-253D	6.57	8.78	65.42	7.28	4.65	0.151	0.87	5.26	1.82	4.98	0.974	0.02	2.39	93.82	-1	199	-5
KC-10-178	SL-253D	17.09	18.92	70.74	8.91	3.86	0.103	0.52	1.88	2.91	4.81	0.699	0.03	1.18	95.64	-1	190	-5
KC-10-179	SL-253D	18.92	23.34	71.65	7.86	4.89	0.155	0.50	2.64	2.58	4.50	0.553	0.03	1.18	96.54	-1	194	-5
KC-10-180	SL-253D	36.48	37.50	74.15	8.02	4.18	0.109	0.35	1.49	2.82	3.81	0.376	0.02	0.61	95.94	-1	172	-5
KC-10-181	SL-253D	39.18	40.11	73.94	9.34	3.67	0.120	0.26	1.37	3.62	3.82	0.271	0.05	0.66	97.12	-1	147	8
KC-10-182	SL-253D	40.11	44.36	65.55	5.33	5.73	0.180	1.15	5.69	1.40	3.84	0.791	0.05	3.27	92.99	-1	1412	-5
KC-10-183	SL-256D	49.38	50.83	69.21	6.90	4.29	0.136	0.06	0.85	4.39	4.55	0.535	0.02	2.71	93.65	-1	199	-5
KC-10-184	SL-256D	65.18	69.19	73.07	7.48	4.24	0.123	0.08	1.25	3.36	4.14	0.471	0.02	1.28	95.51	-1	172	8
KC-10-185	SL-257D	60.05	62.29	70.85	9.18	5.93	0.149	0.05	0.53	4.86	4.03	0.270	0.03	0.75	96.62	-1	106	-5
KC-10-186	SL-257D	70.59	75.29	71.19	8.13	5.91	0.172	0.17	1.17	4.24	4.00	0.482	0.04	1.33	96.83	-1	157	12
KC-10-187	SL-197D	18.27	22.61	69.98	10.04	5.61	0.145	0.08	1.18	4.54	4.40	0.341	0.03	0.59	96.95	-1	105	-5
KC-10-188	SL-197D	28.55	31.48	70.64	10.15	5.32	0.152	0.11	1.14	4.45	4.54	0.269	0.02	0.71	97.50	-1	130	-5
KC-10-189	SL-197D	31.48	35.96	71.26	10.12	5.29	0.143	0.12	0.89	4.86	4.04	0.268	0.02	0.92	97.92	-1	122	-5
KC-10-190	SL-197D	40.45	44.81	70.87	9.90	4.92	0.137	0.26	0.76	4.51	4.32	0.326	0.04	1.01	97.06	-1	181	8
KC-10-191	SL-197D	55.94	58.58	71.25	10.36	4.77	0.128	0.14	0.72	4.62	4.82	0.250	0.02	0.79	97.87	-1	115	-5
KC-10-192	SL-197D	77.22	80.33	68.48	7.53	5.07	0.157	0.07	1.95	4.83	4.04	1.077	0.06	2.26	95.52	-1	147	-5
KC-10-193	SL-177D	13.65	17.38	70.96	9.66	5.48	0.140	0.25	1.34	3.93	4.25	0.380	0.02	1.21	97.61	-1	322	8
KC-10-194	SL-177D	26.65	29.57	70.66	6.61	4.72	0.100	0.90	2.22	0.68	5.23	0.375	0.08	2.31	93.88	-1	406	-5
KC-10-195	SL-177D	39.01	40.45	72.48	7.59	4.51	0.138	0.55	1.51	1.71	4.94	0.489	0.03	2.58	96.52	-1	515	9
KC-10-196	SL-176D	44.17	48.53	73.30	8.31	4.35	0.099	0.29	0.82	3.25	4.18	0.351	0.02	1.50	96.47	-1	302	-5
KC-10-197	SL-229D	11.89	15.25	69.86	8.87	4.63	0.151	0.48	2.14	3.04	4.70	0.405	0.07	1.22	95.57	-1	173	-5
KC-10-198	SL-174D	60.05	64.48	72.57	8.18	4.68	0.135	0.29	1.22	3.39	4.32	0.395	0.05	1.40	96.64	-1	292	-5
KC-11-500	SL-072D	52.43	53.83	70.25	9.04	5.12	0.192	0.26	2.13	4.12	3.81	0.537	0.05	0.74	96.25	-1	288	-5
KC-11-501	SL-076D	28.04	30.78	67.24	8.34	4.84	0.171	0.59	2.92	2.88	4.10	0.568	0.09	1.34	93.08	-1	164	5
KC-11-502	SL-076D	30.78	32.85	67.40	6.27	3.00	0.154	0.47	5.30	1.00	5.07	1.389	0.14	1.99	92.18	-1	339	8
KC-11-503	SL-076D	32.85	38.86	70.98	8.36	5.22	0.161	0.58	2.08	2.88	4.16	0.635	0.06	1.46	96.57	-1	239	5
KC-11-504	SL-079D	12.19	16.03	70.03	8.23	5.04	0.156	0.56	1.99	2.82	4.06	0.609	0.05	1.47	95.03	-1	249	-5

Appendix 1 - Drill Core

	Sample	IOC_DDH	From_m	To_m	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V
Unit					%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm
Detection					0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	1	1	5
Method					FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP		FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP
	KC-11-505	SL-081D	6.09	12.74	70.41	8.44	4.92	0.167	0.63	1.80	2.64	4.53	0.409	0.02	1.24	95.20	-1	235	-5
	KC-11-506	SL-082D	11.88	16.35	72.86	7.56	4.87	0.156	1.03	1.75	2.23	3.85	0.320	0.03	1.54	96.19	-1	225	-5
	KC-11-507	SL-093D	49.35	53.84	70.87	8.88	4.03	0.107	0.42	0.91	3.75	4.38	0.407	0.04	1.42	95.21	-1	253	8
	KC-11-508	SL-094D	7.02	11.02	67.43	5.78	5.16	0.216	0.36	3.66	2.09	3.65	1.341	0.08	1.10	90.86	-1	234	6
	KC-11-509	SL-094D	11.93	14.37	67.15	6.12	5.05	0.186	0.38	3.95	2.58	2.82	1.423	0.06	1.23	90.94	-1	433	6
	KC-11-510	SL-094D	14.37	14.70	70.96	6.77	4.30	0.150	0.17	3.31	3.91	1.33	1.142	0.05	0.92	93.02	-1	367	8
	KC-11-511	SL-094D	43.98	47.33	69.55	8.06	5.13	0.159	0.46	2.13	3.22	3.69	0.542	0.07	1.05	94.05	-1	292	7
	KC-11-512	SL-094D	47.33	54.74	71.00	8.55	5.35	0.158	0.22	1.33	3.70	3.98	0.349	0.02	0.62	95.27	-1	177	-5
	KC-11-513	SL-095D	9.75	11.03	68.21	11.06	4.05	0.108	0.29	1.52	3.35	5.80	0.420	0.05	1.28	96.15	-1	145	-5
	KC-11-514	SL-095D	15.35	17.00	68.05	9.49	3.59	0.113	0.58	2.37	2.36	5.36	0.643	0.05	1.51	94.10	-1	204	8
	KC-11-515	SL-096D	38.15	39.17	68.31	8.99	4.16	0.146	0.33	0.58	4.99	3.90	0.358	0.08	1.81	93.66	-1	144	-5
	KC-11-516	SL-099D	10.36	12.90	70.16	8.66	5.15	0.158	0.39	2.10	2.71	4.62	0.657	0.03	1.36	95.99	-1	168	6
	KC-11-517	SL-099D	27.67	29.93	69.29	9.40	4.76	0.140	0.27	2.12	3.36	4.75	0.274	0.03	0.76	95.16	-1	145	7
	KC-11-518	SL-100D	5.48	6.76	72.22	9.58	5.20	0.125	0.21	1.13	4.11	3.98	0.259	0.01	0.51	97.34	-1	158	-5
	KC-11-519	SL-100D	6.76	20.12	71.08	8.59	5.08	0.124	0.26	1.32	3.22	4.49	0.250	0.02	0.57	95.01	-1	137	7
	KC-11-520	SL-104D	14.17	15.09	69.93	10.00	4.75	0.141	0.33	1.65	4.10	4.20	0.424	0.03	0.87	96.42	-1	182	-5
	KC-11-521	SL-104D	32.38	32.68	65.96	5.06	6.33	0.111	0.67	4.27	1.25	3.86	0.296	0.16	2.83	90.79	-1	3099	-5
	KC-11-522	SL-106D	9.14	15.00	69.89	11.04	4.69	0.112	0.29	1.15	4.46	4.79	0.303	0.03	0.76	97.51	-1	79	-5
	KC-11-523	SL-106D	15.00	19.93	70.20	10.71	4.70	0.129	0.32	1.33	4.23	4.58	0.339	0.03	0.83	97.41	-1	127	-5
	KC-11-524	SL-106D	19.93	21.73	69.70	8.23	5.21	0.172	0.29	2.18	3.56	3.58	0.468	0.04	0.74	94.18	-1	151	-5
	KC-11-525	SL-109D	8.23	9.42	67.86	7.64	5.48	0.107	0.52	3.12	1.89	4.69	0.366	0.04	2.07	93.79	-1	283	6
	KC-11-526	SL-109D	9.42	11.83	72.61	5.11	2.30	0.061	0.36	4.91	0.31	4.09	0.726	0.02	1.99	92.48	-1	521	5
	KC-11-527	SL-111D	15.35	17.78	69.60	10.04	4.46	0.132	0.22	1.49	3.83	5.13	0.303	0.03	0.79	96.03	-1	158	-5
	KC-11-528	SL-111D	17.78	18.55	69.06	9.78	4.50	0.117	0.36	1.86	3.42	4.99	0.218	0.01	0.85	95.17	-1	103	-5
	KC-11-529	SL-111D	24.51	30.74	70.00	11.29	4.68	0.108	0.11	0.91	4.99	4.99	0.292	-0.01	0.88	98.26	-1	32	-5
	KC-11-530	SL-111D	24.57	30.74	71.21	11.55	4.73	0.110	0.11	0.94	5.13	5.16	0.302	-0.01	0.91	100.20	-1	37	-5
	KC-11-531	SL-113D	41.45	47.24	71.99	8.64	4.96	0.133	0.14	0.55	4.17	3.95	0.338	0.02	1.15	96.04	-1	134	-5
	KC-11-532	SL-115D	27.82	38.71	73.02	9.50	4.73	0.113	0.28	0.57	4.11	4.11	0.218	-0.01	1.10	97.75	-1	134	-5
	KC-11-533	SL-119D	40.38	49.53	69.90	9.50	3.81	0.105	0.44	0.77	3.81	4.44	0.422	0.03	1.35	94.57	-1	149	-5
	KC-11-534	SL-120D	57.18	64.62	71.12	8.70	5.00	0.146	0.63	1.96	3.35	3.99	0.435	0.03	0.97	96.33	-1	208	-5
	KC-11-535	SL-120D	59.18	64.62	71.67	8.57	4.92	0.147	0.62	1.92	3.43	3.98	0.431	0.03	0.94	96.65	-1	201	-5
	KC-11-536	SL-120D	4.27	7.74	73.04	10.04	3.68	0.115	0.35	1.36	2.72	5.19	0.391	0.01	0.79	97.69	-1	170	-5
	KC-11-537	SL-128D	9.75	13.99	72.07	8.71	4.46	0.159	0.62	1.85	2.57	4.42	0.396	0.04	1.41	96.69	-1	260	5
	KC-11-538	SL-128D	21.24	25.39	71.00	7.94	4.54	0.141	0.80	1.89	2.44	3.83	0.451	0.02	1.27	94.34	-1	297	-5
	KC-11-539	SL-129D	2.74	4.27	70.64	9.75	4.33	0.150	0.17	1.96	3.86	3.98	0.327	-0.01	0.65	95.81	-1	370	-5
	KC-11-540	SL-129D	17.87	20.02	68.18	6.64	6.14	0.227	0.28	3.96	3.52	2.13	1.227	0.04	1.02	93.35	-1	432	-5
	KC-11-541	SL-161D	2.44	6.23	65.23	7.30	4.20	0.174	0.62	5.41	3.11	3.04	0.862	0.07	1.72	91.74	-1	647	-5
	KC-11-542	SL-228D	20.42	23.66	70.84	8.53	4.44	0.137	0.48	2.20	2.83	4.66	0.393	0.04	0.89	95.45	-1	260	8
	KC-11-543	SL-228D	23.66	26.27	70.19	8.67	3.30	0.106	0.53	2.53	2.52	5.05	0.457	0.03	0.96	94.34	-1	337	7
	KC-11-544	SL-228D	34.63	36.91	68.98	9.81	3.70	0.114	1.09	1.43	3.42	4.10	0.321	0.05	1.47	94.48	-1	176	6
	KC-11-545	SL-229D	41.44	42.88	67.13	7.34	4.75	0.180	1.11	3.05	2.26	3.75	1.226	0.13	1.92	92.85	-1	205	-5
	KC-11-546	SL-229D	42.88	47.21	71.85	8.08	4.99	0.148	0.78	1.44	3.62	3.76	0.490	0.07	1.37	96.61	-1	291	8
	KC-11-547	SL-231D	10.82	16.12	71.90	8.36	4.35	0.139	0.27	1.85	2.80	4.03	0.403	0.04	0.67	94.82	-1	241	-5
	KC-11-548	SL-231D	20.72	25.13	72.18	6.94	4.20	0.124	0.26	2.51	2.26	3.87	0.388	0.02	0.73	93.48	-1	182	7
	KC-11-549	SL-231D	29.57	34.07	71.21	7.12	5.03	0.155	0.29	2.48	2.65	3.97	0.427	0.02	0.62	93.98	-1	200	5

Appendix 1 - Drill Core

	Sample	IOC_DDH	Cr	Co	Ni	Cu	Zn	Ga	Ge	As	Rb	Sr	Y	Zr	Nb	Mo	In	Sn	Sb
Unit			ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection			20	1	20	10	30	1	1	5	2	2	2	4	1	2	0.2	1	0.5
Method			FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
	KC-10-100	SL-168D	-20	-1	-20	-10	1240	57	6	60	1050	75	1779	24360	1080	-2	0.3	427	2.4
	KC-10-101	SL-168D	-20	-1	-20	-10	1450	69	6	50	927	101	2495	14380	2630	-2	0.2	313	2.6
	KC-10-102	SL-168D	-20	-1	-20	30	1270	65	5	81	1210	80	2334	20430	1450	-2	0.2	340	2.5
	KC-10-103	SL-168D	-20	-1	-20	20	1190	62	6	58	1030	54	1850	16810	1400	-2	0.2	377	1.8
	KC-10-104	SL-168D	-20	-1	-20	10	1410	61	6	64	1000	59	1942	15680	1200	-2	0.2	332	2.4
	KC-10-105	SL-168D	-20	-1	-20	-10	1890	62	6	42	1270	50	1898	16270	1200	-2	0.2	337	2.6
	KC-10-106	SL-168D	-20	-1	-20	30	1280	62	6	22	1100	42	1762	15300	1100	-2	0.2	315	2.1
	KC-10-107	SL-168D	-20	-1	-20	-10	1270	56	6	68	1030	71	1780	24780	1060	-2	0.3	417	2.5
	KC-10-108	SL-168D	-20	-1	-20	30	1300	67	5	80	1210	76	2279	19840	1310	-2	0.2	334	2.5
	KC-10-109	SL-168D	-20	-1	-20	20	1200	64	6	50	1080	55	1895	17330	1320	-2	0.2	390	1.9
	KC-10-110	SL-169D	-20	-1	-20	-10	1000	54	5	17	774	41	1046	9534	639	-2	-0.2	191	1.2
	KC-10-111	SL-169D	-20	-1	-20	-10	990	54	5	34	737	47	1252	8818	693	-2	-0.2	194	0.9
	KC-10-112	SL-169D	-20	-1	-20	10	1210	52	6	41	1220	77	4129	29870	2870	-2	0.4	646	1.8
	KC-10-113	SL-169D	-20	-1	-20	-10	1020	55	4	71	1080	58	1745	19320	2110	-2	-0.2	258	2.1
	KC-10-114	SL-169D	-20	-1	-20	-10	970	53	5	21	755	41	1030	10160	599	-2	-0.2	192	1.0
	KC-10-115	SL-174D	-20	-1	-20	100	710	65	5	25	1350	69	2846	21620	1290	83	0.2	341	1.2
	KC-10-116	SL-174D	-20	-1	-20	60	1750	65	6	28	1070	53	2717	19110	1520	-2	0.3	496	1.2
	KC-10-117	SL-174D	-20	-1	-20	-10	1190	59	5	15	1210	68	1796	19410	1200	-2	0.2	394	2.7
	KC-10-118	SL-174D	-20	-1	-20	10	1640	59	6	28	1180	74	2046	19330	1280	-2	0.2	360	2.7
	KC-10-119	SL-174D	-20	-1	-20	10	1080	62	5	39	1200	43	1388	17440	1220	-2	0.2	352	2.5
	KC-10-120	SL-174D	-20	-1	-20	-10	1220	62	4	37	1090	50	1667	17530	1210	-2	0.2	365	-0.5
	KC-10-121	SL-174D	-20	-1	-20	10	1230	59	5	16	1240	67	1835	21210	1170	-2	0.2	399	2.9
	KC-10-122	SL-174D	-20	-1	-20	20	1090	62	5	39	1190	45	1447	18050	1300	-2	0.2	362	2.6
	KC-10-123	SL-181D	-20	-1	-20	20	1580	41	6	16	870	378	2104	33210	2120	-2	0.5	810	1.9
	KC-10-124	SL-181D	-20	-1	-20	20	1690	46	5	34	941	393	2790	33160	2960	-2	0.3	542	1.6
	KC-10-125	SL-181D	-20	-1	-20	20	1290	58	5	43	827	83	1756	14820	961	-2	-0.2	270	1.4
	KC-10-126	SL-168D	-20	-1	-20	-10	1120	60	6	48	1200	66	2031	18000	1330	-2	0.2	378	1.7
	KC-10-127	SL-176D	-20	-1	-20	-10	1120	61	5	39	1070	59	1249	16400	1080	-2	-0.2	316	1.2
	KC-10-128	SL-176D	-20	-1	-20	-10	1260	62	6	29	1020	51	1728	16820	1150	-2	0.2	376	1.9
	KC-10-129	SL-176D	-20	-1	-20	30	1650	58	6	46	957	60	1871	14960	1260	-2	-0.2	264	6.1
	KC-10-130	SL-176D	-20	-1	-20	10	2570	55	5	49	1080	234	1879	23560	1040	-2	0.2	328	3.6
	KC-10-131	SL-176D	-20	-1	-20	30	2080	92	11	81	1230	95	2982	16660	1250	-2	0.2	417	4.1
	KC-10-132	SL-176D	-20	-1	-20	10	1240	59	5	22	1140	44	1793	19160	811	-2	-0.2	267	1.9
	KC-10-133	SL-176D	-20	-1	-20	-10	1600	49	7	31	978	55	1970	29270	981	-2	0.2	382	1.8
	KC-10-134	SL-176D	-20	-1	-20	20	1620	55	5	28	1210	63	1797	19540	1360	-2	-0.2	307	1.5
	KC-10-135	SL-176D	-20	-1	-20	10	1160	62	5	39	1090	59	1268	16850	1070	-2	-0.2	331	1.4
	KC-10-136	SL-253D	-20	-1	-20	10	850	43	7	139	846	210	4797	23660	2850	-2	0.5	913	6.1
	KC-10-137	SL-197D	-20	-1	-20	-10	1000	56	5	18	725	36	1114	8155	731	-2	-0.2	197	2.0
	KC-10-138	SL-197D	-20	-1	-20	-10	1090	57	5	23	808	44	1287	11550	858	-2	-0.2	255	2.2
	KC-10-139	SL-231D	-20	-1	-20	-10	1780	52	7	71	1510	214	2660	29320	2550	-2	0.3	542	8.3
	KC-10-140	SL-192D	-20	-1	-20	30	1080	61	5	33	907	55	1185	12850	842	-2	-0.2	250	1.1
	KC-10-141	SL-189D	-20	-1	-20	20	1480	61	6	39	1090	44	1686	17000	1230	-2	0.2	391	5.9
	KC-10-142	SL-187D	-20	-1	-20	10	960	66	4	44	1100	43	1160	13350	821	-2	-0.2	264	3.3
	KC-10-143	SL-179D	-20	-1	-20	90	1180	51	4	24	1090	101	2444	25070	1480	191	0.3	471	1.1
	KC-10-144	SL-179D	-20	-1	-20	90	1190	51	5	26	1110	100	2389	23420	1390	197	0.3	471	1.2
	KC-10-145	SL-182D	-20	-1	-20	10	1170	54	5	38	955	57	1157	10400	884	-2	-0.2	226	1.5
	KC-10-146	SL-182D	-20	-1	-20	-10	1090	57	5	25	826	54	1226	10910	765	-2	-0.2	245	1.9
	KC-10-147	SL-182D	-20	-1	-20	10	1250	56	6	36	845	53	1304	9194	837	-2	-0.2	242	2.3
	KC-10-148	SL-182D	-20	-1	-20	-10	1090	65	4	51	1320	41	1563	16560	1240	-2	-0.2	283	2.8
	KC-10-149	SL-182D	-20	-1	-20	40	990	64	8	110	1450	109	6477	25670	3420	-2	0.4	634	7.1
	KC-10-150	SL-182D	-20	-1	-20	10	1330	54	5	36	817	48	1176	11830	1240	-2	0.2	359	2.4
	KC-10-151	SL-182D	-20	-1	-20	-10	1210	55	5	23	833	59	1474	10140	1100	-2	-0.2	265	2.9

Appendix 1 - Drill Core

Sample	IOC_DDH	Cr	Co	Ni	Cu	Zn	Ga	Ge	As	Rb	Sr	Y	Zr	Nb	Mo	In	Sn	Sb
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection		20	1	20	10	30	1	1	5	2	2	2	4	1	2	0.2	1	0.5
Method		FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
KC-10-152	SL-182D	-20	-1	-20	-10	1150	53	5	24	920	57	1443	12110	945	-2	-0.2	270	3.5
KC-10-153	SL-182D	-20	-1	-20	-10	1130	56	5	30	839	50	1161	10960	759	-2	-0.2	254	2.8
KC-10-154	SL-182D	-20	-1	-20	10	1130	54	4	25	833	52	1358	9903	946	-2	-0.2	259	2.8
KC-10-155	SL-187D	-20	-1	-20	20	710	58	5	42	1200	67	2121	22670	2700	-2	0.2	416	3.6
KC-10-156	SL-187D	-20	-1	-20	10	970	70	5	50	787	116	1926	20990	4560	-2	0.3	487	4.0
KC-10-157	SL-187D	-20	-1	-20	20	1000	64	5	67	1180	71	2893	17870	1170	-2	0.2	346	4.0
KC-10-158	SL-187D	-20	-1	-20	-10	1110	70	4	37	1260	44	1191	13400	1000	-2	-0.2	262	3.1
KC-10-159	SL-187D	-20	-1	-20	-10	1100	65	4	38	1160	52	1121	14420	822	-2	-0.2	277	3.1
KC-10-160	SL-187D	-20	-1	-20	20	1010	66	4	57	1120	41	1185	13050	841	-2	-0.2	277	4.3
KC-10-161	SL-187D	-20	-1	-20	20	1230	58	4	46	1110	35	1297	25920	920	-2	-0.2	236	2.2
KC-10-162	SL-189D	-20	-1	-20	-10	1380	60	6	34	1140	58	1437	16400	1200	-2	0.2	390	5.5
KC-10-163	SL-189D	-20	-1	-20	30	1570	61	6	39	1120	41	1695	16450	1380	-2	0.3	412	8.6
KC-10-164	SL-189D	-20	-1	-20	-10	1450	61	6	30	1150	57	1707	17050	1280	-2	0.2	370	4.4
KC-10-165	SL-192D	-20	-1	-20	30	1290	63	5	36	958	57	1189	12470	788	-2	-0.2	252	1.5
KC-10-166	SL-192D	-20	-1	-20	30	1450	60	5	41	1030	46	1064	11320	632	-2	-0.2	230	2.9
KC-10-167	SL-192D	-20	-1	-20	20	1050	63	4	40	904	53	1026	13510	870	-2	-0.2	205	2.9
KC-10-168	SL-192D	-20	2	-20	30	1320	64	4	36	799	48	1244	13660	1340	-2	-0.2	227	2.7
KC-10-169	SL-192D	-20	-1	-20	10	2330	45	5	26	1240	108	2869	25620	3230	-2	0.3	503	1.1
KC-10-170	SL-192D	-20	-1	-20	40	2070	53	6	30	1430	99	3467	23800	3210	-2	0.3	526	1.8
KC-10-171	SL-192D	-20	-1	-20	40	2530	45	5	29	1060	85	1739	31650	1220	-2	0.3	429	1.5
KC-10-172	SL-231D	-20	-1	-20	-10	1940	52	7	61	1530	209	2463	27480	3070	-2	0.3	564	11.0
KC-10-173	SL-231D	-20	-1	-20	-10	1290	60	5	33	937	59	1749	21100	2080	-2	-0.2	319	0.8
KC-10-174	SL-248D	-20	-1	-20	10	1380	62	5	47	809	145	1490	16730	943	-2	-0.2	294	2.0
KC-10-175	SL-248D	-20	-1	-20	20	1280	63	6	58	784	120	1582	15410	858	-2	-0.2	298	2.0
KC-10-176	SL-253D	-20	-1	-20	-10	1520	59	4	27	497	311	1788	27020	2010	-2	0.2	356	3.3
KC-10-177	SL-253D	-20	-1	-20	30	1520	54	5	55	916	488	2305	25840	3860	-2	0.3	540	8.3
KC-10-178	SL-253D	-20	-1	-20	-10	880	62	4	32	1020	107	1325	17130	5490	-2	-0.2	266	1.4
KC-10-179	SL-253D	-20	-1	-20	-10	1180	53	4	52	1010	130	1661	24330	938	-2	0.2	336	2.1
KC-10-180	SL-253D	-20	-1	-20	-10	820	55	4	38	963	53	1416	15560	2330	-2	-0.2	252	1.9
KC-10-181	SL-253D	-20	-1	-20	-10	950	64	3	37	857	55	1255	13340	1360	-2	-0.2	214	1.4
KC-10-182	SL-253D	-20	-1	-20	10	920	42	6	85	891	213	4977	22010	3550	-2	0.5	918	9.4
KC-10-183	SL-256D	-20	-1	-20	-10	1080	48	4	76	1110	99	1425	35060	1310	-2	-0.2	308	0.6
KC-10-184	SL-256D	-20	-1	-20	-10	1010	51	4	49	1130	76	1706	18690	1140	-2	-0.2	294	3.4
KC-10-185	SL-257D	-20	-1	-20	-10	1130	64	4	40	937	42	870	9367	885	-2	-0.2	195	2.6
KC-10-186	SL-257D	-20	-1	-20	-10	1330	62	6	30	1070	72	2123	14880	1380	-2	0.2	341	3.9
KC-10-187	SL-197D	-20	-1	-20	10	960	52	4	29	727	35	972	8288	767	4	-0.2	179	1.8
KC-10-188	SL-197D	-20	-1	-20	10	1030	52	4	16	777	34	1136	8918	787	2	-0.2	206	1.8
KC-10-189	SL-197D	-20	-1	-20	-10	1040	54	4	15	725	34	1108	8397	877	-2	-0.2	197	2.7
KC-10-190	SL-197D	-20	-1	-20	-10	1200	57	5	20	840	42	1292	11140	909	-2	-0.2	260	2.9
KC-10-191	SL-197D	-20	-1	-20	40	1010	58	4	22	905	40	1141	9395	861	-2	-0.2	205	2.9
KC-10-192	SL-197D	-20	-1	-20	-10	880	36	3	76	679	90	1668	24220	1310	-2	0.2	324	1.8
KC-10-193	SL-177D	-20	-1	-20	10	970	40	3	26	821	43	1817	12450	957	-2	-0.2	297	1.6
KC-10-194	SL-177D	-20	-1	-20	-10	840	37	4	60	1100	99	2095	31360	889	-2	0.3	586	1.7
KC-10-195	SL-177D	-20	-1	-20	-10	1420	43	3	22	1010	65	1664	21270	905	-2	0.2	346	1.3
KC-10-196	SL-176D	-20	-1	-20	20	1080	58	5	29	1080	33	1639	16520	1160	-2	-0.2	326	4.6
KC-10-197	SL-229D	-20	-1	-20	-10	1070	63	5	41	1150	41	1938	23000	1670	-2	0.3	522	3.3
KC-10-198	SL-174D	-20	-1	-20	-10	1330	58	6	40	1100	65	1958	19260	1500	-2	0.3	503	5.7
KC-11-500	SL-072D	-20	-1	-20	10	1340	59	7	37	699	125	2271	12310	2230	-2	0.3	342	4.4
KC-11-501	SL-076D	-20	-1	-20	20	1000	60	5	50	665	101	2706	23840	2090	-2	0.2	254	1.8
KC-11-502	SL-076D	-20	-1	-20	10	920	67	8	58	1030	182	3094	28860	2800	-2	0.4	545	2.6
KC-11-503	SL-076D	-20	-1	-20	-10	990	65	6	94	808	74	2248	19280	1620	-2	0.3	323	1.8
KC-11-504	SL-079D	-20	-1	-20	-10	960	65	6	89	798	70	2301	18350	1520	-2	0.3	310	1.4

Appendix 1 - Drill Core

	Sample	IOC_DDH	Cr	Co	Ni	Cu	Zn	Ga	Ge	As	Rb	Sr	Y	Zr	Nb	Mo	In	Sn	Sb
Unit			ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection			20	1	20	10	30	1	1	5	2	2	2	4	1	2	0.2	1	0.5
Method			FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
	KC-11-505	SL-081D	-20	-1	-20	-10	1110	69	6	61	1150	65	1717	17100	1420	-2	0.3	322	1.7
	KC-11-506	SL-082D	-20	-1	-20	-10	1370	60	6	70	1060	56	1371	16760	1160	-2	0.3	359	2.2
	KC-11-507	SL-093D	-20	-1	-20	-10	1090	63	6	42	1180	53	1791	20180	1670	-2	0.3	402	4.6
	KC-11-508	SL-094D	-20	-1	-20	10	1320	56	8	84	1000	115	3866	33300	4210	3	0.5	627	6.1
	KC-11-509	SL-094D	-20	-1	-20	-10	1480	62	9	76	737	125	5225	31060	3820	-2	0.5	582	3.8
	KC-11-510	SL-094D	-20	-1	-20	-10	1010	60	6	65	321	66	3316	27000	3450	-2	0.3	373	3.5
	KC-11-511	SL-094D	-20	-1	-20	-10	1050	64	7	20	719	90	3416	18350	1780	-2	0.3	416	2.2
	KC-11-512	SL-094D	-20	-1	-20	10	1160	66	6	33	870	55	1288	10660	1040	-2	0.2	235	1.7
	KC-11-513	SL-095D	-20	-1	-20	-10	800	75	5	35	1320	46	1567	12170	1470	-2	0.2	268	2.1
	KC-11-514	SL-095D	-20	-1	-20	10	870	75	6	106	1470	60	2662	19700	2070	2	0.3	348	1.9
	KC-11-515	SL-096D	-20	-1	-20	-10	1290	68	6	21	1010	40	1485	21520	2620	-2	0.2	232	0.9
	KC-11-516	SL-099D	-20	-1	-20	-10	960	62	6	59	981	52	2360	17830	1410	-2	0.3	322	3.3
	KC-11-517	SL-099D	-20	-1	-20	20	1020	64	5	21	1090	41	1382	22610	1370	-2	0.2	196	2.2
	KC-11-518	SL-100D	-20	-1	-20	30	970	77	6	15	909	67	1085	9357	659	3	0.2	259	1.6
	KC-11-519	SL-100D	-20	-1	-20	-10	940	65	6	11	908	85	1096	15390	560	-2	0.2	202	1.5
	KC-11-520	SL-104D	-20	-1	-20	-10	1240	65	6	27	1210	65	1386	8656	2560	-2	0.2	207	1.3
	KC-11-521	SL-104D	-20	-1	-20	290	2180	73	11	603	2260	89	8202	17880	1530	-2	0.4	540	58.2
	KC-11-522	SL-106D	-20	-1	-20	20	680	50	4	24	904	36	737	5436	575	3	0.2	158	1.0
	KC-11-523	SL-106D	-20	-1	-20	20	930	57	5	33	914	53	1099	8021	749	-2	0.2	208	2.0
	KC-11-524	SL-106D	-20	-1	-20	10	1250	68	7	58	830	62	1352	19100	959	-2	0.2	255	2.5
	KC-11-525	SL-109D	-20	-1	-20	-10	860	63	8	25	1160	102	1946	26670	1320	-2	0.3	370	2.6
	KC-11-526	SL-109D	-20	-1	-20	-10	390	43	5	41	1400	85	2821	37510	1270	2	0.5	689	5.7
	KC-11-527	SL-111D	-20	-1	-20	30	1000	56	6	12	989	52	1016	8866	912	-2	0.3	346	1.2
	KC-11-528	SL-111D	-20	-1	-20	30	990	59	5	18	1070	47	948	16850	627	-2	0.2	209	1.0
	KC-11-529	SL-111D	-20	-1	-20	-10	580	47	4	32	1020	35	602	4674	484	2	-0.2	118	-0.5
	KC-11-530	SL-111D	-20	-1	-20	-10	620	50	4	32	1030	36	649	4832	487	3	-0.2	121	-0.5
	KC-11-531	SL-113D	-20	-1	-20	20	1080	68	6	34	1090	47	1185	12690	915	-2	0.3	300	0.8
	KC-11-532	SL-115D	-20	-1	-20	-10	960	69	6	24	1070	34	1023	12340	707	-2	0.2	182	0.8
	KC-11-533	SL-119D	-20	-1	-20	10	950	67	5	18	1400	37	1357	20540	1300	-2	0.2	250	2.5
	KC-11-534	SL-120D	-20	-1	-20	20	1120	65	6	32	851	107	1547	16450	1160	-2	0.2	282	0.6
	KC-11-535	SL-120D	-20	-1	-20	20	1150	62	6	35	814	106	1491	15470	1150	-2	0.2	271	0.9
	KC-11-536	SL-120D	-20	-1	-20	10	790	65	4	29	1280	44	1619	18110	1190	-2	0.2	273	1.4
	KC-11-537	SL-128D	-20	-1	-20	20	950	68	7	81	1170	56	2071	17980	1590	-2	0.3	384	3.0
	KC-11-538	SL-128D	-20	-1	-20	30	980	66	7	56	1100	48	2673	17370	1690	-2	0.3	377	3.1
	KC-11-539	SL-129D	-20	-1	-20	20	1350	63	5	25	887	64	1485	9980	1280	-2	0.2	241	1.7
	KC-11-540	SL-129D	-20	-1	-20	10	1650	60	7	83	520	141	2658	24030	2770	-2	0.4	510	0.9
	KC-11-541	SL-161D	-20	-1	-20	20	1710	76	8	23	607	431	6224	21930	6130	-2	0.5	625	4.2
	KC-11-542	SL-228D	-20	-1	-20	-10	1180	69	6	60	1210	43	1926	19170	1440	-2	0.3	315	2.0
	KC-11-543	SL-228D	-20	-1	-20	-10	1020	64	5	58	1320	54	1753	23070	1250	-2	0.3	441	3.6
	KC-11-544	SL-228D	-20	-1	-20	-10	1280	69	5	26	1090	50	2043	16860	1020	-2	0.2	291	3.1
	KC-11-545	SL-229D	-20	-1	-20	10	1960	69	8	29	943	93	2602	25620	4330	-2	0.3	408	5.7
	KC-11-546	SL-229D	-20	-1	-20	-10	1690	62	6	42	1180	54	2358	18490	1790	-2	0.3	477	5.5
	KC-11-547	SL-231D	-20	-1	-20	-10	1070	63	7	162	1060	40	1781	20380	2390	-2	0.3	327	2.1
	KC-11-548	SL-231D	-20	-1	-20	-10	980	54	6	26	1070	47	1376	24340	1130	-2	0.2	301	2.4
	KC-11-549	SL-231D	-20	-1	-20	-10	1110	54	6	33	1080	40	1441	23990	1150	3	0.3	420	3.8

Appendix 1 - Drill Core

	Sample	IOC_DDH	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Unit			ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection			0.5	3	0.4	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
Method			FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
	KC-10-100	SL-168D	1.2	88	1.5	709	1640	174.0	669	153.0	8.74	142.0	32.1	259	64.1	230	40.0	278.0	43.6
	KC-10-101	SL-168D	2.4	69	2.5	814	2010	214.0	810	202.0	13.50	213.0	47.5	357	82.8	262	37.3	213.0	30.6
	KC-10-102	SL-168D	8.9	139	1.1	663	1650	182.0	705	175.0	11.00	184.0	45.4	360	86.1	292	47.9	321.0	50.3
	KC-10-103	SL-168D	1.7	58	1.7	831	1940	211.0	816	193.0	10.90	186.0	40.5	298	67.1	218	34.2	224.0	33.8
	KC-10-104	SL-168D	2.4	57	1.8	762	1790	194.0	753	183.0	10.70	187.0	40.9	304	69.2	223	34.8	225.0	34.0
	KC-10-105	SL-168D	8.3	107	2.0	754	1800	200.0	786	186.0	11.10	188.0	40.1	298	68.5	223	34.8	226.0	33.8
	KC-10-106	SL-168D	1.2	40	1.7	742	1700	184.0	708	164.0	9.88	169.0	36.3	270	61.5	199	31.3	205.0	31.1
	KC-10-107	SL-168D	1.3	75	1.7	788	1750	181.0	684	153.0	8.52	141.0	32.2	259	64.2	232	40.4	283.0	44.1
	KC-10-108	SL-168D	9.4	111	1.1	781	1810	195.0	738	179.0	11.10	186.0	45.2	356	84.7	288	47.1	315.0	49.5
	KC-10-109	SL-168D	1.7	57	1.6	879	2040	221.0	855	197.0	11.10	189.0	40.9	301	67.8	220	34.8	229.0	34.3
	KC-10-110	SL-169D	1.1	26	1.1	682	1440	154.0	598	125.0	7.15	116.0	22.1	156	34.0	107	16.2	106.0	16.6
	KC-10-111	SL-169D	1.1	34	1.2	758	1620	174.0	676	142.0	8.01	132.0	25.3	181	39.8	126	19.1	123.0	18.7
	KC-10-112	SL-169D	6.5	67	-0.4	771	1670	158.0	536	161.0	11.20	222.0	65.6	579	153.0	572	101.0	720.0	118.0
	KC-10-113	SL-169D	2.1	107	0.7	503	1200	121.0	434	113.0	7.88	137.0	35.0	275	63.6	209	33.6	232.0	37.3
	KC-10-114	SL-169D	1.1	27	1.0	693	1470	156.0	603	125.0	6.98	115.0	21.5	149	32.4	101	15.3	101.0	15.7
	KC-10-115	SL-174D	5.9	121	0.8	753	1900	209.0	809	233.0	14.80	248.0	58.9	443	99.2	305	44.2	278.0	42.7
	KC-10-116	SL-174D	2.6	104	1.2	814	2080	234.0	926	242.0	14.50	234.0	53.9	413	94.3	303	47.1	303.0	44.3
	KC-10-117	SL-174D	1.5	61	1.3	560	1430	158.0	611	152.0	9.18	151.0	34.2	263	62.1	209	33.9	226.0	34.7
	KC-10-118	SL-174D	1.2	65	1.7	703	1740	193.0	750	189.0	11.30	194.0	43.4	319	70.7	222	33.5	212.0	30.7
	KC-10-119	SL-174D	1.4	39	1.3	493	1190	128.0	477	112.0	6.69	124.0	29.4	221	48.3	153	23.7	156.0	24.2
	KC-10-120	SL-174D	7.0	177	1.2	378	968	102.0	373	98.9	5.82	118.0	31.5	256	59.5	189	28.8	181.0	26.5
	KC-10-121	SL-174D	1.5	63	1.4	571	1460	163.0	629	157.0	9.47	157.0	35.2	270	64.7	214	34.4	228.0	34.9
	KC-10-122	SL-174D	1.4	40	1.5	540	1290	136.0	506	119.0	7.31	132.0	31.5	234	51.7	162	25.0	162.0	24.9
	KC-10-123	SL-181D	3.3	382	0.4	426	1160	123.0	444	116.0	8.07	124.0	32.9	283	75.3	293	54.9	410.0	70.0
	KC-10-124	SL-181D	5.0	410	0.5	728	1620	153.0	509	133.0	8.48	147.0	38.7	344	96.6	385	74.3	571.0	96.7
	KC-10-125	SL-181D	1.6	56	1.6	723	1590	172.0	664	152.0	9.60	156.0	33.4	252	57.3	184	28.2	179.0	27.0
	KC-10-126	SL-168D	3.3	88	1.5	757	1790	200.0	766	185.0	11.30	183.0	40.7	307	70.9	235	37.4	244.0	36.4
	KC-10-127	SL-176D	3.3	79	1.5	640	1500	163.0	628	145.0	8.38	137.0	28.4	202	44.2	140	21.6	143.0	22.1
	KC-10-128	SL-176D	6.2	102	1.6	718	1690	183.0	707	171.0	10.20	174.0	37.3	273	59.0	177	25.4	156.0	22.3
	KC-10-129	SL-176D	6.5	68	1.5	1010	2340	240.0	893	197.0	12.50	196.0	41.0	291	63.8	198	30.2	197.0	30.1
	KC-10-130	SL-176D	10.8	135	1.6	699	1690	184.0	712	174.0	10.60	179.0	39.8	294	67.3	225	36.9	257.0	41.2
	KC-10-131	SL-176D	5.4	267	0.6	2320	6480	774.0	2930	533.0	25.50	359.0	66.9	465	103.0	327	49.2	314.0	47.8
	KC-10-132	SL-176D	1.7	31	1.5	529	1250	135.0	527	140.0	9.43	163.0	38.0	286	64.9	207	32.6	214.0	33.3
	KC-10-133	SL-176D	1.0	40	2.8	868	2210	249.0	996	210.0	11.90	184.0	35.7	272	68.4	251	44.7	328.0	54.8
	KC-10-134	SL-176D	1.1	25	1.3	696	1410	137.0	498	119.0	8.12	127.0	28.4	233	62.3	243	45.3	342.0	58.6
	KC-10-135	SL-176D	3.5	79	1.5	671	1570	171.0	657	153.0	8.91	145.0	29.9	214	46.1	146	22.8	149.0	22.9
	KC-10-136	SL-253D	3.0	150	-0.4	665	1680	170.0	632	234.0	17.60	320.0	85.1	685	164.0	551	87.8	572.0	86.4
	KC-10-137	SL-197D	0.9	44	1.0	646	1400	154.0	598	130.0	7.57	125.0	25.3	173	37.6	116	16.8	105.0	15.6
	KC-10-138	SL-197D	0.9	45	1.2	737	1660	179.0	686	149.0	8.68	141.0	28.3	204	45.0	140	21.0	132.0	19.8
	KC-10-139	SL-231D	2.0	65	0.8	766	1840	186.0	648	169.0	10.60	178.0	44.3	371	97.2	367	65.1	461.0	73.0
	KC-10-140	SL-192D	1.2	38	2.1	738	1740	186.0	737	158.0	8.71	146.0	27.3	188	40.2	122	17.8	115.0	17.4
	KC-10-141	SL-189D	1.2	50	1.8	794	1910	221.0	871	207.0	12.00	193.0	40.9	281	62.2	190	28.4	179.0	26.5
	KC-10-142	SL-187D	1.2	50	1.4	642	1460	156.0	592	128.0	7.57	123.0	26.0	184	40.9	127	19.1	120.0	17.7
	KC-10-143	SL-179D	7.2	100	0.6	517	1350	151.0	593	169.0	11.00	187.0	45.2	355	86.1	296	50.5	358.0	56.0
	KC-10-144	SL-179D	7.6	99	0.6	545	1410	155.0	611	172.0	11.20	190.0	45.9	361	87.4	301	50.5	356.0	56.5
	KC-10-145	SL-182D	2.0	45	1.3	697	1510	162.0	632	134.0	7.68	126.0	26.6	185	41.4	132	20.4	134.0	20.6
	KC-10-146	SL-182D	1.6	25	1.4	743	1630	177.0	696	155.0	8.78	147.0	28.6	195	40.3	117	16.4	101.0	14.7
	KC-10-147	SL-182D	1.9	34	1.8	905	1940	205.0	789	170.0	9.88	160.0	31.0	211	43.6	126	17.7	110.0	16.2
	KC-10-148	SL-182D	3.5	38	1.1	517	1250	132.0	488	112.0	6.70	116.0	28.2	227	54.8	188	31.1	214.0	33.8
	KC-10-149	SL-182D	2.0	198	-0.4	1930	4740	493.0	1760	518.0	32.10	528.0	134.0	1080	269.0	913	147.0	977.0	147.0
	KC-10-150	SL-182D	2.2	54	1.4	648	1490	168.0	650	152.0	8.57	144.0	29.5	209	45.8	141	20.7	137.0	21.0
	KC-10-151	SL-182D	2.1	46	1.6	769	1740	199.0	771	177.0	9.88	171.0	36.2	259	57.3	172	25.4	164.0	24.7

Appendix 1 - Drill Core

	Sample	IOC_DDH	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Unit			ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection			0.5	3	0.4	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
Method			FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
	KC-10-152	SL-182D	2.5	57	1.2	577	1360	153.0	601	144.0	8.62	148.0	31.7	236	54.0	170	26.3	176.0	26.7
	KC-10-153	SL-182D	1.7	28	1.6	740	1640	185.0	721	160.0	8.78	149.0	28.7	194	40.4	116	15.9	97.8	14.6
	KC-10-154	SL-182D	2.0	43	1.4	661	1510	170.0	658	154.0	8.88	154.0	33.0	238	52.4	162	23.7	153.0	22.6
	KC-10-155	SL-187D	3.2	51	1.3	710	1510	145.0	485	125.0	8.31	149.0	38.1	316	82.1	306	53.5	397.0	64.9
	KC-10-156	SL-187D	1.3	61	1.5	961	2240	238.0	817	191.0	10.60	177.0	38.5	298	75.4	280	50.3	388.0	67.7
	KC-10-157	SL-187D	5.2	142	1.1	582	1440	156.0	611	195.0	13.30	252.0	63.5	487	113.0	354	51.8	329.0	48.0
	KC-10-158	SL-187D	1.5	41	1.1	526	1240	138.0	528	123.0	7.07	123.0	27.3	204	47.3	152	23.0	151.0	23.2
	KC-10-159	SL-187D	1.4	38	1.6	571	1380	156.0	546	136.0	7.54	129.0	26.6	192	44.0	141	21.3	142.0	21.4
	KC-10-160	SL-187D	1.4	57	1.6	631	1450	162.0	623	141.0	8.15	140.0	29.1	210	46.6	144	21.0	136.0	19.9
	KC-10-161	SL-187D	1.9	41	2.1	424	852	94.4	361	89.5	5.44	99.2	24.0	196	50.5	184	31.5	238.0	41.4
	KC-10-162	SL-189D	1.3	45	1.9	851	1920	218.0	844	190.0	10.50	175.0	35.6	247	54.6	171	25.5	169.0	25.7
	KC-10-163	SL-189D	1.3	53	1.8	807	1920	226.0	881	215.0	12.10	203.0	42.5	302	66.3	205	29.9	193.0	28.9
	KC-10-164	SL-189D	1.3	53	1.9	862	1960	219.0	852	198.0	11.50	191.0	39.7	289	65.9	211	31.8	212.0	32.0
	KC-10-165	SL-192D	1.5	52	2.5	774	1780	202.0	802	173.0	9.34	160.0	29.5	202	43.6	130	18.8	123.0	18.8
	KC-10-166	SL-192D	3.5	60	2.6	870	1730	193.0	753	157.0	8.15	145.0	27.7	188	39.7	115	16.0	98.4	14.8
	KC-10-167	SL-192D	1.4	63	2.0	575	1290	142.0	557	114.0	6.36	103.0	21.6	164	38.7	125	19.6	129.0	19.2
	KC-10-168	SL-192D	1.4	61	2.1	539	1210	129.0	473	103.0	5.85	97.6	22.7	185	47.7	173	28.3	198.0	30.7
	KC-10-169	SL-192D	1.7	128	0.7	621	1570	167.0	599	172.0	11.40	210.0	57.5	480	120.0	418	67.7	475.0	75.6
	KC-10-170	SL-192D	9.5	152	-0.4	847	2040	207.0	723	188.0	11.90	217.0	63.7	559	146.0	523	86.5	609.0	97.5
	KC-10-171	SL-192D	1.7	112	0.9	517	1220	139.0	538	139.0	8.09	141.0	32.3	254	65.9	246	44.4	347.0	61.5
	KC-10-172	SL-231D	2.2	69	0.9	824	1950	206.0	724	182.0	10.90	181.0	43.7	366	98.4	372	64.9	472.0	76.6
	KC-10-173	SL-231D	2.3	63	0.9	589	1400	147.0	516	116.0	6.49	121.0	31.1	261	69.1	251	41.9	303.0	48.7
	KC-10-174	SL-248D	2.2	148	1.9	923	2000	222.0	870	184.0	10.40	175.0	34.1	241	55.0	175	26.2	173.0	26.9
	KC-10-175	SL-248D	1.4	72	2.0	1100	2310	255.0	996	216.0	11.80	200.0	39.0	272	60.3	189	27.4	179.0	27.0
	KC-10-176	SL-253D	0.7	96	2.4	556	1270	133.0	476	113.0	7.02	126.0	30.4	251	66.8	252	45.4	349.0	60.2
	KC-10-177	SL-253D	2.6	146	0.8	633	1570	161.0	568	153.0	9.69	169.0	43.1	355	92.2	337	58.6	451.0	79.5
	KC-10-178	SL-253D	1.7	61	0.8	778	1950	196.0	644	134.0	8.32	130.0	29.8	223	52.6	179	30.0	224.0	39.1
	KC-10-179	SL-253D	1.4	58	1.1	464	1140	128.0	500	139.0	9.15	149.0	35.5	268	64.2	225	37.7	278.0	47.2
	KC-10-180	SL-253D	1.1	60	1.0	552	1340	137.0	477	110.0	6.99	114.0	29.8	246	61.1	213	34.9	241.0	37.6
	KC-10-181	SL-253D	0.9	60	0.8	380	811	79.6	269	69.7	4.71	87.1	24.2	203	50.1	174	28.1	193.0	30.7
	KC-10-182	SL-253D	3.5	163	-0.4	752	1850	193.0	719	271.0	20.30	377.0	99.2	774	185.0	600	90.2	587.0	89.1
	KC-10-183	SL-256D	4.7	68	0.9	402	1030	122.0	486	127.0	6.10	138.0	31.6	241	58.8	207	36.2	283.0	51.5
	KC-10-184	SL-256D	1.8	40	1.0	506	1210	134.0	506	124.0	7.25	127.0	29.7	247	66.6	249	42.8	311.0	50.6
	KC-10-185	SL-257D	1.3	18	2.0	456	996	113.0	433	91.0	4.59	84.4	18.1	134	32.8	109	17.8	122.0	18.2
	KC-10-186	SL-257D	2.0	44	1.4	839	1900	211.0	810	190.0	10.30	192.0	43.6	336	80.9	268	42.6	292.0	45.1
	KC-10-187	SL-197D	1.4	48	1.4	596	1330	148.0	583	124.0	6.83	118.0	22.9	157	35.0	108	16.2	108.0	17.1
	KC-10-188	SL-197D	1.3	41	1.2	579	1300	146.0	576	129.0	7.36	127.0	25.6	183	40.8	128	19.0	121.0	18.4
	KC-10-189	SL-197D	1.0	35	1.0	577	1290	147.0	577	129.0	7.29	126.0	25.0	177	39.2	119	17.2	109.0	16.4
	KC-10-190	SL-197D	1.0	42	1.4	668	1500	170.0	661	153.0	8.72	146.0	29.5	212	47.7	148	21.7	142.0	22.0
	KC-10-191	SL-197D	1.8	39	1.3	550	1240	138.0	543	126.0	7.32	123.0	25.7	184	42.7	140	21.4	143.0	22.0
	KC-10-192	SL-197D	1.8	58	0.7	581	1360	140.0	500	117.0	7.26	122.0	31.1	251	65.2	236	41.9	314.0	52.6
	KC-10-193	SL-177D	1.0	32	1.1	774	1830	202.0	782	185.0	10.80	179.0	37.8	271	62.8	202	30.9	203.0	30.5
	KC-10-194	SL-177D	2.5	74	1.4	1130	2440	253.0	931	221.0	13.10	209.0	44.9	326	74.7	243	39.2	276.0	45.2
	KC-10-195	SL-177D	2.5	68	0.9	524	1300	149.0	600	181.0	11.40	173.0	36.0	264	61.2	207	35.6	264.0	45.1
	KC-10-196	SL-176D	4.2	51	1.2	658	1570	205.0	659	180.0	11.10	183.0	40.5	290	65.2	211	33.1	229.0	36.7
	KC-10-197	SL-229D	3.1	59	0.9	568	1350	164.0	490	134.0	8.38	140.0	36.5	291	75.2	275	47.0	336.0	53.7
	KC-10-198	SL-174D	1.5	61	1.4	716	1740	227.0	723	201.0	11.70	200.0	46.2	335	75.9	247	38.5	258.0	39.2
	KC-11-500	SL-072D	1.4	100	1.5	756	1770	203.0	675	192.0	12.20	199.0	48.6	348	76.1	246	41.9	278.0	39.6
	KC-11-501	SL-076D	2.5	109	2.0	507	1070	105.0	330	112.0	8.16	164.0	49.5	402	97.8	325	58.0	378.0	54.6
	KC-11-502	SL-076D	6.8	115	0.5	1660	3230	288.0	798	163.0	10.20	169.0	45.1	383	105.0	415	85.6	629.0	97.7
	KC-11-503	SL-076D	1.0	63	3.1	738	1600	179.0	585	158.0	9.82	176.0	47.4	366	84.1	280	48.1	325.0	45.4
	KC-11-504	SL-079D	1.0	61	3.0	730	1590	177.0	580	161.0	10.20	188.0	49.6	378	86.6	283	48.5	318.0	45.3

Appendix 1 - Drill Core

	Sample	IOC_DDH	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Unit			ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection			0.5	3	0.4	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
Method			FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
	KC-11-505	SL-081D	3.2	100	3.4	699	1550	179.0	603	161.0	9.61	170.0	41.1	298	65.3	208	34.7	231.0	32.6
	KC-11-506	SL-082D	1.1	55	3.6	729	1650	191.0	640	157.0	9.06	152.0	33.5	229	48.4	148	23.6	153.0	21.6
	KC-11-507	SL-093D	2.0	41	2.5	564	1290	142.0	474	142.0	9.74	167.0	39.7	276	60.0	193	33.0	208.0	28.8
	KC-11-508	SL-094D	1.2	183	0.6	980	2140	206.0	594	162.0	11.80	220.0	69.8	603	154.0	571	110.0	797.0	122.0
	KC-11-509	SL-094D	0.7	101	0.9	876	2190	232.0	774	259.0	16.00	347.0	101.0	785	183.0	617	110.0	719.0	102.0
	KC-11-510	SL-094D	0.8	64	0.9	708	1680	176.0	546	161.0	11.60	221.0	66.9	534	125.0	413	71.0	481.0	71.4
	KC-11-511	SL-094D	1.1	119	2.4	910	1970	214.0	720	205.0	12.20	257.0	68.2	537	126.0	416	71.9	452.0	62.4
	KC-11-512	SL-094D	1.3	56	3.6	730	1630	191.0	653	160.0	9.14	152.0	33.7	234	50.4	160	26.8	179.0	25.4
	KC-11-513	SL-095D	3.1	71	0.5	441	1040	101.0	322	100.0	6.46	123.0	33.4	251	56.9	190	34.3	228.0	33.8
	KC-11-514	SL-095D	2.1	85	1.6	764	1760	196.0	642	187.0	11.70	211.0	57.0	433	101.0	333	56.3	379.0	55.5
	KC-11-515	SL-096D	6.2	40	2.3	623	1390	135.0	402	93.6	5.77	106.0	26.2	198	49.5	172	31.9	210.0	32.0
	KC-11-516	SL-099D	3.9	140	1.4	502	1340	144.0	503	168.0	11.70	207.0	52.9	370	82.2	262	44.9	282.0	41.5
	KC-11-517	SL-099D	1.2	63	1.9	373	843	87.5	270	77.5	5.17	97.9	26.4	209	49.1	168	31.0	205.0	30.2
	KC-11-518	SL-100D	1.2	41	6.6	673	1450	176.0	640	157.0	8.19	151.0	28.9	189	39.0	117	18.8	120.0	17.1
	KC-11-519	SL-100D	2.1	48	5.9	751	1660	186.0	665	153.0	8.80	149.0	27.9	178	36.5	112	18.0	114.0	16.0
	KC-11-520	SL-104D	2.9	60	2.2	655	1600	185.0	609	157.0	9.29	159.0	33.7	230	48.3	146	23.3	153.0	22.3
	KC-11-521	SL-104D	79.8	298	0.9	1560	3920	461.0	1600	563.0	35.30	652.0	189.0	1430	306.0	884	112.0	564.0	66.3
	KC-11-522	SL-106D	1.1	61	1.6	367	831	96.6	337	83.6	5.11	83.0	18.9	134	29.7	98.4	16.9	115.0	15.8
	KC-11-523	SL-106D	1.4	58	2.3	500	1200	140.0	496	128.0	7.64	126.0	27.1	189	41.4	130	21.9	147.0	20.6
	KC-11-524	SL-106D	1.0	39	2.2	866	1980	230.0	795	192.0	9.92	173.0	34.5	231	50.1	165	29.3	215.0	33.2
	KC-11-525	SL-109D	7.3	105	2.3	730	1700	193.0	655	173.0	10.10	173.0	40.3	285	63.9	212	38.4	257.0	38.4
	KC-11-526	SL-109D	2.6	81	2.2	356	912	111.0	423	174.0	13.20	220.0	58.5	445	101.0	344	62.8	429.0	70.7
	KC-11-527	SL-111D	1.6	65	1.7	659	1530	172.0	598	154.0	9.09	133.0	26.5	168	34.4	105	17.1	107.0	14.8
	KC-11-528	SL-111D	2.0	59	4.6	553	1280	152.0	525	128.0	7.51	118.0	23.6	162	34.9	110	18.7	127.0	18.5
	KC-11-529	SL-111D	3.6	76	1.9	319	722	85.3	297	71.3	4.29	70.1	15.3	107	23.7	75.6	12.6	85.0	12.2
	KC-11-530	SL-111D	3.6	81	2.4	346	775	90.7	313	77.5	4.57	75.4	16.4	116	25.0	80	13.2	88.8	12.7
	KC-11-531	SL-113D	1.6	20	4.1	641	1440	167.0	581	138.0	8.07	130.0	28.0	198	43.8	143	24.0	161.0	23.4
	KC-11-532	SL-115D	1.5	36	4.3	592	1250	148.0	523	125.0	6.95	120.0	24.9	171	36.5	115	19.2	127.0	18.2
	KC-11-533	SL-119D	10.1	63	2.3	352	827	90.7	294	82.5	5.52	96.6	26.6	207	49.8	170	31.2	223.0	33.7
	KC-11-534	SL-120D	1.5	67	3.9	779	1670	196.0	683	173.0	10.20	168.0	36.3	257	57.0	182	30.9	214.0	31.4
	KC-11-535	SL-120D	1.4	66	4.3	767	1650	191.0	663	166.0	9.67	161.0	35.0	243	52.2	168	29.5	202.0	30.2
	KC-11-536	SL-120D	1.2	52	1.7	322	806	89.7	299	90.1	5.87	106.0	30.2	248	61.0	211	37.7	257.0	36.8
	KC-11-537	SL-128D	1.4	92	3.4	704	1650	200.0	700	202.0	12.20	206.0	48.2	347	75.7	242	40.6	263.0	37.2
	KC-11-538	SL-128D	1.2	77	3.6	696	1640	201.0	718	214.0	13.40	240.0	62.0	459	104.0	329	54.2	352.0	47.9
	KC-11-539	SL-129D	1.0	113	4.3	592	1350	157.0	529	143.0	9.86	150.0	34.7	244	54.4	181	32.7	233.0	34.8
	KC-11-540	SL-129D	1.3	150	1.2	645	1540	168.0	525	148.0	10.50	178.0	49.5	392	95.5	340	62.5	453.0	70.3
	KC-11-541	SL-161D	1.5	161	-0.4	973	2330	245.0	755	266.0	20.20	379.0	120.0	970	230.0	797	131.0	852.0	117.0
	KC-11-542	SL-228D	1.7	50	3.7	635	1470	174.0	599	171.0	10.60	180.0	43.8	318	70.0	225	37.6	248.0	35.9
	KC-11-543	SL-228D	2.5	65	2.6	467	1280	145.0	506	149.0	10.10	166.0	38.8	294	66.0	221	36.2	239.0	35.5
	KC-11-544	SL-228D	1.9	86	2.3	463	1130	123.0	421	109.0	6.98	133.0	37.8	302	72.3	239	37.9	239.0	34.9
	KC-11-545	SL-229D	2.0	173	1.0	1080	2380	233.0	685	158.0	9.68	177.0	45.9	361	91.1	340	66.4	487.0	76.2
	KC-11-546	SL-229D	16.3	78	4.0	626	1580	162.0	536	150.0	10.10	181.0	46.5	372	87.9	303	49.1	304.0	43.1
	KC-11-547	SL-231D	2.0	60	3.9	682	1650	178.0	599	153.0	9.09	158.0	37.7	271	60.7	204	36.0	229.0	33.4
	KC-11-548	SL-231D	1.7	47	3.3	645	1480	166.0	575	145.0	8.15	144.0	31.2	215	47.3	159	27.7	196.0	29.7
	KC-11-549	SL-231D	2.5	44	4.6	568	1430	158.0	547	139.0	8.29	142.0	31.4	236	54.7	190	31.8	216.0	33.4

Appendix 1 - Drill Core

	Sample	IOC_DDH	Hf	Ta	W	Tl	Pb	Th	U
Unit			ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection			0.2	0.1	1	0.1	5	0.1	0.1
Method			FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
	KC-10-100	SL-168D	653	82.1	2	1.8	305	248	70.6
	KC-10-101	SL-168D	390	190.0	4	2.3	1980	434	68.4
	KC-10-102	SL-168D	554	94.9	3	4.2	1370	359	62.4
	KC-10-103	SL-168D	461	91.0	3	1.8	554	494	66.6
	KC-10-104	SL-168D	427	85.7	3	1.7	474	638	63.2
	KC-10-105	SL-168D	457	85.6	3	2.7	466	281	63.4
	KC-10-106	SL-168D	393	80.6	3	1.5	208	283	60.6
	KC-10-107	SL-168D	663	78.6	3	1.8	300	247	70.5
	KC-10-108	SL-168D	540	93.2	3	4.1	1350	346	60.1
	KC-10-109	SL-168D	479	94.9	3	1.8	558	389	66.8
	KC-10-110	SL-169D	264	42.3	2	2.1	160	157	31.2
	KC-10-111	SL-169D	225	45.3	2	2.0	170	214	33.1
	KC-10-112	SL-169D	699	224.0	5	2.2	1980	838	114.0
	KC-10-113	SL-169D	514	154.0	3	2.4	322	581	58.6
	KC-10-114	SL-169D	261	41.7	2	2.0	167	158	31.0
	KC-10-115	SL-174D	601	92.6	4	4.4	1830	165	52.8
	KC-10-116	SL-174D	515	103.0	4	1.8	2970	202	80.1
	KC-10-117	SL-174D	519	86.9	3	1.5	554	273	65.6
	KC-10-118	SL-174D	517	87.3	3	1.5	511	273	67.9
	KC-10-119	SL-174D	469	86.6	2	1.5	612	255	62.3
	KC-10-120	SL-174D	480	90.4	2	4.9	322	194	68.0
	KC-10-121	SL-174D	521	87.7	3	1.6	559	287	67.6
	KC-10-122	SL-174D	490	92.4	2	1.5	645	303	66.3
	KC-10-123	SL-181D	775	146.0	3	3.3	845	418	65.6
	KC-10-124	SL-181D	746	219.0	4	3.3	1040	191	91.1
	KC-10-125	SL-181D	367	64.9	3	2.4	180	199	49.5
	KC-10-126	SL-168D	477	94.9	3	3.1	385	343	66.9
	KC-10-127	SL-176D	440	79.6	2	2.3	441	318	53.1
	KC-10-128	SL-176D	427	85.8	3	2.0	366	397	57.3
	KC-10-129	SL-176D	395	106.0	3	1.7	438	356	46.5
	KC-10-130	SL-176D	645	71.7	3	2.1	557	343	49.7
	KC-10-131	SL-176D	409	107.0	4	1.9	435	864	85.9
	KC-10-132	SL-176D	537	54.5	3	1.7	335	347	41.7
	KC-10-133	SL-176D	745	78.6	3	1.3	195	160	59.3
	KC-10-134	SL-176D	494	100.0	3	1.7	177	213	59.7
	KC-10-135	SL-176D	468	82.9	3	2.3	458	299	53.7
	KC-10-136	SL-253D	554	201.0	5	1.7	1190	1080	162.0
	KC-10-137	SL-197D	225	46.9	2	1.9	667	173	36.2
	KC-10-138	SL-197D	303	55.7	2	1.9	259	276	42.5
	KC-10-139	SL-231D	675	177.0	5	1.9	1680	396	117.0
	KC-10-140	SL-192D	342	55.5	1	1.8	150	189	38.9
	KC-10-141	SL-189D	447	86.8	3	1.7	255	280	63.0
	KC-10-142	SL-187D	357	57.9	2	2.6	301	189	43.8
	KC-10-143	SL-179D	597	102.0	3	3.6	2580	276	69.7
	KC-10-144	SL-179D	606	103.0	4	3.8	2730	293	70.3
	KC-10-145	SL-182D	274	56.6	2	2.5	325	185	40.8
	KC-10-146	SL-182D	288	55.4	2	2.0	414	177	42.1
	KC-10-147	SL-182D	241	56.6	3	2.2	713	293	41.4
	KC-10-148	SL-182D	444	89.5	2	2.3	559	238	57.9
	KC-10-149	SL-182D	639	266.0	7	2.9	3780	1190	149.0
	KC-10-150	SL-182D	334	75.4	3	2.6	395	236	46.6
	KC-10-151	SL-182D	278	69.8	3	2.7	218	240	44.0

Appendix 1 - Drill Core

	Sample	IOC_DDH	Hf	Ta	W	Tl	Pb	Th	U
Unit			ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection			0.2	0.1	1	0.1	5	0.1	0.1
Method			FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
	KC-10-152	SL-182D	340	59.7	3	3.0	239	371	46.5
	KC-10-153	SL-182D	313	54.8	3	2.2	419	174	40.5
	KC-10-154	SL-182D	257	63.1	3	2.7	199	240	40.7
	KC-10-155	SL-187D	591	185.0	5	1.5	211	305	71.6
	KC-10-156	SL-187D	577	316.0	4	1.2	536	117	75.0
	KC-10-157	SL-187D	500	77.7	15	1.7	277	487	64.0
	KC-10-158	SL-187D	386	67.3	3	2.0	284	229	44.9
	KC-10-159	SL-187D	413	57.6	3	2.4	243	210	43.7
	KC-10-160	SL-187D	385	60.6	2	2.8	320	188	42.8
	KC-10-161	SL-187D	743	74.8	2	2.4	1120	259	40.3
	KC-10-162	SL-189D	462	78.8	3	1.8	228	448	56.7
	KC-10-163	SL-189D	469	90.4	3	1.8	250	221	61.2
	KC-10-164	SL-189D	483	79.4	4	1.7	213	386	62.9
	KC-10-165	SL-192D	355	54.4	2	2.0	162	177	37.0
	KC-10-166	SL-192D	312	49.6	2	2.2	297	220	37.1
	KC-10-167	SL-192D	378	60.4	2	2.0	125	143	43.4
	KC-10-168	SL-192D	364	96.5	3	1.9	310	117	47.1
	KC-10-169	SL-192D	688	199.0	4	2.4	861	396	84.4
	KC-10-170	SL-192D	589	213.0	7	2.9	6770	717	134.0
	KC-10-171	SL-192D	825	92.8	4	2.5	551	284	64.4
	KC-10-172	SL-231D	711	186.0	5	2.0	1490	350	116.0
	KC-10-173	SL-231D	568	149.0	3	2.9	637	129	57.9
	KC-10-174	SL-248D	481	62.2	2	2.2	550	230	47.7
	KC-10-175	SL-248D	433	60.3	2	2.0	264	231	42.6
	KC-10-176	SL-253D	740	137.0	3	1.6	606	224	54.7
	KC-10-177	SL-253D	663	256.0	7	2.9	1620	564	104.0
	KC-10-178	SL-253D	453	370.0	4	2.1	978	239	64.3
	KC-10-179	SL-253D	651	71.0	2	2.0	406	354	52.5
	KC-10-180	SL-253D	422	161.0	3	1.7	276	358	56.1
	KC-10-181	SL-253D	360	79.8	3	1.8	266	327	48.7
	KC-10-182	SL-253D	570	228.0	6	2.0	1160	1060	157.0
	KC-10-183	SL-256D	1010	88.4	3	5.1	137	262	43.2
	KC-10-184	SL-256D	504	82.1	3	2.0	595	117	53.9
	KC-10-185	SL-257D	259	51.7	3	2.2	150	62.3	34.4
	KC-10-186	SL-257D	411	87.3	7	1.8	768	317	52.4
	KC-10-187	SL-197D	238	41.5	6	2.8	689	130	29.7
	KC-10-188	SL-197D	254	45.0	2	2.5	892	178	30.8
	KC-10-189	SL-197D	237	46.9	3	2.0	669	179	36.0
	KC-10-190	SL-197D	321	57.7	3	2.0	275	284	42.4
	KC-10-191	SL-197D	270	46.6	2	2.6	949	214	38.5
	KC-10-192	SL-197D	632	132.0	-1	2.2	1280	243	52.7
	KC-10-193	SL-177D	336	60.9	-1	2.2	601	298	49.2
	KC-10-194	SL-177D	831	75.8	-1	3.1	516	302	58.0
	KC-10-195	SL-177D	585	77.8	-1	3.0	503	264	64.4
	KC-10-196	SL-176D	542	97.1	2	1.8	849	341	57.4
	KC-10-197	SL-229D	690	134.0	3	1.9	223	301	82.8
	KC-10-198	SL-174D	616	119.0	4	1.6	761	228	79.3
	KC-11-500	SL-072D	293	121.0	3	2.2	1210	363	62.4
	KC-11-501	SL-076D	577	117.0	5	2.3	403	578	50.1
	KC-11-502	SL-076D	607	282.0	7	3.8	1390	493	104.0
	KC-11-503	SL-076D	523	111.0	3	2.6	432	306	74.2
	KC-11-504	SL-079D	506	111.0	3	2.5	405	331	75.5

Appendix 1 - Drill Core

	Sample	IOC_DDH	Hf	Ta	W	Tl	Pb	Th	U
Unit			ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection			0.2	0.1	1	0.1	5	0.1	0.1
Method			FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
	KC-11-505	SL-081D	491	92.9	2	2.8	457	333	62.4
	KC-11-506	SL-082D	484	72.1	2	2.2	448	237	55.0
	KC-11-507	SL-093D	482	105.0	3	2.2	311	353	60.9
	KC-11-508	SL-094D	809	315.0	7	2.4	1080	396	130.0
	KC-11-509	SL-094D	719	276.0	9	1.6	3240	570	94.1
	KC-11-510	SL-094D	735	239.0	5	3.6	1170	379	80.3
	KC-11-511	SL-094D	448	129.0	6	2.3	696	416	79.5
	KC-11-512	SL-094D	316	68.1	2	2.7	351	225	43.8
	KC-11-513	SL-095D	301	101.0	3	2.5	177	393	43.7
	KC-11-514	SL-095D	539	139.0	3	2.3	205	487	75.7
	KC-11-515	SL-096D	567	187.0	3	3.0	324	222	46.9
	KC-11-516	SL-099D	472	92.3	4	2.5	235	390	52.4
	KC-11-517	SL-099D	600	91.5	3	2.2	221	280	39.9
	KC-11-518	SL-100D	300	43.5	2	3.3	360	168	30.5
	KC-11-519	SL-100D	427	45.5	1	2.8	279	133	29.5
	KC-11-520	SL-104D	255	170.0	3	3.2	227	223	65.1
	KC-11-521	SL-104D	532	101.0	9	12.0	2470	1460	99.9
	KC-11-522	SL-106D	171	31.8	2	3.1	217	215	30.0
	KC-11-523	SL-106D	236	48.9	2	2.9	259	220	37.5
	KC-11-524	SL-106D	571	58.7	2	2.2	296	253	41.1
	KC-11-525	SL-109D	679	85.6	3	2.1	300	243	41.8
	KC-11-526	SL-109D	1030	102.0	4	2.1	405	337	91.6
	KC-11-527	SL-111D	243	48.7	2	3.3	470	185	51.9
	KC-11-528	SL-111D	520	42.5	2	3.6	283	158	51.7
	KC-11-529	SL-111D	143	30.0	2	7.0	511	80	25.5
	KC-11-530	SL-111D	147	32.1	2	7.4	573	92.8	26.8
	KC-11-531	SL-113D	376	64.3	1	3.2	794	191	51.9
	KC-11-532	SL-115D	364	48.6	1	3.0	263	165	45.0
	KC-11-533	SL-119D	581	89.0	2	3.8	437	251	47.0
	KC-11-534	SL-120D	467	72.1	2	2.6	593	209	46.5
	KC-11-535	SL-120D	442	70.6	2	2.7	610	225	44.3
	KC-11-536	SL-120D	512	75.7	3	2.5	337	284	56.2
	KC-11-537	SL-128D	503	96.7	2	2.2	255	523	73.0
	KC-11-538	SL-128D	508	110.0	3	1.9	671	574	85.9
	KC-11-539	SL-129D	275	82.0	2	2.7	1760	295	56.4
	KC-11-540	SL-129D	670	194.0	4	1.5	767	747	94.6
	KC-11-541	SL-161D	527	390.0	9	1.9	649	1050	163.0
	KC-11-542	SL-228D	558	90.8	2	1.9	229	383	54.4
	KC-11-543	SL-228D	628	87.1	3	2.1	306	307	66.7
	KC-11-544	SL-228D	432	72.8	3	2.2	387	359	63.6
	KC-11-545	SL-229D	574	312.0	5	2.4	446	307	86.0
	KC-11-546	SL-229D	497	129.0	4	2.8	391	436	74.5
	KC-11-547	SL-231D	507	162.0	3	1.7	280	260	57.3
	KC-11-548	SL-231D	644	82.8	1	1.6	229	132	41.3
	KC-11-549	SL-231D	682	73.4	2	1.8	317	157	55.4

Appendix 2 - Outcrop

	Sample	NTS_Map	UTMEast	UTMNorth	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc
Unit					%	%	%	%	%	%	%	%	%	%	%	%	ppm
Detection					0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	1
Method					FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP		FUS-ICP	FUS-ICP
	AK-10-102A	24A/08	430306	6241712	66.88	4.81	5.16	0.200	0.86	4.94	3.71	1.16	0.804	0.15	2.75	91.43	1
	AK-10-103A	24A/08	430303	6241689	68.60	4.40	4.61	0.218	0.93	6.90	0.99	3.31	0.974	0.18	3.15	94.26	-1
	AK-10-103B	24A/08	430303	6241689	56.27	4.32	4.27	0.349	2.13	10.43	1.77	3.44	0.726	0.09	4.67	88.46	3
	AK-10-104A	24A/08	430309	6241670	67.16	6.92	4.49	0.271	0.89	4.29	2.78	3.28	1.373	0.15	2.24	93.83	1
	AK-10-104B	24A/08	430309	6241670	65.20	3.83	5.70	0.320	1.21	4.72	2.57	2.20	0.916	0.12	3.75	90.54	3

Appendix 2 - Outcrop

	Sample	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As	Rb	Sr	Y	Zr	Nb	Mo
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection		1	5	20	1	20	10	30	1	1	5	2	2	2	4	1	2
Method		FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS
	AK-10-102A	822	-5	-20	-1	-20	-10	960	48	6	13	214	509	11630	19340	10800	-2
	AK-10-103A	169	8	-20	-1	-20	-10	1000	30	4	27	764	479	5940	29790	1570	-2
	AK-10-103B	4162	10	-20	-1	-20	180	2660	35	6	37	568	606	16830	18310	9650	-2
	AK-10-104A	538	-5	-20	-1	-20	30	1460	45	4	28	622	202	5572	29510	2760	-2
	AK-10-104B	1174	19	-20	-1	-20	-10	2270	41	8	21	470	481	18530	14070	11100	-2

Appendix 2 - Outcrop

	Sample	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection		0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1
Method		FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
	AK-10-102A	0.4	704	3.1	0.9	237	-0.4	1770	4450	410	1400	465	33.2	661	202.0	1650	413
	AK-10-103A	0.4	778	2.3	2.5	152	-0.4	1270	2480	220	712	211	11.7	255	81.3	749	210
	AK-10-103B	0.4	724	10.9	2.4	254	-0.4	1640	4180	422	1640	747	57.9	1170	337.0	2560	581
	AK-10-104A	0.4	664	6.2	0.9	165	-0.4	809	2080	192	678	255	18.4	350	106.0	890	222
	AK-10-104B	0.3	606	5.5	1.7	476	-0.4	1910	4950	477	1710	697	55.7	1160	358.0	2890	676

Appendix 2 - Outcrop

	Sample	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection		0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Method		FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
	AK-10-102A	1340	204	1210	163	401	711	11	0.8	1460	1570	253
	AK-10-103A	781	136	935	141	648	149	5	2.0	556	418	143
	AK-10-103B	1670	228	1230	147	396	607	12	1.9	3900	7310	532
	AK-10-104A	759	128	865	130	721	247	5	1.5	442	1890	141
	AK-10-104B	2000	278	1540	183	320	777	17	1.6	1670	6690	417

Appendix 3 - Comparison

Sample	Y2O3 (IOC) (%)	Y (IOC) (ppm)	Y (ActLab) (ppm)	ZrO2 (IOC) (%)	Zr (IOC) (ppm)	Zr (ActLab) (ppm)	Nb2O5 (IOC) (%)	Nb (IOC) (ppm)	Nb (ActLab) (ppm)	Be (IOC) (ppm)	Be (ActLab) (ppm)
KC-10-100	0.29	2248	1779	3.47	25704	24360	0.15	1049	1080	184	219
KC-10-101	0.37	2868	2495	1.75	12963	14380	0.51	3566	2630	361	428
KC-10-102	0.37	2868	2334	2.77	20519	20430	0.22	1538	1450	384	440
KC-10-103	0.28	2171	1850	2.45	18148	16810	0.21	1469	1400	238	265
KC-10-104	0.30	2326	1942	2.29	16963	15680	0.24	1678	1200	208	264
KC-10-105	0.33	2558	1898	5.29	39185	16270	0.22	1538	1200	204	235
KC-10-106	0.27	2093	1762	2.31	17111	15300	0.21	1469	1100	184	224
KC-10-110	0.14	1085	1046	1.22	9037	9534	0.08	559	639		129
KC-10-111	0.20	1550	1252	1.23	9111	8818	0.13	909	693		152
KC-10-112	0.62	4806	4129	3.94	29185	29870	0.53	3706	2870	435	528
KC-10-113	0.27	2093	1745	3.17	23481	19320	0.33	2308	2110	174	220
KC-10-115	0.45	3488	2846	2.89	21407	21620	0.25	1748	1290	415	501
KC-10-116	0.41	3178	2717	2.58	19111	19110	0.26	1818	1520	420	526
KC-10-117	0.30	2326	1796	3.01	22296	19410	0.22	1538	1200	218	249
KC-10-118	0.32	2481	2046	2.88	21333	19330	0.23	1608	1280	264	319
KC-10-119	0.24	1860	1388	2.68	19852	17440	0.23	1608	1220	208	217
KC-10-120	0.28	2171	1667	2.70	20000	17530	0.23	1608	1210	152	160
KC-10-123	0.42	3256	2104	3.75	27778	33210	0.30	2098	2120	235	266
KC-10-124	0.41	3178	2790	3.57	26444	33160	0.47	3287	2960	274	286
KC-10-125	0.26	2016	1756	1.82	13481	14820	0.25	1748	961	163	167
KC-10-126	0.30	2326	2031	2.51	18593	18000	0.24	1678	1330	224	283
KC-10-127	0.21	1628	1249	2.49	18444	16400	0.19	1329	1080	227	247
KC-10-128	0.27	2093	1728	2.27	16815	16820	0.23	1608	1150	230	249
KC-10-129	0.28	2171	1871	2.16	16000	14960	0.29	2028	1260	273	297
KC-10-130	0.28	2171	1879	3.14	23259	23560	0.16	1119	1040	219	235
KC-10-131	0.45	3488	2982	2.20	16296	16660	0.33	2308	1250	425	478
KC-10-132	0.30	2326	1793	2.92	21630	19160	0.13	909	811	247	274
KC-10-133	0.27	2093	1970	3.81	28222	29270	0.14	979	981	204	214
KC-10-134	0.29	2248	1797	2.95	21852	19540	0.26	1818	1360	133	160
KC-10-136	0.67	5194	4797	2.68	19852	23660	0.59	4126	2850	1110	1014
KC-10-137	0.07	543	1114	1.10	8148	8155	0.05	350	731		122
KC-10-138	0.18	1395	1287	1.73	12815	11550	0.13	909	858		175
KC-10-139	0.40	3101	2660	3.50	25926	29320	0.44	3077	2550	166	193
KC-10-140	0.18	1395	1185	1.83	13556	12850	0.10	699	842		146
KC-10-141	0.25	1938	1686	2.43	18000	17000	0.24	1678	1230	232	287
KC-10-142	0.22	1705	1160	2.19	16222	13350	0.11	769	821	176	191
KC-10-143	0.38	2946	2444	2.94	21778	25070	0.23	1608	1480	440	513
KC-10-145	0.17	1318	1157	1.45	10741	10400	0.15	1049	884		161
KC-10-146	0.19	1473	1226	1.67	12370	10910	0.10	699	765		165
KC-10-147	0.19	1473	1304	1.21	8963	9194	0.11	769	837		155
KC-10-148	0.27	2093	1563	2.58	19111	16560	0.20	1399	1240	196	192
KC-10-149	1.04	8062	6477	2.97	22000	25670	0.70	4895	3420	1028	1121
KC-10-150	0.19	1473	1176	1.84	13630	11830	0.17	1189	1240	178	185
KC-10-151	0.25	1938	1474	1.64	12148	10140	0.16	1119	1100	156	180
KC-10-152	0.24	1860	1443	1.90	14074	12110	0.15	1049	945	206	217
KC-10-155	0.32	2481	2121	3.31	24519	22670	0.39	2727	2700	181	216
KC-10-156	0.28	2171	1926	2.94	21778	20990	0.79	5524	4560	274	337
KC-10-157	0.43	3333	2893	2.68	19852	17870	0.22	1538	1170	248	303
KC-10-158	0.23	1783	1191	2.22	16444	13400	0.14	979	1000	170	163
KC-10-159	0.20	1550	1121	2.33	17259	14420	0.08	559	822	142	148
KC-10-161	0.21	1628	1185	3.87	28667	13050	0.12	839	841	112	116
KC-10-162	0.25	1938	1297	2.43	18000	25920	0.19	1329	920	232	242
KC-10-164	0.25	1938	1707	2.49	18444	17050	0.22	1538	1280	243	138
KC-10-166	0.14	1085	1064	1.59	11778	11320	0.06	420	632		115
KC-10-167	0.11	853	1026	2.16	16000	13510	0.05	350	870	102	127
KC-10-168	0.16	1240	1244	1.96	14519	13660	0.21	1469	1340	116	351
KC-10-169	0.48	3721	2869	3.31	24519	25620	0.48	3357	3230	302	295
KC-10-170	0.54	4186	3467	2.64	19556	23800	0.45	3147	3210	258	283
KC-10-171	0.25	1938	1739	3.99	29556	31650	0.14	979	1220	233	145
KC-10-173	0.27	2093	1749	3.11	23037	21100	0.32	2238	2080	126	201
KC-10-174	0.23	1783	1490	2.25	16667	16730	0.13	909	943	174	189
KC-10-175	0.23	1783	1582	2.07	15333	15410	0.12	839	858	157	212
KC-10-176	0.27	2093	1788	3.56	26370	27020	0.30	2098	2010	212	199
KC-10-177	0.35	2713	2305	2.81	20815	25840	0.67	4685	3860	232	190
KC-10-178	0.21	1628	1325	2.21	16370	17130	0.95	6643	5490	159	194
KC-10-179	0.26	2016	1661	3.33	24667	24330	0.16	1119	938	163	172
KC-10-180	0.21	1628	1416	2.23	16519	15560	0.40	2797	2330	158	147
KC-10-181	0.25	1938	1255	2.00	14815	13340	0.23	1608	1360	149	199
KC-10-183	0.24	1860	1425	4.41	32667	35060	0.15	1049	1310	167	172
KC-10-184	0.29	2248	1706	2.87	21259	18690	0.18	1259	1140	146	106
KC-10-185	0.15	1163	870	1.51	11185	9367	0.16	1119	885	113	157
KC-10-186	0.31	2403	2123	2.01	14889	14880	0.24	1678	1380	138	105

Appendix 3 - Comparison

Sample	Y2O3 (IOC) (%)	Y (IOC) (ppm)	Y (ActLab) (ppm)	ZrO2 (IOC) (%)	Zr (IOC) (ppm)	Zr (ActLab) (ppm)	Nb2O5 (IOC) (%)	Nb (IOC) (ppm)	Nb (ActLab) (ppm)	Be (IOC) (ppm)	Be (ActLab) (ppm)
KC-10-187	0.12	930	972	1.08	8000	8288	0.03	175	767		130
KC-10-188	0.09	698	1136	1.05	7778	8918	0.03	175	787		122
KC-10-191	0.18	1395	1141	1.41	10444	9395	0.13	909	861	94	115
KC-10-192	0.15	1163	1668	0.98	7259	24220	0.11	769	1310		147
KC-10-193	0.27	2093	1817	1.77	13111	12450	0.16	1119	957	291	322
KC-10-194	0.30	2326	2095	3.85	28519	31360	0.20	1399	889	354	406
KC-10-195	0.28	2171	1664	3.06	22667	21270	0.16	1119	905	450	515
KC-10-196	0.33	2558	1639	2.79	20667	16520	0.21	1469	1160	298	302
KC-10-197	0.31	2403	1938	3.64	26963	23000	0.24	1678	1670	145	173
KC-10-198	0.31	2403	1958	3.10	22963	19260	0.23	1608	1500	257	292
KC-11-500	0.39	3071	2271	1.82	13432	12310	0.38	2657	2230	275	288
KC-11-501	0.42	3307	2706	3.36	24797	23840	0.28	1958	2090	153	164
KC-11-502	0.47	3701	3094	3.83	28266	28860	0.65	4545	2800	330	339
KC-11-503	0.29	2283	2248	3.13	23100	19280	0.30	2098	1620	175	239
KC-11-504	0.33	2598	2301	2.88	21255	18350	0.25	1748	1520	215	249
KC-11-505	0.29	2283	1717	2.63	19410	17100	0.22	1538	1420	204	235
KC-11-506	0.24	1890	1371	2.62	19336	16760	0.18	1259	1160	195	225
KC-11-508	0.55	4331	3866	4.23	31218	33300	0.64	4476	4210	231	234
KC-11-509	0.56	4409	5225	3.65	26937	31060	0.54	3776	3820	476	433
KC-11-510	0.47	3701	3316	3.50	25830	27000	0.59	4126	3450	432	367
KC-11-511	0.54	4252	3416	2.68	19779	18350	0.30	2098	1780	266	292
KC-11-512	0.22	1732	1288	1.71	12620	10660	0.19	1329	1040	153	177
KC-11-513	0.33	2598	1567	1.91	14096	12170	0.25	1748	1470	141	145
KC-11-514	0.48	3780	2662	3.02	22288	19700	0.38	2657	2070	159	204
KC-11-515	0.28	2205	1485	3.64	26863	21520	0.48	3357	2620	146	144
KC-11-516	0.39	3071	2360	2.68	19779	17830	0.23	1608	1410	165	168
KC-11-517	0.32	2520	1382	3.49	25756	22610	0.19	1329	1370	133	145
KC-11-518	0.18	1417	1085	1.50	11070	9357	0.10	699	659		158
KC-11-519	0.17	1339	1096	2.27	16753	15390	0.10	699	560		137
KC-11-520	0.22	1732	1386	1.34	9889	8656	0.52	3636	2560		182
KC-11-521	1.22	9606	8202	2.37	17491	17880	0.21	1469	1530		3099
KC-11-522	0.14	1102	737	2.80	20664	5436	0.40	2797	575	175	79
KC-11-523	0.16	1260	1099	0.81	5978	8021	0.12	839	749	69	127
KC-11-524	0.20	1575	1352	2.95	21771	19100	0.14	979	959	137	151
KC-11-525	0.28	2205	1946	3.74	27601	26670	0.13	909	1320		283
KC-11-526	0.46	3622	2821	5.36	39557	37510	0.12	839	1270		521
KC-11-527	0.20	1575	1016	1.50	11070	8866	0.15	1049	912		158
KC-11-528	0.14	1102	948	2.89	21328	16850	0.07	490	627		103
KC-11-529	0.12	945	602	0.66	4871	4674	0.08	559	484		32
KC-11-530	0.12	945	649	0.66	4871	4832	0.08	559	487		37
KC-11-531	0.22	1732	1185	2.18	16089	12690	0.14	979	915	120	134
KC-11-532	0.17	1339	1023	2.05	15129	12340	0.10	699	707		134
KC-11-533	0.28	2205	1357	3.58	26421	20540	0.21	1469	1300	126	149
KC-11-534	0.27	2126	1547	2.25	16605	16450	0.27	1888	1160	240	208
KC-11-535	0.27	2126	1491	2.25	16605	15470	0.27	1888	1150	240	201
KC-11-536	0.22	1732	1619	1.63	12030	18110	0.15	1049	1190	160	170
KC-11-537	0.37	2913	2071	2.94	21697	17980	0.24	1678	1590	214	260
KC-11-538	0.47	3701	2673	2.62	19336	17370	0.29	2028	1690	273	297
KC-11-539	0.25	1969	1485	1.54	11365	9980	0.20	1399	1280	307	370
KC-11-540	0.40	3150	2658	3.33	24576	24030	0.45	3147	2770	465	432
KC-11-541	0.93	7323	6224	2.89	21328	21930	1.10	7692	6130	700	647
KC-11-542	0.31	2441	1926	2.82	20812	19170	0.22	1538	1440	221	260
KC-11-543	0.31	2441	1753	3.25	23985	23070	0.22	1538	1250	301	337
KC-11-544	0.36	2835	2043	2.54	18745	16860	0.17	1189	1020	150	176
KC-11-545	0.37	2913	2602	3.35	24723	25620	0.63	4406	4330	212	205
KC-11-546	0.35	2756	2358	2.68	19779	18490	0.31	2168	1790	238	291
KC-11-547	0.29	2283	1781	2.96	21845	20380	0.36	2517	2390	252	241
KC-11-548	0.22	1732	1376	3.41	25166	24340	0.16	1119	1130	171	182
KC-11-549	0.21	1654	1441	3.50	25830	23990	0.13	909	1150	186	200

Appendix 4 - Drill Hole Locations

ICO_DDH	NTS_Map	UTMEast	UTMNorth
SL-072D	24A/08	429333	6240738
SL-076D	24A/08	430580	6241454
SL-081D	24A/08	430391	6241204
SL-082D	24A/08	430393	6241101
SL-094D	24A/08	429463	6240809
SL-095D	24A/08	430302	6240938
SL-096D	24A/08	430196	6240941
SL-099D	24A/08	430135	6240943
SL-100D	24A/08	429949	6240827
SL-104D	24A/08	429904	6240881
SL-106D	24A/08	430085	6240946
SL-109D	24A/08	430003	6240871
SL-111D	24A/08	429904	6240832
SL-115D	24A/08	430137	6240852
SL-119D	24A/08	430196	6240969
SL-120D	24A/08	430799	6241517
SL-128D	24A/08	429995	6241131
SL-129D	24A/08	429384	6240738
SL-168D	24A/08	430107	6241321
SL-169D	24A/08	430699	6241341
SL-174D	24A/08	430212	6241252
SL-176D	24A/08	430310	6241255
SL-177D	24A/08	430573	6241313
SL-179D	24A/08	430572	6241209
SL-181D	24A/08	430801	6241467
SL-182D	24A/08	430788	6241354
SL-187D	24A/08	429951	6241040
SL-189D	24A/08	430000	6241202
SL-192D	24A/08	431000	6241351
SL-197D	24A/08	429495	6240933
SL-228D	24A/08	430280	6240998
SL-229D	24A/08	430303	6240968
SL-231D	24A/08	430354	6240931
SL-248D	24A/08	430792	6241647
SL-253D	24A/08	430443	6241540
SL-256D	24A/08	430698	6241291
SL-257D	24A/08	430939	6241295

Quality Analysis ... *Innovative Technologies*

Date Submitted: 20-Sep-10
Invoice No.: A10-6078
Invoice Date: 21-Oct-10
Your Reference:

Government of Newfoundland
Dept of Mines and Energy
Howley Building, Higgins Line
St. Johns NF A1B 4J6
Canada

ATTN: Seinor Geologist Andrew Kerr

CERTIFICATE OF ANALYSIS

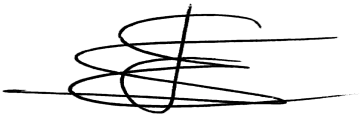
111 Crushed Rock samples were submitted for analysis.

The following analytical package was requested: Code 8-REE-Rare Earth Element Pkg Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)

REPORT **A10-6078**

Notes:
Total includes all elements in % oxide to the left of total.

CERTIFIED BY :



Emmanuel Eseme , Ph.D.
Quality Control

ISO/IEC 17025
SCC Accredited
LAB 266
LAB 266
Accrédité CCN

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Analyte Symbol	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5	2
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
KC-10-100	69.94	7.63	5.92	0.178	0.87	1.73	2.23	4.41	0.452	0.06	2.25	95.67	< 1	219	6	< 20	< 1	< 20	< 10	1240	57	6	60	1050
KC-10-101	68.92	8.71	5.74	0.174	1.10	1.65	2.89	4.20	0.315	0.04	2.30	96.04	< 1	428	6	< 20	< 1	< 20	< 10	1450	69	6	50	927
KC-10-102	69.09	9.14	4.60	0.141	0.85	1.71	1.92	5.32	0.485	0.03	2.11	95.38	< 1	440	8	< 20	< 1	< 20	30	1270	65	5	81	1210
KC-10-103	70.86	8.53	5.45	0.156	0.65	1.55	2.52	4.51	0.445	0.05	1.83	96.54	< 1	265	12	< 20	< 1	< 20	20	1190	62	6	58	1030
KC-10-104	69.27	8.51	5.65	0.146	0.86	1.73	2.93	4.05	0.397	0.03	2.19	95.76	< 1	264	7	< 20	< 1	< 20	10	1410	61	6	64	1000
KC-10-105	70.50	8.56	5.26	0.135	0.83	1.03	3.21	4.67	0.348	0.04	1.72	96.31	< 1	235	< 5	< 20	< 1	< 20	< 10	1890	62	6	42	1270
KC-10-106	72.05	8.53	5.51	0.143	0.35	0.99	3.58	4.15	0.370	0.03	1.04	96.75	< 1	224	11	< 20	< 1	< 20	30	1280	62	6	22	1100
KC-10-107	69.96	7.45	6.04	0.179	0.88	1.74	2.08	4.18	0.424	0.06	2.24	95.22	< 1	209	< 5	< 20	< 1	< 20	< 10	1270	56	6	68	1030
KC-10-108	68.26	9.01	4.73	0.137	0.87	1.70	1.92	5.20	0.480	0.07	2.08	94.45	< 1	439	6	< 20	< 1	< 20	30	1300	67	5	80	1210
KC-10-109	70.99	8.51	5.39	0.156	0.64	1.62	2.50	4.51	0.477	0.04	1.84	96.66	< 1	264	5	< 20	< 1	< 20	20	1200	64	6	50	1080
KC-10-110	70.76	10.04	5.43	0.143	0.08	0.84	4.76	4.54	0.299	0.03	0.87	97.79	< 1	129	< 5	< 20	< 1	< 20	< 10	1000	54	5	17	774
KC-10-111	69.02	9.85	5.38	0.139	0.13	0.85	4.76	4.35	0.301	0.02	1.00	95.80	< 1	152	< 5	< 20	< 1	< 20	< 10	990	54	5	34	737
KC-10-112	69.26	6.15	5.02	0.126	0.34	2.09	3.02	3.90	1.396	0.08	2.03	93.41	< 1	528	< 5	< 20	< 1	< 20	10	1210	52	6	41	1220
KC-10-113	72.39	8.18	4.22	0.144	0.19	0.98	3.64	4.33	0.466	0.05	1.60	96.19	< 1	220	6	< 20	< 1	< 20	< 10	1020	55	4	71	1080
KC-10-114	70.57	9.87	5.59	0.144	0.08	0.86	4.71	4.50	0.312	0.03	0.75	97.43	< 1	135	< 5	< 20	< 1	< 20	< 10	970	53	5	21	755
KC-10-115	68.03	9.04	3.79	0.062	0.42	2.43	0.56	6.50	0.509	0.09	2.86	94.28	< 1	501	< 5	< 20	< 1	< 20	100	710	65	5	25	1350
KC-10-116	71.69	8.18	4.49	0.175	0.52	1.53	2.98	4.11	0.403	0.03	1.75	95.87	< 1	526	< 5	< 20	< 1	< 20	60	1750	65	6	28	1070
KC-10-117	71.42	8.45	4.33	0.126	0.25	1.07	3.45	4.30	0.392	0.03	1.43	95.24	< 1	249	< 5	< 20	< 1	< 20	< 10	1190	59	5	15	1210
KC-10-118	71.10	8.13	4.76	0.148	0.40	1.13	3.36	4.20	0.357	0.05	1.46	95.10	< 1	319	< 5	< 20	< 1	< 20	10	1640	59	6	28	1180
KC-10-119	70.01	9.01	4.38	0.141	0.25	1.16	3.68	4.30	0.380	0.03	1.31	94.64	< 1	217	9	< 20	< 1	< 20	10	1080	62	5	39	1200
KC-10-120	70.81	9.14	4.32	0.157	0.11	0.64	4.19	4.59	0.348	0.08	1.46	95.85	< 1	160	6	< 20	< 1	< 20	< 10	1220	62	4	37	1090
KC-10-121	70.57	8.47	4.29	0.127	0.24	1.07	3.51	4.34	0.396	0.03	1.36	94.40	< 1	255	< 5	< 20	< 1	< 20	10	1230	59	5	16	1240
KC-10-122	71.19	9.25	4.37	0.143	0.25	1.16	3.77	4.40	0.378	0.05	1.27	96.24	< 1	224	< 5	< 20	< 1	< 20	20	1090	62	5	39	1190
KC-10-123	68.78	5.50	5.93	0.166	0.44	4.43	1.78	4.28	1.228	< 0.01	1.63	94.18	< 1	266	< 5	< 20	< 1	< 20	20	1580	41	6	16	870
KC-10-124	66.57	5.49	4.64	0.175	0.49	6.18	1.21	4.67	1.233	0.05	2.29	92.98	< 1	286	< 5	< 20	< 1	< 20	20	1690	46	5	34	941
KC-10-125	70.15	8.83	5.58	0.148	0.37	1.62	3.68	4.11	0.385	0.05	0.74	95.66	< 1	167	< 5	< 20	< 1	< 20	20	1290	58	5	43	827
KC-10-126	70.92	8.27	4.99	0.158	0.51	1.59	2.17	5.14	0.394	0.02	1.52	95.69	< 1	283	6	< 20	< 1	< 20	< 10	1120	60	6	48	1200
KC-10-127	70.23	8.77	4.72	0.138	0.44	1.17	2.46	4.73	0.398	0.04	1.97	95.07	< 1	247	12	< 20	< 1	< 20	< 10	1120	61	5	39	1070
KC-10-128	70.08	8.67	5.36	0.174	0.62	1.84	3.37	4.25	0.409	0.02	1.31	96.09	< 1	249	8	< 20	< 1	< 20	< 10	1260	62	6	29	1020
KC-10-129	70.62	7.32	5.84	0.166	1.07	1.56	3.03	3.71	0.311	0.05	1.74	95.41	< 1	297	6	< 20	< 1	< 20	30	1650	58	6	46	957
KC-10-130	65.16	7.25	5.04	0.179	1.73	4.63	2.67	3.70	0.398	0.05	3.13	93.94	< 1	235	6	< 20	< 1	< 20	10	2570	55	5	49	1080
KC-10-131	66.36	8.44	3.40	0.193	1.46	4.00	2.50	4.36	0.396	0.03	3.36	94.48	< 1	478	< 5	< 20	< 1	< 20	30	2080	92	11	81	1230
KC-10-132	72.50	8.37	4.97	0.135	0.21	0.81	3.92	3.83	0.376	0.03	1.31	96.47	< 1	274	< 5	< 20	< 1	< 20	10	1240	59	5	22	1140
KC-10-133	70.03	5.89	7.54	0.220	0.26	1.41	3.48	3.58	0.543	0.04	1.43	94.42	< 1	214	< 5	< 20	< 1	< 20	< 10	1600	49	7	31	978
KC-10-134	70.57	7.98	5.01	0.154	0.33	1.11	3.56	4.18	0.586	0.04	1.50	95.01	< 1	160	< 5	< 20	< 1	< 20	20	1620	55	5	28	1210
KC-10-135	70.61	8.86	4.81	0.139	0.44	1.17	2.48	4.72	0.397	0.03	2.03	95.69	< 1	251	6	< 20	< 1	< 20	10	1160	62	5	39	1090
KC-10-136	66.23	4.96	5.77	0.177	1.12	5.67	1.44	3.67	0.800	0.03	3.47	93.35	< 1	1014	5	< 20	< 1	< 20	10	850	43	7	139	846
KC-10-137	69.98	10.27	5.44	0.145	0.12	0.88	5.14	4.28	0.265	0.03	0.99	97.52	< 1	122	< 5	< 20	< 1	< 20	< 10	1000	56	5	18	725
KC-10-138	70.76	10.00	4.99	0.138	0.27	0.77	4.50	4.33	0.337	0.03	0.91	97.04	< 1	175	< 5	< 20	< 1	< 20	< 10	1090	57	5	23	808
KC-10-139	66.24	6.57	5.20	0.194	0.20	2.83	3.70	4.68	0.778	0.06	2.70	93.14	< 1	193	< 5	< 20	< 1	< 20	< 10	1780	52	7	71	1510
KC-10-140	71.46	8.91	5.66	0.135	0.41	1.42	3.73	4.19	0.285	0.03	0.93	97.15	< 1	146	< 5	< 20	< 1	< 20	30	1080	61	5	33	907
KC-10-141	71.70	8.28	5.49	0.170	0.27	1.26	3.54	4.02	0.353	0.02	1.15	96.26	< 1	287	< 5	< 20	< 1	< 20	20	1480	61	6	39	1090
KC-10-142	70.93	9.97	4.29	0.120	0.25	0.53	4.26	4.46	0.239	0.03	1.04	96.11	< 1	191	7	< 20	< 1	< 20	10	960	66	4	44	1100
KC-10-143	70.57	7.66	4.19	0.091	0.31	3.99	0.45	5.05	0.419	0.05	2.99	95.77	< 1	513	< 5	< 20	< 1	< 20	90	1180	51	4	24	1090
KC-10-144	70.10	7.50	4.09	0.088	0.31	4.00	0.47	5.03	0.415	0.03	3.14	95.17	< 1	507	6	< 20	< 1	< 20	90	1190	51	5	26	1110
KC-10-145	69.06	9.44	5.80	0.137	0.24	1.30	4.13	4.80	0.358	0.04	1.32	96.62	< 1	161	< 5	< 20	< 1	< 20	10	1170	54	5	38	955
KC-10-146	70.75	9.72	6.00	0.148	0.09	0.97	4.80	4.33	0.318	0.04	0.99	98.14	< 1	165	10	< 20	< 1	< 20	< 10	1090	57	5	25	826
KC-10-147	68.42	8.76	7.01	0.185	0.09	0.99	4.52	4.34	0.341	0.05	1.04	95.75	< 1	155	< 5	< 20	< 1	< 20	10	1250	56	6	36	845
KC-10-148	70.66	9.93	4.22	0.099	0.69	0.73	3.60	4.84	0.393	0.04	1.67	96.89	< 1	192	< 5	< 20	< 1	< 20	< 10	1090	65	4	51	1320
KC-10-149	68.72	6.41	3.75	0.119	0.18	2.27	2.24	5.78	1.096	0.24	2.26	93.07	2	1121	< 5	< 20	< 1	< 20	40	990	64	8	110	1450
KC-10-150	69.80	9.25	5.48	0.151	0.09	1.08	4.89	4.50	0.457	0.02	1.22	96.93	< 1	185	6	< 20	< 1	< 20	10	1330	54	5	36	817
KC-10-151	69.12	9.14	5.70	0.144	0.10	0.96	4.51	4.26	0.343	0.03	1.12	95.42	< 1	180	< 5	< 20	< 1	< 20	< 10	1210	55	5	23	833

Analyte Symbol	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5	2
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
KC-10-152	71.24	9.20	5.43	0.136	0.11	1.03	4.13	4.47	0.376	0.02	1.40	97.56	< 1	217	10	< 20	< 1	< 20	< 10	1150	53	5	24	920
KC-10-153	69.17	9.32	5.87	0.147	0.09	0.96	4.73	4.44	0.299	0.03	0.94	95.99	< 1	166	8	< 20	< 1	< 20	< 10	1130	56	5	30	839
KC-10-154	69.95	9.12	5.19	0.131	0.09	0.93	4.35	4.26	0.367	0.03	1.20	95.60	< 1	161	< 5	< 20	< 1	< 20	10	1130	54	4	25	833
KC-10-155	70.54	8.23	5.14	0.131	0.44	2.48	2.42	4.53	0.465	0.06	1.76	96.19	< 1	216	< 5	< 20	< 1	< 20	20	710	58	5	42	1200
KC-10-156	69.21	8.64	3.96	0.125	0.88	2.74	3.16	3.40	1.088	0.02	1.76	94.99	< 1	337	< 5	< 20	< 1	< 20	10	970	70	5	50	787
KC-10-157	69.01	9.06	4.82	0.163	0.47	1.87	2.89	4.60	0.438	0.05	1.29	94.67	< 1	303	7	< 20	< 1	< 20	20	1000	64	5	67	1180
KC-10-158	71.34	10.31	4.25	0.103	0.38	0.58	4.01	4.46	0.281	0.02	1.40	97.12	< 1	163	6	< 20	< 1	< 20	< 10	1110	70	4	37	1260
KC-10-159	71.01	9.46	4.43	0.118	0.32	0.58	4.05	4.18	0.263	0.01	1.35	95.77	< 1	148	< 5	< 20	< 1	< 20	< 10	1100	65	4	38	1160
KC-10-160	70.76	9.74	4.30	0.120	0.25	0.51	4.54	4.73	0.238	0.02	1.22	96.42	< 1	198	9	< 20	< 1	< 20	20	1010	66	4	57	1120
KC-10-161	70.27	8.26	4.75	0.119	0.44	0.74	3.82	3.99	0.543	0.01	1.76	94.70	< 1	116	< 5	< 20	< 1	< 20	20	1230	58	4	46	1110
KC-10-162	71.64	8.24	5.74	0.156	0.16	1.25	3.42	4.06	0.368	0.03	0.90	95.96	< 1	242	14	< 20	< 1	< 20	< 10	1380	60	6	34	1140
KC-10-163	70.71	8.16	5.54	0.170	0.27	1.28	3.53	3.89	0.364	0.03	1.42	95.37	< 1	277	9	< 20	< 1	< 20	30	1570	61	6	39	1120
KC-10-164	71.67	8.06	5.82	0.156	0.16	1.18	3.43	3.97	0.324	0.02	1.01	95.81	< 1	259	11	< 20	< 1	< 20	< 10	1450	61	6	30	1150
KC-10-165	70.07	8.65	5.83	0.148	0.42	1.45	3.71	4.10	0.287	0.03	1.18	95.86	< 1	152	< 5	< 20	< 1	< 20	30	1290	63	5	36	958
KC-10-166	69.97	8.53	6.67	0.156	0.56	1.12	3.51	4.55	0.291	0.03	1.00	96.39	< 1	138	8	< 20	< 1	< 20	30	1450	60	5	41	1030
KC-10-167	71.11	8.91	5.51	0.135	0.40	1.51	3.79	3.98	0.317	0.03	0.97	96.65	< 1	115	< 5	< 20	< 1	< 20	20	1050	63	4	40	904
KC-10-168	69.76	8.79	6.00	0.162	0.63	1.55	4.02	3.50	0.305	0.03	1.33	96.08	< 1	127	< 5	< 20	2	< 20	30	1320	64	4	36	799
KC-10-169	68.02	5.89	5.42	0.086	0.92	3.92	1.50	4.73	0.940	< 0.01	2.42	93.85	< 1	351	9	< 20	< 1	< 20	10	2330	45	5	26	1240
KC-10-170	64.56	6.09	6.07	0.167	1.49	3.93	1.54	4.74	0.753	0.07	3.23	92.64	< 1	295	8	< 20	< 1	< 20	40	2070	53	6	30	1430
KC-10-171	66.85	6.13	5.51	0.147	0.99	3.64	1.98	4.36	0.785	0.03	2.39	92.82	< 1	283	< 5	< 20	< 1	< 20	40	2530	45	5	29	1060
KC-10-172	67.18	6.47	5.33	0.201	0.20	2.83	3.63	4.71	0.773	0.05	2.58	93.96	< 1	190	< 5	< 20	< 1	< 20	< 10	1940	52	7	61	1530
KC-10-173	71.03	7.88	4.98	0.157	0.25	0.72	4.78	3.43	0.541	0.04	1.70	95.52	< 1	145	10	< 20	< 1	< 20	< 10	1290	60	5	33	937
KC-10-174	71.41	8.20	4.97	0.151	0.46	2.47	3.26	4.14	0.324	0.03	1.22	96.63	< 1	201	< 5	< 20	< 1	< 20	10	1380	62	5	47	809
KC-10-175	71.31	8.20	5.80	0.153	0.24	1.91	3.51	3.88	0.284	0.03	0.83	96.16	< 1	189	7	< 20	< 1	< 20	20	1280	63	6	58	784
KC-10-176	69.10	7.56	4.61	0.186	0.56	3.76	3.10	3.18	0.784	0.05	1.73	94.63	< 1	212	< 5	< 20	< 1	< 20	< 10	1520	59	4	27	497
KC-10-177	65.42	7.28	4.65	0.151	0.87	5.26	1.82	4.98	0.974	0.02	2.39	93.82	< 1	199	< 5	< 20	< 1	< 20	30	1520	54	5	55	916
KC-10-178	70.74	8.91	3.86	0.103	0.52	1.88	2.91	4.81	0.699	0.03	1.18	95.64	< 1	190	< 5	< 20	< 1	< 20	< 10	880	62	4	32	1020
KC-10-179	71.65	7.86	4.89	0.155	0.50	2.64	2.58	4.50	0.553	0.03	1.18	96.54	< 1	194	< 5	< 20	< 1	< 20	< 10	1180	53	4	52	1010
KC-10-180	74.15	8.02	4.18	0.109	0.35	1.49	2.82	3.81	0.376	0.02	0.61	95.94	< 1	172	< 5	< 20	< 1	< 20	< 10	820	55	4	38	963
KC-10-181	73.94	9.34	3.67	0.120	0.26	1.37	3.62	3.82	0.271	0.05	0.66	97.12	< 1	147	8	< 20	< 1	< 20	< 10	950	64	3	37	857
KC-10-182	65.55	5.33	5.73	0.180	1.15	5.69	1.40	3.84	0.791	0.05	3.27	92.99	< 1	1412	< 5	< 20	< 1	< 20	10	920	42	6	85	891
KC-10-183	69.21	6.90	4.29	0.136	0.06	0.85	4.39	4.55	0.535	0.02	2.71	93.65	< 1	199	< 5	< 20	< 1	< 20	< 10	1080	48	4	76	1110
KC-10-184	73.07	7.48	4.24	0.123	0.08	1.25	3.36	4.14	0.471	0.02	1.28	95.51	< 1	172	8	< 20	< 1	< 20	< 10	1010	51	4	49	1130
KC-10-185	70.85	9.18	5.93	0.149	0.05	0.53	4.86	4.03	0.270	0.03	0.75	96.62	< 1	106	< 5	< 20	< 1	< 20	< 10	1130	64	4	40	937
KC-10-186	71.19	8.13	5.91	0.172	0.17	1.17	4.24	4.00	0.482	0.04	1.33	96.83	< 1	157	12	< 20	< 1	< 20	< 10	1330	62	6	30	1070
KC-10-187	69.98	10.04	5.61	0.145	0.08	1.18	4.54	4.40	0.341	0.03	0.59	96.95	< 1	105	< 5	< 20	< 1	< 20	10	960	52	4	29	727
KC-10-188	70.64	10.15	5.32	0.152	0.11	1.14	4.45	4.54	0.269	0.02	0.71	97.50	< 1	130	< 5	< 20	< 1	< 20	10	1030	52	4	16	777
KC-10-189	71.26	10.12	5.29	0.143	0.12	0.89	4.86	4.04	0.268	0.02	0.92	97.92	< 1	122	< 5	< 20	< 1	< 20	< 10	1040	54	4	15	725
KC-10-190	70.87	9.90	4.92	0.137	0.26	0.76	4.51	4.32	0.326	0.04	1.01	97.06	< 1	181	8	< 20	< 1	< 20	< 10	1200	57	5	20	840
KC-10-191	71.25	10.36	4.77	0.128	0.14	0.72	4.62	4.82	0.250	0.02	0.79	97.87	< 1	115	< 5	< 20	< 1	< 20	40	1010	58	4	22	905
KC-10-192	68.48	7.53	5.07	0.157	0.07	1.95	4.83	4.04	1.077	0.06	2.26	95.52	< 1	147	< 5	< 20	< 1	< 20	< 10	880	36	3	76	679
KC-10-193	70.96	9.66	5.48	0.140	0.25	1.34	3.93	4.25	0.380	0.02	1.21	97.61	< 1	322	8	< 20	< 1	< 20	10	970	40	3	26	821
KC-10-194	70.66	6.61	4.72	0.100	0.90	2.22	0.68	5.23	0.375	0.08	2.31	93.88	< 1	406	< 5	< 20	< 1	< 20	< 10	840	37	4	60	1100
KC-10-195	72.48	7.59	4.51	0.138	0.55	1.51	1.71	4.94	0.489	0.03	2.58	96.52	< 1	515	9	< 20	< 1	< 20	< 10	1420	43	3	22	1010
KC-10-196	73.30	8.31	4.35	0.099	0.29	0.82	3.25	4.18	0.351	0.02	1.50	96.47	< 1	302	< 5	< 20	< 1	< 20	20	1080	58	5	29	1080
KC-10-197	69.86	8.87	4.63	0.151	0.48	2.14	3.04	4.70	0.405	0.07	1.22	95.57	< 1	173	< 5	< 20	< 1	< 20	< 10	1070	63	5	41	1150
KC-10-198	72.57	8.18	4.68	0.135	0.29	1.22	3.39	4.32	0.395	0.05	1.40	96.64	< 1	292	< 5	< 20	< 1	< 20	< 10	1330	58	6	40	1100
AK-10-102A	66.88	4.81	5.16	0.200	0.86	4.94	3.71	1.16	0.804	0.15	2.75	91.43	1	822	< 5	< 20	< 1	< 20	< 10	960	48	6	13	214
AK-10-103A	68.60	4.40	4.61	0.218	0.93	6.90	0.99	3.31	0.974	0.18	3.15	94.26	< 1	169	8	< 20	< 1	< 20	< 10	1000	30	4	27	764
AK-10-103B	56.27	4.32	4.27	0.349	2.13	10.43	1.77	3.44	0.726	0.09	4.67	88.46	3	4162	10	< 20	< 1	< 20	180	2660	35	6	37	568
AK-10-104A	67.16	6.92	4.49	0.271	0.89	4.29	2.78	3.28	1.373	0.15	2.24	93.83	1	538	< 5	< 20	< 1	< 20	30	1460	45	4	28	622
AK-10-104B	65.20	3.83	5.70	0.320	1.21	4.72	2.57	2.20	0.916	0.12	3.75	90.54	3	1174	19	< 20	< 1	< 20	< 10	2270	41	8	21	470

Analyte Symbol	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5	2
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
AK-10-105	67.32	7.95	3.99	0.228	0.78	3.67	2.89	4.18	0.944	0.10	2.15	94.21	< 1	507	< 5	< 20	< 1	< 20	20	1160	49	4	18	847
~~AK-10-156~~	~~64.23~~	~~16.60~~	~~1.18~~	~~0.143~~	~~0.02~~	~~0.70~~	~~10.02~~	~~0.12~~	~~0.411~~	~~0.43~~	~~0.50~~	~~94.35~~	~~4~~	~~2488~~	~~5~~	~~< 20~~	~~< 1~~	~~< 20~~	~~< 10~~	~~1650~~	~~168~~	~~3~~	~~7~~	~~6~~
~~AK-10-163~~	~~59.68~~	~~11.86~~	~~9.22~~	~~0.682~~	~~0.25~~	~~1.85~~	~~7.77~~	~~2.80~~	~~0.555~~	~~0.07~~	~~0.52~~	~~95.25~~	~~1~~	~~382~~	~~< 5~~	~~< 20~~	~~< 1~~	~~< 20~~	~~< 10~~	~~3880~~	~~92~~	~~6~~	~~10~~	~~193~~
~~AK-10-164~~	~~59.62~~	~~12.86~~	~~8.15~~	~~1.263~~	~~0.04~~	~~0.41~~	~~8.27~~	~~2.77~~	~~0.086~~	~~0.79~~	~~0.57~~	~~94.83~~	~~6~~	~~125~~	~~< 5~~	~~< 20~~	~~< 1~~	~~< 20~~	~~< 10~~	~~1890~~	~~183~~	~~11~~	~~24~~	~~295~~
~~AK-10-080~~	~~82.55~~	~~1.39~~	~~8.89~~	~~0.165~~	~~0.57~~	~~1.73~~	~~0.46~~	~~0.14~~	~~1.601~~	~~0.11~~	~~0.58~~	~~98.18~~	~~9~~	~~4~~	~~35~~	~~< 20~~	~~3~~	~~< 20~~	~~< 10~~	~~140~~	~~9~~	~~3~~	~~< 5~~	~~5~~
~~AK-10-086B~~	~~69.53~~	~~3.98~~	~~9.86~~	~~0.293~~	~~1.43~~	~~3.54~~	~~0.51~~	~~0.62~~	~~0.988~~	~~0.27~~	~~1.39~~	~~92.42~~	~~24~~	~~16~~	~~168~~	~~< 20~~	~~13~~	~~< 20~~	~~270~~	~~370~~	~~44~~	~~9~~	~~16~~	~~23~~
~~AK-10-087B~~	~~75.33~~	~~3.37~~	~~7.76~~	~~0.154~~	~~0.41~~	~~2.22~~	~~0.76~~	~~0.56~~	~~1.206~~	~~0.23~~	~~0.72~~	~~92.72~~	~~7~~	~~3~~	~~67~~	~~< 20~~	~~6~~	~~< 20~~	~~10~~	~~180~~	~~28~~	~~5~~	~~6~~	~~20~~

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.05
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
KC-10-100	75	1779	24360	1080	< 2		0.3	427	2.4	1.2	88	1.5	709	1640	174	669	153	8.74	142	32.1	259	64.1	230	40.0
KC-10-101	101	2495	14380	2630	< 2		0.2	313	2.6	2.4	69	2.5	814	2010	214	810	202	13.5	213	47.5	357	82.8	262	37.3
KC-10-102	80	2334	20430	1450	< 2		0.2	340	2.5	8.9	139	1.1	663	1650	182	705	175	11.0	184	45.4	360	86.1	292	47.9
KC-10-103	54	1850	16810	1400	< 2		0.2	377	1.8	1.7	58	1.7	831	1940	211	816	193	10.9	186	40.5	298	67.1	218	34.2
KC-10-104	59	1942	15680	1200	< 2		0.2	332	2.4	2.4	57	1.8	762	1790	194	753	183	10.7	187	40.9	304	69.2	223	34.8
KC-10-105	50	1898	16270	1200	< 2		0.2	337	2.6	8.3	107	2.0	754	1800	200	786	186	11.1	188	40.1	298	68.5	223	34.8
KC-10-106	42	1762	15300	1100	< 2		0.2	315	2.1	1.2	40	1.7	742	1700	184	708	164	9.88	169	36.3	270	61.5	199	31.3
KC-10-107	71	1780	24780	1060	< 2		0.3	417	2.5	1.3	75	1.7	788	1750	181	684	153	8.52	141	32.2	259	64.2	232	40.4
KC-10-108	76	2279	19840	1310	< 2		0.2	334	2.5	9.4	111	1.1	781	1810	195	738	179	11.1	186	45.2	356	84.7	288	47.1
KC-10-109	55	1895	17330	1320	< 2		0.2	390	1.9	1.7	57	1.6	879	2040	221	855	197	11.1	189	40.9	301	67.8	220	34.8
KC-10-110	41	1046	9534	639	< 2		< 0.2	191	1.2	1.1	26	1.1	682	1440	154	598	125	7.15	116	22.1	156	34.0	107	16.2
KC-10-111	47	1252	8818	693	< 2		< 0.2	194	0.9	1.1	34	1.2	758	1620	174	676	142	8.01	132	25.3	181	39.8	126	19.1
KC-10-112	77	4129	29870	2870	< 2		0.4	646	1.8	6.5	67	< 0.4	771	1670	158	536	161	11.2	222	65.6	579	153	572	101
KC-10-113	58	1745	19320	2110	< 2		< 0.2	258	2.1	2.1	107	0.7	503	1200	121	434	113	7.88	137	35.0	275	63.6	209	33.6
KC-10-114	41	1030	10160	599	< 2		< 0.2	192	1.0	1.1	27	1.0	693	1470	156	603	125	6.98	115	21.5	149	32.4	101	15.3
KC-10-115	69	2846	21620	1290	83		0.2	341	1.2	5.9	121	0.8	753	1900	209	809	233	14.8	248	58.9	443	99.2	305	44.2
KC-10-116	53	2717	19110	1520	< 2		0.3	496	1.2	2.6	104	1.2	814	2080	234	926	242	14.5	234	53.9	413	94.3	303	47.1
KC-10-117	68	1796	19410	1200	< 2		0.2	394	2.7	1.5	61	1.3	560	1430	158	611	152	9.18	151	34.2	263	62.1	209	33.9
KC-10-118	74	2046	19330	1280	< 2		0.2	360	2.7	1.2	65	1.7	703	1740	193	750	189	11.3	194	43.4	319	70.7	222	33.5
KC-10-119	43	1388	17440	1220	< 2		0.2	352	2.5	1.4	39	1.3	493	1190	128	477	112	6.69	124	29.4	221	48.3	153	23.7
KC-10-120	50	1667	17530	1210	< 2		0.2	365	< 0.5	7.0	177	1.2	378	968	102	373	98.9	5.82	118	31.5	256	59.5	189	28.8
KC-10-121	67	1835	21210	1170	< 2		0.2	399	2.9	1.5	63	1.4	571	1460	163	629	157	9.47	157	35.2	270	64.7	214	34.4
KC-10-122	45	1447	18050	1300	< 2		0.2	362	2.6	1.4	40	1.5	540	1290	136	506	119	7.31	132	31.5	234	51.7	162	25.0
KC-10-123	378	2104	33210	2120	< 2		0.5	810	1.9	3.3	382	0.4	426	1160	123	444	116	8.07	124	32.9	283	75.3	293	54.9
KC-10-124	393	2790	33160	2960	< 2		0.3	542	1.6	5.0	410	0.5	728	1620	153	509	133	8.48	147	38.7	344	96.6	385	74.3
KC-10-125	83	1756	14820	961	< 2		< 0.2	270	1.4	1.6	56	1.6	723	1590	172	664	152	9.60	156	33.4	252	57.3	184	28.2
KC-10-126	66	2031	18000	1330	< 2		0.2	378	1.7	3.3	88	1.5	757	1790	200	766	185	11.3	183	40.7	307	70.9	235	37.4
KC-10-127	59	1249	16400	1080	< 2		< 0.2	316	1.2	3.3	79	1.5	640	1500	163	628	145	8.38	137	28.4	202	44.2	140	21.6
KC-10-128	51	1728	16820	1150	< 2		0.2	376	1.9	6.2	102	1.6	718	1690	183	707	171	10.2	174	37.3	273	59.0	177	25.4
KC-10-129	60	1871	14960	1260	< 2		< 0.2	264	6.1	6.5	68	1.5	1010	2340	240	893	197	12.5	196	41.0	291	63.8	198	30.2
KC-10-130	234	1879	23560	1040	< 2		0.2	328	3.6	10.8	135	1.6	699	1690	184	712	174	10.6	179	39.8	294	67.3	225	36.9
KC-10-131	95	2982	16660	1250	< 2		0.2	417	4.1	5.4	267	0.6	2320	6480	774	2930	533	25.5	359	66.9	465	103	327	49.2
KC-10-132	44	1793	19160	811	< 2		< 0.2	267	1.9	1.7	31	1.5	529	1250	135	527	140	9.43	163	38.0	286	64.9	207	32.6
KC-10-133	55	1970	29270	981	< 2		0.2	382	1.8	1.0	40	2.8	868	2210	249	996	210	11.9	184	35.7	272	68.4	251	44.7
KC-10-134	63	1797	19540	1360	< 2		< 0.2	307	1.5	1.1	25	1.3	696	1410	137	498	119	8.12	127	28.4	233	62.3	243	45.3
KC-10-135	59	1268	16850	1070	< 2		< 0.2	331	1.4	3.5	79	1.5	671	1570	171	657	153	8.91	145	29.9	214	46.1	146	22.8
KC-10-136	210	4797	23660	2850	< 2		0.5	913	6.1	3.0	150	< 0.4	665	1680	170	632	234	17.6	320	85.1	685	164	551	87.8
KC-10-137	36	1114	8155	731	< 2		< 0.2	197	2.0	0.9	44	1.0	646	1400	154	598	130	7.57	125	25.3	173	37.6	116	16.8
KC-10-138	44	1287	11550	858	< 2		< 0.2	255	2.2	0.9	45	1.2	737	1660	179	686	149	8.68	141	28.3	204	45.0	140	21.0
KC-10-139	214	2660	29320	2550	< 2		0.3	542	8.3	2.0	65	0.8	766	1840	186	648	169	10.6	178	44.3	371	97.2	367	65.1
KC-10-140	55	1185	12850	842	< 2		< 0.2	250	1.1	1.2	38	2.1	738	1740	186	737	158	8.71	146	27.3	188	40.2	122	17.8
KC-10-141	44	1686	17000	1230	< 2		0.2	391	5.9	1.2	50	1.8	794	1910	221	871	207	12.0	193	40.9	281	62.2	190	28.4
KC-10-142	43	1160	13350	821	< 2		< 0.2	264	3.3	1.2	50	1.4	642	1460	156	592	128	7.57	123	26.0	184	40.9	127	19.1
KC-10-143	101	2444	25070	1480	191		0.3	471	1.1	7.2	100	0.6	517	1350	151	593	169	11.0	187	45.2	355	86.1	296	50.5
KC-10-144	100	2389	23420	1390	197		0.3	471	1.2	7.6	99	0.6	545	1410	155	611	172	11.2	190	45.9	361	87.4	301	50.5
KC-10-145	57	1157	10400	884	< 2		< 0.2	226	1.5	2.0	45	1.3	697	1510	162	632	134	7.68	126	26.6	185	41.4	132	20.4
KC-10-146	54	1226	10910	765	< 2		< 0.2	245	1.9	1.6	25	1.4	743	1630	177	696	155	8.78	147	28.6	195	40.3	117	16.4
KC-10-147	53	1304	9194	837	< 2		< 0.2	242	2.3	1.9	34	1.8	905	1940	205	789	170	9.88	160	31.0	211	43.6	126	17.7
KC-10-148	41	1563	16560	1240	< 2		< 0.2	283	2.8	3.5	38	1.1	517	1250	132	488	112	6.70	116	28.2	227	54.8	188	31.1
KC-10-149	109	6477	25670	3420	< 2		0.4	634	7.1	2.0	198	< 0.4	1930	4740	493	1760	518	32.1	528	134	1080	269	913	147
KC-10-150	48	1176	11830	1240	< 2		0.2	359	2.4	2.2	54	1.4	648	1490	168	650	152	8.57	144	29.5	209	45.8	141	20.7
KC-10-151	59	1474	10140	1100	< 2		< 0.2	265	2.9	2.1	46	1.6	769	1740	199	771	177	9.88	171	36.2	259	57.3	172	25.4

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.05
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
KC-10-152	57	1443	12110	945	< 2		< 0.2	270	3.5	2.5	57	1.2	577	1360	153	601	144	8.62	148	31.7	236	54.0	170	26.3
KC-10-153	50	1161	10960	759	< 2		< 0.2	254	2.8	1.7	28	1.6	740	1640	185	721	160	8.78	149	28.7	194	40.4	116	15.9
KC-10-154	52	1358	9903	946	< 2		< 0.2	259	2.8	2.0	43	1.4	661	1510	170	658	154	8.88	154	33.0	238	52.4	162	23.7
KC-10-155	67	2121	22670	2700	< 2		0.2	416	3.6	3.2	51	1.3	710	1510	145	485	125	8.31	149	38.1	316	82.1	306	53.5
KC-10-156	116	1926	20990	4560	< 2		0.3	487	4.0	1.3	61	1.5	961	2240	238	817	191	10.6	177	38.5	298	75.4	280	50.3
KC-10-157	71	2893	17870	1170	< 2		0.2	346	4.0	5.2	142	1.1	582	1440	156	611	195	13.3	252	63.5	487	113	354	51.8
KC-10-158	44	1191	13400	1000	< 2		< 0.2	262	3.1	1.5	41	1.1	526	1240	138	528	123	7.07	123	27.3	204	47.3	152	23.0
KC-10-159	52	1121	14420	822	< 2		< 0.2	277	3.1	1.4	38	1.6	571	1380	156	546	136	7.54	129	26.6	192	44.0	141	21.3
KC-10-160	41	1185	13050	841	< 2		< 0.2	277	4.3	1.4	57	1.6	631	1450	162	623	141	8.15	140	29.1	210	46.6	144	21.0
KC-10-161	35	1297	25920	920	< 2		< 0.2	236	2.2	1.9	41	2.1	424	852	94.4	361	89.5	5.44	99.2	24.0	196	50.5	184	31.5
KC-10-162	58	1437	16400	1200	< 2		0.2	390	5.5	1.3	45	1.9	851	1920	218	844	190	10.5	175	35.6	247	54.6	171	25.5
KC-10-163	41	1695	16450	1380	< 2		0.3	412	8.6	1.3	53	1.8	807	1920	226	881	215	12.1	203	42.5	302	66.3	205	29.9
KC-10-164	57	1707	17050	1280	< 2		0.2	370	4.4	1.3	53	1.9	862	1960	219	852	198	11.5	191	39.7	289	65.9	211	31.8
KC-10-165	57	1189	12470	788	< 2		< 0.2	252	1.5	1.5	52	2.5	774	1780	202	802	173	9.34	160	29.5	202	43.6	130	18.8
KC-10-166	46	1064	11320	632	< 2		< 0.2	230	2.9	3.5	60	2.6	870	1730	193	753	157	8.15	145	27.7	188	39.7	115	16.0
KC-10-167	53	1026	13510	870	< 2		< 0.2	205	2.9	1.4	63	2.0	575	1290	142	557	114	6.36	103	21.6	164	38.7	125	19.6
KC-10-168	48	1244	13660	1340	< 2		< 0.2	227	2.7	1.4	61	2.1	539	1210	129	473	103	5.85	97.6	22.7	185	47.7	173	28.3
KC-10-169	108	2869	25620	3230	< 2		0.3	503	1.1	1.7	128	0.7	621	1570	167	599	172	11.4	210	57.5	480	120	418	67.7
KC-10-170	99	3467	23800	3210	< 2		0.3	526	1.8	9.5	152	< 0.4	847	2040	207	723	188	11.9	217	63.7	559	146	523	86.5
KC-10-171	85	1739	31650	1220	< 2		0.3	429	1.5	1.7	112	0.9	517	1220	139	538	139	8.09	141	32.3	254	65.9	246	44.4
KC-10-172	209	2463	27480	3070	< 2		0.3	564	11.0	2.2	69	0.9	824	1950	206	724	182	10.9	181	43.7	366	98.4	372	64.9
KC-10-173	59	1749	21100	2080	< 2		< 0.2	319	0.8	2.3	63	0.9	589	1400	147	516	116	6.49	121	31.1	261	69.1	251	41.9
KC-10-174	145	1490	16730	943	< 2		< 0.2	294	2.0	2.2	148	1.9	923	2000	222	870	184	10.4	175	34.1	241	55.0	175	26.2
KC-10-175	120	1582	15410	858	< 2		< 0.2	298	2.0	1.4	72	2.0	1100	2310	255	996	216	11.8	200	39.0	272	60.3	189	27.4
KC-10-176	311	1788	27020	2010	< 2		0.2	356	3.3	0.7	96	2.4	556	1270	133	476	113	7.02	126	30.4	251	66.8	252	45.4
KC-10-177	488	2305	25840	3860	< 2		0.3	540	8.3	2.6	146	0.8	633	1570	161	568	153	9.69	169	43.1	355	92.2	337	58.6
KC-10-178	107	1325	17130	5490	< 2		< 0.2	266	1.4	1.7	61	0.8	778	1950	196	644	134	8.32	130	29.8	223	52.6	179	30.0
KC-10-179	130	1661	24330	938	< 2		0.2	336	2.1	1.4	58	1.1	464	1140	128	500	139	9.15	149	35.5	268	64.2	225	37.7
KC-10-180	53	1416	15560	2330	< 2		< 0.2	252	1.9	1.1	60	1.0	552	1340	137	477	110	6.99	114	29.8	246	61.1	213	34.9
KC-10-181	55	1255	13340	1360	< 2		< 0.2	214	1.4	0.9	60	0.8	380	811	79.6	269	69.7	4.71	87.1	24.2	203	50.1	174	28.1
KC-10-182	213	4977	22010	3550	< 2		0.5	918	9.4	3.5	163	< 0.4	752	1850	193	719	271	20.3	377	99.2	774	185	600	90.2
KC-10-183	99	1425	35060	1310	< 2		< 0.2	308	0.6	4.7	68	0.9	402	1030	122	486	127	6.10	138	31.6	241	58.8	207	36.2
KC-10-184	76	1706	18690	1140	< 2		< 0.2	294	3.4	1.8	40	1.0	506	1210	134	506	124	7.25	127	29.7	247	66.6	249	42.8
KC-10-185	42	870	9367	885	< 2		< 0.2	195	2.6	1.3	18	2.0	456	996	113	433	91.0	4.59	84.4	18.1	134	32.8	109	17.8
KC-10-186	72	2123	14880	1380	< 2		0.2	341	3.9	2.0	44	1.4	839	1900	211	810	190	10.3	192	43.6	336	80.9	268	42.6
KC-10-187	35	972	8288	767	4		< 0.2	179	1.8	1.4	48	1.4	596	1330	148	583	124	6.83	118	22.9	157	35.0	108	16.2
KC-10-188	34	1136	8918	787	2		< 0.2	206	1.8	1.3	41	1.2	579	1300	146	576	129	7.36	127	25.6	183	40.8	128	19.0
KC-10-189	34	1108	8397	877	< 2		< 0.2	197	2.7	1.0	35	1.0	577	1290	147	577	129	7.29	126	25.0	177	39.2	119	17.2
KC-10-190	42	1292	11140	909	< 2		< 0.2	260	2.9	1.0	42	1.4	668	1500	170	661	153	8.72	146	29.5	212	47.7	148	21.7
KC-10-191	40	1141	9395	861	< 2		< 0.2	205	2.9	1.8	39	1.3	550	1240	138	543	126	7.32	123	25.7	184	42.7	140	21.4
KC-10-192	90	1668	24220	1310	< 2		0.2	324	1.8	1.8	58	0.7	581	1360	140	500	117	7.26	122	31.1	251	65.2	236	41.9
KC-10-193	43	1817	12450	957	< 2		< 0.2	297	1.6	1.0	32	1.1	774	1830	202	782	185	10.8	179	37.8	271	62.8	202	30.9
KC-10-194	99	2095	31360	889	< 2		0.3	586	1.7	2.5	74	1.4	1130	2440	253	931	221	13.1	209	44.9	326	74.7	243	39.2
KC-10-195	65	1664	21270	905	< 2		0.2	346	1.3	2.5	68	0.9	524	1300	149	600	181	11.4	173	36.0	264	61.2	207	35.6
KC-10-196	33	1639	16520	1160	< 2		< 0.2	326	4.6	4.2	51	1.2	658	1570	205	659	180	11.1	183	40.5	290	65.2	211	33.1
KC-10-197	41	1938	23000	1670	< 2		0.3	522	3.3	3.1	59	0.9	568	1350	164	490	134	8.38	140	36.5	291	75.2	275	47.0
KC-10-198	65	1958	19260	1500	< 2		0.3	503	5.7	1.5	61	1.4	716	1740	227	723	201	11.7	200	46.2	335	75.9	247	38.5
AK-10-102A	509	11630	19340	10800	< 2		0.4	704	3.1	0.9	237	< 0.4	1770	4450	410	1400	465	33.2	661	202	1650	413	1340	204
AK-10-103A	479	5940	29790	1570	< 2		0.4	778	2.3	2.5	152	< 0.4	1270	2480	220	712	211	11.7	255	81.3	749	210	781	136
AK-10-103B	606	16830	18310	9650	< 2		0.4	724	10.9	2.4	254	< 0.4	1640	4180	422	1640	747	57.9	1170	337	2560	581	1670	228
AK-10-104A	202	5572	29510	2760	< 2		0.4	664	6.2	0.9	165	< 0.4	809	2080	192	678	255	18.4	350	106	890	222	759	128
AK-10-104B	481	18530	14070	11100	< 2		0.3	606	5.5	1.7	476	< 0.4	1910	4950	477	1710	697	55.7	1160	358	2890	676	2000	278

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.05
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
AK-10-105	178	5033	23940	2980	< 2		0.3	606	3.7	2.0	146	< 0.4	856	2140	207	708	245	16.9	322	96.9	790	197	660	110
~~AK-10-156~~	~~223~~	~~68~~	~~106~~	~~4490~~	~~< 2~~	~~< 0.5~~	~~< 0.2~~	~~28~~	~~1.1~~	~~< 0.5~~	~~21070~~	~~< 0.4~~	~~2680~~	~~4310~~	~~349~~	~~918~~	~~82.2~~	~~4.65~~	~~37.0~~	~~2.8~~	~~12.8~~	~~2.5~~	~~7.2~~	~~0.99~~
~~AK-10-163~~	~~1188~~	~~257~~	~~143~~	~~10800~~	~~< 2~~	~~< 0.5~~	~~< 0.2~~	~~29~~	~~1.1~~	~~7.8~~	~~3471~~	~~< 0.4~~	~~1650~~	~~3330~~	~~366~~	~~1290~~	~~240~~	~~22.0~~	~~144~~	~~14.0~~	~~58.0~~	~~7.9~~	~~17.7~~	~~2.18~~
~~AK-10-164~~	~~1035~~	~~414~~	~~159~~	~~891~~	~~< 2~~	~~0.5~~	~~< 0.2~~	~~15~~	~~< 0.5~~	~~3.2~~	~~1051~~	~~< 0.4~~	~~6400~~	~~15700~~	~~1640~~	~~6510~~	~~1320~~	~~105~~	~~583~~	~~41.1~~	~~115~~	~~9.0~~	~~12.0~~	~~1.18~~
~~AK-10-080~~	~~28~~	~~4528~~	~~2413~~	~~6780~~	~~< 2~~		~~< 0.2~~	~~45~~	~~< 0.5~~	~~< 0.5~~	~~44~~	~~< 0.4~~	~~100~~	~~338~~	~~64.1~~	~~480~~	~~279~~	~~23.8~~	~~411~~	~~98.5~~	~~755~~	~~184~~	~~585~~	~~82.0~~
~~AK-10-086B~~	~~362~~	~~7804~~	~~19890~~	~~5180~~	~~< 2~~		~~< 0.2~~	~~143~~	~~< 0.5~~	~~< 0.5~~	~~214~~	~~0.5~~	~~3730~~	~~9820~~	~~1100~~	~~4420~~	~~1010~~	~~57.3~~	~~904~~	~~185~~	~~1280~~	~~290~~	~~873~~	~~121~~
~~AK-10-087B~~	~~225~~	~~3609~~	~~39920~~	~~2920~~	~~< 2~~		~~< 0.2~~	~~245~~	~~< 0.5~~	~~< 0.5~~	~~157~~	~~< 0.4~~	~~2180~~	~~5120~~	~~526~~	~~1950~~	~~300~~	~~15.9~~	~~219~~	~~49.0~~	~~419~~	~~120~~	~~450~~	~~75.7~~

Analyte Symbol	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
KC-10-100	278	43.6	653	82.1	2	1.8	305	248	70.6
KC-10-101	213	30.6	390	190	4	2.3	1980	434	68.4
KC-10-102	321	50.3	554	94.9	3	4.2	1370	359	62.4
KC-10-103	224	33.8	461	91.0	3	1.8	554	494	66.6
KC-10-104	225	34.0	427	85.7	3	1.7	474	638	63.2
KC-10-105	226	33.8	457	85.6	3	2.7	466	281	63.4
KC-10-106	205	31.1	393	80.6	3	1.5	208	283	60.6
KC-10-107	283	44.1	663	78.6	3	1.8	300	247	70.5
KC-10-108	315	49.5	540	93.2	3	4.1	1350	346	60.1
KC-10-109	229	34.3	479	94.9	3	1.8	558	389	66.8
KC-10-110	106	16.6	264	42.3	2	2.1	160	157	31.2
KC-10-111	123	18.7	225	45.3	2	2.0	170	214	33.1
KC-10-112	720	118	699	224	5	2.2	1980	838	114
KC-10-113	232	37.3	514	154	3	2.4	322	581	58.6
KC-10-114	101	15.7	261	41.7	2	2.0	167	158	31.0
KC-10-115	278	42.7	601	92.6	4	4.4	1830	165	52.8
KC-10-116	303	44.3	515	103	4	1.8	2970	202	80.1
KC-10-117	226	34.7	519	86.9	3	1.5	554	273	65.6
KC-10-118	212	30.7	517	87.3	3	1.5	511	273	67.9
KC-10-119	156	24.2	469	86.6	2	1.5	612	255	62.3
KC-10-120	181	26.5	480	90.4	2	4.9	322	194	68.0
KC-10-121	228	34.9	521	87.7	3	1.6	559	287	67.6
KC-10-122	162	24.9	490	92.4	2	1.5	645	303	66.3
KC-10-123	410	70.0	775	146	3	3.3	845	418	65.6
KC-10-124	571	96.7	746	219	4	3.3	1040	191	91.1
KC-10-125	179	27.0	367	64.9	3	2.4	180	199	49.5
KC-10-126	244	36.4	477	94.9	3	3.1	385	343	66.9
KC-10-127	143	22.1	440	79.6	2	2.3	441	318	53.1
KC-10-128	156	22.3	427	85.8	3	2.0	366	397	57.3
KC-10-129	197	30.1	395	106	3	1.7	438	356	46.5
KC-10-130	257	41.2	645	71.7	3	2.1	557	343	49.7
KC-10-131	314	47.8	409	107	4	1.9	435	864	85.9
KC-10-132	214	33.3	537	54.5	3	1.7	335	347	41.7
KC-10-133	328	54.8	745	78.6	3	1.3	195	160	59.3
KC-10-134	342	58.6	494	100	3	1.7	177	213	59.7
KC-10-135	149	22.9	468	82.9	3	2.3	458	299	53.7
KC-10-136	572	86.4	554	201	5	1.7	1190	1080	162
KC-10-137	105	15.6	225	46.9	2	1.9	667	173	36.2
KC-10-138	132	19.8	303	55.7	2	1.9	259	276	42.5
KC-10-139	461	73.0	675	177	5	1.9	1680	396	117
KC-10-140	115	17.4	342	55.5	1	1.8	150	189	38.9
KC-10-141	179	26.5	447	86.8	3	1.7	255	280	63.0
KC-10-142	120	17.7	357	57.9	2	2.6	301	189	43.8
KC-10-143	358	56.0	597	102	3	3.6	2580	276	69.7
KC-10-144	356	56.5	606	103	4	3.8	2730	293	70.3
KC-10-145	134	20.6	274	56.6	2	2.5	325	185	40.8
KC-10-146	101	14.7	288	55.4	2	2.0	414	177	42.1
KC-10-147	110	16.2	241	56.6	3	2.2	713	293	41.4
KC-10-148	214	33.8	444	89.5	2	2.3	559	238	57.9
KC-10-149	977	147	639	266	7	2.9	3780	1190	149
KC-10-150	137	21.0	334	75.4	3	2.6	395	236	46.6
KC-10-151	164	24.7	278	69.8	3	2.7	218	240	44.0

Analyte Symbol	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
KC-10-152	176	26.7	340	59.7	3	3.0	239	371	46.5
KC-10-153	97.8	14.6	313	54.8	3	2.2	419	174	40.5
KC-10-154	153	22.6	257	63.1	3	2.7	199	240	40.7
KC-10-155	397	64.9	591	185	5	1.5	211	305	71.6
KC-10-156	388	67.7	577	316	4	1.2	536	117	75.0
KC-10-157	329	48.0	500	77.7	15	1.7	277	487	64.0
KC-10-158	151	23.2	386	67.3	3	2.0	284	229	44.9
KC-10-159	142	21.4	413	57.6	3	2.4	243	210	43.7
KC-10-160	136	19.9	385	60.6	2	2.8	320	188	42.8
KC-10-161	238	41.4	743	74.8	2	2.4	1120	259	40.3
KC-10-162	169	25.7	462	78.8	3	1.8	228	448	56.7
KC-10-163	193	28.9	469	90.4	3	1.8	250	221	61.2
KC-10-164	212	32.0	483	79.4	4	1.7	213	386	62.9
KC-10-165	123	18.8	355	54.4	2	2.0	162	177	37.0
KC-10-166	98.4	14.8	312	49.6	2	2.2	297	220	37.1
KC-10-167	129	19.2	378	60.4	2	2.0	125	143	43.4
KC-10-168	198	30.7	364	96.5	3	1.9	310	117	47.1
KC-10-169	475	75.6	688	199	4	2.4	861	396	84.4
KC-10-170	609	97.5	589	213	7	2.9	6770	717	134
KC-10-171	347	61.5	825	92.8	4	2.5	551	284	64.4
KC-10-172	472	76.6	711	186	5	2.0	1490	350	116
KC-10-173	303	48.7	568	149	3	2.9	637	129	57.9
KC-10-174	173	26.9	481	62.2	2	2.2	550	230	47.7
KC-10-175	179	27.0	433	60.3	2	2.0	264	231	42.6
KC-10-176	349	60.2	740	137	3	1.6	606	224	54.7
KC-10-177	451	79.5	663	256	7	2.9	1620	564	104
KC-10-178	224	39.1	453	370	4	2.1	978	239	64.3
KC-10-179	278	47.2	651	71.0	2	2.0	406	354	52.5
KC-10-180	241	37.6	422	161	3	1.7	276	358	56.1
KC-10-181	193	30.7	360	79.8	3	1.8	266	327	48.7
KC-10-182	587	89.1	570	228	6	2.0	1160	1060	157
KC-10-183	283	51.5	1010	88.4	3	5.1	137	262	43.2
KC-10-184	311	50.6	504	82.1	3	2.0	595	117	53.9
KC-10-185	122	18.2	259	51.7	3	2.2	150	62.3	34.4
KC-10-186	292	45.1	411	87.3	7	1.8	768	317	52.4
KC-10-187	108	17.1	238	41.5	6	2.8	689	130	29.7
KC-10-188	121	18.4	254	45.0	2	2.5	892	178	30.8
KC-10-189	109	16.4	237	46.9	3	2.0	669	179	36.0
KC-10-190	142	22.0	321	57.7	3	2.0	275	284	42.4
KC-10-191	143	22.0	270	46.6	2	2.6	949	214	38.5
KC-10-192	314	52.6	632	132	< 1	2.2	1280	243	52.7
KC-10-193	203	30.5	336	60.9	< 1	2.2	601	298	49.2
KC-10-194	276	45.2	831	75.8	< 1	3.1	516	302	58.0
KC-10-195	264	45.1	585	77.8	< 1	3.0	503	264	64.4
KC-10-196	229	36.7	542	97.1	2	1.8	849	341	57.4
KC-10-197	336	53.7	690	134	3	1.9	223	301	82.8
KC-10-198	258	39.2	616	119	4	1.6	761	228	79.3
AK-10-102A	1210	163	401	711	11	0.8	1460	1570	253
AK-10-103A	935	141	648	149	5	2.0	556	418	143
AK-10-103B	1230	147	396	607	12	1.9	3900	7310	532
AK-10-104A	865	130	721	247	5	1.5	442	1890	141
AK-10-104B	1540	183	320	777	17	1.6	1670	6690	417

Analyte Symbol	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
AK-10-105	742	111	583	267	5	2.0	584	1010	146
~~AK-10-156~~	~~5.3~~	~~0.68~~	~~3.1~~	~~24.1~~	~~< 1~~	~~0.3~~	~~26~~	~~1290~~	~~3.1~~
~~AK-10-163~~	~~12.9~~	~~1.86~~	~~5.3~~	~~400~~	~~4~~	~~2.9~~	~~53~~	~~352~~	~~28.4~~
~~AK-10-164~~	~~5.5~~	~~0.58~~	~~4.3~~	~~10.0~~	~~< 1~~	~~1.1~~	~~154~~	~~1720~~	~~58.0~~
~~AK-10-080~~	~~426~~	~~49.2~~	~~72.7~~	~~304~~	~~30~~	~~< 0.1~~	~~251~~	~~522~~	~~564~~
~~AK-10-086B~~	~~689~~	~~89.5~~	~~352~~	~~284~~	~~46~~	~~0.1~~	~~327~~	~~3990~~	~~512~~
~~AK-10-087B~~	~~515~~	~~78.5~~	~~676~~	~~317~~	~~18~~	~~< 0.1~~	~~188~~	~~2310~~	~~299~~

Quality Control																								
Analyte Symbol	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Sr	Y	Zr	Ba	Cr	Co	Ni	Cu	Zn
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	2	2	4	3	20	1	20	10	30
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
WMG-1 Meas																				760	206	2670	5890	110
WMG-1 Cert																				770	200	2700	5900	110
DH-1a Meas																								
DH-1a Cert																								
TAN-1 Meas																								
TAN-1 Cert																								
NIST 694 Meas	11.32	1.90	0.75	0.011	0.35	44.22	0.87	0.56	0.119	30.16					1686									
NIST 694 Cert	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740									
DNC-1 Meas	47.35	18.50	9.86	0.149	10.01	11.19	1.88	0.23	0.477	0.08			32		153	142	15	36	101	260	56	250	100	60
DNC-1 Cert	47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148.0	144.0	18.0	38	118	270.0	57.0	247	100.0	70.0
GBW 07113 Meas	71.42	12.64	3.18	0.137	0.14	0.56	2.39	5.36	0.278	0.05			5	4	< 5	40	44	423	467					
GBW 07113 Cert	72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00	43.0	43.0	403	506					
LKSD-3 Meas																				70	30	40	30	150
LKSD-3 Cert																				87.0	30.0	47.0	35.0	152
NIST 1633b Meas	48.29	28.06	10.99	0.020	0.76	2.09	0.25	2.33	1.291	0.54			40		303	1040			678					
NIST 1633b Cert	49.2	28.4	11.1	0.0200	0.800	2.11	0.270	2.35	1.32	0.530			41.0		296	1040			709					
OKA-2 Meas																								
OKA-2 Cert																								
W-2a Meas	52.93	15.38	10.90	0.170	6.29	10.89	2.20	0.64	1.083	0.14			36	< 1	280	196	20	92	168	80	43	70	100	80
W-2a Cert	52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262	190	24.0	94.0	182	92.0	43.0	70.0	110	80.0
SY-4 Meas	49.84	20.46	6.16	0.108	0.51	7.99	6.85	1.70	0.289	0.14			1	3	< 5	1196	119	521	328					
SY-4 Cert	49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0	1191	119	517	340					
CTA-AC-1 Meas																					< 1		60	< 30
CTA-AC-1 Cert																					2.72		54.0	38.0
BIR-1a Meas	48.10	15.71	11.15	0.171	9.56	12.79	1.94	0.02	0.955	0.04			43	< 1	335	108	13	16	8	380	53	170	130	80
BIR-1a Cert	47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	110	16	18	6	370	52	170	125	70
NCS DC86312 Meas																								
NCS DC86312 Cert																								
NCS DC70014 Meas																					26	70	2630	7400
NCS DC70014 Cert																					26.2	70.9	2600.00	7400.00
IGS 40 Meas																								
IGS 40 Cert																								
NCS DC86316 Meas	71.01	13.61	0.39	0.019	0.07	0.67	4.11	3.98	0.671	0.05								34320						
NCS DC86316 Cert	70.73	14.57	0.38	0.021	0.079	0.63	4.20	3.90	0.64	0.040								34666						
NCS DC70009 (GBW07241) Meas																				30	3	< 20	1000	100
NCS DC70009 (GBW07241) Cert																				30	3.7	2.8	960.000	100.000
OREAS 100a (Fusion) Meas																					18		180	
OREAS 100a (Fusion) Cert																					18.1		169	
OREAS 101a (Fusion) Meas																					50		440	
OREAS 101a (Fusion) Cert																					48.8		434	
JR-1 Meas																				< 20	< 1	< 20	< 10	< 30
JR-1 Cert																				2.83	0.83	1.67	2.68	30.6
NCS DC86318 Meas	62.51	13.24	2.27	0.054	0.08		0.58	5.44	0.167	0.02							17330							
NCS DC86318 Cert	66.90	14.26	2.24	0.052	0.11		0.66	5.52	0.17	0.020							17010							
SARM 3 Meas																		11320						
SARM 3 Cert																		11119						
USZ 44-2007 Meas																		15790						
USZ 44-2007 Cert																		15800						
KC-10-114 Orig	70.33	9.89	5.54	0.143	0.08	0.85	4.75	4.53	0.311	0.02	0.75	97.20	< 1	134	< 5	41	1023	10490	27	< 20	< 1	< 20	< 10	990
KC-10-114 Dup	70.81	9.86	5.64	0.145	0.08	0.86	4.68	4.47	0.314	0.04	0.75	97.66	< 1	135	< 5	41	1038	9832	27	< 20	< 1	< 20	< 10	940
KC-10-129 Orig	70.62	7.32	5.84	0.166	1.07	1.56	3.03	3.71	0.311	0.05	1.74	95.41	< 1	297	6	60	1871	14960	68	< 20	< 1	< 20	30	1650
KC-10-129 Split	71.18	7.31	5.81	0.165	1.07	1.54	2.96	3.77	0.310	0.06	1.76	95.93	< 1	297	< 5	60	1862	15050	68	< 20	< 1	< 20	30	1550
KC-10-148 Orig	70.52	9.89	4.21	0.099	0.68	0.73	3.61	4.84	0.390	0.02	1.67	96.66	< 1	191	6	41	1553	16490	38	< 20	< 1	< 20	< 10	1090

Quality Control

Analyte Symbol	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Sr	Y	Zr	Ba	Cr	Co	Ni	Cu	Zn
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	2	2	4	3	20	1	20	10	30
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
KC-10-148 Dup	70.80	9.98	4.23	0.100	0.69	0.74	3.60	4.85	0.396	0.06	1.67	97.11	< 1	193	< 5	41	1574	16630	38	< 20	< 1	< 20	< 10	1100
KC-10-163 Orig	70.18	8.13	5.51	0.169	0.27	1.28	3.56	3.89	0.361	0.03	1.42	94.79	< 1	274	7	41	1683	16320	53	< 20	< 1	< 20	30	1560
KC-10-163 Dup	71.24	8.19	5.58	0.170	0.28	1.29	3.51	3.88	0.366	0.04	1.42	95.95	< 1	279	12	41	1707	16590	53	< 20	< 1	< 20	20	1570
KC-10-180 Orig	74.11	8.07	4.20	0.110	0.35	1.49	2.82	3.82	0.375	0.02	0.61	95.98	< 1	173	< 5	53	1424	15540	60	< 20	< 1	< 20	< 10	810
KC-10-180 Dup	74.20	7.97	4.15	0.109	0.35	1.48	2.82	3.80	0.376	0.03	0.61	95.89	< 1	171	6	53	1408	15570	60	< 20	< 1	< 20	< 10	830
KC-10-191 Orig	71.29	10.44	4.76	0.128	0.14	0.72	4.74	4.97	0.249	0.03	0.79	98.24	< 1	115	< 5	40	1143	9410	39	< 20	< 1	< 20	40	1010
KC-10-191 Dup	71.21	10.27	4.78	0.128	0.14	0.73	4.50	4.67	0.251	0.02	0.79	97.49	< 1	115	< 5	39	1140	9380	38	< 20	< 1	< 20	40	1020
AK-10-102A Orig	66.88	4.81	5.16	0.200	0.86	4.94	3.71	1.16	0.804	0.15	2.75	91.43	1	822	< 5	509	11630	19340	237	< 20	< 1	< 20	< 10	960
AK-10-102A Split	67.15	4.75	5.20	0.204	0.85	4.97	3.65	1.15	0.811	0.12	2.72	91.59	1	841	< 5	508	11570	18030	241	< 20	< 1	< 20	< 10	1040
AK-10-163 Orig	59.62	11.89	9.22	0.681	0.26	1.85	7.81	2.82	0.560	0.07	0.52	95.29	1	383	< 5	1190	256	150	3477	< 20	< 1	< 20	< 10	3810
AK-10-163 Dup	59.74	11.83	9.22	0.683	0.25	1.85	7.73	2.79	0.551	0.07	0.52	95.22	1	382	< 5	1186	257	137	3465	< 20	< 1	< 20	< 10	3950
AK-10-087B Orig	75.33	3.37	7.76	0.154	0.41	2.22	0.76	0.56	1.206	0.23	0.72	92.72	7	3	67	225	3609	39920	157	< 20	6	< 20	10	180
AK-10-087B Split	75.03	3.35	7.77	0.154	0.41	2.22	0.76	0.56	1.207	0.23	0.69	92.38	7	3	68	227	3603	39750	156	< 20	6	< 20	10	180
Method Blank Method Blank																				< 20	< 1	< 20	< 10	< 30

Quality Control

Analyte Symbol	Ga	Ge	As	Rb	Nb	Mo	Ag	In	Sn	Sb	Cs	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	1	1	5	2	1	2	0.5	0.2	1	0.5	0.5	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.05
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
WMG-1 Meas	10		9		5	< 2	1.5		3		< 0.5						2.4	0.72			2.4	0.5		0.21
WMG-1 Cert	10.3		7.00		6.00	1.40	2.70		2.20		0.480						2.30	0.820			2.80	0.500		0.200
DH-1a Meas																								
DH-1a Cert																								
TAN-1 Meas				2710																				
TAN-1 Cert				2700																				
NIST 694 Meas																								
NIST 694 Cert																								
DNC-1 Meas										0.9			3.7			5.2		0.56						
DNC-1 Cert										0.96			3.6			5.20		0.59						
GBW 07113 Meas																								
GBW 07113 Cert																								
LKSD-3 Meas			27	76		< 2	2.6		2	1.3	2.3		51.0	91.5		43.3	7.6	1.35			4.7			
LKSD-3 Cert			27.0	78.0		2.00	2.70		3.00	1.30	2.30		52.0	90.0		44.0	8.00	1.50			4.90			
NIST 1633b Meas																								
NIST 1633b Cert																								
OKA-2 Meas																					1500			
OKA-2 Cert																					1480			
W-2a Meas	17	2	< 5	20	7	< 2	< 0.5			0.9	0.9	< 0.4	11.3	24.5		12.3	3.1	1.05		0.6	3.7	0.8	2.3	0.28
W-2a Cert	17.0	1.00	1.20	21.0	7.90	0.600	0.0460			0.790	0.990	0.0300	10.0	23.0		13.0	3.30	1.00		0.630	3.60	0.760	2.50	0.380
SY-4 Meas																								
SY-4 Cert																								
CTA-AC-1 Meas													2160	3330		1110	163	44.4	124	13.0				
CTA-AC-1 Cert													2176	3326		1087	162	46.7	124	13.9				
BIR-1a Meas	16		< 5		< 1					0.8			0.7	2.0		2.4	1.1	0.56	2.0					
BIR-1a Cert	16		0.44		0.6					0.58			0.63	1.9		2.5	1.1	0.55	2.0					
NCS DC86312 Meas													2380	191		1580			227	35.1	184	35.7	96.4	14.4
NCS DC86312 Cert													2360.000	190.000		1600.000			225.0	34.6	183.00	35.70	96.2	15.1
NCS DC70014 Meas	25					270	16.7			180		80.3	45.0	88.0	10.8	39.0	7.8	1.64	7.0	1.0	6.5	1.3	3.6	0.56
NCS DC70014 Cert	25.2					270.000	16.7			180.000		80.3	45.3	87.0	10.8	39.9	8.0	1.8	7.4	1.1	6.7	1.3	3.5	0.57
IGS 40 Meas													20600	32300	2710	8310		86.9						
IGS 40 Cert													20720	32247	2730	8320		86.35						
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas	17	11	69	506			1.9	1.3	1700	3.5	42.6		23.9	61.1	7.64	31.2	12.3		14.0	3.4	20.4	4.2	12.5	2.30
NCS DC70009 (GBW07241) Cert	16.5	11.2	69.9	500.00			1.8	1.3	1701	3.1	41		23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7	4.5	13.4	2.2
OREAS 100a (Fusion) Meas						23							272	444	46.3	148	24.1	3.62	20.6	3.5	22.7	4.9	14.3	2.38
OREAS 100a (Fusion) Cert						24.1							260	463	47.1	152	23.6	3.71	23.6	3.80	23.2	4.81	14.9	2.31
OREAS 101a (Fusion) Meas						20							802	1390	127	401	49.2	7.83		5.5	30.8	6.3	18.6	2.89
OREAS 101a (Fusion) Cert						21.9							816	1396	134	403	48.8	8.06		5.92	33.3	6.46	19.5	2.90
JR-1 Meas	17	3	17	247	13	3	< 0.5	< 0.2	3	1.3	21.0	0.7	20.3	49.2	5.52	22.8	5.8	0.27	5.4	0.9	6.2	1.2	3.9	0.69
JR-1 Cert	16.1	1.88	16.3	257	15.2	3.25	0.031	0.028	2.86	1.19	20.8	0.56	19.7	47.2	5.58	23.3	6.03	0.30	5.06	1.01	5.69	1.11	3.61	0.67
NCS DC86318 Meas													1940	416	715	3330	1670	18.1	2040	468		558	1680	268
NCS DC86318 Cert													1960	430	740	3430	1720	18.91	2095	470		560	1750	270
SARM 3 Meas					975																			
SARM 3 Cert					978																			
USZ 44-2007 Meas																								
USZ 44-2007 Cert																								
KC-10-114 Orig	54	5	21	773	598	< 2		< 0.2	198	1.1	1.1	1.0	720	1520	161	623	129	7.25	119	22.2	155	33.8	105	15.9
KC-10-114 Dup	51	4	21	738	600	2		< 0.2	186	1.0	1.1	1.0	667	1420	150	582	121	6.72	111	20.7	143	31.1	97.2	14.7
KC-10-129 Orig	58	6	46	957	1260	< 2		< 0.2	264	6.1	6.5	1.5	1010	2340	240	893	197	12.5	196	41.0	291	63.8	198	30.2
KC-10-129 Split	41	4	33	948	1460	< 2		< 0.2	271	7.6	6.3	1.8	1020	2410	246	912	208	13.5	202	43.3	303	67.1	205	30.9
KC-10-148 Orig	64	4	56	1330	1230	< 2		< 0.2	280	2.7	3.5	1.1	515	1250	133	487	112	6.70	116	28.3	227	54.9	188	31.1

Quality Control

Analyte Symbol	Ga	Ge	As	Rb	Nb	Mo	Ag	In	Sn	Sb	Cs	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	1	1	5	2	1	2	0.5	0.2	1	0.5	0.5	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.05
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
KC-10-148 Dup	65	4	46	1320	1250	< 2		< 0.2	285	2.8	3.5	1.0	519	1250	132	488	112	6.69	116	28.0	226	54.7	188	31.1
KC-10-163 Orig	60	6	40	1120	1360	< 2		0.2	408	8.5	1.3	1.9	803	1900	225	877	214	12.0	202	42.1	300	65.8	204	29.7
KC-10-163 Dup	61	6	38	1130	1400	< 2		0.3	417	8.6	1.3	1.7	812	1930	227	885	217	12.1	204	42.8	304	66.8	206	30.1
KC-10-180 Orig	54	4	41	957	2360	< 2		< 0.2	249	1.8	1.1	1.1	550	1340	138	477	110	6.97	115	30.0	248	61.4	214	35.1
KC-10-180 Dup	55	4	35	969	2310	< 2		< 0.2	255	2.1	1.1	0.9	554	1340	137	476	109	7.01	113	29.5	244	60.7	212	34.7
KC-10-191 Orig	58	4	23	900	833	< 2		< 0.2	203	2.6	1.8	1.4	548	1230	138	545	127	7.37	124	25.7	184	42.6	138	21.2
KC-10-191 Dup	58	4	21	911	888	< 2		< 0.2	208	3.1	1.8	1.2	551	1240	138	541	126	7.26	122	25.8	184	42.9	141	21.5
AK-10-102A Orig	48	6	13	214	10800	< 2		0.4	704	3.1	0.9	< 0.4	1770	4450	410	1400	465	33.2	661	202	1650	413	1340	204
AK-10-102A Split	50	6	12	219	10800	< 2		0.4	713	3.1	0.9	< 0.4	1780	4490	415	1400	470	33.9	669	204	1650	415	1360	206
AK-10-163 Orig	92	6	10	194	10600	< 2	< 0.5	< 0.2	29	1.1	7.9	< 0.4	1670	3380	373	1320	246	22.5	148	14.4	59.2	8.1	18.0	2.22
AK-10-163 Dup	93	6	10	193	11100	< 2	< 0.5	< 0.2	29	1.1	7.8	< 0.4	1620	3280	360	1260	234	21.4	139	13.7	56.8	7.7	17.5	2.14
AK-10-087B Orig	28	5	6	20	2920	< 2		< 0.2	245	< 0.5	< 0.5	< 0.4	2180	5120	526	1950	300	15.9	219	49.0	419	120	450	75.7
AK-10-087B Split	28	4	6	18	2880	< 2		< 0.2	235	< 0.5	< 0.5	< 0.4	2170	5150	529	1970	302	15.8	225	51.1	431	123	461	78.3
Method Blank Method Blank	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05

Quality Control

Analyte Symbol	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
WMG-1 Meas	1.4	0.19	1.4	0.4	2		20	1.3	
WMG-1 Cert	1.30	0.210	1.30	0.500	1.30		15.0	1.10	
DH-1a Meas								915	
DH-1a Cert								910	
TAN-1 Meas				2350					
TAN-1 Cert				2360					
NIST 694 Meas									
NIST 694 Cert									
DNC-1 Meas	1.9								
DNC-1 Cert	2.0								
GBW 07113 Meas									
GBW 07113 Cert									
LKSD-3 Meas	2.6	0.39	4.7	0.7			33	10.6	4.5
LKSD-3 Cert	2.70	0.400	4.80	0.700			29.0	11.4	4.60
NIST 1633b Meas									
NIST 1633b Cert									
OKA-2 Meas								28600	
OKA-2 Cert								28900	
W-2a Meas	2.0	0.28	2.3	0.5		< 0.1	10	2.2	0.5
W-2a Cert	2.10	0.330	2.60	0.500		0.200	9.30	2.40	0.530
SY-4 Meas									
SY-4 Cert									
CTA-AC-1 Meas	10.7	1.18		2.7				22.8	4.2
CTA-AC-1 Cert	11.4	1.08		2.65				21.8	4.4
BIR-1a Meas	1.7	0.28	0.6						
BIR-1a Cert	1.7	0.3	0.60						
NCS DC86312 Meas	87.6	12.1						25.6	
NCS DC86312 Cert	87.79	11.96						23.6	
NCS DC70014 Meas	3.6	0.51					27200		
NCS DC70014 Cert	3.3	0.50					27200.00		
IGS 40 Meas									
IGS 40 Cert									
NCS DC86316 Meas			712						
NCS DC86316 Cert			712						
NCS DC70009 (GBW07241) Meas	15.9	2.25			2200	2.1		27.9	
NCS DC70009 (GBW07241) Cert	14.9	2.4			2200.00	1.8		28.3	
OREAS 100a (Fusion) Meas	15.3	2.15						51.5	143
OREAS 100a (Fusion) Cert	14.9	2.26						51.6	135
OREAS 101a (Fusion) Meas	17.9	2.44						35.0	419
OREAS 101a (Fusion) Cert	17.5	2.66						36.6	422
JR-1 Meas	4.7	0.69	4.5	1.9		1.5	21	27.1	9.5
JR-1 Cert	4.55	0.71	4.51	1.86		1.56	19.3	26.7	8.88
NCS DC86318 Meas	1740	265							
NCS DC86318 Cert	1840	260.0							
SARM 3 Meas									
SARM 3 Cert									
USZ 44-2007 Meas									
USZ 44-2007 Cert									
KC-10-114 Orig	105	16.3	271	43.0	2	2.0	176	164	32.2
KC-10-114 Dup	96.6	15.2	252	40.4	2	1.9	158	151	29.9
KC-10-129 Orig	197	30.1	395	106	3	1.7	438	356	46.5
KC-10-129 Split	203	31.2	419	106	2	1.9	485	350	48.0
KC-10-148 Orig	216	33.9	445	89.3	2	2.3	566	237	57.8

Quality Control

Analyte Symbol	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
KC-10-148 Dup	213	33.7	443	89.7	2	2.2	553	238	58.0
KC-10-163 Orig	193	28.7	464	89.3	3	1.8	248	219	60.7
KC-10-163 Dup	193	29.0	474	91.4	3	1.8	252	222	61.7
KC-10-180 Orig	239	37.4	418	161	3	1.7	279	356	56.0
KC-10-180 Dup	242	37.8	427	161	3	1.7	273	361	56.2
KC-10-191 Orig	142	21.8	268	46.3	2	2.6	960	211	38.0
KC-10-191 Dup	143	22.1	273	46.9	2	2.6	938	216	39.0
AK-10-102A Orig	1210	163	401	711	11	0.8	1460	1570	253
AK-10-102A Split	1230	165	405	733	10	0.8	1450	1600	259
AK-10-163 Orig	13.3	1.90	5.6	407	5	2.9	55	356	28.8
AK-10-163 Dup	12.6	1.81	5.0	393	4	2.9	50	348	28.1
AK-10-087B Orig	515	78.5	676	317	18	< 0.1	188	2310	299
AK-10-087B Split	535	81.6	705	325	19	< 0.1	193	2430	313
Method Blank Method Blank	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1

Quality Analysis ... *Innovative Technologies*

Date Submitted: 01-Feb-12
Invoice No.: A12-00805
Invoice Date: 20-Feb-12
Your Reference:

Government of Newfoundland
Dept of Mines and Energy
Howley Building, Higgins Line
St. Johns NF A1B 4J6
Canada

ATTN: Seinor Geologist Andrew Kerr

CERTIFICATE OF ANALYSIS

50 Rock samples were submitted for analysis.

The following analytical package was requested: Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)

REPORT **A12-00805**

Notes:
Total includes all elements in % oxide to the left of total.

Footnote: Zr interference on Ag.

CERTIFIED BY :

Elitsa Hrischeva, Ph.D.
Quality Control

ISO/IEC 17025
SCC Accredited
LAB 266
LAB 266
Accrédité CCN

ACTIVATION LABORATORIES LTD.

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Analyte Symbol	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5	2
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
KC-11-500	70.25	9.04	5.12	0.192	0.26	2.13	4.12	3.81	0.537	0.05	0.74	96.25	< 1	288	< 5	< 20	< 1	< 20	10	1340	59	7	37	699
KC-11-501	67.24	8.34	4.84	0.171	0.59	2.92	2.88	4.10	0.568	0.09	1.34	93.08	< 1	164	5	< 20	< 1	< 20	20	1000	60	5	50	665
KC-11-502	67.40	6.27	3.00	0.154	0.47	5.30	1.00	5.07	1.389	0.14	1.99	92.18	< 1	339	8	< 20	< 1	< 20	10	920	67	8	58	1030
KC-11-503	70.98	8.36	5.22	0.161	0.58	2.08	2.88	4.16	0.635	0.06	1.46	96.57	< 1	239	5	< 20	< 1	< 20	< 10	990	65	6	94	808
KC-11-504	70.03	8.23	5.04	0.156	0.56	1.99	2.82	4.06	0.609	0.05	1.47	95.03	< 1	249	< 5	< 20	< 1	< 20	< 10	960	65	6	89	798
KC-11-505	70.41	8.44	4.92	0.167	0.63	1.80	2.64	4.53	0.409	0.02	1.24	95.20	< 1	235	< 5	< 20	< 1	< 20	< 10	1110	69	6	61	1150
KC-11-506	72.86	7.56	4.87	0.156	1.03	1.75	2.23	3.85	0.320	0.03	1.54	96.19	< 1	225	< 5	< 20	< 1	< 20	< 10	1370	60	6	70	1060
KC-11-507	70.87	8.88	4.03	0.107	0.42	0.91	3.75	4.38	0.407	0.04	1.42	95.21	< 1	253	8	< 20	< 1	< 20	< 10	1090	63	6	42	1180
KC-11-508	67.43	5.78	5.16	0.216	0.36	3.66	2.09	3.65	1.341	0.08	1.10	90.86	< 1	234	6	< 20	< 1	< 20	10	1320	56	8	84	1000
KC-11-509	67.15	6.12	5.05	0.186	0.38	3.95	2.58	2.82	1.423	0.06	1.23	90.94	< 1	433	6	< 20	< 1	< 20	< 10	1480	62	9	76	737
KC-11-510	70.96	6.77	4.30	0.150	0.17	3.31	3.91	1.33	1.142	0.05	0.92	93.02	< 1	367	8	< 20	< 1	< 20	< 10	1010	60	6	65	321
KC-11-511	69.55	8.06	5.13	0.159	0.46	2.13	3.22	3.69	0.542	0.07	1.05	94.05	< 1	292	7	< 20	< 1	< 20	< 10	1050	64	7	20	719
KC-11-512	71.00	8.55	5.35	0.158	0.22	1.33	3.70	3.98	0.349	0.02	0.62	95.27	< 1	177	< 5	< 20	< 1	< 20	10	1160	66	6	33	870
KC-11-513	68.21	11.06	4.05	0.108	0.29	1.52	3.35	5.80	0.420	0.05	1.28	96.15	< 1	145	< 5	< 20	< 1	< 20	< 10	800	75	5	35	1320
KC-11-514	68.05	9.49	3.59	0.113	0.58	2.37	2.36	5.36	0.643	0.05	1.51	94.10	< 1	204	8	< 20	< 1	< 20	10	870	75	6	106	1470
KC-11-515	68.31	8.99	4.16	0.146	0.33	0.58	4.99	3.90	0.358	0.08	1.81	93.66	< 1	144	< 5	< 20	< 1	< 20	< 10	1290	68	6	21	1010
KC-11-516	70.16	8.66	5.15	0.158	0.39	2.10	2.71	4.62	0.657	0.03	1.36	95.99	< 1	168	6	< 20	< 1	< 20	< 10	960	62	6	59	981
KC-11-517	69.29	9.40	4.76	0.140	0.27	2.12	3.36	4.75	0.274	0.03	0.76	95.16	< 1	145	7	< 20	< 1	< 20	20	1020	64	5	21	1090
KC-11-518	72.22	9.58	5.20	0.125	0.21	1.13	4.11	3.98	0.259	0.01	0.51	97.34	< 1	158	< 5	< 20	< 1	< 20	30	970	77	6	15	909
KC-11-519	71.08	8.59	5.08	0.124	0.26	1.32	3.22	4.49	0.250	0.02	0.57	95.01	< 1	137	7	< 20	< 1	< 20	< 10	940	65	6	11	908
KC-11-520	69.93	10.00	4.75	0.141	0.33	1.65	4.10	4.20	0.424	0.03	0.87	96.42	< 1	182	< 5	< 20	< 1	< 20	< 10	1240	65	6	27	1210
KC-11-521	65.96	5.06	6.33	0.111	0.67	4.27	1.25	3.86	0.296	0.16	2.83	90.79	< 1	3099	< 5	< 20	< 1	< 20	290	2180	73	11	603	2260
KC-11-522	69.89	11.04	4.69	0.112	0.29	1.15	4.46	4.79	0.303	0.03	0.76	97.51	< 1	79	< 5	< 20	< 1	< 20	20	680	50	4	24	904
KC-11-523	70.20	10.71	4.70	0.129	0.32	1.33	4.23	4.58	0.339	0.03	0.83	97.41	< 1	127	< 5	< 20	< 1	< 20	20	930	57	5	33	914
KC-11-524	69.70	8.23	5.21	0.172	0.29	2.18	3.56	3.58	0.468	0.04	0.74	94.18	< 1	151	< 5	< 20	< 1	< 20	10	1250	68	7	58	830
KC-11-525	67.86	7.64	5.48	0.107	0.52	3.12	1.89	4.69	0.366	0.04	2.07	93.79	< 1	283	6	< 20	< 1	< 20	< 10	860	63	8	25	1160
KC-11-526	72.61	5.11	2.30	0.061	0.36	4.91	0.31	4.09	0.726	0.02	1.99	92.48	< 1	521	5	< 20	< 1	< 20	< 10	390	43	5	41	1400
KC-11-527	69.60	10.04	4.46	0.132	0.22	1.49	3.83	5.13	0.303	0.03	0.79	96.03	< 1	158	< 5	< 20	< 1	< 20	30	1000	56	6	12	989
KC-11-528	69.06	9.78	4.50	0.117	0.36	1.86	3.42	4.99	0.218	0.01	0.85	95.17	< 1	103	< 5	< 20	< 1	< 20	30	990	59	5	18	1070
KC-11-529	70.00	11.29	4.68	0.108	0.11	0.91	4.99	4.99	0.292	< 0.01	0.88	98.26	< 1	32	< 5	< 20	< 1	< 20	< 10	580	47	4	32	1020
KC-11-530	71.21	11.55	4.73	0.110	0.11	0.94	5.13	5.16	0.302	< 0.01	0.91	100.2	< 1	37	< 5	< 20	< 1	< 20	< 10	620	50	4	32	1030
KC-11-531	71.99	8.64	4.96	0.133	0.14	0.55	4.17	3.95	0.338	0.02	1.15	96.04	< 1	134	< 5	< 20	< 1	< 20	20	1080	68	6	34	1090
KC-11-532	73.02	9.50	4.73	0.113	0.28	0.57	4.11	4.11	0.218	< 0.01	1.10	97.75	< 1	134	< 5	< 20	< 1	< 20	< 10	960	69	6	24	1070
KC-11-533	69.90	9.50	3.81	0.105	0.44	0.77	3.81	4.44	0.422	0.03	1.35	94.57	< 1	149	< 5	< 20	< 1	< 20	10	950	67	5	18	1400
KC-11-534	71.12	8.70	5.00	0.146	0.63	1.96	3.35	3.99	0.435	0.03	0.97	96.33	< 1	208	< 5	< 20	< 1	< 20	20	1120	65	6	32	851
KC-11-535	71.67	8.57	4.92	0.147	0.62	1.92	3.43	3.98	0.431	0.03	0.94	96.65	< 1	201	< 5	< 20	< 1	< 20	20	1150	62	6	35	814
KC-11-536	73.04	10.04	3.68	0.115	0.35	1.36	2.72	5.19	0.391	0.01	0.79	97.69	< 1	170	< 5	< 20	< 1	< 20	10	790	65	4	29	1280
KC-11-537	72.07	8.71	4.46	0.159	0.62	1.85	2.57	4.42	0.396	0.04	1.41	96.69	< 1	260	5	< 20	< 1	< 20	20	950	68	7	81	1170
KC-11-538	71.00	7.94	4.54	0.141	0.80	1.89	2.44	3.83	0.451	0.02	1.27	94.34	< 1	297	< 5	< 20	< 1	< 20	30	980	66	7	56	1100
KC-11-539	70.64	9.75	4.33	0.150	0.17	1.96	3.86	3.98	0.327	< 0.01	0.65	95.81	< 1	370	< 5	< 20	< 1	< 20	20	1350	63	5	25	887
KC-11-540	68.18	6.64	6.14	0.227	0.28	3.96	3.52	2.13	1.227	0.04	1.02	93.35	< 1	432	< 5	< 20	< 1	< 20	10	1650	60	7	83	520
KC-11-541	65.23	7.30	4.20	0.174	0.62	5.41	3.11	3.04	0.862	0.07	1.72	91.74	< 1	647	< 5	< 20	< 1	< 20	20	1710	76	8	23	607
KC-11-542	70.84	8.53	4.44	0.137	0.48	2.20	2.83	4.66	0.393	0.04	0.89	95.45	< 1	260	8	< 20	< 1	< 20	< 10	1180	69	6	60	1210
KC-11-543	70.19	8.67	3.30	0.106	0.53	2.53	2.52	5.05	0.457	0.03	0.96	94.34	< 1	337	7	< 20	< 1	< 20	< 10	1020	64	5	58	1320
KC-11-544	68.98	9.81	3.70	0.114	1.09	1.43	3.42	4.10	0.321	0.05	1.47	94.48	< 1	176	6	< 20	< 1	< 20	< 10	1280	69	5	26	1090
KC-11-545	67.13	7.34	4.75	0.180	1.11	3.05	2.26	3.75	1.226	0.13	1.92	92.85	< 1	205	< 5	< 20	< 1	< 20	10	1960	69	8	29	943
KC-11-546	71.85	8.08	4.99	0.148	0.78	1.44	3.62	3.76	0.490	0.07	1.37	96.61	< 1	291	8	< 20	< 1	< 20	< 10	1690	62	6	42	1180
KC-11-547	71.90	8.36	4.35	0.139	0.27	1.85	2.80	4.03	0.403	0.04	0.67	94.82	< 1	241	< 5	< 20	< 1	< 20	< 10	1070	63	7	162	1060
KC-11-548	72.18	6.94	4.20	0.124	0.26	2.51	2.26	3.87	0.388	0.02	0.73	93.48	< 1	182	7	< 20	< 1	< 20	< 10	980	54	6	26	1070
KC-11-549	71.21	7.12	5.03	0.155	0.29	2.48	2.65	3.97	0.427	0.02	0.62	93.98	< 1	200	5	< 20	< 1	< 20	< 10	1110	54	6	33	1080

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	4	1	2		0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.05
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
KC-11-500	125	2271	12310	2230	< 2		0.3	342	4.4	1.4	100	1.5	756	1770	203	675	192	12.2	199	48.6	348	76.1	246	41.9
KC-11-501	101	2706	23840	2090	< 2		0.2	254	1.8	2.5	109	2.0	507	1070	105	330	112	8.16	164	49.5	402	97.8	325	58.0
KC-11-502	182	3094	28860	2800	< 2		0.4	545	2.6	6.8	115	0.5	1660	3230	288	798	163	10.2	169	45.1	383	105	415	85.6
KC-11-503	74	2248	19280	1620	< 2		0.3	323	1.8	1.0	63	3.1	738	1600	179	585	158	9.82	176	47.4	366	84.1	280	48.1
KC-11-504	70	2301	18350	1520	< 2		0.3	310	1.4	1.0	61	3.0	730	1590	177	580	161	10.2	188	49.6	378	86.6	283	48.5
KC-11-505	65	1717	17100	1420	< 2		0.3	322	1.7	3.2	100	3.4	699	1550	179	603	161	9.61	170	41.1	298	65.3	208	34.7
KC-11-506	56	1371	16760	1160	< 2		0.3	359	2.2	1.1	55	3.6	729	1650	191	640	157	9.06	152	33.5	229	48.4	148	23.6
KC-11-507	53	1791	20180	1670	< 2		0.3	402	4.6	2.0	41	2.5	564	1290	142	474	142	9.74	167	39.7	276	60.0	193	33.0
KC-11-508	115	3866	33300	4210	3		0.5	627	6.1	1.2	183	0.6	980	2140	206	594	162	11.8	220	69.8	603	154	571	110
KC-11-509	125	5225	31060	3820	< 2		0.5	582	3.8	0.7	101	0.9	876	2190	232	774	259	16.0	347	101	785	183	617	110
KC-11-510	66	3316	27000	3450	< 2		0.3	373	3.5	0.8	64	0.9	708	1680	176	546	161	11.6	221	66.9	534	125	413	71.0
KC-11-511	90	3416	18350	1780	< 2		0.3	416	2.2	1.1	119	2.4	910	1970	214	720	205	12.2	257	68.2	537	126	416	71.9
KC-11-512	55	1288	10660	1040	< 2		0.2	235	1.7	1.3	56	3.6	730	1630	191	653	160	9.14	152	33.7	234	50.4	160	26.8
KC-11-513	46	1567	12170	1470	< 2		0.2	268	2.1	3.1	71	0.5	441	1040	101	322	100	6.46	123	33.4	251	56.9	190	34.3
KC-11-514	60	2662	19700	2070	2		0.3	348	1.9	2.1	85	1.6	764	1760	196	642	187	11.7	211	57.0	433	101	333	56.3
KC-11-515	40	1485	21520	2620	< 2		0.2	232	0.9	6.2	40	2.3	623	1390	135	402	93.6	5.77	106	26.2	198	49.5	172	31.9
KC-11-516	52	2360	17830	1410	< 2		0.3	322	3.3	3.9	140	1.4	502	1340	144	503	168	11.7	207	52.9	370	82.2	262	44.9
KC-11-517	41	1382	22610	1370	< 2		0.2	196	2.2	1.2	63	1.9	373	843	87.5	270	77.5	5.17	97.9	26.4	209	49.1	168	31.0
KC-11-518	67	1085	9357	659	3		0.2	259	1.6	1.2	41	6.6	673	1450	176	640	157	8.19	151	28.9	189	39.0	117	18.8
KC-11-519	85	1096	15390	560	< 2		0.2	202	1.5	2.1	48	5.9	751	1660	186	665	153	8.80	149	27.9	178	36.5	112	18.0
KC-11-520	65	1386	8656	2560	< 2		0.2	207	1.3	2.9	60	2.2	655	1600	185	609	157	9.29	159	33.7	230	48.3	146	23.3
KC-11-521	89	8202	17880	1530	< 2		0.4	540	58.2	79.8	298	0.9	1560	3920	461	1600	563	35.3	652	189	1430	306	884	112
KC-11-522	36	737	5436	575	3		0.2	158	1.0	1.1	61	1.6	367	831	96.6	337	83.6	5.11	83.0	18.9	134	29.7	98.4	16.9
KC-11-523	53	1099	8021	749	< 2		0.2	208	2.0	1.4	58	2.3	500	1200	140	496	128	7.64	126	27.1	189	41.4	130	21.9
KC-11-524	62	1352	19100	959	< 2		0.2	255	2.5	1.0	39	2.2	866	1980	230	795	192	9.92	173	34.5	231	50.1	165	29.3
KC-11-525	102	1946	26670	1320	< 2		0.3	370	2.6	7.3	105	2.3	730	1700	193	655	173	10.1	173	40.3	285	63.9	212	38.4
KC-11-526	85	2821	37510	1270	2		0.5	689	5.7	2.6	81	2.2	356	912	111	423	174	13.2	220	58.5	445	101	344	62.8
KC-11-527	52	1016	8866	912	< 2		0.3	346	1.2	1.6	65	1.7	659	1530	172	598	154	9.09	133	26.5	168	34.4	105	17.1
KC-11-528	47	948	16850	627	< 2		0.2	209	1.0	2.0	59	4.6	553	1280	152	525	128	7.51	118	23.6	162	34.9	110	18.7
KC-11-529	35	602	4674	484	2		< 0.2	118	< 0.5	3.6	76	1.9	319	722	85.3	297	71.3	4.29	70.1	15.3	107	23.7	75.6	12.6
KC-11-530	36	649	4832	487	3		< 0.2	121	< 0.5	3.6	81	2.4	346	775	90.7	313	77.5	4.57	75.4	16.4	116	25.0	80.0	13.2
KC-11-531	47	1185	12690	915	< 2		0.3	300	0.8	1.6	20	4.1	641	1440	167	581	138	8.07	130	28.0	198	43.8	143	24.0
KC-11-532	34	1023	12340	707	< 2		0.2	182	0.8	1.5	36	4.3	592	1250	148	523	125	6.95	120	24.9	171	36.5	115	19.2
KC-11-533	37	1357	20540	1300	< 2		0.2	250	2.5	10.1	63	2.3	352	827	90.7	294	82.5	5.52	96.6	26.6	207	49.8	170	31.2
KC-11-534	107	1547	16450	1160	< 2		0.2	282	0.6	1.5	67	3.9	779	1670	196	683	173	10.2	168	36.3	257	57.0	182	30.9
KC-11-535	106	1491	15470	1150	< 2		0.2	271	0.9	1.4	66	4.3	767	1650	191	663	166	9.67	161	35.0	243	52.2	168	29.5
KC-11-536	44	1619	18110	1190	< 2		0.2	273	1.4	1.2	52	1.7	322	806	89.7	299	90.1	5.87	106	30.2	248	61.0	211	37.7
KC-11-537	56	2071	17980	1590	< 2		0.3	384	3.0	1.4	92	3.4	704	1650	200	700	202	12.2	206	48.2	347	75.7	242	40.6
KC-11-538	48	2673	17370	1690	< 2		0.3	377	3.1	1.2	77	3.6	696	1640	201	718	214	13.4	240	62.0	459	104	329	54.2
KC-11-539	64	1485	9980	1280	< 2		0.2	241	1.7	1.0	113	4.3	592	1350	157	529	143	9.86	150	34.7	244	54.4	181	32.7
KC-11-540	141	2658	24030	2770	< 2		0.4	510	0.9	1.3	150	1.2	645	1540	168	525	148	10.5	178	49.5	392	95.5	340	62.5
KC-11-541	431	6224	21930	6130	< 2		0.5	625	4.2	1.5	161	< 0.4	973	2330	245	755	266	20.2	379	120	970	230	797	131
KC-11-542	43	1926	19170	1440	< 2		0.3	315	2.0	1.7	50	3.7	635	1470	174	599	171	10.6	180	43.8	318	70.0	225	37.6
KC-11-543	54	1753	23070	1250	< 2		0.3	441	3.6	2.5	65	2.6	467	1280	145	506	149	10.1	166	38.8	294	66.0	221	36.2
KC-11-544	50	2043	16860	1020	< 2		0.2	291	3.1	1.9	86	2.3	463	1130	123	421	109	6.98	133	37.8	302	72.3	239	37.9
KC-11-545	93	2602	25620	4330	< 2		0.3	408	5.7	2.0	173	1.0	1080	2380	233	685	158	9.68	177	45.9	361	91.1	340	66.4
KC-11-546	54	2358	18490	1790	< 2		0.3	477	5.5	16.3	78	4.0	626	1580	162	536	150	10.1	181	46.5	372	87.9	303	49.1
KC-11-547	40	1781	20380	2390	< 2		0.3	327	2.1	2.0	60	3.9	682	1650	178	599	153	9.09	158	37.7	271	60.7	204	36.0
KC-11-548	47	1376	24340	1130	< 2		0.2	301	2.4	1.7	47	3.3	645	1480	166	575	145	8.15	144	31.2	215	47.3	159	27.7
KC-11-549	40	1441	23990	1150	3		0.3	420	3.8	2.5	44	4.6	568	1430	158	547	139	8.29	142	31.4	236	54.7	190	31.8

Analyte Symbol	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Nb2O5
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
Detection Limit	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	0.003
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-XRF
KC-11-500	278	39.6	293	121	3	2.2	1210	363	62.4	
KC-11-501	378	54.6	577	117	5	2.3	403	578	50.1	
KC-11-502	629	97.7	607	282	7	3.8	1390	493	104	
KC-11-503	325	45.4	523	111	3	2.6	432	306	74.2	
KC-11-504	318	45.3	506	111	3	2.5	405	331	75.5	
KC-11-505	231	32.6	491	92.9	2	2.8	457	333	62.4	
KC-11-506	153	21.6	484	72.1	2	2.2	448	237	55.0	
KC-11-507	208	28.8	482	105	3	2.2	311	353	60.9	
KC-11-508	797	122	809	315	7	2.4	1080	396	130	
KC-11-509	719	102	719	276	9	1.6	3240	570	94.1	0.573
KC-11-510	481	71.4	735	239	5	3.6	1170	379	80.3	
KC-11-511	452	62.4	448	129	6	2.3	696	416	79.5	
KC-11-512	179	25.4	316	68.1	2	2.7	351	225	43.8	
KC-11-513	228	33.8	301	101	3	2.5	177	393	43.7	
KC-11-514	379	55.5	539	139	3	2.3	205	487	75.7	
KC-11-515	210	32.0	567	187	3	3.0	324	222	46.9	
KC-11-516	282	41.5	472	92.3	4	2.5	235	390	52.4	
KC-11-517	205	30.2	600	91.5	3	2.2	221	280	39.9	
KC-11-518	120	17.1	300	43.5	2	3.3	360	168	30.5	
KC-11-519	114	16.0	427	45.5	1	2.8	279	133	29.5	
KC-11-520	153	22.3	255	170	3	3.2	227	223	65.1	
KC-11-521	564	66.3	532	101	9	12.0	2470	1460	99.9	
KC-11-522	115	15.8	171	31.8	2	3.1	217	215	30.0	
KC-11-523	147	20.6	236	48.9	2	2.9	259	220	37.5	
KC-11-524	215	33.2	571	58.7	2	2.2	296	253	41.1	
KC-11-525	257	38.4	679	85.6	3	2.1	300	243	41.8	
KC-11-526	429	70.7	1030	102	4	2.1	405	337	91.6	
KC-11-527	107	14.8	243	48.7	2	3.3	470	185	51.9	
KC-11-528	127	18.5	520	42.5	2	3.6	283	158	51.7	
KC-11-529	85.0	12.2	143	30.0	2	7.0	511	80.0	25.5	
KC-11-530	88.8	12.7	147	32.1	2	7.4	573	92.8	26.8	
KC-11-531	161	23.4	376	64.3	1	3.2	794	191	51.9	
KC-11-532	127	18.2	364	48.6	1	3.0	263	165	45.0	
KC-11-533	223	33.7	581	89.0	2	3.8	437	251	47.0	
KC-11-534	214	31.4	467	72.1	2	2.6	593	209	46.5	
KC-11-535	202	30.2	442	70.6	2	2.7	610	225	44.3	
KC-11-536	257	36.8	512	75.7	3	2.5	337	284	56.2	
KC-11-537	263	37.2	503	96.7	2	2.2	255	523	73.0	
KC-11-538	352	47.9	508	110	3	1.9	671	574	85.9	
KC-11-539	233	34.8	275	82.0	2	2.7	1760	295	56.4	
KC-11-540	453	70.3	670	194	4	1.5	767	747	94.6	
KC-11-541	852	117	527	390	9	1.9	649	1050	163	0.904
KC-11-542	248	35.9	558	90.8	2	1.9	229	383	54.4	
KC-11-543	239	35.5	628	87.1	3	2.1	306	307	66.7	
KC-11-544	239	34.9	432	72.8	3	2.2	387	359	63.6	
KC-11-545	487	76.2	574	312	5	2.4	446	307	86.0	0.643
KC-11-546	304	43.1	497	129	4	2.8	391	436	74.5	
KC-11-547	229	33.4	507	162	3	1.7	280	260	57.3	
KC-11-548	196	29.7	644	82.8	1	1.6	229	132	41.3	
KC-11-549	216	33.4	682	73.4	2	1.8	317	157	55.4	

Quality Control																								
Analyte Symbol	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5	2
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
TAN-1 Meas																								
TAN-1 Cert																								
NIST 694 Meas	11.35	1.87	0.74	0.013	0.36	43.73	0.86	0.55	0.119	30.26					1672									
NIST 694 Cert	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740									
DNC-1 Meas	46.99	18.31	9.76	0.147	10.25	11.24	1.91	0.23	0.483	0.06			31		153	270	58	250	100	70				
DNC-1 Cert	47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148.0	270.000	57.0	247.000	100.0	70.0				
GBW 07113 Meas	70.79	12.48	3.28	0.152	0.15	0.57	2.42	5.41	0.282	0.04			5	4	6									
GBW 07113 Cert	72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00									
LKSD-3 Meas																70	31	50	30				30	73
LKSD-3 Cert																87.0	30.0	47.0	35.0				27.0	78.0
OKA-2 Meas																								
OKA-2 Cert																								
OKA-1 Meas																								
OKA-1 Cert																								
W-2a Meas	52.73	15.64	10.81	0.169	6.55	11.01	2.24	0.63	1.105	0.13			36	< 1	280	80	42	70	100	80	16		< 5	19
W-2a Cert	52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262	92.0	43.0	70.0	110	80.0	17.0		1.20	21.0
SY-4 Meas	49.63	20.42	6.15	0.108	0.52	8.06	6.96	1.70	0.289	0.13			1	3	6									
SY-4 Cert	49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0									
CTA-AC-1 Meas																			60	< 30				
CTA-AC-1 Cert																			54.0	38.0				
BIR-1a Meas	47.71	15.42	11.05	0.170	9.69	13.02	1.82	0.02	0.962	0.01			43	< 1	334	380	53	160	130	70	15		< 5	
BIR-1a Cert	47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	70	16		0.44	
NCS DC86312 Meas																								
NCS DC86312 Cert																								
ZW-C Meas																				1050	99			
ZW-C Cert																				1050	99			
VS-N Meas																								
VS-N Cert																								
NCS DC70014 Meas																	25	70	2600	7400	25			
NCS DC70014 Cert																	26.2	70.9	2600.00	7400.00	25.2			
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas																30	3	< 20	960	90	16	11	69	502
NCS DC70009 (GBW07241) Cert																30	3.7	2.8	960.000	100.000	16.5	11.2	69.9	500.00
OREAS 100a (Fusion) Meas																	17		170					
OREAS 100a (Fusion) Cert																	18.1		169					
OREAS 101a (Fusion) Meas																	47		430					
OREAS 101a (Fusion) Cert																	48.8		434					
JR-1 Meas																< 20	< 1	< 20	< 10	< 30	16		17	248
JR-1 Cert																2.83	0.83	1.67	2.68	30.6	16.1		16.3	257
NCS DC86318 Meas																								
NCS DC86318 Cert																								
SX18-01 Meas																								
SX18-01 Cert																								
SX18-04 Meas																								
SX18-04 Cert																								
SX18-05 Meas																								
SX18-05 Cert																								
SARM 3 Meas																								
SARM 3 Cert																								
USZ 44-2007 Meas																								

Quality Control

Analyte Symbol	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5	2
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
USZ 44-2007 Cert																								
DMMAS 111 Meas																							1450	
DMMAS 111 Cert																							1450	
USZ 42-2006 Meas																								
USZ 42-2006 Cert																								
KC-11-514 Dup	68.05	9.49	3.59	0.113	0.58	2.37	2.36	5.36	0.643	0.05	1.51	94.10	< 1	204	8	< 20	< 1	< 20	10	870	75	6	106	1470
KC-11-529 Orig	70.00	11.29	4.68	0.108	0.11	0.91	4.99	4.99	0.292	< 0.01	0.88	98.26	< 1	32	< 5	< 20	< 1	< 20	< 10	580	47	4	32	1020
KC-11-529 Split	69.11	11.19	4.60	0.106	0.11	0.90	4.95	4.93	0.290	0.01	0.71	96.90	< 1	33	< 5	< 20	< 1	< 20	< 10	590	47	4	23	939
KC-11-531 Dup	71.99	8.64	4.96	0.133	0.14	0.55	4.17	3.95	0.338	0.02	1.15	96.04	< 1	134	< 5	< 20	< 1	< 20	20	1080	68	6	34	1090
KC-11-542 Orig	70.69	8.52	4.44	0.136	0.49	2.19	2.85	4.68	0.395	0.03	0.89	95.30	< 1	261	7	< 20	< 1	< 20	< 10	1170	69	6	56	1220
KC-11-542 Dup	70.99	8.55	4.45	0.137	0.48	2.21	2.81	4.65	0.391	0.05	0.89	95.60	< 1	259	9	< 20	< 1	< 20	10	1190	69	6	64	1210
KC-11-549 Orig	71.21	7.12	5.03	0.155	0.29	2.48	2.65	3.97	0.427	0.02	0.62	93.98	< 1	200	5	< 20	< 1	< 20	< 10	1110	54	6	33	1080
KC-11-549 Split	71.49	7.09	5.03	0.153	0.30	2.44	2.77	4.09	0.431	0.03	0.59	94.42	< 1	195	< 5	< 20	< 1	< 20	10	1170	55	6	34	1100
KC-11-549 Split	71.49	7.09	5.03	0.153	0.30	2.44	2.77	4.09	0.431	0.03	0.59	94.42	< 1	195	< 5	< 20	< 1	< 20	10	1170	55	6	34	1100
Method Blank																< 20	< 1	< 20	< 10	< 30	< 1	< 1	< 5	< 2
Method Blank																								

Quality Control																								
Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.05
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
TAN-1 Meas																								
TAN-1 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
DNC-1 Meas	141	16	36						0.9		107		3.5			4.7		0.58						
DNC-1 Cert	144.0	18.0	38						0.96		118		3.6			5.20		0.59						
GBW 07113 Meas	39	44	388								499													
GBW 07113 Cert	43.0	43.0	403								506													
LKSD-3 Meas					< 2	0.9		2	0.9	2.3				88.1		42.6	8.0	1.43			4.8			
LKSD-3 Cert					2.00	2.70		3.00	1.30	2.30				90.0		44.0	8.00	1.50			4.90			
OKA-2 Meas																								
OKA-2 Cert																								
OKA-1 Meas																								
OKA-1 Cert																								
W-2a Meas	196	20	88	8	< 2	0.6			0.8	0.9	178	< 0.4	10.1	23.1		12.8	3.2	1.00		0.6	3.6	0.8		
W-2a Cert	190	24.0	94.0	7.90	0.600	0.0460			0.790	0.990	182	0.0300	10.0	23.0		13.0	3.30	1.00		0.630	3.60	0.760		
SY-4 Meas	1211	118	538								348													
SY-4 Cert	1191	119	517								340													
CTA-AC-1 Meas													2240	3360		1150	167	45.5	134	14.8				
CTA-AC-1 Cert													2176	3326		1087	162	46.7	124	13.9				
BIR-1a Meas	105	14	16	< 1					0.6		7			1.9		2.3	1.1	0.50	1.8					
BIR-1a Cert	110	16	18	0.6					0.58		6			1.9		2.5	1.1	0.55	2.0					
NCS DC86312 Meas													2320	175		1560			221	34.3	184	35.6	96.2	14.2
NCS DC86312 Cert													2360.000	190.000		1600.000			225.0	34.6	183.00	35.70	96.2	15.1
ZW-C Meas				199				1320		263														
ZW-C Cert				198				1300		260														
VS-N Meas																								
VS-N Cert																								
NCS DC70014 Meas					270	16.5			180			80.3	42.4	84.3	9.79	37.3	7.9	1.68	7.3	1.1	6.1	1.2	3.4	0.52
NCS DC70014 Cert					270	16.7			180.000			80.3	45.3	87.0	10.8	39.9	8.0	1.8	7.4	1.1	6.7	1.3	3.5	0.57
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas						3.6	1.3	1700	3.4	42.9			22.0	59.4	7.36	30.3	11.9		14.3	3.2	20.5	4.3	12.8	2.31
NCS DC70009 (GBW07241) Cert						1.8	1.3	1701.000	3.1	41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7	4.5	13.4	2.2
OREAS 100a (Fusion) Meas					22								246	452	44.4	144	23.8	3.57	21.9	3.7	22.5	4.9	14.4	2.35
OREAS 100a (Fusion) Cert					24.1								260	463	47.1	152	23.6	3.71	23.6	3.80	23.2	4.81	14.9	2.31
OREAS 101a (Fusion) Meas					19								771	1360	123	374	48.9	7.79		5.4	30.8	6.4	18.5	2.85
OREAS 101a (Fusion) Cert					21.9								816	1396	134	403	48.8	8.06		5.92	33.3	6.46	19.5	2.90
JR-1 Meas				14	3	< 0.5	< 0.2	3	1.3	20.8			18.4	44.3	5.56	22.1	5.6		5.5	1.0	6.1		3.9	0.68
JR-1 Cert				15.2	3.25	0.031	0.028	2.86	1.19	20.8			19.7	47.2	5.58	23.3	6.03		5.06	1.01	5.69		3.61	0.67
NCS DC86318 Meas													1960	414	719	3290	1710	18.9	2100	474	3190	573	1690	265
NCS DC86318 Cert													1960	430	740	3430	1720	18.91	2095	470	3220	560	1750	270
SX18-01 Meas																								
SX18-01 Cert																								
SX18-04 Meas																								
SX18-04 Cert																								
SX18-05 Meas																								
SX18-05 Cert																								
SARM 3 Meas				979																				
SARM 3 Cert				978																				
USZ 44-2007 Meas								125																

Quality Control

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.05
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
USZ 44-2007 Cert								126																
DMMAS 111 Meas																								
DMMAS 111 Cert																								
USZ 42-2006 Meas													21400	28300	2340	6480	529	85.8						
USZ 42-2006 Cert													21100	27600	2300	6500	539	87.22						
KC-11-514 Dup	60	2662	19700	2070	2		0.3	348	1.9	2.1	85	1.6	764	1760	196	642	187	11.7	211	57.0	433	101	333	56.3
KC-11-529 Orig	35	602	4674	484	2		< 0.2	118	< 0.5	3.6	76	1.9	319	722	85.3	297	71.3	4.29	70.1	15.3	107	23.7	75.6	12.6
KC-11-529 Split	34	597	4818	477	2		< 0.2	130	< 0.5	3.5	75	1.9	330	795	86.5	301	71.7	4.38	69.4	14.6	107	23.9	79.4	12.9
KC-11-531 Dup	47	1185	12690	915	< 2		0.3	300	0.8	1.6	20	4.1	641	1440	167	581	138	8.07	130	28.0	198	43.8	143	24.0
KC-11-542 Orig	43	1932	19290	1480	< 2		0.3	315	2.1	1.7	51	3.5	638	1480	174	604	172	10.6	181	44.5	322	70.7	227	37.7
KC-11-542 Dup	43	1919	19050	1410	< 2		0.3	314	2.0	1.7	50	3.8	632	1470	174	593	171	10.6	178	43.0	314	69.3	224	37.4
KC-11-549 Orig	40	1441	23990	1150	3		0.3	420	3.8	2.5	44	4.6	568	1430	158	547	139	8.29	142	31.4	236	54.7	190	31.8
KC-11-549 Split	37	1391	24780	1120	< 2		0.3	405	3.9	2.5	46	4.6	574	1440	160	548	141	8.36	140	31.0	236	53.4	187	31.9
KC-11-549 Split	37	1391	24780	1120	< 2		0.3	405	3.9	2.5	46	4.6	574	1440	160	548	141	8.36	140	31.0	236	53.4	187	31.9
Method Blank				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05
Method Blank																								

Quality Control										
Analyte Symbol	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Nb2O5
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
Detection Limit	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	0.003
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-XRF
DH-1a Meas								922		
DH-1a Cert								910		
TAN-1 Meas				2360						
TAN-1 Cert				2360						
NIST 694 Meas										
NIST 694 Cert										
DNC-1 Meas	1.9									
DNC-1 Cert	2.0									
GBW 07113 Meas										
GBW 07113 Cert										
LKSD-3 Meas	2.7	0.43		0.7	2				4.5	
LKSD-3 Cert	2.70	0.400		0.700	2.00				4.60	
OKA-2 Meas								28000		
OKA-2 Cert								28900.000		
OKA-1 Meas										0.528
OKA-1 Cert										0.529
W-2a Meas	2.0	0.33	2.4	0.5	< 1		10	2.2	0.5	
W-2a Cert	2.10	0.330	2.60	0.500	0.300		9.30	2.40	0.530	
SY-4 Meas										
SY-4 Cert										
CTA-AC-1 Meas	10.9	1.18	1.6	2.5				23.5	4.2	
CTA-AC-1 Cert	11.4	1.08	1.13	2.65				21.8	4.4	
BIR-1a Meas	1.7	0.27	0.5				< 5			
BIR-1a Cert	1.7	0.3	0.60				3			
NCS DC86312 Meas	87.5	12.9						25.3		
NCS DC86312 Cert	87.79	11.96						23.6		
ZW-C Meas				83.9	329	34.7	78			
ZW-C Cert				82	320	34	80			
VS-N Meas										0.099
VS-N Cert										0.10
NCS DC70014 Meas	3.3	0.51					27200			
NCS DC70014 Cert	3.3	0.50					27200.00			
NCS DC86316 Meas			685							
NCS DC86316 Cert			712							
NCS DC70009 (GBW07241) Meas	15.9	2.43			2200			28.5		
NCS DC70009 (GBW07241) Cert	14.9	2.4			2200.00			28.3		
OREAS 100a (Fusion) Meas	15.3	2.29						52.2	137	
OREAS 100a (Fusion) Cert	14.9	2.26						51.6	135	
OREAS 101a (Fusion) Meas	17.9	2.64						35.7	421	
OREAS 101a (Fusion) Cert	17.5	2.66						36.6	422	
JR-1 Meas	4.7	0.74	4.4	1.9		1.6		26.6	8.8	
JR-1 Cert	4.55	0.71	4.51	1.86		1.56		26.7	8.88	
NCS DC86318 Meas	1770	263								
NCS DC86318 Cert	1840	260.0								
SX18-01 Meas										0.693
SX18-01 Cert										0.695
SX18-04 Meas										1.316
SX18-04 Cert										1.32
SX18-05 Meas										0.978
SX18-05 Cert										0.973
SARM 3 Meas										
SARM 3 Cert										
USZ 44-2007 Meas										

Quality Control

Analyte Symbol	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Nb2O5
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
Detection Limit	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	0.003
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-XRF
USZ 44-2007 Cert										
DMMAS 111 Meas										
DMMAS 111 Cert										
USZ 42-2006 Meas										
USZ 42-2006 Cert										
KC-11-514 Dup	379	55.5	539	139	3	2.3	205	487	75.7	
KC-11-529 Orig	85.0	12.2	143	30.0	2	7.0	511	80.0	25.5	
KC-11-529 Split	81.7	11.8	140	29.5	2	6.4	465	80.5	25.6	
KC-11-531 Dup	161	23.4	376	64.3	1	3.2	794	191	51.9	
KC-11-542 Orig	250	36.1	559	90.9	2	1.9	225	382	54.6	
KC-11-542 Dup	246	35.8	556	90.8	2	2.0	234	383	54.2	
KC-11-549 Orig	216	33.4	682	73.4	2	1.8	317	157	55.4	
KC-11-549 Split	215	33.1	672	73.0	2	1.9	317	160	55.5	
KC-11-549 Split	215	33.1	672	73.0	2	1.9	317	160	55.5	
Method Blank	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1	
Method Blank										< 0.003