



ALS Scandinavia AB

Hammarvagen 22

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An INAB accredited testing laboratory Reg. No. 173T. Accredited methods are listed in the Scope of Accreditation available on request.

To: GEOLOGICAL SURVEY OF NORWAY (NGU)
POSTBOKS 6315 TORGARDEN
NO-7491 TRONDHEIM
NORWAY

Page: 1
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Plus Appendix Pages
Finalized Date: 15-DEC-2018
Account: ONUSEG

QC CERTIFICATE PI18302104

Project: Not provided

P.O. No.: 379500

This report is for 191 1/4 Core samples submitted to our lab in Pitea, Sweden on 28-NOV-2018.

The following have access to data associated with this certificate:

NOLWENN COINT

SVEN DAHLGREN

HENRIK SCHIELLERUP

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
SPL-22Y	Split Sample - Boyd Rotary Splitter
PUL-31	Pulverize split to 85% <75 um
LOG-24	Pulp Login - Rcd w/o Barcode
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION
ME-MS61	48 element four acid ICP-MS
ME-MS81h	High grade REE by fusion/ICPMS ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Comments: Samples were received on 27-Nov-2018. and the SSF/Request on 28-Nov-2018.

Signature:

Andrey Tairov, Technical Manager, Ireland



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QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS81h Ce ppm 3	ME-MS81h Dy ppm 0.3	ME-MS81h Er ppm 0.2	ME-MS81h Eu ppm 0.2	ME-MS81h Gd ppm 0.3	ME-MS81h Hf ppm 1	ME-MS81h Ho ppm 0.05	ME-MS81h La ppm 3	ME-MS81h Lu ppm 0.05	ME-MS81h Nb ppm 1	ME-MS81h Nd ppm 0.5	ME-MS81h Pr ppm 0.2	ME-MS81h Rb ppm 1	ME-MS81h Sm ppm 0.2	ME-MS81h Sn ppm 5
STANDARDS																
AMISO304		8430	132.0	35.5	154.0	350	26	17.90	3550	2.06	5000	4040	1055	11	582	27
AMISO304		7990	132.0	33.7	151.0	351	28	18.10	3360	2.11	4940	3930	976	10	540	23
AMISO304		8280	137.5	35.5	149.0	361	26	18.60	3470	1.99	>5000	4070	1065	10	601	26
Target Range - Lower Bound		7520	122.5	31.4	139.5	319	25	16.70	3350	1.81	4830	3600	956	9	535	15
Upper Bound		8660	141.5	36.6	160.5	367	31	19.30	3870	2.19	>5000	4150	1100	13	615	36
EMOG-17																
EMOG-17																
EMOG-17																
EMOG-17																
Target Range - Lower Bound																
Upper Bound																
GRE-04		6150	89.9	27.1	98.4	217	22	12.85	2740	1.72	3550	2790	755	1	383	80
GRE-04		6310	93.9	28.0	98.7	221	23	13.35	2830	1.82	3740	2790	756	<1	370	79
GRE-04		5900	93.3	26.8	94.5	221	22	13.20	2700	1.74	3720	2670	709	<1	368	80
Target Range - Lower Bound		5700	89.5	26.4	93.3	216	18	12.50	2540	1.59	3300	2510	670	<1	363	59
Upper Bound		6560	103.5	30.8	108.0	249	23	14.50	2930	1.93	3800	2890	772	2	418	81
GRE-3		4100	87.8	29.1	73.8	180.5	19	13.40	2100	1.69	3520	1775	468	1	269	42
GRE-3		4290	89.9	28.2	76.5	184.5	18	13.35	2190	1.82	3680	1835	485	1	274	42
GRE-3		4280	87.4	27.3	71.2	178.5	21	13.35	2170	1.65	3590	1735	499	2	274	39
GRE-3		4510	86.5	27.4	70.6	168.5	18	12.75	2240	1.66	3700	1825	494	1	269	43
Target Range - Lower Bound		4050	85.6	26.6	69.8	177.5	17	12.55	2070	1.63	3280	1705	462	<1	260	34
Upper Bound		4660	99.1	31.1	80.7	205	22	14.55	2380	1.99	3770	1965	532	3	299	56
MRGeo08																
MRGeo08																
MRGeo08																
Target Range - Lower Bound																
Upper Bound																
OGGeo08																
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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS81h Ta ppm 0.5	ME-MS81h Tb ppm 0.05	ME-MS81h Th ppm 0.3	ME-MS81h Tm ppm 0.05	ME-MS81h U ppm 0.3	ME-MS81h W ppm 5	ME-MS81h Y ppm 3	ME-MS81h Yb ppm 0.2	ME-MS81h Zr ppm 10	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01
STANDARDS																
AMISO304		11.9	34.4	449	3.37	23.8	5	412	17.7	1070						
AMISO304		12.0	35.2	411	3.42	22.4	5	404	16.2	1110						
AMISO304		12.3	35.5	460	3.45	23.4	5	414	16.4	1050						
Target Range - Lower Bound		11.6	32.5	406	3.21	22.0	<5	378	15.6	1030						
Upper Bound		14.4	37.5	468	3.80	26.0	15	442	18.4	1210						
EMOG-17											67.8	4.73	571	560	1.97	6.04
EMOG-17											65.8	4.55	566	620	1.84	5.61
EMOG-17											66.8	4.58	574	650	1.89	5.68
EMOG-17											66.1	4.76	591	690	1.76	6.17
Target Range - Lower Bound											60.9	4.18	515	310	1.60	5.31
Upper Bound											74.5	5.13	629	440	2.06	6.51
GRE-04		127.5	22.7	134.0	2.83	127.0	<5	312	14.6	1020						
GRE-04		130.5	22.8	137.0	2.87	126.0	<5	320	13.8	970						
GRE-04		126.0	23.2	135.0	2.75	126.5	<5	298	14.2	970						
Target Range - Lower Bound		113.0	22.7	123.5	2.75	116.0	<5	294	13.8	870						
Upper Bound		131.0	26.2	142.5	3.27	134.0	10	345	16.3	1020						
GRE-3		161.0	20.4	112.0	2.83	109.5	<5	298	14.6	960						
GRE-3		157.0	19.60	112.0	2.91	112.0	<5	297	14.8	970						
GRE-3		167.5	20.1	116.0	2.90	114.0	<5	310	14.6	980						
GRE-3		164.5	18.40	109.0	2.70	108.0	<5	301	14.4	900						
Target Range - Lower Bound		149.5	20.1	109.0	2.81	103.5	<5	295	14.2	890						
Upper Bound		173.5	23.2	126.0	3.35	120.0	13	346	16.8	1050						
MRGeo08											4.29	7.47	33.0	1060	3.48	0.67
MRGeo08											4.32	7.59	32.6	1070	3.53	0.64
MRGeo08											4.55	7.34	32.9	1120	3.44	0.68
Target Range - Lower Bound											4.00	6.64	29.5	920	2.98	0.60
Upper Bound											4.92	8.14	36.5	1270	3.76	0.76
OGGeo08											20.4	6.92	124.0	930	2.94	10.85
OGGeo08											19.25	6.84	114.5	890	3.09	11.15
OGGeo08											19.55	6.74	114.0	900	2.72	10.30
OGGeo08											19.95	6.17	116.0	790	2.74	10.30
Target Range - Lower Bound											18.15	6.07	106.0	700	2.59	9.44
Upper Bound											22.2	7.44	130.0	980	3.27	11.55

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QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS61 Ca %	ME-MS61 Cd ppm	ME-MS61 Ce ppm	ME-MS61 Co ppm	ME-MS61 Cr ppm	ME-MS61 Cs ppm	ME-MS61 Cu ppm	ME-MS61 Fe %	ME-MS61 Ga ppm	ME-MS61 Ge ppm	ME-MS61 Hf ppm	ME-MS61 In ppm	ME-MS61 K %	ME-MS61 La ppm	ME-MS61 Li ppm
		0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2
STANDARDS																
AMISO304																
AMISO304																
AMISO304																
Target Range - Lower Bound																
Upper Bound																
EMOG-17		1.94	21.2	48.0	767	52	7.53	8450	4.95	12.40	0.63	1.9	0.974	1.69	25.9	29.0
EMOG-17		1.92	19.85	44.7	754	53	6.66	8090	4.90	11.30	0.59	1.7	0.905	1.60	23.0	26.1
EMOG-17		1.96	21.0	51.6	766	53	7.18	8200	4.91	12.30	0.60	1.9	0.934	1.64	26.3	27.3
EMOG-17		2.02	20.8	46.5	765	51	7.38	8350	4.93	11.95	0.36	1.9	0.919	1.66	23.5	26.9
Target Range - Lower Bound		1.72	18.15	42.9	686	49	6.56	7750	4.42	10.75	0.07	1.6	0.823	1.49	20.7	23.9
Upper Bound		2.12	22.2	52.5	838	62	8.12	8910	5.42	13.25	0.29	2.2	1.015	1.85	26.4	29.7
GRE-04																
GRE-04																
GRE-04																
Target Range - Lower Bound																
Upper Bound																
GRE-3																
GRE-3																
GRE-3																
GRE-3																
Target Range - Lower Bound																
Upper Bound																
MRGeo08		2.68	2.16	67.7	19.1	88	11.60	614	4.00	18.10	0.18	3.2	0.161	2.95	31.8	33.1
MRGeo08		2.72	2.28	66.5	19.1	86	11.45	628	4.07	18.40	0.17	3.2	0.176	3.03	31.0	33.3
MRGeo08		2.65	2.26	68.1	19.5	90	11.75	614	3.99	18.60	0.13	3.2	0.179	3.10	32.1	32.9
Target Range - Lower Bound		2.35	2.00	66.2	17.7	81	11.20	587	3.55	17.50	<0.05	2.8	0.155	2.79	31.1	29.5
Upper Bound		2.90	2.48	81.0	21.9	102	13.80	675	4.37	21.5	0.27	3.6	0.201	3.43	39.1	36.5
OGGeo08		2.22	20.0	74.6	94.2	81	11.30	7950	5.34	18.55	0.71	2.8	1.470	2.98	31.9	34.0
OGGeo08		2.23	17.90	74.1	97.0	79	10.25	8310	5.45	16.15	0.70	3.0	1.430	2.90	32.2	32.8
OGGeo08		2.22	18.40	62.5	91.4	83	10.30	8340	5.35	16.65	0.40	2.8	1.375	2.87	30.6	31.0
OGGeo08		2.22	19.00	52.3	93.0	80	10.40	8380	5.34	16.55	0.43	2.6	1.405	2.86	24.6	31.2
Target Range - Lower Bound		1.98	16.70	64.8	87.2	78	9.85	7800	4.81	16.05	0.25	2.5	1.320	2.59	31.0	29.7
Upper Bound		2.44	20.5	79.2	107.0	98	12.15	8980	5.91	19.75	0.49	3.3	1.620	3.19	39.0	36.7

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QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS61 Mg %	ME-MS61 Mn ppm	ME-MS61 Mo ppm	ME-MS61 Na %	ME-MS61 Nb ppm	ME-MS61 Ni ppm	ME-MS61 P ppm	ME-MS61 Pb ppm	ME-MS61 Rb ppm	ME-MS61 Re ppm	ME-MS61 S %	ME-MS61 Sb ppm	ME-MS61 Sc ppm	ME-MS61 Se ppm	ME-MS61 Sn ppm
		0.01	5	0.05	0.01	0.1	0.2	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2
STANDARDS																
AMISO304																
AMISO304																
AMISO304																
Target Range - Lower Bound																
Upper Bound																
EMOG-17		0.97	757	1140	1.09	14.3	7690	800	7340	116.5	0.339	3.23	753	7.2	7	2.6
EMOG-17		0.97	733	1050	1.09	13.8	7520	800	7200	107.0	0.299	3.26	748	7.7	8	2.5
EMOG-17		0.98	730	1070	1.13	14.0	7600	800	7280	116.5	0.306	3.27	757	7.7	8	2.7
EMOG-17		1.01	745	1100	1.13	15.1	7580	790	7340	113.0	0.315	3.27	756	8.1	8	2.7
Target Range - Lower Bound		0.86	670	997	0.99	12.7	6820	700	6570	98.9	0.286	2.91	643	7.2	4	2.2
Upper Bound		1.08	830	1220	1.23	15.7	8330	880	8030	121.0	0.354	3.57	869	9.0	9	3.2
GRE-04																
GRE-04																
GRE-04																
Target Range - Lower Bound																
Upper Bound																
GRE-3																
GRE-3																
GRE-3																
GRE-3																
Target Range - Lower Bound																
Upper Bound																
MRGeo08		1.35	572	14.00	1.98	20.2	688	1010	1060	181.0	0.008	0.30	4.42	11.5	1	3.9
MRGeo08		1.36	572	14.10	2.02	20.0	707	1050	1080	169.0	0.009	0.31	4.48	11.3	1	3.9
MRGeo08		1.33	567	13.85	1.99	20.5	697	1030	1080	180.5	0.008	0.31	4.35	11.3	1	3.9
Target Range - Lower Bound		1.17	497	13.65	1.76	19.0	622	930	971	173.5	0.005	0.27	3.89	11.1	<1	3.5
Upper Bound		1.45	619	16.75	2.18	23.4	760	1160	1185	212	0.013	0.35	5.39	13.7	4	4.7
OGGeo08		1.28	501	863	1.81	18.6	8540	840	7250	195.5	1.315	2.81	27.6	9.6	11	14.3
OGGeo08		1.29	510	874	1.87	18.7	8690	820	7310	184.5	1.410	2.77	25.6	10.1	12	13.1
OGGeo08		1.27	506	914	1.83	19.0	8870	850	7230	172.0	1.305	2.79	25.8	9.3	10	13.5
OGGeo08		1.25	502	905	1.80	15.6	8860	840	7230	144.5	1.430	2.81	27.0	9.0	11	14.1
Target Range - Lower Bound		1.11	447	841	1.62	15.4	8000	760	6520	164.5	1.285	2.51	22.8	9.2	8	12.5
Upper Bound		1.38	557	1030	2.00	19.0	9770	950	7970	201	1.575	3.09	31.0	11.4	14	15.7

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Sample Description	Method Analyte Units LOD	ME-MS61 Sr ppm 0.2	ME-MS61 Ta ppm 0.05	ME-MS61 Te ppm 0.05	ME-MS61 Th ppm 0.01	ME-MS61 Ti % 0.005	ME-MS61 Tl ppm 0.02	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
STANDARDS													
AMISO304													
AMISO304													
AMISO304													
Target Range - Lower Bound													
Upper Bound													
EMOG-17		210	0.96	1.35	11.75	0.328	2.33	3.3	70	4.0	15.5	7650	59.8
EMOG-17		202	0.89	1.24	10.55	0.311	2.09	3.0	71	3.7	15.4	7380	63.1
EMOG-17		206	0.94	1.28	12.30	0.309	2.17	3.6	73	4.0	16.7	7480	65.3
EMOG-17		208	0.95	1.33	12.10	0.321	2.31	3.3	72	3.8	16.6	7540	64.6
Target Range - Lower Bound		184.5	0.78	1.10	10.35	0.294	1.89	2.8	67	3.3	14.3	6800	55.6
Upper Bound		226	1.08	1.46	12.65	0.370	2.61	3.7	84	4.7	17.7	8320	76.4
GRE-04													
GRE-04													
GRE-04													
Target Range - Lower Bound													
Upper Bound													
GRE-3													
GRE-3													
GRE-3													
GRE-3													
Target Range - Lower Bound													
Upper Bound													
MRGeo08		308	1.44	<0.05	17.95	0.492	1.08	4.9	107	5.2	24.1	826	108.0
MRGeo08		310	1.55	0.05	18.05	0.497	1.11	4.9	109	5.5	24.1	802	106.5
MRGeo08		306	1.62	0.05	18.30	0.501	1.16	4.9	111	4.7	25.5	805	103.0
Target Range - Lower Bound		277	1.39	<0.05	17.90	0.443	0.89	4.9	97	4.1	23.8	722	92.2
Upper Bound		339	1.81	0.14	21.9	0.553	1.25	6.2	121	5.8	29.3	886	126.0
OGGeo08		249	1.28	0.20	18.50	0.382	1.66	4.6	82	4.3	21.3	7030	92.3
OGGeo08		246	1.40	0.14	17.15	0.386	1.73	5.1	86	4.7	23.2	7150	96.1
OGGeo08		255	1.39	0.19	16.75	0.399	1.68	4.7	83	4.4	21.3	7240	87.6
OGGeo08		248	1.29	0.17	14.45	0.391	1.75	4.6	84	4.4	20.1	7240	86.6
Target Range - Lower Bound		224	1.19	0.09	16.90	0.353	1.43	4.5	77	3.9	21.1	6500	78.6
Upper Bound		274	1.57	0.31	20.7	0.443	1.98	5.8	97	5.4	26.0	7950	107.5

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS81h Ce ppm 3	ME-MS81h Dy ppm 0.3	ME-MS81h Er ppm 0.2	ME-MS81h Eu ppm 0.2	ME-MS81h Gd ppm 0.3	ME-MS81h Hf ppm 1	ME-MS81h Ho ppm 0.05	ME-MS81h La ppm 3	ME-MS81h Lu ppm 0.05	ME-MS81h Nb ppm 1	ME-MS81h Nd ppm 0.5	ME-MS81h Pr ppm 0.2	ME-MS81h Rb ppm 1	ME-MS81h Sm ppm 0.2	ME-MS81h Sn ppm 5
STANDARDS																
OREAS 920																
OREAS 920																
OREAS 920																
Target Range - Lower Bound																
Upper Bound																
REE-1		4180	875	702	24.6	427	500	214	1750	94.6	4160	1465	447	1060	373	515
REE-1		3990	877	715	25.2	455	473	214	1675	93.1	4030	1490	454	1080	391	490
REE-1		3960	868	713	23.7	429	504	216	1610	88.9	4020	1420	455	1040	379	494
REE-1		3870	875	708	24.2	437	475	206	1650	93.9	3850	1415	431	991	360	466
Target Range - Lower Bound		3680	787	652	21.7	402	444	193.5	1540	85.9	3770	1355	404	973	354	458
Upper Bound		4240	907	750	25.3	464	514	223	1780	98.9	4330	1560	466	1120	408	538
BLANKS																
BLANK																
BLANK																
BLANK																
BLANK																
BLANK																
BLANK																
BLANK																
BLANK																
Target Range - Lower Bound																
Upper Bound																
BLANK		<3	<0.3	0.3	<0.2	<0.3	<1	0.10	<3	<0.05	<1	<0.5	<0.2	2	<0.2	<5
BLANK		<3	<0.3	<0.2	<0.2	<0.3	<1	<0.05	<3	<0.05	<1	<0.5	<0.2	1	<0.2	<5
BLANK		<3	<0.3	<0.2	<0.2	<0.3	<1	<0.05	<3	<0.05	<1	<0.5	<0.2	<1	<0.2	<5
BLANK		<3	<0.3	<0.2	<0.2	<0.3	<1	<0.05	<3	<0.05	<1	<0.5	<0.2	<1	<0.2	<5
BLANK		<3	<0.3	<0.2	<0.2	<0.3	<1	0.07	<3	0.08	<1	<0.5	<0.2	1	<0.2	<5
BLANK		<3	<0.3	<0.2	<0.2	<0.3	<1	<0.05	<3	<0.05	<1	<0.5	<0.2	1	<0.2	<5
BLANK		<3	<0.3	<0.2	<0.2	<0.3	<1	<0.05	<3	<0.05	<1	<0.5	<0.2	<1	<0.2	<5
Target Range - Lower Bound		<3	<0.3	<0.2	<0.2	<0.3	<1	<0.05	<3	<0.05	<1	<0.5	<0.2	<1	<0.2	<5
Upper Bound		6	0.6	0.4	0.4	0.6	2	0.10	6	0.10	2	1.0	0.4	2	0.4	10

Comments: Samples were received on 27-Nov-2018. and the SSF/Request on 28-Nov-2018.

***** See Appendix Page for comments regarding this certificate *****



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To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

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Plus Appendix Pages

Finalized Date: 15-DEC-2018

Account: ONUSEG

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS81h Ta ppm 0.5	ME-MS81h Tb ppm 0.05	ME-MS81h Th ppm 0.3	ME-MS81h Tm ppm 0.05	ME-MS81h U ppm 0.3	ME-MS81h W ppm 5	ME-MS81h Y ppm 3	ME-MS81h Yb ppm 0.2	ME-MS81h Zr ppm 10	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01
STANDARDS																
OREAS 920											0.11	7.45	5.0	530	2.61	0.66
OREAS 920											0.11	7.69	5.1	560	2.55	0.68
OREAS 920											0.09	7.69	4.5	570	2.77	0.67
Target Range - Lower Bound											0.08	6.91	4.4	450	2.54	0.61
Upper Bound											0.13	8.47	5.8	640	3.22	0.77
REE-1		225	112.5	719	107.5	140.5	7	5610	692	20300						
REE-1		220	112.0	744	106.0	137.5	7	5650	691	19200						
REE-1		225	110.0	764	105.0	139.5	8	5460	652	18200						
REE-1		224	106.5	737	107.0	135.0	8	5520	710	19100						
Target Range - Lower Bound		214	98.7	668	98.5	127.0	<5	5090	630	17750						
Upper Bound		248	113.5	770	113.5	147.0	20	5870	726	20400						
BLANKS																
BLANK											<0.01	<0.01	<0.2	<10	<0.05	<0.01
BLANK											<0.01	<0.01	<0.2	<10	<0.05	0.01
BLANK											0.01	<0.01	<0.2	<10	<0.05	<0.01
BLANK											0.01	<0.01	<0.2	10	<0.05	0.01
BLANK											0.01	<0.01	<0.2	10	<0.05	0.01
BLANK											0.01	<0.01	<0.2	<10	<0.05	0.01
BLANK											0.01	<0.01	<0.2	<10	<0.05	0.01
BLANK											<0.01	<0.01	<0.2	<10	<0.05	0.01
Target Range - Lower Bound											<0.01	<0.01	<0.2	<10	<0.05	<0.01
Upper Bound											0.02	0.02	0.4	20	0.10	0.02
BLANK		<0.5	<0.05	<0.3	<0.05	<0.3	<5	<3	<0.2	<10						
BLANK		0.6	<0.05	<0.3	<0.05	<0.3	<5	<3	<0.2	<10						
BLANK		<0.5	0.07	<0.3	<0.05	<0.3	<5	<3	<0.2	<10						
BLANK		<0.5	<0.05	<0.3	<0.05	<0.3	<5	<3	<0.2	10						
BLANK		<0.5	0.08	<0.3	0.07	<0.3	<5	<3	<0.2	<10						
BLANK		<0.5	<0.05	<0.3	<0.05	<0.3	<5	<3	<0.2	<10						
BLANK		0.6	<0.05	<0.3	0.06	<0.3	<5	<3	<0.2	<10						
Target Range - Lower Bound		<0.5	<0.05	<0.3	<0.05	<0.3	<5	<3	<0.2	<10						
Upper Bound		1.0	0.10	0.6	0.10	0.6	10	6	0.4	20						

Comments: Samples were received on 27-Nov-2018. and the SSF/Request on 28-Nov-2018.

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To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

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Account: ONUSEG

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS61 Ca %	ME-MS61 Cd ppm	ME-MS61 Ce ppm	ME-MS61 Co ppm	ME-MS61 Cr ppm	ME-MS61 Cs ppm	ME-MS61 Cu ppm	ME-MS61 Fe %	ME-MS61 Ga ppm	ME-MS61 Ge ppm	ME-MS61 Hf ppm	ME-MS61 In ppm	ME-MS61 K %	ME-MS61 La ppm	ME-MS61 Li ppm
		0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2
STANDARDS																
OREAS 920		0.50	0.06	87.8	15.2	80	7.84	107.0	3.92	19.55	0.19	4.5	0.081	2.81	37.6	29.5
OREAS 920		0.52	0.07	100.0	14.0	84	8.26	108.5	4.15	19.50	0.11	4.5	0.079	2.87	51.2	27.8
OREAS 920		0.50	0.05	85.6	14.1	86	8.72	107.5	4.11	19.75	0.12	4.5	0.081	2.89	41.3	27.9
Target Range - Lower Bound		0.44	0.04	84.6	13.9	70	7.72	104.0	3.72	18.65	0.06	4.0	0.070	2.59	41.0	26.0
Upper Bound		0.56	0.12	103.5	17.3	88	9.54	120.0	4.56	22.9	0.28	5.2	0.098	3.19	51.2	32.2
REE-1																
REE-1																
REE-1																
REE-1																
Target Range - Lower Bound																
Upper Bound																
BLANKS																
BLANK		<0.01	<0.02	0.01	<0.1	<1	<0.05	<0.2	<0.01	<0.05	<0.05	<0.1	<0.005	<0.01	<0.5	<0.2
BLANK		<0.01	<0.02	<0.01	<0.1	<1	<0.05	<0.2	<0.01	<0.05	<0.05	<0.1	<0.005	<0.01	<0.5	<0.2
BLANK		0.02	<0.02	0.02	<0.1	<1	<0.05	0.2	<0.01	<0.05	<0.05	<0.1	<0.005	<0.01	<0.5	<0.2
BLANK		0.02	<0.02	<0.01	<0.1	1	<0.05	<0.2	<0.01	<0.05	<0.05	<0.1	<0.005	<0.01	<0.5	<0.2
BLANK		0.02	<0.02	0.01	<0.1	<1	<0.05	0.2	<0.01	<0.05	<0.05	<0.1	<0.005	<0.01	<0.5	<0.2
BLANK		<0.01	<0.02	0.01	<0.1	<1	<0.05	0.2	<0.01	<0.05	<0.05	<0.1	<0.005	<0.01	<0.5	<0.2
BLANK		<0.01	<0.02	<0.01	<0.1	1	<0.05	0.3	<0.01	<0.05	<0.05	<0.1	<0.005	<0.01	<0.5	<0.2
BLANK		<0.01	<0.02	0.01	<0.1	<1	<0.05	<0.2	<0.01	<0.05	<0.05	<0.1	<0.005	<0.01	<0.5	<0.2
Target Range - Lower Bound		<0.01	<0.02	<0.01	<0.1	<1	<0.05	<0.2	<0.01	<0.05	<0.05	<0.1	<0.005	<0.01	<0.5	<0.2
Upper Bound		0.02	0.04	0.02	0.2	2	0.10	0.4	0.02	0.10	0.10	0.2	0.010	0.02	1.0	0.4
BLANK																
BLANK																
BLANK																
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BLANK																
BLANK																
BLANK																
Target Range - Lower Bound																
Upper Bound																

Comments: Samples were received on 27-Nov-2018. and the SSF/Request on 28-Nov-2018.

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NORWAY

Page: 3 - D

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Finalized Date: 15-DEC-2018

Account: ONUSEG

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS61 Mg %	ME-MS61 Mn ppm	ME-MS61 Mo ppm	ME-MS61 Na %	ME-MS61 Nb ppm	ME-MS61 Ni ppm	ME-MS61 P ppm	ME-MS61 Pb ppm	ME-MS61 Rb ppm	ME-MS61 Re ppm	ME-MS61 S %	ME-MS61 Sb ppm	ME-MS61 Sc ppm	ME-MS61 Se ppm	ME-MS61 Sn ppm
		0.01	5	0.05	0.01	0.1	0.2	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2
STANDARDS																
OREAS 920		1.31	586	0.50	0.61	16.7	40.8	740	23.8	163.5	0.002	0.03	1.47	13.2	<1	4.7
OREAS 920		1.33	599	0.45	0.63	16.3	40.0	750	22.0	185.5	<0.002	0.04	1.52	13.8	1	4.9
OREAS 920		1.36	584	0.49	0.64	16.0	43.9	730	23.1	161.0	0.002	0.03	1.57	13.7	1	4.9
Target Range - Lower Bound		1.23	535	0.34	0.56	15.6	37.4		20.7	158.5	<0.002	<0.01	1.22	12.8	<1	4.3
Upper Bound		1.53	665	0.58	0.71	19.2	46.2		26.4	193.5	0.004	0.05	1.76	15.8	2	5.7
REE-1																
REE-1																
REE-1																
REE-1																
Target Range - Lower Bound																
Upper Bound																
BLANKS																
BLANK		<0.01	<5	<0.05	<0.01	<0.1	<0.2	<10	<0.5	0.1	<0.002	<0.01	0.09	0.1	<1	<0.2
BLANK		<0.01	<5	<0.05	<0.01	0.2	<0.2	<10	<0.5	<0.1	<0.002	<0.01	0.06	<0.1	1	<0.2
BLANK		<0.01	<5	<0.05	<0.01	0.1	<0.2	<10	<0.5	0.1	<0.002	<0.01	0.05	<0.1	<1	<0.2
BLANK		<0.01	<5	<0.05	<0.01	0.1	<0.2	<10	<0.5	<0.1	<0.002	<0.01	0.08	<0.1	1	<0.2
BLANK		<0.01	<5	<0.05	<0.01	0.1	<0.2	<10	<0.5	<0.1	<0.002	<0.01	0.06	<0.1	1	<0.2
BLANK		<0.01	<5	0.05	<0.01	<0.1	0.2	10	<0.5	<0.1	<0.002	<0.01	0.07	0.1	1	<0.2
BLANK		<0.01	<5	<0.05	<0.01	0.1	<0.2	<10	<0.5	<0.1	<0.002	<0.01	0.05	0.1	2	<0.2
BLANK		<0.01	<5	<0.05	<0.01	<0.1	<0.2	<10	<0.5	<0.1	<0.002	<0.01	<0.05	0.1	1	<0.2
Target Range - Lower Bound		<0.01	<5	<0.05	<0.01	<0.1	<0.2	<10	<0.5	<0.1	<0.002	<0.01	<0.05	<0.1	<1	<0.2
Upper Bound		0.02	10	0.10	0.02	0.2	0.4	20	1.0	0.2	0.004	0.02	0.10	0.2	2	0.4
BLANK																
BLANK																
BLANK																
BLANK																
BLANK																
BLANK																
Target Range - Lower Bound																
Upper Bound																

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NORWAY

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS61 Sr ppm 0.2	ME-MS61 Ta ppm 0.05	ME-MS61 Te ppm 0.05	ME-MS61 Th ppm 0.01	ME-MS61 Ti % 0.005	ME-MS61 Tl ppm 0.02	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
STANDARDS													
OREAS 920		78.1	1.31	<0.05	17.55	0.475	0.84	3.3	92	3.2	28.3	118	156.0
OREAS 920		78.8	1.34	<0.05	20.5	0.478	0.88	3.8	96	3.1	33.6	118	155.5
OREAS 920		78.6	1.38	0.05	18.35	0.481	0.91	3.8	98	3.1	31.2	118	154.5
Target Range - Lower Bound		73.6	1.08	<0.05	17.35	0.434	0.76	3.3	86	2.5	29.8	102	128.0
Upper Bound		90.4	1.43	0.10	21.2	0.542	1.08	4.2	108	3.7	36.6	130	174.0
REE-1													
REE-1													
REE-1													
REE-1													
Target Range - Lower Bound													
Upper Bound													
BLANKS													
BLANK		<0.2	<0.05	<0.05	<0.01	<0.005	<0.02	<0.1	<1	<0.1	<0.1	<2	<0.5
BLANK		0.2	<0.05	<0.05	0.01	<0.005	<0.02	<0.1	<1	<0.1	<0.1	<2	<0.5
BLANK		0.2	<0.05	<0.05	0.01	<0.005	<0.02	<0.1	<1	0.2	<0.1	<2	<0.5
BLANK		<0.2	<0.05	<0.05	<0.01	<0.005	<0.02	<0.1	<1	0.1	<0.1	3	<0.5
BLANK		0.2	<0.05	<0.05	0.01	<0.005	<0.02	<0.1	<1	0.1	<0.1	3	<0.5
BLANK		<0.2	<0.05	<0.05	0.01	<0.005	<0.02	<0.1	<1	<0.1	<0.1	2	<0.5
BLANK		0.4	<0.05	<0.05	0.01	<0.005	<0.02	0.1	<1	<0.1	<0.1	2	<0.5
BLANK		0.2	<0.05	<0.05	0.01	<0.005	<0.02	<0.1	<1	<0.1	<0.1	<2	<0.5
Target Range - Lower Bound		<0.2	<0.05	<0.05	<0.01	<0.005	<0.02	<0.1	<1	<0.1	<0.1	<2	<0.5
Upper Bound		0.4	0.10	0.10	0.02	0.010	0.04	0.2	2	0.2	0.2	4	1.0
BLANK													
BLANK													
BLANK													
BLANK													
BLANK													
BLANK													
BLANK													
Target Range - Lower Bound													
Upper Bound													

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Account: ONUSEG

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS81h Ce ppm 3	ME-MS81h Dy ppm 0.3	ME-MS81h Er ppm 0.2	ME-MS81h Eu ppm 0.2	ME-MS81h Gd ppm 0.3	ME-MS81h Hf ppm 1	ME-MS81h Ho ppm 0.05	ME-MS81h La ppm 3	ME-MS81h Lu ppm 0.05	ME-MS81h Nb ppm 1	ME-MS81h Nd ppm 0.5	ME-MS81h Pr ppm 0.2	ME-MS81h Rb ppm 1	ME-MS81h Sm ppm 0.2	ME-MS81h Sn ppm 5
DUPLICATES																
191522		4350	17.3	4.4	32.2	59.1	1	2.22	2340	0.34	368	1430	436	<1	159.0	6
DUP		4040	17.1	4.0	32.6	59.6	1	2.15	2260	0.35	342	1360	446	<1	153.5	6
Target Range - Lower Bound		4050	16.3	3.9	31.1	57.0	<1	2.06	2220	0.28	342	1345	425	<1	150.5	<5
Upper Bound		4340	18.1	4.5	33.7	61.7	2	2.31	2380	0.41	368	1445	457	2	162.0	10
191537		1350	13.7	3.5	20.0	37.0	1	1.63	635	0.29	356	639	165.5	5	99.0	11
DUP		1310	13.3	3.5	19.7	36.8	1	1.76	626	0.27	355	630	163.0	6	94.0	10
Target Range - Lower Bound		1280	12.7	3.2	19.0	35.3	<1	1.59	605	0.22	342	612	158.5	4	92.9	<5
Upper Bound		1380	14.3	3.8	20.7	38.5	2	1.80	656	0.34	369	657	170.0	7	100.0	16
191557		769	7.0	2.4	12.3	23.3	<1	1.01	412	0.27	1610	261	78.4	4	44.7	7
DUP		777	7.1	2.3	12.5	23.7	<1	1.00	426	0.27	1750	275	81.4	4	47.7	7
Target Range - Lower Bound		743	6.5	2.1	11.8	22.4	<1	0.92	401	0.21	1620	258	76.9	3	44.4	<5
Upper Bound		803	7.6	2.6	13.0	24.6	2	1.09	437	0.33	1740	278	82.9	5	48.0	10
191558																
DUP																
Target Range - Lower Bound																
Upper Bound																
191571																
DUP																
Target Range - Lower Bound																
Upper Bound																
191591		3390	23.6	7.7	42.2	79.3	<1	3.66	1880	0.68	450	1350	363	1	216	5
DUP		3430	24.4	8.2	43.1	79.7	1	3.60	1920	0.70	408	1355	373	<1	219	<5
Target Range - Lower Bound		3290	22.9	7.5	41.0	76.4	<1	3.45	1830	0.62	413	1305	355	<1	210	<5
Upper Bound		3530	25.1	8.4	44.3	82.6	2	3.81	1970	0.76	445	1400	381	2	225	10
FEN198253		7190	42.1	15.1	85.9	136.5	2	6.38	3050	1.95	498	3490	916	5	397	<5
DUP		7170	44.6	15.6	88.9	143.0	2	6.83	3030	2.13	527	3480	881	5	401	<5
Target Range - Lower Bound		6930	41.5	14.6	84.1	134.5	<1	6.32	2930	1.92	494	3360	867	4	385	<5
Upper Bound		7430	45.2	16.1	90.7	145.0	3	6.89	3150	2.16	531	3610	930	6	413	10
191625		6650	19.7	3.8	59.6	106.5	1	2.26	3810	0.31	520	2330	683	<1	257	17
DUP		6520	18.8	3.4	58.4	100.5	1	2.17	3670	0.35	444	2210	694	<1	248	17
Target Range - Lower Bound		6350	18.3	3.3	56.7	99.6	<1	2.09	3610	0.27	464	2190	664	<1	243	11
Upper Bound		6820	20.2	3.9	61.3	107.5	2	2.34	3870	0.39	500	2350	713	2	262	23

Comments: Samples were received on 27-Nov-2018. and the SSF/Request on 28-Nov-2018.

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To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

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Finalized Date: 15-DEC-2018

Account: ONUSEG

An INAB accredited testing laboratory Reg. No. 173T. Accredited methods are listed in the Scope of Accreditation available on request.

Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS81h Ta ppm 0.5	ME-MS81h Tb ppm 0.05	ME-MS81h Th ppm 0.3	ME-MS81h Tm ppm 0.05	ME-MS81h U ppm 0.3	ME-MS81h W ppm 5	ME-MS81h Y ppm 3	ME-MS81h Yb ppm 0.2	ME-MS81h Zr ppm 10	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01
DUPLICATES																
191522		2.4	4.60	232	0.45	18.7	<5	44	2.4	70						
DUP		2.3	4.38	227	0.42	17.7	<5	43	2.4	60						
Target Range - Lower Bound		1.8	4.28	221	0.37	17.3	<5	39	2.1	50						
Upper Bound		2.9	4.70	238	0.50	19.1	10	48	2.7	80						
191537		4.2	3.25	167.0	0.37	11.7	<5	43	2.2	50	1.69	2.07	5.7	1100	1.85	3.23
DUP		4.0	2.97	155.0	0.37	11.6	<5	45	2.3	50	1.66	2.06	5.9	1160	1.88	3.42
Target Range - Lower Bound		3.5	2.95	155.0	0.31	10.9	<5	39	2.0	40	1.58	1.95	5.3	1040	1.72	3.15
Upper Bound		4.7	3.27	167.0	0.43	12.4	10	49	2.5	60	1.77	2.18	6.3	1220	2.01	3.50
191557		9.2	1.84	77.0	0.28	5.4	<5	25	1.8	30						
DUP		9.2	2.08	78.7	0.28	5.6	<5	26	2.2	30						
Target Range - Lower Bound		8.4	1.84	74.8	0.22	5.0	<5	22	1.7	20						
Upper Bound		10.0	2.08	80.9	0.34	6.0	10	29	2.3	40						
191558											0.94	2.23	2.0	1620	1.20	1.53
DUP											0.99	2.25	2.0	1650	1.23	1.54
Target Range - Lower Bound											0.91	2.12	1.7	1500	1.10	1.45
Upper Bound											1.02	2.36	2.3	1770	1.33	1.62
191571											0.46	0.08	2.1	3830	0.51	0.47
DUP											0.40	0.09	1.9	3870	0.48	0.46
Target Range - Lower Bound											0.40	0.07	1.7	3550	0.42	0.43
Upper Bound											0.46	0.10	2.3	4150	0.57	0.50
191591		2.2	6.00	358	0.83	5.4	<5	87	5.1	50	1.65	0.05	5.3	2150	0.81	6.10
DUP		2.0	5.98	352	0.90	5.3	<5	88	5.4	50	1.40	0.05	6.2	2040	0.86	5.88
Target Range - Lower Bound		1.5	5.73	342	0.78	4.9	<5	81	4.9	40	1.44	0.04	5.3	1930	0.74	5.68
Upper Bound		2.7	6.25	368	0.95	5.8	10	94	5.6	60	1.61	0.06	6.2	2260	0.93	6.30
FEN198253		0.7	9.20	1250	1.81	5.6	5	217	13.5	180						
DUP		0.7	9.89	1260	2.01	5.6	5	226	14.1	190						
Target Range - Lower Bound		<0.5	9.16	1210	1.79	5.1	<5	211	13.1	170						
Upper Bound		1.0	9.93	1300	2.03	6.1	10	232	14.5	200						
191625		22.4	7.11	355	0.39	11.8	<5	50	2.3	40						
DUP		17.6	6.58	344	0.36	10.2	<5	48	2.2	50						
Target Range - Lower Bound		18.8	6.56	337	0.31	10.3	<5	44	2.0	30						
Upper Bound		21.2	7.13	362	0.44	11.7	10	54	2.5	60						

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Finalized Date: 15-DEC-2018

Account: ONUSEG

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS61 Ca %	ME-MS61 Cd ppm	ME-MS61 Ce ppm	ME-MS61 Co ppm	ME-MS61 Cr ppm	ME-MS61 Cs ppm	ME-MS61 Cu ppm	ME-MS61 Fe %	ME-MS61 Ga ppm	ME-MS61 Ge ppm	ME-MS61 Hf ppm	ME-MS61 In ppm	ME-MS61 K %	ME-MS61 La ppm	ME-MS61 Li ppm
		0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2
191522 DUP Target Range - Lower Bound Upper Bound		DUPLICATES														
191537 DUP Target Range - Lower Bound Upper Bound		13.50 13.75 12.95 14.30	0.96 1.00 0.91 1.05	>500 >500 475 >500	16.8 17.8 16.3 18.3	8 8 7 9	1.01 1.01 0.91 1.11	5.2 5.4 4.9 5.7	10.35 10.60 9.94 11.00	11.40 11.35 10.75 12.00	1.21 1.24 1.11 1.34	1.1 1.2 1.0 1.3	0.735 0.714 0.683 0.766	0.10 0.10 0.09 0.12	480 500 465 515	20.5 20.4 19.2 21.7
191557 DUP Target Range - Lower Bound Upper Bound																
191558 DUP Target Range - Lower Bound Upper Bound		14.80 17.15 15.15 16.80	1.05 1.02 0.96 1.11	>500 >500 475 >500	8.7 9.1 8.4 9.4	7 6 5 8	0.53 0.53 0.45 0.61	9.1 9.6 8.8 9.9	9.29 9.42 8.88 9.83	10.65 10.90 10.20 11.35	0.65 0.74 0.61 0.78	0.6 0.7 0.5 0.8	0.470 0.472 0.442 0.500	0.03 0.03 0.02 0.04	510 510 484 536	18.0 18.4 17.1 19.3
191571 DUP Target Range - Lower Bound Upper Bound		18.85 18.70 17.85 19.70	0.58 0.62 0.55 0.65	>500 >500 475 >500	5.9 5.6 5.4 6.1	3 3 2 4	<0.05 <0.05 <0.05 0.10	0.6 0.5 0.3 0.8	6.79 6.80 6.45 7.14	9.83 9.67 9.21 10.30	1.34 1.31 1.21 1.44	0.3 0.3 0.2 0.4	0.389 0.389 0.365 0.413	<0.01 <0.01 <0.01 0.02	810 800 764 846	1.7 1.7 1.4 2.0
191591 DUP Target Range - Lower Bound Upper Bound		21.9 22.1 20.9 23.1	2.44 2.41 2.28 2.57	>500 >500 475 >500	10.5 10.7 10.0 11.2	5 6 4 7	<0.05 0.05 <0.05 0.10	3.0 3.9 3.1 3.8	6.45 6.56 6.17 6.84	13.95 14.20 13.30 14.85	2.24 2.29 2.10 2.43	0.7 0.7 0.6 0.8	0.639 0.626 0.596 0.669	0.01 0.01 <0.01 0.02	1530 1460 1420 1570	1.5 1.6 1.3 1.8
FEN198253 DUP Target Range - Lower Bound Upper Bound																
191625 DUP Target Range - Lower Bound Upper Bound																

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS61 Mg %	ME-MS61 Mn ppm	ME-MS61 Mo ppm	ME-MS61 Na %	ME-MS61 Nb ppm	ME-MS61 Ni ppm	ME-MS61 P ppm	ME-MS61 Pb ppm	ME-MS61 Rb ppm	ME-MS61 Re ppm	ME-MS61 S %	ME-MS61 Sb ppm	ME-MS61 Sc ppm	ME-MS61 Se ppm	ME-MS61 Sn ppm
		0.01	5	0.05	0.01	0.1	0.2	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2
191522 DUP Target Range - Lower Bound Upper Bound		DUPLICATES														
191537 DUP Target Range - Lower Bound Upper Bound		5.85 5.92 5.58 6.19	8170 8390 7860 8700	507 524 490 541	0.53 0.54 0.50 0.57	293 300 282 311	3.4 3.5 3.1 3.8	3000 3020 2850 3170	12.8 13.8 12.1 14.5	5.0 5.1 4.7 5.4	0.012 0.014 0.010 0.016	0.95 1.01 0.92 1.04	0.27 0.32 0.22 0.37	24.4 24.5 23.1 25.8	1 1 <1 2	8.8 8.5 8.0 9.3
191557 DUP Target Range - Lower Bound Upper Bound																
191558 DUP Target Range - Lower Bound Upper Bound		5.87 5.78 5.52 6.13	7440 7260 6980 7720	451 435 421 465	0.38 0.38 0.35 0.41	342 335 321 356	6.4 7.0 6.2 7.2	1150 1100 1060 1190	91.8 99.0 90.1 100.5	1.9 2.0 1.8 2.1	0.006 0.008 0.005 0.009	0.35 0.36 0.33 0.38	0.19 0.16 0.11 0.24	22.0 22.4 21.0 23.4	2 1 <1 2	2.4 2.5 2.1 2.8
191571 DUP Target Range - Lower Bound Upper Bound		7.91 7.94 7.52 8.33	10300 10200 9730 10750	101.5 101.0 96.1 106.5	0.03 0.03 0.02 0.04	291 272 267 296	1.1 0.8 0.7 1.2	2780 2750 2620 2910	18.9 19.5 17.7 20.7	0.2 0.2 <0.1 0.3	0.003 0.003 <0.002 0.004	0.33 0.32 0.30 0.35	0.29 0.30 0.22 0.37	18.8 18.8 17.8 19.8	<1 <1 <1 2	2.1 1.9 1.7 2.3
191591 DUP Target Range - Lower Bound Upper Bound		5.17 5.39 5.01 5.55	8400 8260 7910 8750	163.5 188.0 167.0 184.5	0.16 0.13 0.13 0.16	240 247 231 256	5.3 6.0 5.2 6.1	6210 6120 5850 6480	43.5 42.4 40.3 45.6	0.4 0.4 0.3 0.5	0.020 0.020 0.017 0.023	0.64 0.62 0.59 0.67	0.24 0.35 0.22 0.37	38.6 39.0 36.8 40.8	<1 1 <1 2	3.8 4.4 3.7 4.5
FEN198253 DUP Target Range - Lower Bound Upper Bound																
191625 DUP Target Range - Lower Bound Upper Bound																

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS61 Sr ppm 0.2	ME-MS61 Ta ppm 0.05	ME-MS61 Te ppm 0.05	ME-MS61 Th ppm 0.01	ME-MS61 Ti % 0.005	ME-MS61 Tl ppm 0.02	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
191522 DUP Target Range - Lower Bound Upper Bound		DUPLICATES											
191537 DUP Target Range - Lower Bound Upper Bound		2130 2160 2040 2250	3.61 3.57 3.36 3.82	0.22 0.27 0.18 0.31	154.5 164.0 151.5 167.0	0.032 0.034 0.026 0.040	0.22 0.22 0.18 0.26	11.3 11.9 10.9 12.3	20 21 18 23	1.3 1.3 1.1 1.5	40.1 40.7 38.3 42.5	572 561 536 597	45.8 46.3 42.1 50.0
191557 DUP Target Range - Lower Bound Upper Bound													
191558 DUP Target Range - Lower Bound Upper Bound		2550 2570 2430 2690	2.81 2.76 2.60 2.97	0.15 0.14 0.09 0.20	178.0 178.0 169.0 187.0	0.023 0.022 0.016 0.029	0.10 0.11 0.08 0.13	4.1 4.2 3.8 4.5	23 23 21 25	0.9 0.8 0.7 1.0	22.2 22.7 21.2 23.7	628 589 576 641	24.7 24.1 22.1 26.7
191571 DUP Target Range - Lower Bound Upper Bound		3710 3740 3540 3910	14.25 9.34 11.15 12.45	<0.05 <0.05 <0.05 0.10	188.5 184.5 177.0 196.0	0.009 0.008 <0.005 0.010	0.02 0.02 <0.02 0.04	8.7 8.0 7.8 8.9	17 17 15 19	1.8 1.7 1.5 2.0	33.4 33.1 31.5 35.0	137 143 131 149	18.9 18.5 16.8 20.6
191591 DUP Target Range - Lower Bound Upper Bound		2490 2560 2400 2650	1.14 1.13 1.03 1.24	0.10 0.12 <0.05 0.17	355 340 330 365	0.033 0.034 0.027 0.040	0.07 0.08 0.05 0.10	5.6 5.6 5.2 6.0	28 28 26 30	2.8 3.0 2.6 3.2	93.9 95.1 89.7 99.3	646 645 611 680	45.4 46.5 42.0 49.9
FEN198253 DUP Target Range - Lower Bound Upper Bound													
191625 DUP Target Range - Lower Bound Upper Bound													

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS81h Ce ppm 3	ME-MS81h Dy ppm 0.3	ME-MS81h Er ppm 0.2	ME-MS81h Eu ppm 0.2	ME-MS81h Gd ppm 0.3	ME-MS81h Hf ppm 1	ME-MS81h Ho ppm 0.05	ME-MS81h La ppm 3	ME-MS81h Lu ppm 0.05	ME-MS81h Nb ppm 1	ME-MS81h Nd ppm 0.5	ME-MS81h Pr ppm 0.2	ME-MS81h Rb ppm 1	ME-MS81h Sm ppm 0.2	ME-MS81h Sn ppm 5
DUPLICATES																
191640 DUP																
Target Range - Lower Bound																
Upper Bound																
191660 DUP		6360	23.6	5.0	42.4	81.9	1	2.84	3680	0.43	349	2240	684	5	219	11
Target Range - Lower Bound		6680	23.3	5.2	43.6	84.9	1	2.90	3680	0.38	372	2240	685	1	225	12
Upper Bound		6290	22.3	4.7	41.3	80.2	<1	2.72	3550	0.34	347	2160	660	2	214	6
		6750	24.6	5.5	44.7	86.6	2	3.02	3810	0.47	374	2320	709	4	230	17
191674 DUP		3020	10.9	2.2	26.3	48.7	<1	1.31	1625	0.16	350	1120	334	1	124.5	<5
Target Range - Lower Bound		3050	10.9	2.1	24.8	47.2	<1	1.21	1590	0.16	369	1115	335	<1	122.5	<5
Upper Bound		2930	10.2	1.9	24.5	46.0	<1	1.17	1550	0.10	346	1080	323	<1	119.0	<5
		3140	11.6	2.4	26.6	49.9	2	1.35	1665	0.22	373	1155	346	2	128.0	10
191686 DUP																
Target Range - Lower Bound																
Upper Bound																
191694 DUP		1730	15.6	3.4	24.5	48.5	<1	1.98	915	0.25	483	714	194.0	1	107.5	<5
Target Range - Lower Bound		1770	16.7	3.4	24.3	51.0	<1	2.05	938	0.22	515	735	198.0	<1	110.5	<5
Upper Bound		1685	15.3	3.1	23.3	47.7	<1	1.89	891	0.18	481	699	189.0	<1	105.0	<5
		1815	17.0	3.7	25.5	51.8	2	2.14	962	0.29	517	750	203	2	113.0	10
191700 DUP		42100	63.6	14.4	146.5	261	2	7.62	28700	1.10	103	10350	3810	<1	780	8
Target Range - Lower Bound		41400	65.3	14.5	148.5	260	2	7.60	28400	1.00	104	10300	3660	<1	769	8
Upper Bound		40300	61.9	13.7	142.0	251	<1	7.29	27500	0.96	99	9960	3600	<1	747	<5
		43200	67.0	15.2	153.0	270	3	7.93	29600	1.14	108	10700	3870	2	802	10
198804 DUP		5940	10.3	2.2	26.4	50.5	<1	1.16	3630	0.15	498	1705	578	1	129.5	<5
Target Range - Lower Bound		5850	10.2	1.9	25.0	48.3	<1	1.11	3580	0.13	490	1675	562	<1	123.0	<5
Upper Bound		5690	9.6	1.8	24.6	47.4	<1	1.05	3480	0.09	476	1630	550	<1	121.5	<5
		6100	10.9	2.3	26.8	51.4	2	1.22	3730	0.19	512	1750	590	2	131.0	10
198819 DUP		2980	9.7	2.7	15.5	30.3	1	1.25	1730	0.25	196	916	286	<1	82.0	<5
Target Range - Lower Bound		3000	10.2	2.7	15.7	30.3	<1	1.37	1760	0.23	188	911	290	<1	84.9	<5
Upper Bound		2880	9.3	2.4	14.9	28.9	<1	1.21	1680	0.18	184	881	278	<1	80.3	<5
		3100	10.6	3.0	16.3	31.7	2	1.41	1810	0.30	200	946	298	2	86.6	10

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS81h Ta ppm 0.5	ME-MS81h Tb ppm 0.05	ME-MS81h Th ppm 0.3	ME-MS81h Tm ppm 0.05	ME-MS81h U ppm 0.3	ME-MS81h W ppm 5	ME-MS81h Y ppm 3	ME-MS81h Yb ppm 0.2	ME-MS81h Zr ppm 10	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01
DUPLICATES																
191640											0.82	0.26	13.8	1530	0.63	1.06
DUP											0.89	0.26	13.4	1140	0.58	1.05
Target Range - Lower Bound											0.80	0.24	12.7	1220	0.52	0.99
Upper Bound											0.91	0.28	14.5	1450	0.69	1.12
191660		7.8	6.52	257	0.58	9.6	7	59	2.8	80	0.44	0.51	2.2	1420	1.90	0.52
DUP		10.0	6.98	257	0.53	10.0	7	60	3.1	80	0.42	0.49	2.1	1260	2.00	0.52
Target Range - Lower Bound		8.1	6.46	248	0.49	9.2	<5	54	2.6	70	0.40	0.47	1.8	1230	1.80	0.48
Upper Bound		9.7	7.04	266	0.62	10.4	10	65	3.3	90	0.46	0.54	2.5	1450	2.10	0.56
191674		3.4	3.61	139.0	0.20	6.6	<5	24	1.1	20						
DUP		3.7	3.54	132.0	0.18	6.8	<5	24	1.1	20						
Target Range - Lower Bound		2.9	3.40	130.5	0.13	6.2	<5	20	0.9	<10						
Upper Bound		4.2	3.75	140.5	0.25	7.2	10	28	1.3	30						
191686											0.08	0.16	1.9	5060	0.59	0.65
DUP											0.18	0.17	1.8	5090	0.64	0.62
Target Range - Lower Bound											0.11	0.15	1.6	4680	0.53	0.59
Upper Bound											0.15	0.18	2.1	5470	0.70	0.68
191694		7.9	4.21	228	0.34	14.6	5	42	1.9	30						
DUP		6.3	4.27	237	0.33	14.7	5	43	1.8	30						
Target Range - Lower Bound		6.4	4.04	224	0.27	13.8	<5	38	1.6	20						
Upper Bound		7.8	4.44	241	0.40	15.5	10	47	2.1	40						
191700		<0.5	22.1	799	1.22	11.2	7	158	7.3	150						
DUP		0.5	21.4	784	1.29	11.6	6	157	6.8	140						
Target Range - Lower Bound		<0.5	20.9	763	1.16	10.7	<5	149	6.6	130						
Upper Bound		1.0	22.6	820	1.35	12.1	10	166	7.5	160						
198804		4.9	3.36	286	0.25	4.5	<5	25	1.1	20						
DUP		4.6	3.34	267	0.21	4.0	<5	25	1.3	10						
Target Range - Lower Bound		4.1	3.18	267	0.17	3.8	<5	21	1.0	<10						
Upper Bound		5.4	3.52	286	0.29	4.7	10	29	1.4	20						
198819		2.2	2.35	127.5	0.37	2.0	<5	31	1.7	40						
DUP		1.8	2.46	125.0	0.29	2.0	<5	30	1.8	40						
Target Range - Lower Bound		1.4	2.27	121.5	0.27	1.6	<5	26	1.5	30						
Upper Bound		2.6	2.54	131.0	0.39	2.4	10	35	2.0	50						

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To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

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Finalized Date: 15-DEC-2018

Account: ONUSEG

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS61 Ca %	ME-MS61 Cd ppm	ME-MS61 Ce ppm	ME-MS61 Co ppm	ME-MS61 Cr ppm	ME-MS61 Cs ppm	ME-MS61 Cu ppm	ME-MS61 Fe %	ME-MS61 Ga ppm	ME-MS61 Ge ppm	ME-MS61 Hf ppm	ME-MS61 In ppm	ME-MS61 K %	ME-MS61 La ppm	ME-MS61 Li ppm
		0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2
DUPLICATES																
191640		18.85	0.40	>500	21.9	5	<0.05	3.5	8.24	16.45	1.98	0.7	0.621	<0.01	1510	3.7
DUP		18.95	0.37	>500	22.5	5	<0.05	3.5	8.27	16.85	2.03	0.7	0.629	<0.01	1520	3.8
Target Range - Lower Bound		17.95	0.35	475	21.0	4	<0.05	3.2	7.83	15.75	1.85	0.6	0.589	<0.01	1440	3.4
Upper Bound		19.85	0.42	>500	23.4	6	0.10	3.8	8.68	17.55	2.16	0.8	0.661	0.02	1590	4.1
191660		17.25	1.02	>500	12.6	29	0.25	7.5	7.97	29.0	3.85	1.3	0.580	0.03	3070	8.0
DUP		17.10	1.07	>500	11.6	21	0.23	8.0	7.81	28.3	3.79	1.3	0.584	0.03	3050	7.6
Target Range - Lower Bound		16.30	0.97	475	11.4	23	0.18	7.3	7.49	27.2	3.58	1.1	0.548	0.02	2910	7.2
Upper Bound		18.05	1.12	>500	12.8	27	0.30	8.2	8.29	30.1	4.06	1.5	0.616	0.04	3210	8.4
191674																
DUP																
Target Range - Lower Bound																
Upper Bound																
191686		20.3	0.73	>500	9.3	4	0.06	0.6	7.48	6.11	0.69	0.3	0.563	0.04	600	2.4
DUP		20.3	0.73	>500	9.6	5	0.05	0.6	7.51	6.22	0.68	0.4	0.569	0.04	610	2.5
Target Range - Lower Bound		19.30	0.67	475	8.9	3	<0.05	0.4	7.11	5.81	0.60	0.2	0.533	0.03	574	2.1
Upper Bound		21.3	0.79	>500	10.0	6	0.10	0.8	7.88	6.52	0.77	0.5	0.599	0.05	636	2.8
191694																
DUP																
Target Range - Lower Bound																
Upper Bound																
191700																
DUP																
Target Range - Lower Bound																
Upper Bound																
198804																
DUP																
Target Range - Lower Bound																
Upper Bound																
198819																
DUP																
Target Range - Lower Bound																
Upper Bound																

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To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

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Finalized Date: 15-DEC-2018

Account: ONUSEG

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS61 Mg %	ME-MS61 Mn ppm	ME-MS61 Mo ppm	ME-MS61 Na %	ME-MS61 Nb ppm	ME-MS61 Ni ppm	ME-MS61 P ppm	ME-MS61 Pb ppm	ME-MS61 Rb ppm	ME-MS61 Re ppm	ME-MS61 S %	ME-MS61 Sb ppm	ME-MS61 Sc ppm	ME-MS61 Se ppm	ME-MS61 Sn ppm
		0.01	5	0.05	0.01	0.1	0.2	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2
DUPLICATES																
191640		6.65	10450	250	0.10	>500	10.5	1530	13.5	0.1	0.007	0.92	0.22	32.4	1	3.7
DUP		6.60	10350	251	0.07	>500	11.1	1620	13.7	0.1	0.008	0.97	0.25	32.4	1	3.8
Target Range - Lower Bound		6.28	9880	238	0.07	475	10.1	1490	12.4	<0.1	0.005	0.89	0.17	30.7	<1	3.4
Upper Bound		6.97	10950	263	0.10	>500	11.5	1660	14.8	0.2	0.010	1.00	0.30	34.1	2	4.1
191660		6.62	10900	117.5	0.11	222	17.7	4530	15.4	1.0	0.008	0.54	0.23	29.4	<1	7.1
DUP		6.59	10800	118.0	0.10	284	16.8	4550	14.8	1.0	0.008	0.49	0.23	28.9	1	7.1
Target Range - Lower Bound		6.26	10300	112.0	0.09	240	16.2	4300	13.8	0.9	0.006	0.48	0.16	27.6	<1	6.5
Upper Bound		6.95	11400	123.5	0.12	266	18.3	4780	16.4	1.2	0.010	0.55	0.30	30.7	2	7.7
191674																
DUP																
Target Range - Lower Bound																
Upper Bound																
191686		7.18	11900	132.0	0.03	440	8.9	1390	9.9	1.4	0.006	0.46	0.21	22.5	2	2.4
DUP		7.19	12000	135.0	0.03	430	9.0	1410	10.3	1.4	0.006	0.47	0.24	22.6	1	2.4
Target Range - Lower Bound		6.82	11350	127.0	0.02	413	8.3	1320	9.1	1.2	0.004	0.43	0.16	21.3	<1	2.1
Upper Bound		7.55	12550	140.0	0.04	457	9.6	1480	11.1	1.6	0.008	0.50	0.29	23.8	2	2.7
191694																
DUP																
Target Range - Lower Bound																
Upper Bound																
191700																
DUP																
Target Range - Lower Bound																
Upper Bound																
198804																
DUP																
Target Range - Lower Bound																
Upper Bound																
198819																
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Upper Bound																

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POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

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Account: ONUSEG

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS61 Sr ppm 0.2	ME-MS61 Ta ppm 0.05	ME-MS61 Te ppm 0.05	ME-MS61 Th ppm 0.01	ME-MS61 Ti % 0.005	ME-MS61 Tl ppm 0.02	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
DUPLICATES													
191640		2640	10.60	0.12	190.5	0.015	0.06	6.6	22	2.1	36.3	128	33.2
DUP		2620	11.75	0.11	194.0	0.016	0.07	6.7	22	2.2	37.2	128	33.6
Target Range - Lower Bound		2500	10.55	0.06	182.5	0.010	0.04	6.2	20	1.9	34.8	120	30.4
Upper Bound		2760	11.80	0.17	202	0.021	0.09	7.1	24	2.4	38.7	136	36.4
191660		2780	4.44	0.17	269	0.079	0.08	10.4	41	5.5	58.8	372	72.5
DUP		2750	6.20	0.16	265	0.082	0.07	11.2	40	5.8	58.6	386	72.0
Target Range - Lower Bound		2630	5.00	0.11	254	0.071	0.05	10.2	37	5.1	55.7	358	66.3
Upper Bound		2900	5.64	0.22	280	0.090	0.10	11.4	44	6.2	61.7	400	78.2
191674													
DUP													
Target Range - Lower Bound													
Upper Bound													
191686		2920	5.86	0.10	101.0	0.014	0.06	16.0	20	1.8	27.7	253	20.5
DUP		2900	5.29	0.07	103.0	0.014	0.07	15.3	20	1.9	27.7	260	20.1
Target Range - Lower Bound		2760	5.25	<0.05	96.9	0.008	0.04	14.8	18	1.6	26.2	242	18.3
Upper Bound		3060	5.90	0.10	107.0	0.020	0.09	16.5	22	2.1	29.2	271	22.3
191694													
DUP													
Target Range - Lower Bound													
Upper Bound													
191700													
DUP													
Target Range - Lower Bound													
Upper Bound													
198804													
DUP													
Target Range - Lower Bound													
Upper Bound													
198819													
DUP													
Target Range - Lower Bound													
Upper Bound													

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POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

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Finalized Date: 15-DEC-2018

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS81h Ce ppm 3	ME-MS81h Dy ppm 0.3	ME-MS81h Er ppm 0.2	ME-MS81h Eu ppm 0.2	ME-MS81h Gd ppm 0.3	ME-MS81h Hf ppm 1	ME-MS81h Ho ppm 0.05	ME-MS81h La ppm 3	ME-MS81h Lu ppm 0.05	ME-MS81h Nb ppm 1	ME-MS81h Nd ppm 0.5	ME-MS81h Pr ppm 0.2	ME-MS81h Rb ppm 1	ME-MS81h Sm ppm 0.2	ME-MS81h Sn ppm 5
191501 DUP Target Range - Lower Bound Upper Bound		DUPLICATES														
191502 DUP Target Range - Lower Bound Upper Bound																
		PREP DUPLICATES														
191564		5930	29.9	5.1	71.5	141.0	<1	3.04	3080	0.49	270	2080	651	1	280	9
191564 PREP DUP		5580	31.8	5.6	71.3	154.0	1	3.33	3030	0.44	306	2020	634	<1	284	9
191614		4090	12.0	2.5	29.8	50.1	1	1.38	1860	0.25	43	1550	466	<1	143.5	<5
191614 PREP DUP		4360	13.0	2.6	29.8	57.0	1	1.43	2030	0.29	43	1655	523	<1	153.0	<5
191664		2750	10.6	2.2	22.0	43.9	1	1.14	1510	0.16	572	966	295	3	102.5	<5
191664 PREP DUP		2640	11.2	2.1	22.2	47.0	<1	1.15	1495	0.17	681	963	288	<1	102.0	5

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS81h Ta ppm 0.5	ME-MS81h Tb ppm 0.05	ME-MS81h Th ppm 0.3	ME-MS81h Tm ppm 0.05	ME-MS81h U ppm 0.3	ME-MS81h W ppm 5	ME-MS81h Y ppm 3	ME-MS81h Yb ppm 0.2	ME-MS81h Zr ppm 10	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01
DUPLICATES																
191501											<0.01	1.67	<0.2	6980	6.65	0.42
DUP											0.09	1.69	<0.2	7040	6.72	0.43
Target Range - Lower Bound											0.04	1.59	<0.2	6470	6.30	0.39
Upper Bound											0.06	1.77	0.4	7550	7.07	0.46
191502											0.01	2.37	<0.2	6950	4.94	0.38
DUP											<0.01	2.38	<0.2	7110	5.20	0.39
Target Range - Lower Bound											<0.01	2.25	<0.2	6490	4.77	0.36
Upper Bound											0.02	2.50	0.4	7570	5.37	0.41
PREP DUPLICATES																
191564		3.1	10.95	724	0.49	7.0	<5	59	3.2	50	1.30	0.07	39.0	1410	1.01	2.74
191564 PREP DUP		3.3	12.10	786	0.57	7.4	<5	58	3.1	50	0.95	0.12	48.4	1350	1.07	2.52
191614		0.7	3.42	132.0	0.27	3.0	<5	29	1.8	30	1.45	0.07	0.7	1850	0.71	0.87
191614 PREP DUP		0.7	4.19	141.0	0.23	3.0	<5	32	1.7	30	1.56	0.09	<0.2	2790	0.62	1.02
191664		11.9	3.35	158.0	0.17	9.8	<5	24	1.1	30	0.12	0.10	4.2	1700	0.43	0.36
191664 PREP DUP		23.3	3.66	163.0	0.19	11.5	<5	24	1.1	30	0.43	0.11	3.9	1460	0.44	0.46

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS61 Ca %	ME-MS61 Cd ppm	ME-MS61 Ce ppm	ME-MS61 Co ppm	ME-MS61 Cr ppm	ME-MS61 Cs ppm	ME-MS61 Cu ppm	ME-MS61 Fe %	ME-MS61 Ga ppm	ME-MS61 Ge ppm	ME-MS61 Hf ppm	ME-MS61 In ppm	ME-MS61 K %	ME-MS61 La ppm	ME-MS61 Li ppm
		0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2
DUPLICATES																
191501		15.60	0.46	>500	13.9	82	4.68	14.3	8.16	13.10	1.00	2.4	0.295	0.95	1500	71.1
DUP		15.65	0.50	>500	13.3	68	4.68	13.9	8.18	13.20	0.95	2.4	0.301	0.95	1560	71.5
Target Range - Lower Bound		14.85	0.44	475	12.8	70	4.40	13.4	7.75	12.45	0.88	2.2	0.278	0.89	1455	67.5
Upper Bound		16.40	0.52	>500	14.4	80	4.96	14.8	8.59	13.85	1.07	2.6	0.318	1.01	1605	75.1
191502		12.35	0.18	>500	16.1	114	5.42	19.4	9.39	14.55	0.86	2.7	0.229	1.31	1240	81.0
DUP		12.30	0.21	>500	16.3	104	5.39	18.3	9.41	14.75	0.88	2.5	0.229	1.31	1280	82.1
Target Range - Lower Bound		11.70	0.17	475	15.3	103	5.08	18.0	8.92	13.85	0.78	2.4	0.213	1.23	1195	77.3
Upper Bound		12.95	0.22	>500	17.1	115	5.73	19.7	9.88	15.45	0.96	2.8	0.245	1.39	1325	85.8
PREP DUPLICATES																
191564		17.80	1.14	>500	12.1	8	0.12	1.7	9.47	25.0	3.87	1.1	0.950	0.01	2400	2.9
191564 PREP DUP		17.80	1.14	>500	12.6	8	0.13	2.2	9.36	19.80	3.00	1.1	0.987	0.01	2490	3.0
191614		18.10	3.83	>500	16.2	4	<0.05	2.3	8.34	19.50	2.75	0.6	0.548	<0.01	1470	1.8
191614 PREP DUP		19.00	3.71	>500	16.4	4	<0.05	2.9	8.66	16.40	2.45	0.7	0.542	0.01	1630	1.9
191664		18.05	0.85	>500	13.8	6	0.12	2.4	7.96	13.50	1.70	0.5	0.511	0.02	1200	3.8
191664 PREP DUP		18.55	0.76	>500	15.3	5	0.14	3.7	8.01	10.45	1.39	0.5	0.516	0.02	1220	3.7

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS61 Mg %	ME-MS61 Mn ppm	ME-MS61 Mo ppm	ME-MS61 Na %	ME-MS61 Nb ppm	ME-MS61 Ni ppm	ME-MS61 P ppm	ME-MS61 Pb ppm	ME-MS61 Rb ppm	ME-MS61 Re ppm	ME-MS61 S %	ME-MS61 Sb ppm	ME-MS61 Sc ppm	ME-MS61 Se ppm	ME-MS61 Sn ppm
		0.01	5	0.05	0.01	0.1	0.2	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2
DUPLICATES																
191501		8.71	8370	60.6	0.06	480	81.0	430	4.7	42.6	0.004	0.21	0.17	27.6	1	10.1
DUP		8.68	8320	62.0	0.06	470	86.3	430	4.8	42.3	0.007	0.21	0.18	27.8	1	10.1
Target Range - Lower Bound		8.25	7920	58.2	0.05	451	79.3	400	4.0	40.2	0.003	0.19	0.11	26.2	<1	9.4
Upper Bound		9.14	8770	64.4	0.07	499	88.0	460	5.5	44.7	0.008	0.23	0.24	29.2	2	10.8
191502		9.02	8050	49.8	0.06	>500	96.2	600	3.9	53.6	0.003	0.26	0.17	27.8	1	10.0
DUP		8.98	8040	52.0	0.06	480	100.5	590	4.2	54.2	0.006	0.25	0.15	27.6	1	9.0
Target Range - Lower Bound		8.54	7640	48.3	0.05	465	93.2	560	3.3	51.1	<0.002	0.23	0.10	26.2	<1	8.8
Upper Bound		9.46	8450	53.5	0.07	>500	103.5	630	4.8	56.7	0.007	0.28	0.22	29.2	2	10.2
PREP DUPLICATES																
191564		6.38	12900	13.30	0.02	205	4.4	2090	41.9	0.6	0.002	1.13	0.22	30.7	<1	6.9
191564 PREP DUP		6.54	13100	13.30	0.09	233	5.5	2050	40.3	0.7	<0.002	1.32	0.24	34.8	1	7.1
191614		6.39	12900	361	0.11	41.8	3.8	420	13.3	0.2	0.012	0.61	0.19	21.8	1	1.9
191614 PREP DUP		6.65	13600	400	0.18	39.6	5.0	460	15.6	0.4	0.013	0.67	0.23	24.6	2	2.0
191664		7.02	10750	71.8	0.11	470	3.5	720	9.5	0.8	0.003	0.83	0.22	18.9	1	3.2
191664 PREP DUP		7.18	11000	76.0	0.11	>500	4.3	750	10.6	0.9	0.004	0.91	0.20	20.6	1	4.4

Comments: Samples were received on 27-Nov-2018. and the SSF/Request on 28-Nov-2018.

***** See Appendix Page for comments regarding this certificate *****



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To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

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Total # Pages: 6 (A - E)

Plus Appendix Pages

Finalized Date: 15-DEC-2018

Account: ONUSE

An INAB accredited testing laboratory Reg. No. 173T. Accredited methods are listed in the Scope of Accreditation available on request.

Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302104

Sample Description	Method Analyte Units LOD	ME-MS61 Sr ppm 0.2	ME-MS61 Ta ppm 0.05	ME-MS61 Te ppm 0.05	ME-MS61 Th ppm 0.01	ME-MS61 Ti % 0.005	ME-MS61 Tl ppm 0.02	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
DUPLICATES													
191501		1510	6.66	0.12	97.7	0.195	0.40	6.9	53	1.2	15.1	95	62.2
DUP		1500	7.40	0.09	105.5	0.196	0.43	7.5	53	1.2	15.1	95	62.5
Target Range - Lower Bound		1430	6.63	<0.05	96.5	0.181	0.36	6.7	49	1.0	14.2	88	57.2
Upper Bound		1580	7.43	0.16	106.5	0.210	0.47	7.7	57	1.4	16.0	102	67.5
191502		1240	11.75	0.06	116.5	0.287	0.49	6.7	53	1.5	12.4	111	62.3
DUP		1260	9.16	0.09	118.0	0.286	0.49	6.5	54	1.5	12.5	115	63.6
Target Range - Lower Bound		1185	9.88	<0.05	111.5	0.267	0.43	6.2	50	1.3	11.7	105	57.7
Upper Bound		1315	11.05	0.10	123.0	0.306	0.55	7.0	57	1.7	13.2	121	68.2
PREP DUPLICATES													
191564		2430	2.33	0.24	670	0.085	0.04	6.4	50	2.9	55.3	357	46.8
191564 PREP DUP		2480	3.28	0.33	720	0.096	0.05	7.7	55	3.3	62.7	423	47.8
191614		2660	0.99	0.18	130.0	0.016	0.09	3.3	17	0.6	27.9	1150	25.7
191614 PREP DUP		2680	0.40	0.20	169.5	0.017	0.10	3.4	18	0.6	33.3	1100	28.9
191664		3230	10.05	0.13	185.0	0.010	0.05	11.5	17	2.2	24.6	232	26.2
191664 PREP DUP		3250	17.30	0.18	203	0.011	0.06	13.0	17	2.1	25.6	209	26.5

Comments: Samples were received on 27-Nov-2018. and the SSF/Request on 28-Nov-2018.

***** See Appendix Page for comments regarding this certificate *****



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To: GEOLOGICAL SURVEY OF NORWAY (NGU)
POSTBOKS 6315 TORGARDEN
NO-7491 TRONDHEIM
NORWAY

Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 15-DEC-2018
Account: ONUSEG

An INAB accredited testing laboratory Reg. No. 173T. Accredited methods are listed in the Scope of Accreditation available on request.

Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302104

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

ACCREDITATION COMMENTS

Applies to Method: The methods immediately below this line are ISO 17025:2005 Accredited. INAB Registration No: 173T
ME-MS61



LABORATORY ADDRESSES

Applies to Method:	Processed at ALS Pitea located at Hammarvagen 22, SE-943 36, Ojebyn, Sweden.		
	CRU-31	CRU-QC	LOG-22
	PUL-31	PUL-QC	SPL-22Y
			LOG-24
			WEI-21
Applies to Method:	Processed at ALS Loughrea located at Dublin Road, Loughrea, Co. Galway, Ireland.		
	ME-MS61	ME-MS81h	