



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

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
Total # Pages: 8 (A - E)
Plus Appendix Pages
Finalized Date: 27-DEC-2018
Account: ONUSE

QC CERTIFICATE PI18302116

Project: Not provided

P.O. No.: 379500

This report is for 204 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-OG62	Ore Grade Elements - Four Acid	ICP-AES
Zn-OG62	Ore Grade Zn - Four Acid	
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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 2 - A

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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		8290	140.0	35.9	154.0	358	26	18.80	3400	1.86	>5000	3860	1060	11	578	25
AMISO304		7880	137.5	33.3	156.0	354	26	17.50	3370	1.99	4870	4040	989	10	568	24
AMISO304		8260	139.0	34.6	152.0	349	29	18.20	3520	1.90	>5000	3880	1055	12	595	25
AMISO304		8580	136.0	34.4	160.0	354	27	18.85	3510	2.02	>5000	3980	1055	10	595	26
AMISO304		8150	131.5	34.2	153.5	353	27	18.30	3460	2.01	>5000	3860	1000	11	574	23
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																
EMOG-17																
Target Range - Lower Bound																
Upper Bound																
GRE-04		6130	91.7	26.7	94.2	220	23	13.40	2720	1.75	3540	2730	770	1	388	79
GRE-04		5810	97.1	27.5	96.5	219	21	13.30	2790	1.72	3550	2650	727	1	370	78
GRE-04		6070	91.1	27.0	96.5	220	21	13.40	2780	1.72	3760	2730	736	1	381	81
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		4360	86.5	27.8	71.5	181.5	18	12.80	2230	1.68	3680	1835	498	<1	262	44
GRE-3		4440	88.5	27.3	72.5	181.5	19	12.60	2200	1.68	3750	1830	478	1	271	45
GRE-3		4230	86.3	27.3	70.7	178.0	19	13.40	2280	1.66	3610	1795	498	1	272	45
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
MP-1b																
Target Range - Lower Bound																
Upper Bound																
MRGeo08																
MRGeo08																
MRGeo08																
Target Range - Lower Bound																
Upper Bound																

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 2 - B

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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		12.5	36.4	443	3.66	23.9	6	392	17.5	1050						
AMISO304		12.0	37.1	408	3.43	22.5	5	399	17.1	1090						
AMISO304		12.0	35.4	425	3.34	23.5	5	413	16.8	1190						
AMISO304		13.2	35.6	431	3.34	23.8	6	420	16.2	1200						
AMISO304		11.9	35.4	438	3.57	22.3	7	406	17.1	1160						
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											67.5	4.69	577	700	1.67	6.07
EMOG-17											66.4	4.67	570	830	1.87	5.82
EMOG-17											69.2	4.56	576	830	1.98	6.14
EMOG-17											67.8	4.63	570	830	1.80	6.24
EMOG-17											67.1	4.57	590	380	1.72	5.62
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		128.0	23.3	138.0	2.82	128.0	<5	303	14.2	990						
GRE-04		131.0	23.5	136.5	3.02	130.5	<5	302	15.0	880						
GRE-04		128.5	23.3	137.0	2.76	125.0	<5	321	14.2	950						
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		159.0	21.3	111.0	2.87	113.5	<5	321	15.0	930						
GRE-3		160.0	20.1	109.5	2.85	109.5	<5	306	14.5	950						
GRE-3		163.0	21.7	109.0	2.83	106.0	9	306	14.2	970						
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						
MP-1b																
Target Range - Lower Bound																
Upper Bound																
MRGeo08											4.50	7.98	32.9	1140	3.41	0.69
MRGeo08											4.58	8.05	32.6	1130	3.47	0.69
MRGeo08											4.42	7.82	32.9	1120	3.11	0.72
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

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 2 - C

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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																
AMISO304																
AMISO304																
Target Range - Lower Bound																
Upper Bound																
EMOG-17		1.97	20.7	47.3	769	53	7.45	8180	4.95	12.00	0.25	1.9	0.916	1.65	24.5	26.5
EMOG-17		1.97	20.2	47.0	770	53	7.25	8260	4.91	12.70	0.59	1.8	0.913	1.70	24.4	24.5
EMOG-17		1.96	21.0	48.6	760	51	7.51	8320	4.86	12.40	0.54	2.0	0.940	1.67	23.5	26.5
EMOG-17		1.90	20.7	48.0	761	52	7.36	8310	4.93	12.40	0.60	1.8	0.941	1.67	24.9	25.7
EMOG-17		1.96	20.7	50.3	747	54	7.41	8450	4.70	12.10	0.12	1.9	0.938	1.62	26.3	24.0
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																
Target Range - Lower Bound																
Upper Bound																
MP-1b																
Target Range - Lower Bound																
Upper Bound																
MRGeo08		2.71	2.34	74.1	19.6	96	12.25	638	4.11	19.50	0.20	3.3	0.171	3.29	36.1	32.3
MRGeo08		2.68	2.28	75.9	19.5	91	12.75	633	4.08	19.15	0.18	3.3	0.187	3.30	35.1	32.9
MRGeo08		2.66	2.31	71.8	19.3	90	12.35	638	4.02	19.20	0.20	3.2	0.172	3.20	34.3	30.4
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

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 2 - D

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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																
AMISO304																
AMISO304																
Target Range - Lower Bound																
Upper Bound																
EMOG-17		0.97	739	1060	1.13	15.0	7550	790	7330	119.0	0.317	3.23	758	7.6	8	2.6
EMOG-17		1.04	755	1100	1.13	14.5	7490	790	7390	106.0	0.299	3.27	752	7.8	8	2.7
EMOG-17		1.05	750	1110	1.12	15.1	7690	790	7290	108.0	0.319	3.25	761	7.9	8	2.7
EMOG-17		0.96	744	1100	1.12	13.9	7550	790	7350	106.5	0.331	3.23	763	8.1	8	2.8
EMOG-17		0.98	711	1080	1.06	15.4	7540	800	7180	120.0	0.325	3.20	735	7.2	7	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																
Target Range - Lower Bound																
Upper Bound																
MP-1b																
Target Range - Lower Bound																
Upper Bound																
MRGeo08		1.40	579	15.00	2.07	20.8	701	1040	1100	190.5	0.010	0.31	4.39	11.9	1	3.9
MRGeo08		1.40	579	13.20	2.07	21.4	703	1040	1090	202	0.009	0.31	4.28	11.9	2	4.0
MRGeo08		1.38	559	14.80	2.07	20.4	699	1020	1100	193.5	0.013	0.30	4.48	11.6	1	4.0
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

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 2 - E

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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	Zn-OG62 Zn % 0.001
STANDARDS														
AMISO304														
AMISO304														
AMISO304														
AMISO304														
AMISO304														
Target Range - Lower Bound														
Upper Bound														
EMOG-17		204	0.94	1.30	11.35	0.307	2.20	3.2	72	4.1	16.0	7370	62.1	
EMOG-17		205	0.93	1.27	10.65	0.321	2.16	3.4	75	3.5	15.2	7570	63.3	
EMOG-17		206	0.97	1.32	11.30	0.322	2.30	3.4	75	4.6	15.6	7590	64.6	
EMOG-17		207	0.88	1.25	11.00	0.321	2.32	3.5	73	4.1	15.6	7590	65.1	
EMOG-17		198.0	0.93	1.37	10.55	0.293	2.10	3.2	70	4.0	15.8	7430	64.2	
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														
Target Range - Lower Bound														
Upper Bound														
MP-1b														16.95
Target Range - Lower Bound														16.10
Upper Bound														17.25
MRGeo08		318	1.52	<0.05	18.55	0.504	1.07	5.2	108	5.3	25.9	815	113.5	
MRGeo08		316	1.66	<0.05	19.30	0.498	1.09	5.7	108	5.0	26.4	788	113.5	
MRGeo08		310	1.53	<0.05	18.85	0.501	1.11	5.6	107	5.0	25.6	805	109.0	
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	

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 3 - A

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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																
OGGeo08																
OGGeo08																
OGGeo08																
OGGeo08																
OGGeo08																
Target Range - Lower Bound																
Upper Bound																
OGGeo08																
Target Range - Lower Bound																
Upper Bound																
OREAS 920																
OREAS 920																
OREAS 920																
OREAS 920																
Target Range - Lower Bound																
Upper Bound																
OREAS-134b																
Target Range - Lower Bound																
Upper Bound																
REE-1		4220	892	706	25.2	452	510	219	1720	94.5	4060	1475	461	1050	400	513
REE-1		4140	844	713	23.9	453	474	213	1710	93.7	3830	1545	445	1110	382	510
REE-1		4190	890	724	23.4	458	509	219	1740	96.3	3870	1515	457	1090	368	493
REE-1		4050	884	701	23.8	435	492	209	1680	94.6	3740	1480	452	1105	389	525
REE-1		3970	880	744	23.8	457	490	219	1740	92.7	3990	1445	452	1050	384	516
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																
BLANK																

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 3 - B

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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																
OGGeo08											20.4	6.81	123.5	930	3.09	10.20
OGGeo08											20.1	6.84	121.0	860	2.86	10.45
OGGeo08											19.65	6.78	114.0	910	2.87	9.52
OGGeo08											19.90	6.82	122.5	940	2.86	10.15
OGGeo08											20.0	6.83	119.5	970	2.88	10.55
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
OGGeo08																
Target Range - Lower Bound																
Upper Bound																
OREAS 920											0.10	7.70	5.0	550	2.89	0.80
OREAS 920											0.08	7.88	4.8	560	2.57	0.80
OREAS 920											0.09	7.62	4.7	530	2.62	0.93
OREAS 920											0.10	7.75	5.4	570	2.84	0.62
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
OREAS-134b																
Target Range - Lower Bound																
Upper Bound																
REE-1		232	110.0	767	113.0	141.5	9	5710	696	20300						
REE-1		228	111.5	754	109.0	140.0	9	5820	720	18400						
REE-1		243	111.0	717	113.0	146.0	8	5830	708	19000						
REE-1		222	110.5	779	111.5	139.0	9	5820	703	19800						
REE-1		228	108.0	769	112.5	135.0	14	5790	723	20000						
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	0.3	<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	0.3	<10	<0.05	<0.01
BLANK											0.01	<0.01	<0.2	<10	<0.05	0.01
BLANK											<0.01	<0.01	<0.2	20	<0.05	<0.01
BLANK											<0.01	<0.01	<0.2	<10	<0.05	<0.01
BLANK											0.01	<0.01	0.4	<10	<0.05	<0.01
BLANK											0.01	<0.01	<0.2	<10	<0.05	0.01

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 3 - C

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

Sample Description	Method Analyte Units LOD	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge	Hf	In	K	La	Li
		%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	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																
OGGeo08		2.24	19.30	70.7	98.0	83	11.75	8460	5.43	18.10	0.53	2.9	1.495	2.87	34.2	33.2
OGGeo08		2.21	18.85	65.1	96.9	79	10.85	8330	5.36	17.30	0.67	3.1	1.505	2.88	31.9	32.5
OGGeo08		2.19	18.20	66.6	93.1	81	11.05	8080	5.31	16.30	0.51	2.8	1.420	2.84	33.9	30.2
OGGeo08		2.23	19.90	70.7	97.4	82	11.05	8410	5.37	18.30	0.51	2.8	1.475	2.89	34.2	32.1
OGGeo08		2.29	18.90	61.2	94.6	81	10.55	8370	5.34	16.80	0.47	2.8	1.400	2.90	32.5	30.9
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
OGGeo08																
Target Range - Lower Bound																
Upper Bound																
OREAS 920		0.51	0.07	94.8	15.3	84	8.61	109.0	4.12	19.90	0.18	4.7	0.075	2.83	46.5	29.6
OREAS 920		0.50	0.06	93.4	14.6	83	8.91	104.5	4.00	19.40	0.15	4.7	0.077	2.82	47.5	28.1
OREAS 920		0.49	0.04	93.3	15.5	83	8.38	106.0	4.14	21.0	0.15	4.4	0.080	2.85	44.9	27.5
OREAS 920		0.54	0.05	94.3	15.0	84	8.57	111.5	3.99	20.5	0.15	4.7	0.089	2.85	50.1	27.8
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
OREAS-134b																
Target Range - Lower Bound																
Upper Bound																
REE-1																
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	0.3	<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	0.3	<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	0.3	<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
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	0.3	<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
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

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 3 - D

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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																
OGGeo08		1.27	505	885	1.86	20.7	8750	850	7290	178.5	1.380	2.83	27.5	10.5	11	14.2
OGGeo08		1.27	506	909	1.86	18.8	8840	850	7230	172.0	1.375	2.80	26.7	9.6	10	13.9
OGGeo08		1.24	489	866	1.82	18.4	8560	860	7120	169.5	1.340	2.78	25.3	9.5	11	13.0
OGGeo08		1.26	500	915	1.84	19.4	8840	850	7330	185.0	1.400	2.81	27.0	10.0	11	14.6
OGGeo08		1.31	497	911	1.81	17.1	8860	840	7280	169.5	1.295	2.82	25.9	10.0	11	13.4
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
OGGeo08																
Target Range - Lower Bound																
Upper Bound																
OREAS 920		1.35	605	0.46	0.63	18.1	41.7	730	25.7	179.0	0.002	0.03	1.45	13.5	<1	4.8
OREAS 920		1.32	610	0.55	0.63	18.7	38.3	710	23.4	168.0	0.003	0.04	1.54	13.3	1	4.7
OREAS 920		1.32	584	0.42	0.64	15.7	40.7	750	24.3	173.5	0.004	0.03	1.53	13.6	1	5.1
OREAS 920		1.44	609	0.43	0.63	15.7	40.8	780	23.5	184.0	0.002	0.03	1.59	14.2	<1	5.0
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
OREAS-134b																
Target Range - Lower Bound																
Upper Bound																
REE-1																
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	0.05	<0.1	2	<0.2
BLANK		<0.01	<5	0.08	<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	<0.05	<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	0.05	<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	<0.05	<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	<0.05	<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	<0.05	<0.1	<1	<0.2
BLANK		<0.01	<5	0.05	<0.01	<0.1	0.4	<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

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 3 - E

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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	Zn-OG62 Zn % 0.001
STANDARDS														
OGGeo08		252	1.37	0.13	17.80	0.398	1.87	5.0	87	4.6	23.2	6940	95.1	
OGGeo08		248	1.31	0.17	18.60	0.398	1.78	4.9	83	4.7	22.3	7200	88.7	
OGGeo08		243	1.26	0.15	18.00	0.382	1.71	5.0	84	4.7	22.2	6800	89.7	
OGGeo08		250	1.34	0.19	17.40	0.396	1.74	5.1	84	4.7	22.9	7260	96.1	
OGGeo08		245	1.33	0.15	15.90	0.382	1.72	4.8	83	4.6	21.4	7180	89.5	
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	
OGGeo08														0.725
Target Range - Lower Bound														0.696
Upper Bound														0.748
OREAS 920		82.4	1.37	<0.05	21.2	0.479	0.94	3.9	98	3.4	32.8	122	150.0	
OREAS 920		80.1	1.35	<0.05	19.55	0.475	0.96	3.8	94	3.3	31.9	118	153.0	
OREAS 920		80.7	1.37	<0.05	18.45	0.467	0.90	3.7	97	3.1	32.0	122	155.5	
OREAS 920		81.4	1.35	<0.05	19.00	0.469	0.90	3.8	96	3.2	32.6	121	161.0	
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	
OREAS-134b														17.80
Target Range - Lower Bound														17.40
Upper Bound														18.65
REE-1														
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	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		<0.2	<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	<0.1	<0.1	<2	<0.5	
BLANK		0.3	<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	<0.1	<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	

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 4 - A

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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
BLANKS																
BLANK																
Target Range - Lower Bound																
Upper Bound																
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	<0.05	<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	0.07	<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	<0.05	<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
BLANK																
Target Range - Lower Bound																
Upper Bound																
DUPLICATES																
191702																
DUP																
Target Range - Lower Bound																
Upper Bound																
191705		8310	23.0	5.2	41.6	79.3	2	2.83	4880	0.34	97	2320	841	8	199.5	9
DUP		8220	22.8	4.7	41.1	79.2	2	2.94	4750	0.29	110	2290	785	8	199.0	9
Target Range - Lower Bound		7970	21.8	4.6	39.7	76.2	<1	2.73	4640	0.25	99	2220	784	7	192.0	<5
Upper Bound		8560	24.0	5.3	43.0	82.3	3	3.04	4990	0.38	108	2390	842	9	206	10
191707		3400	11.0	3.3	22.3	38.6	3	1.57	1370	0.29	60	1390	396	14	115.0	<5
DUP		3300	10.9	3.4	21.8	40.0	3	1.48	1420	0.29	53	1320	388	13	119.0	<5
Target Range - Lower Bound		3230	10.3	3.0	21.1	37.6	2	1.42	1345	0.23	54	1305	378	12	112.5	<5
Upper Bound		3470	11.6	3.7	23.0	41.0	4	1.63	1445	0.35	59	1405	406	15	121.5	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 *****



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 4 - B

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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
BLANKS																
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		<0.5	<0.05	<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		0.6	<0.05	<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	<0.05	<0.3	0.05	<0.3	<5	<3	<0.2	<10						
BLANK		0.8	<0.05	<0.3	<0.05	<0.3	<5	<3	<0.2	<10						
BLANK		0.7	<0.05	<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	<0.05	<0.3	<0.05	<0.3	7	<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						
BLANK																
Target Range - Lower Bound																
Upper Bound																
DUPLICATES																
191702											1.27	0.02	7.4	460	1.33	0.40
DUP											1.20	0.01	7.2	730	1.27	0.41
Target Range - Lower Bound											1.16	<0.01	6.7	540	1.19	0.37
Upper Bound											1.31	0.02	7.9	650	1.42	0.44
191705		2.1	11.05	226	0.50	2.4	<5	61	3.3	150						
DUP		1.0	11.20	222	0.45	2.4	<5	61	2.9	140						
Target Range - Lower Bound		1.0	10.70	216	0.41	2.0	<5	56	2.8	130						
Upper Bound		2.1	11.55	232	0.54	2.8	10	66	3.4	160						
191707		1.8	3.02	91.9	0.34	2.0	<5	40	2.1	160						
DUP		1.7	3.13	90.9	0.28	1.9	<5	37	2.1	150						
Target Range - Lower Bound		1.2	2.92	87.9	0.25	1.6	<5	34	1.8	140						
Upper Bound		2.3	3.23	94.9	0.37	2.3	10	43	2.4	170						

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 4 - C

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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
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
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																
BLANK																
BLANK																
BLANK																
BLANK																
BLANK																
BLANK																
Target Range - Lower Bound																
Upper Bound																
BLANK																
Target Range - Lower Bound																
Upper Bound																
DUPLICATES																
191702		20.1	0.76	>500	16.5	5	<0.05	1.4	4.89	22.8	2.28	1.3	0.546	<0.01	3480	1.9
DUP		19.90	0.76	>500	15.8	6	<0.05	1.2	4.84	22.1	2.18	1.2	0.537	<0.01	3490	1.7
Target Range - Lower Bound		19.00	0.70	475	15.2	4	<0.05	1.1	4.61	21.3	2.07	1.1	0.509	<0.01	3310	1.5
Upper Bound		21.0	0.82	>500	17.1	7	0.10	1.5	5.12	23.6	2.39	1.4	0.574	0.02	3660	2.1
191705																
DUP																
Target Range - Lower Bound																
Upper Bound																
191707																
DUP																
Target Range - Lower Bound																
Upper Bound																

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 4 - D

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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
BLANKS																
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																
BLANK																
BLANK																
BLANK																
BLANK																
Target Range - Lower Bound																
Upper Bound																
BLANK																
Target Range - Lower Bound																
Upper Bound																
DUPLICATES																
191702		3.32	7150	216	0.05	94.5	2.1	7000	10.7	0.2	0.015	0.92	0.19	31.4	1	11.5
DUP		3.35	7320	217	0.07	90.8	2.1	6970	10.8	0.2	0.015	0.93	0.18	31.4	1	11.2
Target Range - Lower Bound		3.16	6870	206	0.05	87.9	1.8	6630	9.7	<0.1	0.012	0.87	0.12	29.7	<1	10.6
Upper Bound		3.51	7600	227	0.07	97.4	2.4	7340	11.8	0.3	0.018	0.98	0.25	33.1	2	12.1
191705																
DUP																
Target Range - Lower Bound																
Upper Bound																
191707																
DUP																
Target Range - Lower Bound																
Upper Bound																

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 4 - E

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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	Zn-OG62 Zn % 0.001
BLANKS														
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														
BLANK														
BLANK														
Target Range - Lower Bound														
Upper Bound														
BLANK														<0.001
Target Range - Lower Bound														<0.001
Upper Bound														0.002
DUPLICATES														
191702		2340	0.32	0.67	195.5	0.039	0.06	5.0	24	2.3	60.9	72	98.7	
DUP		2460	0.30	0.61	197.0	0.038	0.06	4.9	23	2.2	58.2	74	93.8	
Target Range - Lower Bound		2280	0.24	0.56	186.5	0.032	0.04	4.6	21	2.0	56.5	67	88.5	
Upper Bound		2520	0.38	0.72	206	0.045	0.08	5.3	26	2.5	62.6	79	104.0	
191705														
DUP														
Target Range - Lower Bound														
Upper Bound														
191707														
DUP														
Target Range - Lower Bound														
Upper Bound														

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 5 - A

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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
191716 DUP Target Range - Lower Bound Upper Bound																
191719 DUP Target Range - Lower Bound Upper Bound		4930 4870 4730 5070	20.6 19.8 19.2 21.2	4.3 4.1 3.9 4.5	32.0 32.2 30.8 33.4	63.6 64.4 61.5 66.5	1 1 <1 2	2.49 2.50 2.36 2.63	2690 2620 2560 2750	0.30 0.33 0.25 0.38	236 238 228 246	1445 1425 1385 1485	477 471 457 491	<1 <1 <1 2	138.5 137.5 133.0 143.0	5 5 <5 10
191736 DUP Target Range - Lower Bound Upper Bound																
191739 DUP Target Range - Lower Bound Upper Bound		11850 11150 11100 11900	27.4 29.2 27.0 29.6	3.9 4.5 3.9 4.5	80.5 82.1 78.3 84.3	147.0 155.5 145.5 157.0	1 1 <1 2	2.86 2.80 2.68 2.98	6610 5990 6080 6520	0.25 0.17 0.15 0.27	665 671 644 692	3860 3870 3730 4000	1205 1205 1165 1245	1 1 <1 2	377 360 355 382	9 8 <5 10
191751 DUP Target Range - Lower Bound Upper Bound																
191753 DUP Target Range - Lower Bound Upper Bound		7220 7690 7190 7720	35.3 36.7 34.4 37.6	6.7 6.8 6.3 7.2	59.8 64.3 59.7 64.4	124.5 126.5 121.0 130.0	1 1 <1 2	4.14 4.30 4.02 4.42	3910 4280 3950 4240	0.30 0.38 0.28 0.40	445 455 433 467	2420 2570 2410 2580	761 827 766 822	<1 <1 <1 2	243 260 242 261	10 9 <5 10
191766 DUP Target Range - Lower Bound Upper Bound		6260 6100 5960 6400	31.4 33.2 30.9 33.7	7.2 7.8 7.0 8.0	48.3 49.3 46.9 50.7	94.1 101.0 93.8 101.5	2 2 <1 3	4.03 4.12 3.88 4.27	3490 3490 3360 3620	0.58 0.59 0.51 0.66	152 142 141 153	2100 2070 2010 2160	667 639 630 676	<1 <1 <1 2	218 219 211 226	<5 <5 <5 10
191785 DUP Target Range - Lower Bound Upper Bound																

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 5 - B

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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																
191716											1.93	0.08	9.3	1300	0.67	1.61
DUP											2.19	0.08	8.9	2690	0.72	1.55
Target Range - Lower Bound											1.95	0.07	8.4	1840	0.61	1.49
Upper Bound											2.17	0.09	9.8	2150	0.78	1.67
191719		2.1	8.60	178.5	0.39	5.1	<5	54	2.8	140						
DUP		2.2	8.35	181.5	0.33	5.0	<5	52	3.1	140						
Target Range - Lower Bound		1.6	8.13	173.5	0.30	4.6	<5	48	2.6	130						
Upper Bound		2.7	8.82	186.5	0.42	5.5	10	58	3.3	150						
191736											0.57	0.65	2.3	2050	0.98	0.54
DUP											0.60	0.64	2.6	2250	0.97	0.57
Target Range - Lower Bound											0.55	0.60	2.1	1980	0.88	0.52
Upper Bound											0.62	0.69	2.8	2320	1.07	0.59
191739		6.0	10.00	436	0.37	7.1	7	57	1.6	90						
DUP		6.5	13.85	453	0.29	8.1	5	50	1.8	70						
Target Range - Lower Bound		5.5	11.45	429	0.27	7.0	<5	49	1.4	70						
Upper Bound		7.0	12.40	460	0.39	8.2	10	58	2.0	90						
191751											1.36	0.31	2.0	2080	0.85	1.21
DUP											1.57	0.31	2.4	2380	0.74	1.16
Target Range - Lower Bound											1.38	0.28	1.9	2050	0.71	1.12
Upper Bound											1.55	0.34	2.5	2410	0.88	1.25
191753		7.7	12.65	497	0.52	8.1	5	81	3.3	120						
DUP		7.6	13.00	523	0.54	8.4	5	85	3.3	120						
Target Range - Lower Bound		6.9	12.35	492	0.46	7.7	<5	77	3.0	110						
Upper Bound		8.4	13.30	528	0.60	8.8	10	89	3.6	130						
191766		2.7	8.79	314	0.77	6.1	5	90	4.2	200	1.25	0.21	15.8	320	1.25	1.34
DUP		2.7	9.47	313	0.81	6.1	5	89	4.2	190	1.26	0.22	15.2	510	1.33	1.34
Target Range - Lower Bound		2.1	8.76	302	0.71	5.6	<5	83	3.9	180	1.18	0.19	14.5	370	1.18	1.26
Upper Bound		3.3	9.50	325	0.87	6.6	10	96	4.5	210	1.33	0.24	16.5	460	1.40	1.42
191785											3.36	1.26	8.1	1030	1.68	1.84
DUP											3.10	1.24	8.2	1040	1.61	1.75
Target Range - Lower Bound											3.06	1.18	7.5	950	1.51	1.70
Upper Bound											3.40	1.32	8.8	1120	1.78	1.89

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 5 - C

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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																
191716		21.2	6.52	>500	10.4	7	0.12	6.1	6.56	19.05	2.56	0.2	0.957	0.05	2500	3.8
DUP		21.9	7.05	>500	10.3	6	0.12	6.6	6.62	19.60	2.25	0.3	0.947	0.05	2490	4.2
Target Range - Lower Bound		20.5	6.43	475	9.7	5	0.06	5.9	6.25	18.30	2.23	<0.1	0.899	0.04	2370	3.6
Upper Bound		22.6	7.14	>500	11.0	8	0.18	6.8	6.93	20.3	2.58	0.4	1.005	0.06	2620	4.4
191719																
DUP																
Target Range - Lower Bound																
Upper Bound																
191736		17.45	1.49	>500	18.5	8	0.45	3.4	9.26	11.05	1.05	1.4	0.552	0.05	980	6.2
DUP		17.35	1.74	>500	19.3	8	0.46	3.5	9.32	11.35	1.10	1.4	0.562	0.05	990	6.4
Target Range - Lower Bound		16.50	1.51	475	17.9	7	0.38	3.1	8.82	10.60	0.97	1.2	0.524	0.04	935	5.8
Upper Bound		18.30	1.72	>500	19.9	9	0.53	3.8	9.76	11.80	1.18	1.6	0.590	0.06	1035	6.8
191739																
DUP																
Target Range - Lower Bound																
Upper Bound																
191751		18.90	2.21	>500	10.2	7	0.11	2.5	9.43	19.75	2.62	1.0	0.855	0.01	1890	2.5
DUP		19.00	2.05	>500	9.9	7	0.12	2.6	9.36	18.85	2.48	1.1	0.853	0.01	1840	2.4
Target Range - Lower Bound		18.00	2.00	475	9.4	6	0.06	2.3	8.92	18.30	2.37	0.9	0.806	<0.01	1770	2.1
Upper Bound		19.90	2.26	>500	10.7	8	0.17	2.8	9.87	20.3	2.73	1.2	0.902	0.02	1960	2.8
191753																
DUP																
Target Range - Lower Bound																
Upper Bound																
191766		19.30	1.03	>500	27.7	4	0.05	2.0	7.36	21.2	2.97	0.3	0.455	0.01	2790	4.6
DUP		19.80	1.04	>500	27.8	5	0.05	1.9	7.56	21.2	3.01	0.3	0.445	0.01	2870	4.6
Target Range - Lower Bound		18.55	0.96	475	26.3	3	<0.05	1.7	7.08	20.1	2.79	0.2	0.423	<0.01	2690	4.2
Upper Bound		20.5	1.11	>500	29.2	6	0.10	2.2	7.84	22.3	3.19	0.4	0.478	0.02	2970	5.0
191785		13.55	1.17	>500	18.7	9	0.49	2.0	10.65	20.2	2.05	0.9	0.608	0.01	1480	9.3
DUP		13.50	1.03	>500	17.3	8	0.47	2.1	10.65	19.25	1.87	0.8	0.595	0.01	1420	8.9
Target Range - Lower Bound		12.85	1.03	475	17.0	7	0.41	1.8	10.10	18.70	1.81	0.7	0.566	<0.01	1375	8.4
Upper Bound		14.20	1.18	>500	19.0	10	0.55	2.3	11.20	20.8	2.11	1.0	0.637	0.02	1525	9.8

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 5 - D

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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																
191716		5.32	9630	781	0.02	244	2.4	7490	14.9	1.4	0.031	0.71	0.19	29.8	<1	6.7
DUP		5.10	10000	751	0.20	314	3.1	7430	14.9	1.6	0.031	0.72	0.22	28.1	2	6.4
Target Range - Lower Bound		4.94	9320	728	0.09	265	2.4	7080	13.7	1.3	0.027	0.67	0.14	27.4	<1	6.0
Upper Bound		5.48	10300	804	0.13	293	3.1	7840	16.1	1.7	0.035	0.76	0.27	30.5	2	7.1
191719																
DUP																
Target Range - Lower Bound																
Upper Bound																
191736		7.14	11300	506	0.19	>500	7.5	1450	9.3	2.3	0.013	0.85	0.09	27.9	1	6.5
DUP		7.18	11300	515	0.20	>500	8.0	1420	9.2	2.4	0.012	0.88	0.07	28.2	1	5.9
Target Range - Lower Bound		6.79	10750	485	0.18	475	7.2	1350	8.3	2.1	0.010	0.81	<0.05	26.5	<1	5.7
Upper Bound		7.53	11850	536	0.21	>500	8.3	1520	10.2	2.6	0.015	0.92	0.10	29.6	2	6.7
191739																
DUP																
Target Range - Lower Bound																
Upper Bound																
191751		5.34	10400	569	0.12	430	3.1	1770	17.5	0.7	0.010	0.74	0.10	31.5	1	9.7
DUP		5.38	10500	560	0.15	447	3.0	1810	17.3	0.7	0.010	0.71	0.09	32.1	1	10.2
Target Range - Lower Bound		5.08	9920	536	0.12	416	2.7	1690	16.0	0.6	0.008	0.68	<0.05	30.1	<1	9.3
Upper Bound		5.64	11000	593	0.15	461	3.4	1890	18.8	0.8	0.013	0.77	0.10	33.5	2	10.6
191753																
DUP																
Target Range - Lower Bound																
Upper Bound																
191766		5.95	8430	257	0.03	82.0	2.4	>10000	27.5	0.3	0.049	2.09	0.26	26.1	1	3.1
DUP		6.04	8580	265	0.03	43.7	2.2	>10000	27.8	0.2	0.045	2.15	0.26	27.3	1	3.2
Target Range - Lower Bound		5.69	8070	248	0.02	59.6	2.0	9490	25.8	<0.1	0.043	2.00	0.19	25.3	<1	2.8
Upper Bound		6.30	8940	274	0.04	66.1	2.6	>10000	29.5	0.4	0.051	2.24	0.33	28.1	2	3.5
191785		6.60	10100	791	0.01	>500	7.4	2130	29.7	0.5	0.104	0.76	0.33	32.4	1	6.7
DUP		6.60	10100	773	0.01	>500	7.2	2140	27.9	0.5	0.095	0.75	0.31	31.7	<1	6.0
Target Range - Lower Bound		6.26	9590	743	<0.01	475	6.7	2020	26.9	0.4	0.093	0.71	0.25	30.3	<1	5.8
Upper Bound		6.94	10600	821	0.02	>500	7.9	2250	30.7	0.6	0.106	0.80	0.39	33.8	2	6.9

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 5 - E

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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	Zn-OG62 Zn % 0.001
DUPLICATES														
191716		2420	0.42	0.27	253	0.038	0.17	2.8	27	2.9	44.8	2020	13.8	
DUP		2510	0.61	0.33	268	0.035	0.17	2.8	28	3.2	47.3	2010	39.6	
Target Range - Lower Bound		2340	0.44	0.24	247	0.030	0.14	2.6	25	2.7	43.6	1910	24.2	
Upper Bound		2590	0.59	0.37	274	0.043	0.20	3.0	30	3.4	48.5	2120	29.2	
191719														
DUP														
Target Range - Lower Bound														
Upper Bound														
191736		3090	7.59	0.13	70.9	0.046	0.21	8.4	35	3.7	20.6	408	52.5	
DUP		3080	8.02	0.17	73.4	0.045	0.20	8.5	37	3.8	21.0	422	53.7	
Target Range - Lower Bound		2930	7.36	0.09	68.5	0.038	0.17	7.9	33	3.4	19.7	392	48.6	
Upper Bound		3240	8.25	0.21	75.8	0.053	0.24	9.0	39	4.1	21.9	438	57.6	
191739														
DUP														
Target Range - Lower Bound														
Upper Bound														
191751		2410	8.19	0.30	231	0.031	0.11	6.2	35	3.4	31.6	655	46.5	
DUP		2410	6.90	0.31	216	0.029	0.09	5.8	34	3.5	31.2	644	47.7	
Target Range - Lower Bound		2290	7.12	0.24	212	0.024	0.07	5.6	32	3.1	29.7	615	43.1	
Upper Bound		2530	7.97	0.37	235	0.037	0.13	6.4	37	3.8	33.1	684	51.1	
191753														1.835
DUP														1.790
Target Range - Lower Bound														1.765
Upper Bound														1.860
191766		3400	0.36	0.18	325	0.019	0.07	6.3	20	2.4	85.0	263	28.4	
DUP		3440	0.24	0.19	331	0.020	0.08	6.2	21	2.4	84.9	263	15.3	
Target Range - Lower Bound		3250	0.24	0.13	312	0.014	0.05	5.8	18	2.1	80.6	248	19.7	
Upper Bound		3590	0.37	0.24	344	0.025	0.10	6.7	23	2.7	89.3	278	24.0	
191785		2590	4.62	0.27	208	0.054	0.21	6.8	27	3.2	47.5	477	54.2	
DUP		2610	3.94	0.25	194.0	0.051	0.20	6.2	27	2.9	45.3	454	52.4	
Target Range - Lower Bound		2470	4.02	0.20	191.0	0.045	0.17	6.1	25	2.7	44.0	440	48.8	
Upper Bound		2730	4.54	0.32	211	0.060	0.24	6.9	29	3.4	48.8	491	57.8	

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 6 - A

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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																
191788		6370	23.5	5.2	53.9	89.4	1	2.83	2960	0.47	479	2600	755	1	274	11
DUP		6150	23.5	5.1	54.1	101.0	1	2.80	2700	0.40	441	2520	705	<1	248	10
Target Range - Lower Bound		6040	22.4	4.8	51.9	91.6	<1	2.67	2730	0.37	443	2470	704	<1	252	<5
Upper Bound		6480	24.6	5.5	56.1	98.8	2	2.96	2930	0.50	477	2650	756	2	270	16
191804																
DUP																
Target Range - Lower Bound																
Upper Bound																
191807		2760	12.9	3.3	20.2	40.0	1	1.73	1500	0.27	841	1010	301	3	92.3	<5
DUP		2880	14.3	3.6	22.5	42.5	1	1.80	1590	0.22	881	1065	309	3	97.7	<5
Target Range - Lower Bound		2720	12.8	3.1	20.4	39.5	<1	1.65	1490	0.19	830	1000	294	2	91.5	<5
Upper Bound		2920	14.4	3.8	22.3	43.0	2	1.88	1600	0.30	892	1075	316	4	98.5	10
191814		2970	9.5	2.1	22.2	38.4	<1	1.23	1580	0.15	603	1045	319	1	101.0	<5
DUP		2840	9.9	2.1	21.0	37.4	1	1.08	1515	0.12	618	996	302	1	96.8	<5
Target Range - Lower Bound		2800	9.1	1.8	20.6	36.3	<1	1.06	1490	0.08	588	984	299	<1	95.2	<5
Upper Bound		3010	10.3	2.4	22.6	39.5	2	1.25	1605	0.19	633	1055	322	2	102.5	10
191819																
DUP																
Target Range - Lower Bound																
Upper Bound																
191839																
DUP																
Target Range - Lower Bound																
Upper Bound																
191842		2270	16.3	6.2	17.4	37.6	4	2.46	1270	0.63	701	787	237	6	83.0	23
DUP		2200	16.0	5.7	16.7	36.9	4	2.50	1230	0.64	714	768	229	6	79.5	22
Target Range - Lower Bound		2150	15.3	5.5	16.3	35.6	3	2.34	1205	0.56	682	750	225	5	78.2	17
Upper Bound		2320	17.0	6.4	17.8	38.9	5	2.62	1295	0.71	733	805	241	7	84.3	28
FEN198258																
DUP																
Target Range - Lower Bound																
Upper Bound																

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 6 - B

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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																
191788		2.1	6.64	283	0.52	2.1	6	67	3.1	90						
DUP		2.1	10.15	281	0.39	2.1	5	63	3.1	70						
Target Range - Lower Bound		1.5	8.05	272	0.39	1.7	<5	60	2.8	70						
Upper Bound		2.7	8.74	292	0.52	2.5	10	70	3.4	90						
191804											1.25	0.36	6.1	1870	3.64	1.23
DUP											1.41	0.36	6.1	1390	3.16	1.23
Target Range - Lower Bound											1.25	0.33	5.6	1500	3.18	1.16
Upper Bound											1.41	0.39	6.6	1760	3.62	1.30
191807		8.2	3.43	81.3	0.40	3.3	6	48	1.9	60						
DUP		9.0	4.86	82.8	0.26	3.4	<5	49	2.1	60						
Target Range - Lower Bound		7.8	3.95	78.9	0.27	2.9	<5	44	1.7	50						
Upper Bound		9.4	4.34	85.2	0.39	3.8	10	53	2.3	70						
191814		3.3	2.96	89.8	0.22	4.0	6	28	1.3	50	0.31	0.30	1.0	3440	0.67	0.42
DUP		3.4	2.98	85.2	0.24	3.7	5	27	1.1	50	0.30	0.30	1.2	3420	0.73	0.43
Target Range - Lower Bound		2.7	2.82	84.1	0.17	3.4	<5	24	1.0	40	0.28	0.28	0.8	3160	0.62	0.39
Upper Bound		4.0	3.12	90.9	0.29	4.3	10	31	1.4	60	0.33	0.33	1.4	3700	0.79	0.46
191819											1.01	0.62	9.2	2930	0.89	1.56
DUP											1.06	0.60	10.0	2790	0.85	1.46
Target Range - Lower Bound											0.97	0.57	8.9	2640	0.78	1.42
Upper Bound											1.10	0.65	10.3	3080	0.96	1.60
191839											1.09	0.34	6.3	1450	0.54	0.56
DUP											0.89	0.34	5.9	1770	0.52	0.56
Target Range - Lower Bound											0.93	0.31	5.6	1480	0.45	0.52
Upper Bound											1.05	0.37	6.6	1740	0.61	0.60
191842		6.7	4.44	92.0	0.78	4.9	15	64	5.1	260						
DUP		6.5	4.58	91.0	0.79	4.4	13	64	4.5	250						
Target Range - Lower Bound		5.9	4.30	88.0	0.71	4.2	9	59	4.4	240						
Upper Bound		7.3	4.72	95.0	0.86	5.1	19	69	5.2	270						
FEN198258											0.15	0.73	18.0	390	9.25	6.11
DUP											0.26	0.71	16.8	390	9.34	6.07
Target Range - Lower Bound											0.18	0.67	16.3	350	8.78	5.78
Upper Bound											0.23	0.77	18.5	430	9.81	6.40

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 6 - C

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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
191788 DUP Target Range - Lower Bound Upper Bound		DUPLICATES														
191804 DUP Target Range - Lower Bound Upper Bound		19.10 19.45 18.30 20.2	12.70 11.70 11.55 12.85	>500 >500 475 >500	10.5 11.6 10.4 11.7	7 6 5 8	0.31 0.33 0.25 0.39	6.2 6.2 5.8 6.6	8.11 8.06 7.67 8.50	10.25 12.60 10.80 12.05	1.28 1.65 1.34 1.59	0.4 0.5 0.3 0.6	1.125 1.070 1.040 1.155	0.04 0.03 0.02 0.05	880 920 855 946	10.0 10.4 9.5 10.9
191807 DUP Target Range - Lower Bound Upper Bound																
191814 DUP Target Range - Lower Bound Upper Bound		18.55 18.30 17.50 19.35	4.59 4.52 4.31 4.80	>500 >500 475 >500	8.4 8.5 7.9 9.0	5 4 3 6	0.18 0.18 0.12 0.24	4.5 4.3 4.0 4.8	7.29 7.25 6.90 7.64	12.00 11.95 11.35 12.60	1.53 1.43 1.36 1.60	0.5 0.5 0.4 0.6	0.644 0.639 0.604 0.679	0.02 0.02 <0.01 0.03	1220 1250 1175 1295	4.2 3.9 3.6 4.5
191819 DUP Target Range - Lower Bound Upper Bound		17.70 17.75 16.85 18.60	2.05 1.85 1.83 2.07	>500 >500 475 >500	13.2 13.7 12.7 14.2	59 47 49 57	0.29 0.32 0.24 0.37	5.0 4.9 4.6 5.3	8.73 8.40 8.13 9.00	11.80 14.45 12.40 13.85	1.32 1.59 1.33 1.58	1.1 1.2 1.0 1.3	0.507 0.518 0.482 0.543	0.03 0.03 0.02 0.04	1100 1130 1060 1170	9.5 9.7 8.9 10.3
191839 DUP Target Range - Lower Bound Upper Bound		17.65 17.60 16.75 18.50	8.44 8.87 8.20 9.11	>500 >500 475 >500	10.0 10.0 9.4 10.6	6 5 4 7	0.63 0.59 0.53 0.69	4.8 4.3 4.2 4.9	7.88 7.91 7.49 8.30	18.40 18.55 17.50 19.45	2.23 2.21 2.06 2.38	1.2 1.2 1.0 1.4	0.767 0.780 0.730 0.817	0.03 0.03 0.02 0.04	1890 1870 1785 1975	7.0 7.1 6.5 7.6
191842 DUP Target Range - Lower Bound Upper Bound																
FEN198258 DUP Target Range - Lower Bound Upper Bound		1.38 1.36 1.29 1.45	0.03 0.03 <0.02 0.04	>500 >500 475 >500	7.2 7.5 6.9 7.8	101 100 94 107	0.91 0.91 0.81 1.01	0.7 1.0 0.6 1.1	>50 >50 47.5 50.0	29.5 29.0 27.7 30.8	7.52 7.45 7.06 7.91	0.8 0.8 0.7 0.9	1.435 1.420 1.350 1.505	0.04 0.03 0.02 0.05	780 760 731 809	12.1 12.1 11.3 12.9

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 6 - D

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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
191788 DUP Target Range - Lower Bound Upper Bound		DUPLICATES														
191804 DUP Target Range - Lower Bound Upper Bound		6.29 5.80 5.73 6.36	10700 10700 10150 11250	429 419 403 445	0.06 0.06 0.05 0.07	>500 >500 475 >500	8.2 8.2 7.6 8.8	>10000 >10000 9490 >10000	24.0 24.8 22.7 26.1	1.7 1.8 1.6 1.9	0.013 0.019 0.013 0.019	0.81 0.81 0.76 0.86	0.19 0.20 0.13 0.26	33.5 31.3 30.7 34.1	<1 1 <1 2	4.9 5.2 4.6 5.5
191807 DUP Target Range - Lower Bound Upper Bound																
191814 DUP Target Range - Lower Bound Upper Bound		8.15 8.12 7.72 8.55	10300 10250 9760 10800	205 207 195.5 216	0.10 0.10 0.09 0.12	500 >500 475 >500	5.0 4.9 4.5 5.4	2430 2480 2320 2590	9.6 9.6 8.6 10.6	0.6 0.6 0.5 0.7	0.008 0.009 0.006 0.011	0.48 0.46 0.44 0.50	0.11 0.13 0.06 0.18	19.1 19.0 18.0 20.1	1 1 <1 2	2.0 2.0 1.7 2.3
191819 DUP Target Range - Lower Bound Upper Bound		7.53 7.09 6.93 7.69	10300 10350 9800 10850	210 205 197.0 218	0.02 0.03 <0.01 0.04	436 490 440 486	28.8 29.5 27.5 30.8	3950 3940 3740 4150	65.8 62.7 60.5 68.0	1.6 1.7 1.5 1.8	0.013 0.015 0.011 0.017	0.69 0.66 0.63 0.72	0.30 0.30 0.23 0.37	26.8 24.9 24.5 27.2	1 <1 <1 2	6.1 6.1 5.6 6.6
191839 DUP Target Range - Lower Bound Upper Bound		7.06 6.93 6.64 7.35	11400 11200 10750 11850	155.0 153.5 146.5 162.0	0.18 0.18 0.16 0.20	440 431 414 457	7.2 7.1 6.6 7.7	1490 1470 1400 1560	12.7 12.6 11.5 13.8	1.8 1.9 1.7 2.0	0.017 0.015 0.013 0.019	0.50 0.51 0.47 0.54	0.21 0.20 0.14 0.27	25.0 24.8 23.6 26.2	1 1 <1 2	3.7 3.6 3.3 4.0
191842 DUP Target Range - Lower Bound Upper Bound																
FEN198258 DUP Target Range - Lower Bound Upper Bound		0.63 0.63 0.59 0.67	335 348 319 364	20.0 20.3 19.10 21.2	0.01 0.01 <0.01 0.02	230 230 218 242	16.8 16.6 15.7 17.7	3130 2990 2900 3220	51.3 51.1 48.1 54.3	3.3 3.2 3.0 3.5	0.004 0.006 0.003 0.007	0.04 0.04 0.03 0.05	5.60 5.78 5.21 6.17	44.3 45.5 42.6 47.2	<1 <1 <1 2	2.8 2.9 2.5 3.2

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 6 - E

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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	Zn-OG62 Zn % 0.001
191788 DUP Target Range - Lower Bound Upper Bound		DUPLICATES												
191804 DUP Target Range - Lower Bound Upper Bound		2640 2650 2510 2780	0.25 0.46 0.29 0.42	0.23 0.24 0.17 0.30	168.0 190.0 170.0 188.0	0.045 0.047 0.039 0.053	0.14 0.15 0.11 0.18	10.8 11.1 10.3 11.6	22 24 21 25	4.0 4.4 3.8 4.6	201 196.5 188.5 209	4660 4250 4230 4680	5.9 11.1 7.4 9.6	
191807 DUP Target Range - Lower Bound Upper Bound														
191814 DUP Target Range - Lower Bound Upper Bound		3750 3720 3550 3920	3.54 4.89 3.95 4.48	0.09 0.07 <0.05 0.10	87.1 87.2 82.8 91.5	0.009 0.010 <0.005 0.010	0.06 0.06 0.04 0.08	3.9 3.9 3.6 4.2	11 12 10 13	2.6 2.6 2.3 2.9	24.9 25.2 23.7 26.4	1620 1610 1530 1700	35.7 36.5 32.9 39.3	
191819 DUP Target Range - Lower Bound Upper Bound		3140 3220 3020 3340	3.56 3.61 3.36 3.81	0.13 0.17 0.09 0.21	99.6 110.0 99.6 110.0	0.198 0.204 0.186 0.216	0.09 0.07 0.05 0.11	4.2 4.3 3.9 4.6	29 30 27 32	4.9 5.2 4.6 5.5	32.4 32.6 30.8 34.2	744 707 687 764	73.9 71.8 66.9 78.8	
191839 DUP Target Range - Lower Bound Upper Bound		2770 2770 2630 2910	4.24 4.25 3.98 4.51	0.19 0.24 0.15 0.28	129.5 129.0 123.0 135.5	0.033 0.034 0.027 0.040	0.14 0.09 0.09 0.14	5.9 5.7 5.4 6.2	20 19 18 21	2.2 2.2 1.9 2.5	34.8 34.6 32.9 36.5	2790 2880 2690 2980	70.8 71.2 65.2 76.8	
191842 DUP Target Range - Lower Bound Upper Bound														
FEN198258 DUP Target Range - Lower Bound Upper Bound		280 272 262 290	0.33 0.34 0.27 0.40	<0.05 <0.05 <0.05 0.10	1090 1070 1025 1135	0.060 0.059 0.052 0.067	0.08 0.07 0.05 0.10	7.7 7.9 7.3 8.3	102 100 95 107	55.7 56.2 51.7 60.2	134.0 129.5 125.0 138.5	111 112 104 119	32.0 32.6 29.4 35.2	

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 7 - A

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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																
191856		3570	19.6	5.5	28.8	60.3	1	3.08	1880	0.39	519	1295	383	4	128.5	<5
DUP		3480	19.0	5.6	27.3	58.2	1	2.73	1840	0.34	485	1245	371	4	122.5	<5
Target Range - Lower Bound		3400	18.3	5.2	26.9	56.9	<1	2.75	1790	0.30	483	1225	364	3	121.0	<5
Upper Bound		3650	20.3	5.9	29.2	61.6	2	3.06	1930	0.43	521	1315	390	5	130.0	10
191876		3260	18.7	3.7	31.2	63.9	1	2.03	2000	0.19	380	1050	341	6	122.0	<5
DUP		3180	18.1	3.4	29.9	63.9	1	1.88	2100	0.14	392	1050	346	6	123.5	<5
Target Range - Lower Bound		3100	17.5	3.2	29.3	61.4	<1	1.84	1975	0.11	371	1015	331	5	118.5	<5
Upper Bound		3340	19.3	3.9	31.8	66.4	2	2.07	2120	0.22	401	1085	356	7	127.0	10
191882		10700	36.3	7.5	61.8	116.5	1	4.26	7080	0.40	204	3340	1065	4	291	<5
DUP		11300	36.6	7.2	63.0	115.5	2	4.28	7280	0.45	193	3370	1085	4	293	<5
Target Range - Lower Bound		10600	34.9	6.9	60.0	111.5	<1	4.07	6930	0.36	191	3240	1035	3	282	<5
Upper Bound		11400	38.0	7.8	64.8	120.5	2	4.47	7430	0.49	206	3470	1115	5	302	10
191887		9860	53.0	11.5	77.0	153.5	3	7.01	5470	0.81	510	3560	1060	9	368	7
DUP		9310	49.9	10.9	73.3	146.0	3	6.66	5400	0.79	493	3430	995	9	350	5
Target Range - Lower Bound		9250	49.3	10.6	72.3	144.0	2	6.55	5240	0.72	483	3370	991	8	346	<5
Upper Bound		9920	53.6	11.8	78.0	155.5	4	7.12	5630	0.88	520	3620	1065	10	372	10
191888																
DUP																
Target Range - Lower Bound																
Upper Bound																
191891		5500	16.1	3.5	33.2	60.8	1	1.91	3550	0.20	185	1555	568	2	145.0	6
DUP		5480	15.5	3.6	32.2	60.0	1	1.82	3510	0.24	185	1560	566	2	144.5	6
Target Range - Lower Bound		5290	14.9	3.2	31.4	58.0	<1	1.75	3400	0.16	178	1500	547	<1	139.5	<5
Upper Bound		5690	16.7	3.9	34.0	62.8	2	1.98	3660	0.28	192	1615	587	3	150.0	10
191903																
DUP																
Target Range - Lower Bound																
Upper Bound																
191917																
DUP																
Target Range - Lower Bound																
Upper Bound																

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 7 - B

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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																
191856		10.1	6.72	190.5	0.65	11.1	<5	67	3.3	90						
DUP		8.7	6.35	185.5	0.61	10.4	<5	62	3.1	90						
Target Range - Lower Bound		8.6	6.26	181.0	0.56	10.1	<5	59	2.9	80						
Upper Bound		10.2	6.81	195.0	0.70	11.4	10	70	3.5	100						
191876		3.5	5.61	244	0.23	4.3	5	42	1.9	70						
DUP		3.0	5.39	239	0.21	4.1	<5	43	2.0	70						
Target Range - Lower Bound		2.6	5.26	233	0.16	3.8	<5	38	1.7	60						
Upper Bound		3.9	5.74	250	0.28	4.6	10	47	2.2	80						
191882		1.0	15.25	418	0.59	2.8	10	83	3.2	140	0.87	0.08	9.5	250	0.55	2.18
DUP		<0.5	15.70	421	0.64	2.7	9	87	3.2	140	0.90	0.09	10.2	200	0.44	2.27
Target Range - Lower Bound		<0.5	14.90	405	0.54	2.4	<5	79	2.9	130	0.83	0.07	9.2	200	0.42	2.10
Upper Bound		1.0	16.05	434	0.69	3.1	10	91	3.5	150	0.94	0.10	10.5	250	0.57	2.35
191887		5.6	19.50	577	1.11	8.5	14	141	6.4	320	0.81	0.56	19.2	490	1.12	1.64
DUP		4.5	17.90	551	1.04	7.4	13	132	5.9	310	0.87	0.55	19.1	660	1.11	1.56
Target Range - Lower Bound		4.4	18.00	544	0.99	7.4	8	129	5.7	290	0.79	0.52	18.0	520	1.01	1.51
Upper Bound		5.7	19.40	584	1.16	8.5	19	144	6.6	340	0.89	0.59	20.3	630	1.22	1.69
191888											0.55	0.16	10.0	390	0.65	0.87
DUP											0.57	0.16	9.1	260	0.67	0.86
Target Range - Lower Bound											0.52	0.14	8.9	290	0.58	0.81
Upper Bound											0.60	0.18	10.2	360	0.74	0.92
191891		10.7	4.85	171.5	0.20	17.8	<5	39	2.1	70						
DUP		10.2	4.56	170.5	0.28	16.9	<5	39	2.1	70						
Target Range - Lower Bound		9.6	4.49	164.5	0.18	16.4	<5	35	1.8	60						
Upper Bound		11.3	4.92	177.5	0.30	18.3	10	43	2.4	80						
191903											0.98	0.23	13.2	710	1.22	1.21
DUP											0.82	0.23	12.4	460	1.27	1.11
Target Range - Lower Bound											0.85	0.21	12.0	530	1.13	1.09
Upper Bound											0.96	0.25	13.6	640	1.36	1.23
191917											0.36	0.44	3.5	5480	0.62	0.15
DUP											0.37	0.43	3.4	3910	0.61	0.14
Target Range - Lower Bound											0.34	0.40	3.1	4330	0.53	0.13
Upper Bound											0.39	0.47	3.8	5060	0.70	0.16

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 7 - C

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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
191856 DUP Target Range - Lower Bound Upper Bound		DUPLICATES														
191876 DUP Target Range - Lower Bound Upper Bound																
191882 DUP Target Range - Lower Bound Upper Bound		17.05 17.65 16.45 18.25	0.61 0.62 0.56 0.67	>500 >500 475 >500	25.3 27.1 24.8 27.6	6 7 5 8	1.21 1.21 1.10 1.32	2.4 1.9 1.9 2.4	8.24 8.55 7.97 8.82	17.20 18.30 16.80 18.70	2.46 2.51 2.31 2.66	1.0 1.0 0.9 1.2	0.528 0.500 0.483 0.545	0.06 0.06 0.05 0.07	5680 5830 5470 6040	14.5 14.4 13.5 15.4
191887 DUP Target Range - Lower Bound Upper Bound		17.65 17.40 16.65 18.40	1.99 1.87 1.81 2.05	>500 >500 475 >500	22.0 21.7 20.7 23.0	6 6 5 7	3.43 3.46 3.22 3.67	3.8 4.4 3.8 4.4	9.70 9.53 9.12 10.10	17.70 18.35 17.05 19.00	2.54 2.56 2.37 2.73	2.1 2.2 1.9 2.4	0.889 0.889 0.840 0.938	0.15 0.15 0.13 0.17	3890 4130 3810 4210	27.2 26.8 25.5 28.6
191888 DUP Target Range - Lower Bound Upper Bound		16.05 16.25 15.35 16.95	3.17 2.97 2.90 3.24	>500 >500 475 >500	31.6 32.4 30.3 33.7	4 5 3 6	1.00 1.03 0.91 1.12	4.6 5.3 4.6 5.3	9.32 9.32 8.84 9.80	29.8 31.1 28.9 32.0	4.27 4.44 4.09 4.62	1.5 1.5 1.3 1.7	1.080 1.055 1.010 1.125	0.03 0.04 0.02 0.05	3150 3320 3070 3400	15.8 15.8 14.8 16.8
191891 DUP Target Range - Lower Bound Upper Bound																
191903 DUP Target Range - Lower Bound Upper Bound		26.2 26.3 24.9 27.6	0.67 0.58 0.57 0.68	>500 >500 475 >500	16.9 16.0 15.5 17.4	7 5 5 7	0.14 0.14 0.08 0.20	2.1 2.1 1.8 2.4	4.16 4.22 3.97 4.41	9.85 9.61 9.19 10.25	1.37 1.35 1.24 1.48	0.4 0.5 0.3 0.6	0.202 0.188 0.180 0.210	0.01 0.01 <0.01 0.02	960 970 916 1015	3.0 2.7 2.5 3.2
191917 DUP Target Range - Lower Bound Upper Bound		18.00 17.95 17.05 18.90	0.68 0.76 0.66 0.78	>500 >500 475 >500	4.6 4.8 4.4 5.0	2 2 <1 3	0.47 0.48 0.40 0.55	0.9 1.0 0.7 1.2	7.46 7.42 7.06 7.82	15.50 14.85 14.35 16.00	2.11 1.87 1.84 2.14	0.7 0.6 0.5 0.8	0.349 0.347 0.326 0.370	0.04 0.04 0.03 0.05	1590 1570 1500 1660	4.1 4.0 3.6 4.5

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 7 - D

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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
191856 DUP Target Range - Lower Bound Upper Bound		DUPLICATES														
191876 DUP Target Range - Lower Bound Upper Bound																
191882 DUP Target Range - Lower Bound Upper Bound		6.59 6.72 6.31 7.00	10900 11100 10450 11550	288 296 277 307	0.02 0.02 <0.01 0.03	193.5 191.0 182.5 202	7.2 7.2 6.6 7.8	7920 8170 7630 8460	17.9 18.3 16.7 19.5	3.6 3.7 3.4 3.9	0.017 0.017 0.014 0.020	1.46 1.52 1.41 1.57	0.13 0.15 0.08 0.20	21.1 21.7 20.2 22.6	<1 <1 <1 2	1.6 1.5 1.3 1.8
191887 DUP Target Range - Lower Bound Upper Bound		5.79 5.91 5.55 6.15	10250 10450 9830 10850	140.0 136.0 131.0 145.0	0.15 0.15 0.13 0.17	428 428 407 450	3.1 3.0 2.7 3.4	>10000 >10000 9490 >10000	32.5 32.6 30.4 34.7	9.4 9.4 8.8 10.0	0.013 0.009 0.008 0.014	1.29 1.26 1.20 1.35	0.30 0.37 0.26 0.41	27.3 27.4 25.9 28.8	<1 <1 <1 2	4.3 4.3 3.9 4.7
191888 DUP Target Range - Lower Bound Upper Bound		5.03 5.06 4.78 5.31	11400 11600 10900 12100	52.7 53.2 50.3 55.6	0.10 0.09 0.08 0.11	89.5 96.1 88.1 97.5	1.7 1.7 1.4 2.0	>10000 >10000 9490 >10000	20.1 20.3 18.7 21.7	3.0 3.0 2.8 3.3	0.003 0.006 <0.002 0.007	1.32 1.35 1.26 1.41	0.19 0.22 0.14 0.27	27.5 27.7 26.1 29.1	1 2 <1 2	1.0 1.2 0.8 1.4
191891 DUP Target Range - Lower Bound Upper Bound																
191903 DUP Target Range - Lower Bound Upper Bound		2.54 2.55 2.41 2.68	3700 3710 3510 3900	42.9 41.2 39.9 44.2	0.23 0.21 0.20 0.24	45.8 39.1 40.2 44.7	2.3 1.8 1.7 2.4	>10000 >10000 9490 >10000	42.8 39.8 38.7 43.9	0.6 0.6 0.5 0.7	0.012 0.006 0.007 0.011	1.00 0.99 0.94 1.05	0.20 0.18 0.13 0.25	22.1 21.6 20.7 23.0	<1 <1 <1 2	6.0 5.8 5.4 6.4
191917 DUP Target Range - Lower Bound Upper Bound		6.96 6.89 6.57 7.28	10300 10200 9730 10750	153.5 150.5 144.5 159.5	0.23 0.23 0.21 0.25	197.5 235 205 227	1.2 1.3 1.0 1.5	6380 6070 5900 6550	10.5 10.1 9.3 11.3	2.1 2.1 1.9 2.3	0.006 0.003 <0.002 0.007	0.34 0.31 0.30 0.35	0.23 0.20 0.15 0.28	17.2 17.1 16.2 18.1	1 1 <1 2	1.0 1.1 0.8 1.3

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 7 - E

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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	Zn-OG62 Zn % 0.001
191856 DUP Target Range - Lower Bound Upper Bound		DUPLICATES												
191876 DUP Target Range - Lower Bound Upper Bound														
191882 DUP Target Range - Lower Bound Upper Bound		2620 2630 2490 2760	0.57 0.53 0.47 0.63	0.39 0.36 0.31 0.44	392 405 379 418	0.025 0.025 0.019 0.031	0.13 0.13 0.10 0.16	2.8 2.9 2.6 3.1	21 22 19 24	2.4 2.5 2.2 2.7	81.0 85.5 79.0 87.5	136 136 127 145	80.2 86.7 76.7 90.2	
191887 DUP Target Range - Lower Bound Upper Bound		2650 2700 2540 2810	4.94 4.94 4.64 5.24	0.35 0.36 0.29 0.42	480 510 470 520	0.133 0.133 0.121 0.145	0.29 0.29 0.25 0.33	9.0 8.0 8.0 9.0	34 35 32 37	5.4 5.3 4.8 5.9	130.0 130.5 123.5 137.0	743 733 699 777	205 209 191.0 223	
191888 DUP Target Range - Lower Bound Upper Bound		2200 2280 2130 2350	0.20 0.24 0.16 0.28	0.27 0.31 0.23 0.35	318 346 315 349	0.018 0.019 0.013 0.024	0.09 0.10 0.07 0.12	3.5 3.7 3.3 3.9	21 22 19 24	2.7 2.8 2.4 3.1	95.7 98.3 92.1 102.0	1270 1210 1175 1305	160.5 163.0 149.0 174.5	
191891 DUP Target Range - Lower Bound Upper Bound														
191903 DUP Target Range - Lower Bound Upper Bound		4870 4850 4620 5100	0.47 0.55 0.43 0.59	0.12 0.10 <0.05 0.17	185.0 177.5 172.0 190.5	0.073 0.067 0.062 0.079	0.07 0.05 0.04 0.08	121.5 113.0 111.5 123.0	19 19 17 21	7.1 6.7 6.3 7.5	287 282 270 299	199 203 189 213	4.5 3.3 3.1 4.7	
191917 DUP Target Range - Lower Bound Upper Bound		3400 3340 3200 3540	1.77 2.27 1.87 2.17	0.06 0.10 <0.05 0.10	85.2 83.4 80.1 88.5	0.015 0.016 0.010 0.021	0.10 0.09 0.07 0.12	6.3 6.6 6.0 6.9	13 13 11 15	1.5 1.4 1.2 1.7	67.3 67.9 64.1 71.1	210 204 195 219	57.2 58.1 52.8 62.5	

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 8 - A

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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																
198976		2050	5.3	2.3	14.5	20.2	2	0.87	856	0.35	709	1055	259	3	98.5	6
DUP		1975	5.5	2.4	15.3	21.8	3	0.91	854	0.35	706	1075	264	3	98.1	6
Target Range - Lower Bound		1940	4.9	2.1	14.2	20.0	<1	0.81	822	0.29	682	1025	252	2	94.7	<5
Upper Bound		2090	5.9	2.6	15.6	22.0	4	0.97	888	0.41	733	1105	271	4	102.0	10
199335		8040	18.0	3.3	30.5	62.5	<1	2.18	4790	0.12	263	2310	725	1	157.5	<5
DUP		8150	18.4	3.5	32.2	62.7	<1	2.08	4830	0.14	236	2410	740	1	164.5	<5
Target Range - Lower Bound		7810	17.3	3.1	30.1	60.1	<1	2.01	4640	0.08	240	2280	707	<1	155.0	<5
Upper Bound		8380	19.1	3.7	32.6	65.1	2	2.25	4980	0.18	259	2440	758	2	167.0	10
199349		7220	14.5	2.4	38.2	64.6	2	1.47	4170	0.10	176	2630	718	1	219	20
DUP		7470	14.2	2.4	37.1	65.2	1	1.39	4240	0.09	167	2680	741	1	227	23
Target Range - Lower Bound		7080	13.5	2.1	36.1	62.3	<1	1.33	4050	<0.05	164	2560	704	<1	215	16
Upper Bound		7610	15.2	2.7	39.2	67.5	2	1.53	4360	0.10	179	2750	755	2	231	27
ORIGINAL																
DUP																
Target Range - Lower Bound																
Upper Bound																
ORIGINAL																
DUP																
Target Range - Lower Bound																
Upper Bound																
PREP DUPLICATES																
191751		4360	14.2	2.7	33.6	60.7	1	1.66	2370	0.10	638	1555	477	1	166.5	17
191751 PREP DUP		4020	14.0	2.5	33.1	60.8	1	1.41	2300	0.07	544	1450	454	1	153.0	13
191801		3090	13.0	2.6	22.8	43.4	1	1.40	1890	0.21	945	967	298	4	98.1	9
191801 PREP DUP		3050	12.1	2.6	19.4	41.6	1	1.36	1820	0.14	907	943	277	4	92.5	8
191851		3070	14.3	3.9	22.6	47.8	<1	1.94	1780	0.32	147	1015	312	2	101.0	<5
191851 PREP DUP		2980	14.2	4.0	22.8	49.2	1	1.82	1725	0.34	152	956	277	2	102.0	<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 *****



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 8 - B

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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																
198976		7.8	1.24	263	0.27	9.5	<5	29	2.2	90						
DUP		8.5	1.21	265	0.30	9.4	<5	29	2.3	90						
Target Range - Lower Bound		7.4	1.13	254	0.23	8.8	<5	25	2.0	80						
Upper Bound		8.9	1.32	274	0.34	10.1	10	33	2.5	100						
199335		16.2	5.23	179.5	0.24	50.4	<5	43	1.5	10						
DUP		15.2	5.13	183.0	0.21	48.0	<5	44	1.4	20						
Target Range - Lower Bound		14.7	4.95	174.5	0.17	47.2	<5	39	1.2	<10						
Upper Bound		16.7	5.41	188.0	0.28	51.2	10	48	1.7	20						
199349		1.2	4.20	387	0.17	5.6	<5	30	1.3	50						
DUP		1.5	4.05	384	0.13	5.7	<5	30	1.2	60						
Target Range - Lower Bound		0.8	3.93	372	0.09	5.2	<5	26	1.0	40						
Upper Bound		1.9	4.32	399	0.21	6.1	10	34	1.5	70						
ORIGINAL											2.77	7.50	44.7	540	0.90	0.14
DUP											2.65	7.43	43.9	530	0.82	0.14
Target Range - Lower Bound											2.56	7.08	41.9	480	0.77	0.12
Upper Bound											2.86	7.85	46.7	590	0.95	0.16
ORIGINAL											0.92	8.68	41.3	540	0.87	0.40
DUP											1.00	8.65	40.5	540	0.90	0.38
Target Range - Lower Bound											0.90	8.22	38.7	490	0.79	0.36
Upper Bound											1.02	9.11	43.1	590	0.98	0.42
PREP DUPLICATES																
191751		9.4	5.60	217	0.16	5.4	<5	31	1.3	50	1.36	0.31	2.0	2080	0.85	1.21
191751 PREP DUP		8.6	4.12	207	0.09	6.1	<5	30	1.2	50	1.63	0.32	2.7	2170	0.71	1.34
191801		6.1	4.86	151.0	0.19	2.6	5	33	1.7	60	1.20	0.51	3.4	1240	0.98	1.04
191801 PREP DUP		4.3	3.62	139.5	0.19	2.5	5	32	1.4	60	1.48	0.55	3.2	2530	0.84	1.04
191851		0.9	5.08	117.5	0.45	2.3	<5	41	2.7	70	1.00	0.09	3.3	4150	0.38	0.42
191851 PREP DUP		<0.5	3.90	114.5	0.43	2.5	<5	44	2.6	70	1.02	0.08	3.5	4280	0.35	0.46

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 8 - C

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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
198976 DUP Target Range - Lower Bound Upper Bound		DUPLICATES														
199335 DUP Target Range - Lower Bound Upper Bound																
199349 DUP Target Range - Lower Bound Upper Bound																
ORIGINAL DUP Target Range - Lower Bound Upper Bound		1.35 1.35 1.27 1.43	0.80 0.75 0.72 0.83	48.6 46.6 45.2 50.0	6.7 6.6 6.2 7.1	7 7 6 8	0.36 0.35 0.29 0.42	4.7 5.6 4.8 5.5	3.15 3.19 3.00 3.34	17.75 17.40 16.65 18.50	0.12 0.12 0.06 0.18	3.4 3.5 3.2 3.7	0.065 0.061 0.055 0.071	2.49 2.42 2.32 2.59	23.0 22.2 21.0 24.2	10.3 10.1 9.5 10.9
ORIGINAL DUP Target Range - Lower Bound Upper Bound		3.03 3.04 2.87 3.20	0.10 0.08 0.07 0.11	33.1 33.1 31.4 34.8	17.3 17.7 16.5 18.5	8 7 6 9	0.86 0.84 0.76 0.94	31.3 30.5 29.6 32.2	5.29 5.27 5.01 5.55	24.2 23.9 22.8 25.3	0.17 0.17 0.11 0.23	2.7 2.6 2.4 2.9	0.058 0.066 0.054 0.070	2.07 2.06 1.95 2.18	14.1 13.9 12.8 15.2	16.2 17.1 15.6 17.7
191751 191751 PREP DUP		PREP DUPLICATES														
		18.90 19.00	2.21 2.30	>500 >500	10.2 10.1	7 6	0.11 0.11	2.5 2.3	9.43 9.27	19.75 19.20	2.62 2.59	1.0 1.1	0.855 0.851	0.01 0.02	1890 1790	2.5 2.3
191801 191801 PREP DUP		17.70 17.75	6.86 5.55	>500 >500	14.4 13.3	5 4	1.17 1.15	3.7 2.8	8.26 8.45	15.30 14.45	1.71 1.58	0.5 0.5	0.813 0.692	0.08 0.08	1530 1440	14.2 12.7
191851 191851 PREP DUP		19.55 19.95	1.90 1.77	>500 >500	9.3 8.3	4 3	0.45 0.46	1.2 1.5	6.82 6.90	13.65 12.70	1.73 1.57	0.6 0.2	0.397 0.408	0.03 0.03	1510 1370	6.1 5.7

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 8 - D

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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
198976 DUP Target Range - Lower Bound Upper Bound		DUPLICATES														
199335 DUP Target Range - Lower Bound Upper Bound																
199349 DUP Target Range - Lower Bound Upper Bound																
ORIGINAL DUP Target Range - Lower Bound Upper Bound		0.90 0.88 0.84 0.94	405 404 379 430	1.64 1.56 1.47 1.73	1.28 1.26 1.20 1.34	2.7 1.9 2.1 2.5	1.3 1.2 1.0 1.5	550 520 500 570	25.3 24.8 23.3 26.8	38.2 37.7 36.0 39.9	<0.002 <0.002 <0.002 0.004	2.70 2.71 2.56 2.85	4.50 4.24 3.99 4.75	14.0 13.8 13.1 14.7	<1 <1 <1 2	1.4 1.3 1.1 1.6
ORIGINAL DUP Target Range - Lower Bound Upper Bound		2.39 2.36 2.25 2.50	1010 1020 959 1070	1.00 1.10 0.95 1.15	1.58 1.60 1.50 1.68	1.7 1.6 1.5 1.8	5.3 5.5 4.9 5.9	820 840 780 880	49.1 47.9 45.6 51.4	19.0 17.7 17.3 19.4	0.003 0.004 <0.002 0.004	3.67 3.62 3.45 3.84	5.21 5.17 4.75 5.63	21.0 21.3 20.0 22.3	<1 <1 <1 2	0.7 0.7 0.5 0.9
191751 191751 PREP DUP		PREP DUPLICATES														
		5.34 5.47	10400 10350	569 522	0.12 0.01	430 >500	3.1 3.2	1770 1820	17.5 17.7	0.7 0.8	0.010 0.010	0.74 0.75	0.10 0.18	31.5 30.4	1 <1	9.7 7.9
191801 191801 PREP DUP		7.24 7.29	9690 9790	259 261	0.07 0.06	>500 >500	5.7 5.2	1440 1410	22.1 20.9	3.8 3.7	0.011 0.010	0.81 0.73	0.18 0.15	20.4 20.5	<1 <1	4.2 4.1
191851 191851 PREP DUP		7.25 7.25	10400 10400	124.0 134.0	0.04 0.04	140.5 71.1	3.4 3.6	6740 8150	31.7 35.9	1.7 1.6	0.006 0.006	0.57 0.59	0.13 0.13	18.9 18.8	1 <1	1.1 1.0

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

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



ALS Scandinavia AB

Hammarvagen 22

SE-943 36, Ojebyn

Phone: +46 911 65 800 Fax: +46 911 60 085

www.alsglobal.com/geochemistry

To: GEOLOGICAL SURVEY OF NORWAY (NGU)

POSTBOKS 6315 TORGARDEN

NO-7491 TRONDHEIM

NORWAY

Page: 8 - E

Total # Pages: 8 (A - E)

Plus Appendix Pages

Finalized Date: 27-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 PI18302116

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	Zn-OG62 Zn % 0.001
198976 DUP Target Range - Lower Bound Upper Bound	DUPLICATES													
199335 DUP Target Range - Lower Bound Upper Bound														
199349 DUP Target Range - Lower Bound Upper Bound														
ORIGINAL DUP Target Range - Lower Bound Upper Bound	66.6 64.6 62.1 69.1	0.15 0.14 0.09 0.20	<0.05 0.06 <0.05 0.10	3.76 3.62 3.50 3.88	0.150 0.148 0.137 0.161	1.98 1.97 1.81 2.14	2.2 2.2 2.0 2.4	39 39 36 42	0.5 0.5 0.4 0.6	13.2 12.9 12.3 13.8	137 132 126 143	134.0 129.5 121.5 142.0		
ORIGINAL DUP Target Range - Lower Bound Upper Bound	193.0 193.0 183.0 203	0.12 0.12 0.06 0.18	0.46 0.41 0.36 0.51	1.64 1.56 1.51 1.69	0.239 0.238 0.222 0.255	5.52 5.42 5.04 5.90	1.1 1.0 0.9 1.2	171 169 161 180	0.4 0.3 0.2 0.5	9.3 9.2 8.7 9.8	125 125 117 133	104.0 103.5 95.5 112.0		
191751 191751 PREP DUP	PREP DUPLICATES													
191751 191751 PREP DUP	2410 2410	8.19 8.69	0.30 0.29	231 214	0.031 0.029	0.11 0.11	6.2 7.6	35 34	3.4 3.6	31.6 29.9	655 629	46.5 47.6		
191801 191801 PREP DUP	3430 3480	4.35 4.22	0.20 0.15	163.5 138.5	0.025 0.025	0.43 0.49	2.8 2.8	18 18	3.6 3.2	29.6 28.3	2490 1960	37.2 39.3		
191851 191851 PREP DUP	3770 3900	0.45 0.32	0.25 0.25	111.0 110.0	0.008 0.009	0.05 0.05	2.4 2.5	13 13	2.0 2.0	39.3 41.3	534 505	55.7 19.3		

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

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



ALS Scandinavia AB
Hammarvagen 22
SE-943 36, Ojebyn
Phone: +46 911 65 800 Fax: +46 911 60 085
www.alsglobal.com/geochemistry

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

Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 27-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 PI18302116

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 ME-OG62



LABORATORY ADDRESSES

Applies to Method: Processed at ALS Pitea located at Hammarvagen 22, SE-943 36, Ojebyn, Sweden.
CRU-31 CRU-QC LOG-22 LOG-24
PUL-31 PUL-QC SPL-22Y WEI-21

Applies to Method: Processed at ALS Loughrea located at Dublin Road, Loughrea, Co. Galway, Ireland.
ME-MS61 ME-MS81h ME-OG62 Zn-OG62