



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.

QC CERTIFICATE PI18302180

Project: Not provided

P.O. No.: 379500

This report is for 205 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

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

Page: 1
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Plus Appendix Pages
Finalized Date: 30-DEC-2018
Account: ONUSEG

SAMPLE PREPARATION

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

ANALYTICAL PROCEDURES

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

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

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

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

Signature:

Andrey Tairov, Technical Manager, Ireland



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QC CERTIFICATE OF ANALYSIS PI18302180

| 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 | | | | | | | | | | | | | | | | |
| AMIS0304 | | 7770 | 133.0 | 35.1 | 155.0 | 344 | 28 | 18.10 | 3380 | 2.03 | >5000 | 3710 | 968 | 9 | 557 | 24 |
| AMIS0304 | | 8440 | 135.5 | 35.2 | 150.5 | 354 | 24 | 17.55 | 3620 | 1.96 | 4960 | 4000 | 1035 | 11 | 603 | 25 |
| AMIS0304 | | 8060 | 138.0 | 34.3 | 149.0 | 351 | 26 | 18.20 | 3410 | 2.17 | >5000 | 3820 | 994 | 10 | 577 | 23 |
| AMIS0304 | | 8390 | 128.5 | 34.3 | 146.0 | 347 | 26 | 17.45 | 3370 | 2.14 | >5000 | 3760 | 996 | 11 | 585 | 23 |
| AMIS0304 | | 7980 | 131.0 | 32.9 | 151.5 | 347 | 26 | 17.85 | 3370 | 1.93 | >5000 | 3700 | 982 | 11 | 558 | 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 | | 6390 | 90.1 | 26.7 | 94.1 | 216 | 22 | 12.65 | 2900 | 1.70 | 3790 | 2810 | 742 | 1 | 413 | 76 |
| GRE-04 | | 6320 | 94.2 | 26.9 | 94.3 | 217 | 22 | 13.65 | 2870 | 1.66 | 3720 | 2780 | 768 | 1 | 393 | 80 |
| GRE-04 | | 6510 | 89.6 | 26.7 | 96.8 | 222 | 24 | 12.90 | 2780 | 1.85 | 3790 | 2680 | 742 | 1 | 389 | 75 |
| GRE-04 | | 6390 | 94.8 | 26.7 | 104.0 | 224 | 22 | 13.40 | 2900 | 1.73 | 3780 | 2870 | 767 | 1 | 394 | 77 |
| 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 | | 4440 | 88.5 | 27.3 | 72.5 | 181.5 | 19 | 12.60 | 2200 | 1.68 | 3750 | 1830 | 478 | 1 | 271 | 45 |
| GRE-3 | | 4240 | 86.9 | 27.2 | 71.5 | 178.5 | 19 | 12.55 | 2230 | 1.64 | 3580 | 1785 | 486 | <1 | 281 | 41 |
| GRE-3 | | 4220 | 88.9 | 27.4 | 72.1 | 182.0 | 20 | 13.30 | 2090 | 1.68 | 3610 | 1745 | 466 | <1 | 262 | 43 |
| GRE-3 | | 4370 | 85.6 | 26.7 | 72.8 | 178.0 | 18 | 12.55 | 2230 | 1.64 | 3630 | 1845 | 507 | 1 | 277 | 44 |
| Target Range - Lower Bound | | 4050 | 85.6 | 26.6 | 69.8 | 177.5 | 17 | 12.55 | 2070 | 1.63 | 3280 | 1705 | 462 | <1 | 260 | 34 |
| Upper Bound | | 4660 | 99.1 | 31.1 | 80.7 | 205 | 22 | 14.55 | 2380 | 1.99 | 3770 | 1965 | 532 | 3 | 299 | 56 |
| MRGeo08 | | | | | | | | | | | | | | | | |
| MRGeo08 | | | | | | | | | | | | | | | | |
| MRGeo08 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| OGGeo08 | | | | | | | | | | | | | | | | |
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| OGGeo08 | | | | | | | | | | | | | | | | |
| OGGeo08 | | | | | | | | | | | | | | | | |

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

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

| 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 | | | | | | | | | | | | | | | | |
| AMIS0304 | | 11.7 | 34.6 | 441 | 3.72 | 23.6 | 7 | 402 | 16.9 | 1110 | | | | | | |
| AMIS0304 | | 12.0 | 37.1 | 425 | 3.50 | 23.0 | 5 | 398 | 17.8 | 1130 | | | | | | |
| AMIS0304 | | 12.6 | 37.1 | 452 | 3.52 | 23.8 | 11 | 389 | 17.0 | 1120 | | | | | | |
| AMIS0304 | | 12.2 | 35.4 | 435 | 3.50 | 22.3 | 12 | 396 | 16.7 | 1040 | | | | | | |
| AMIS0304 | | 11.8 | 34.8 | 435 | 3.43 | 22.3 | <5 | 389 | 16.9 | 1110 | | | | | | |
| 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 | | | | | | | | | | | 67.3 | 4.60 | 572 | 380 | 1.86 | 5.59 |
| EMOG-17 | | | | | | | | | | | 67.3 | 4.58 | 572 | 320 | 1.82 | 5.87 |
| EMOG-17 | | | | | | | | | | | 69.9 | 4.81 | 585 | 310 | 1.92 | 5.85 |
| EMOG-17 | | | | | | | | | | | 66.6 | 4.52 | 580 | 420 | 1.89 | 5.36 |
| EMOG-17 | | | | | | | | | | | 66.9 | 4.64 | 570 | 620 | 1.88 | 5.61 |
| 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 | | 123.5 | 23.8 | 135.0 | 2.92 | 121.0 | <5 | 308 | 14.8 | 1000 | | | | | | |
| GRE-04 | | 130.0 | 24.2 | 140.5 | 2.84 | 128.5 | 9 | 302 | 14.6 | 980 | | | | | | |
| GRE-04 | | 128.5 | 23.3 | 138.0 | 3.09 | 129.5 | 9 | 313 | 14.3 | 1090 | | | | | | |
| GRE-04 | | 129.0 | 22.8 | 134.0 | 2.85 | 130.0 | <5 | 317 | 14.9 | 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 | | 160.0 | 20.1 | 109.5 | 2.85 | 109.5 | <5 | 306 | 14.5 | 950 | | | | | | |
| GRE-3 | | 161.5 | 20.4 | 110.0 | 2.86 | 108.0 | <5 | 301 | 14.5 | 930 | | | | | | |
| GRE-3 | | 165.0 | 22.1 | 112.5 | 2.82 | 109.0 | <5 | 296 | 14.3 | 930 | | | | | | |
| GRE-3 | | 156.5 | 21.6 | 109.5 | 2.83 | 106.0 | 8 | 305 | 14.4 | 910 | | | | | | |
| Target Range - Lower Bound | | 149.5 | 20.1 | 109.0 | 2.81 | 103.5 | <5 | 295 | 14.2 | 890 | | | | | | |
| Upper Bound | | 173.5 | 23.2 | 126.0 | 3.35 | 120.0 | 13 | 346 | 16.8 | 1050 | | | | | | |
| MRGeo08 | | | | | | | | | | | 4.71 | 7.48 | 30.9 | 1110 | 3.41 | 0.64 |
| MRGeo08 | | | | | | | | | | | 4.43 | 7.61 | 33.2 | 1100 | 3.39 | 0.65 |
| MRGeo08 | | | | | | | | | | | 4.24 | 7.62 | 32.4 | 1070 | 3.32 | 0.68 |
| Target Range - Lower Bound | | | | | | | | | | | 4.00 | 6.64 | 29.5 | 920 | 2.98 | 0.60 |
| Upper Bound | | | | | | | | | | | 4.92 | 8.14 | 36.5 | 1270 | 3.76 | 0.76 |
| OGGeo08 | | | | | | | | | | | 19.65 | 6.75 | 120.5 | 940 | 2.94 | 11.00 |
| OGGeo08 | | | | | | | | | | | 19.15 | 6.79 | 118.0 | 790 | 3.19 | 10.10 |
| OGGeo08 | | | | | | | | | | | 18.90 | 6.81 | 120.0 | 900 | 2.88 | 10.30 |
| OGGeo08 | | | | | | | | | | | 19.30 | 6.87 | 118.5 | 940 | 2.88 | 10.20 |
| OGGeo08 | | | | | | | | | | | 19.55 | 6.78 | 118.5 | 880 | 2.88 | 10.80 |
| OGGeo08 | | | | | | | | | | | 20.9 | 6.90 | 123.5 | 890 | 3.07 | 11.25 |

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

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

| 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 | | | | | | | | | | | | | | | | |
| AMIS0304 | | | | | | | | | | | | | | | | |
| AMIS0304 | | | | | | | | | | | | | | | | |
| AMIS0304 | | | | | | | | | | | | | | | | |
| AMIS0304 | | | | | | | | | | | | | | | | |
| AMIS0304 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| EMOG-17 | | 1.94 | 20.7 | 49.2 | 762 | 57 | 7.18 | 8380 | 4.92 | 12.15 | 0.05 | 1.8 | 0.932 | 1.67 | 24.1 | 25.1 |
| EMOG-17 | | 1.92 | 20.5 | 47.6 | 761 | 53 | 6.86 | 8360 | 4.91 | 12.25 | 0.76 | 1.9 | 0.893 | 1.68 | 24.6 | 25.8 |
| EMOG-17 | | 1.96 | 20.3 | 50.0 | 775 | 56 | 7.03 | 8630 | 5.09 | 12.25 | 0.65 | 1.9 | 0.895 | 1.67 | 25.8 | 26.4 |
| EMOG-17 | | 1.84 | 20.1 | 47.6 | 759 | 57 | 7.47 | 8180 | 4.79 | 12.00 | 0.08 | 1.9 | 0.900 | 1.63 | 23.8 | 25.8 |
| EMOG-17 | | 1.92 | 18.80 | 44.7 | 760 | 55 | 7.33 | 8330 | 4.93 | 12.55 | 0.20 | 1.8 | 0.868 | 1.67 | 23.4 | 24.4 |
| 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 | | | | | | | | | | | | | | | | |
| GRE-04 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| GRE-3 | | | | | | | | | | | | | | | | |
| GRE-3 | | | | | | | | | | | | | | | | |
| GRE-3 | | | | | | | | | | | | | | | | |
| GRE-3 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| MRGeo08 | | 2.62 | 2.28 | 69.5 | 18.0 | 94 | 11.70 | 624 | 3.94 | 18.15 | 0.05 | 3.2 | 0.179 | 3.13 | 34.4 | 31.7 |
| MRGeo08 | | 2.60 | 2.21 | 67.2 | 19.4 | 94 | 11.35 | 631 | 3.95 | 18.90 | 0.26 | 3.2 | 0.183 | 3.06 | 31.8 | 32.5 |
| MRGeo08 | | 2.61 | 2.11 | 70.7 | 19.0 | 92 | 11.35 | 645 | 3.97 | 18.60 | 0.20 | 3.2 | 0.172 | 3.05 | 33.0 | 31.7 |
| Target Range - Lower Bound | | 2.35 | 2.00 | 66.2 | 17.7 | 81 | 11.20 | 587 | 3.55 | 17.50 | <0.05 | 2.8 | 0.155 | 2.79 | 31.1 | 29.5 |
| Upper Bound | | 2.90 | 2.48 | 81.0 | 21.9 | 102 | 13.80 | 675 | 4.37 | 21.5 | 0.27 | 3.6 | 0.201 | 3.43 | 39.1 | 36.5 |
| OGGeo08 | | 2.24 | 19.95 | 69.1 | 97.8 | 79 | 10.75 | 8370 | 5.35 | 17.15 | 0.68 | 2.9 | 1.480 | 2.90 | 33.8 | 31.7 |
| OGGeo08 | | 2.19 | 18.90 | 68.5 | 99.0 | 85 | 10.55 | 8050 | 5.39 | 17.85 | 0.09 | 2.8 | 1.385 | 2.88 | 33.1 | 32.4 |
| OGGeo08 | | 2.10 | 19.15 | 68.7 | 95.2 | 79 | 10.55 | 8050 | 5.34 | 17.25 | 0.91 | 2.8 | 1.400 | 2.89 | 33.2 | 31.9 |
| OGGeo08 | | 2.22 | 19.30 | 65.3 | 95.5 | 80 | 10.70 | 8390 | 5.44 | 17.05 | 1.04 | 2.9 | 1.410 | 2.98 | 31.6 | 31.1 |
| OGGeo08 | | 2.23 | 19.50 | 65.5 | 97.0 | 83 | 10.80 | 8370 | 5.35 | 17.75 | 0.47 | 2.8 | 1.435 | 2.87 | 31.6 | 32.6 |
| OGGeo08 | | 2.22 | 20.1 | 68.2 | 101.0 | 86 | 11.05 | 8390 | 5.34 | 19.00 | 0.76 | 3.2 | 1.545 | 3.13 | 31.7 | 33.3 |

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| 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 | | | | | | | | | | | | | | | | |
| AMIS0304 | | | | | | | | | | | | | | | | |
| AMIS0304 | | | | | | | | | | | | | | | | |
| AMIS0304 | | | | | | | | | | | | | | | | |
| AMIS0304 | | | | | | | | | | | | | | | | |
| AMIS0304 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| EMOG-17 | | 0.98 | 747 | 1110 | 1.11 | 15.9 | 7580 | 790 | 7300 | 109.0 | 0.325 | 3.24 | 756 | 7.9 | 7 | 2.7 |
| EMOG-17 | | 0.97 | 747 | 1070 | 1.09 | 17.0 | 7620 | 820 | 7330 | 112.0 | 0.294 | 3.26 | 757 | 8.1 | 8 | 2.6 |
| EMOG-17 | | 0.99 | 783 | 1150 | 1.10 | 14.5 | 7800 | 830 | 7350 | 108.0 | 0.309 | 3.38 | 778 | 8.0 | 8 | 2.7 |
| EMOG-17 | | 0.91 | 718 | 1080 | 1.09 | 15.1 | 7430 | 780 | 7080 | 114.0 | 0.302 | 3.22 | 757 | 8.2 | 6 | 2.5 |
| EMOG-17 | | 0.97 | 738 | 1100 | 1.11 | 14.3 | 7560 | 800 | 7270 | 120.0 | 0.288 | 3.24 | 757 | 8.9 | 7 | 2.4 |
| 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 | | | | | | | | | | | | | | | | |
| GRE-04 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| GRE-3 | | | | | | | | | | | | | | | | |
| GRE-3 | | | | | | | | | | | | | | | | |
| GRE-3 | | | | | | | | | | | | | | | | |
| GRE-3 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| MRGeo08 | | 1.36 | 568 | 14.10 | 2.00 | 21.1 | 685 | 1060 | 1080 | 176.5 | 0.007 | 0.31 | 4.30 | 11.1 | 1 | 4.0 |
| MRGeo08 | | 1.30 | 555 | 14.35 | 1.96 | 19.1 | 686 | 1020 | 1070 | 179.0 | 0.009 | 0.30 | 4.42 | 11.2 | 2 | 3.6 |
| MRGeo08 | | 1.33 | 577 | 14.55 | 1.99 | 22.5 | 695 | 1050 | 1060 | 181.0 | 0.010 | 0.31 | 4.41 | 11.5 | 2 | 3.8 |
| Target Range - Lower Bound | | 1.17 | 497 | 13.65 | 1.76 | 19.0 | 622 | 930 | 971 | 173.5 | 0.005 | 0.27 | 3.89 | 11.1 | <1 | 3.5 |
| Upper Bound | | 1.45 | 619 | 16.75 | 2.18 | 23.4 | 760 | 1160 | 1185 | 212 | 0.013 | 0.35 | 5.39 | 13.7 | 4 | 4.7 |
| OGGeo08 | | 1.30 | 503 | 917 | 1.81 | 18.2 | 8870 | 850 | 7290 | 187.5 | 1.415 | 2.80 | 26.8 | 10.0 | 12 | 13.8 |
| OGGeo08 | | 1.24 | 478 | 850 | 1.82 | 18.5 | 8360 | 760 | 7250 | 181.5 | 1.340 | 2.79 | 25.8 | 9.8 | 11 | 14.1 |
| OGGeo08 | | 1.24 | 495 | 846 | 1.87 | 17.4 | 8520 | 820 | 7300 | 176.0 | 1.325 | 2.81 | 26.1 | 9.7 | 12 | 13.8 |
| OGGeo08 | | 1.22 | 520 | 932 | 1.84 | 18.2 | 8830 | 850 | 7220 | 174.5 | 1.435 | 2.80 | 25.9 | 9.4 | 12 | 13.6 |
| OGGeo08 | | 1.26 | 494 | 886 | 1.81 | 17.6 | 8660 | 850 | 7230 | 198.5 | 1.330 | 2.80 | 25.0 | 9.6 | 12 | 13.3 |
| OGGeo08 | | 1.29 | 512 | 934 | 1.89 | 17.2 | 8870 | 850 | 7310 | 192.5 | 1.505 | 2.83 | 28.5 | 10.6 | 12 | 14.8 |

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: 2 - E
 Total # Pages: 8 (A - E)
 Plus Appendix Pages
 Finalized Date: 30-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 PI18302180

| Sample Description | Method Analyte Units LOD | ME-MS61 Sr ppm 0.2 | ME-MS61 Ta ppm 0.05 | ME-MS61 Te ppm 0.05 | ME-MS61 Th ppm 0.01 | ME-MS61 Ti % 0.005 | ME-MS61 Tl ppm 0.02 | ME-MS61 U ppm 0.1 | ME-MS61 V ppm 1 | ME-MS61 W ppm 0.1 | ME-MS61 Y ppm 0.1 | ME-MS61 Zn ppm 2 | ME-MS61 Zr ppm 0.5 |
|----------------------------|-----------------------------------|-----------------------------|------------------------------|------------------------------|------------------------------|-----------------------------|------------------------------|----------------------------|--------------------------|----------------------------|----------------------------|---------------------------|-----------------------------|
| STANDARDS | | | | | | | | | | | | | |
| AMIS0304 | | | | | | | | | | | | | |
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| AMIS0304 | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | |
| EMOG-17 | | 211 | 0.94 | 1.26 | 10.90 | 0.322 | 2.14 | 3.3 | 74 | 3.9 | 15.6 | 7550 | 64.2 |
| EMOG-17 | | 205 | 0.94 | 1.25 | 11.85 | 0.314 | 2.13 | 3.3 | 70 | 4.1 | 16.2 | 7520 | 67.2 |
| EMOG-17 | | 209 | 0.96 | 1.24 | 11.85 | 0.336 | 2.17 | 3.5 | 75 | 4.0 | 15.8 | 7770 | 62.5 |
| EMOG-17 | | 202 | 0.95 | 1.35 | 10.70 | 0.312 | 2.17 | 3.2 | 70 | 3.8 | 16.3 | 7370 | 61.1 |
| EMOG-17 | | 209 | 0.95 | 1.28 | 10.85 | 0.324 | 2.08 | 2.9 | 73 | 4.1 | 16.3 | 7540 | 70.2 |
| 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 | | | | | | | | | | | | | |
| GRE-04 | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | |
| GRE-3 | | | | | | | | | | | | | |
| GRE-3 | | | | | | | | | | | | | |
| GRE-3 | | | | | | | | | | | | | |
| GRE-3 | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | |
| MRGeo08 | | 305 | 1.49 | <0.05 | 18.10 | 0.507 | 1.05 | 5.3 | 110 | 4.7 | 23.8 | 809 | 106.5 |
| MRGeo08 | | 299 | 1.46 | <0.05 | 18.25 | 0.502 | 1.04 | 4.9 | 109 | 4.6 | 25.3 | 795 | 105.5 |
| MRGeo08 | | 305 | 1.58 | 0.05 | 18.25 | 0.500 | 1.04 | 5.1 | 107 | 4.9 | 24.9 | 814 | 104.5 |
| Target Range - Lower Bound | | 277 | 1.39 | <0.05 | 17.90 | 0.443 | 0.89 | 4.9 | 97 | 4.1 | 23.8 | 722 | 92.2 |
| Upper Bound | | 339 | 1.81 | 0.14 | 21.9 | 0.553 | 1.25 | 6.2 | 121 | 5.8 | 29.3 | 886 | 126.0 |
| OGGeo08 | | 249 | 1.29 | 0.20 | 18.80 | 0.397 | 1.76 | 4.9 | 84 | 4.7 | 23.2 | 7210 | 93.6 |
| OGGeo08 | | 241 | 1.24 | 0.15 | 16.30 | 0.371 | 1.62 | 4.6 | 81 | 4.4 | 22.7 | 6820 | 92.8 |
| OGGeo08 | | 245 | 1.23 | 0.18 | 17.10 | 0.383 | 1.73 | 4.8 | 79 | 4.4 | 22.7 | 6860 | 91.8 |
| OGGeo08 | | 248 | 1.31 | 0.22 | 18.60 | 0.413 | 1.76 | 4.9 | 86 | 4.5 | 21.9 | 7210 | 92.6 |
| OGGeo08 | | 249 | 1.21 | 0.16 | 17.25 | 0.399 | 1.71 | 4.9 | 82 | 4.3 | 22.5 | 7000 | 89.8 |
| OGGeo08 | | 249 | 1.39 | 0.19 | 17.40 | 0.419 | 1.85 | 4.9 | 88 | 5.1 | 23.4 | 7250 | 96.9 |

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: 3 - A
 Total # Pages: 8 (A - E)
 Plus Appendix Pages
 Finalized Date: 30-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 PI18302180

| 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 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| OREAS 920 | | | | | | | | | | | | | | | | |
| OREAS 920 | | | | | | | | | | | | | | | | |
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| OREAS 920 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| OREAS-121 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| REE-1 | | 4050 | 884 | 701 | 23.8 | 435 | 492 | 209 | 1680 | 94.6 | 3740 | 1480 | 452 | 1105 | 389 | 525 |
| REE-1 | | 4170 | 851 | 704 | 22.3 | 429 | 506 | 205 | 1780 | 98.6 | 3950 | 1530 | 458 | 1000 | 401 | 524 |
| REE-1 | | 4240 | 864 | 716 | 24.3 | 458 | 506 | 209 | 1780 | 92.9 | 4030 | 1545 | 458 | 1050 | 402 | 496 |
| REE-1 | | 4090 | 850 | 746 | 24.4 | 451 | 512 | 210 | 1690 | 91.7 | 4040 | 1480 | 464 | 1055 | 396 | 505 |
| REE-1 | | 3940 | 886 | 716 | 25.2 | 463 | 475 | 214 | 1700 | 94.6 | 4010 | 1480 | 451 | 1110 | 387 | 533 |
| 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 |
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| 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: 3 - B
Total # Pages: 8 (A - E)
Plus Appendix Pages
Finalized Date: 30-DEC-2018
Account: ONUSEG

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

| 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 | | | | | | | | | | | | | | | | |
| 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 |
| OREAS 920 | | | | | | | | | | | 0.10 | 7.38 | 4.9 | 530 | 2.59 | 0.69 |
| OREAS 920 | | | | | | | | | | | 0.12 | 7.69 | 5.1 | 570 | 2.91 | 0.70 |
| OREAS 920 | | | | | | | | | | | 0.09 | 7.88 | 5.3 | 550 | 2.60 | 0.63 |
| OREAS 920 | | | | | | | | | | | 0.12 | 7.51 | 5.6 | 540 | 2.87 | 0.79 |
| OREAS 920 | | | | | | | | | | | 0.08 | 7.57 | 5.5 | 540 | 2.56 | 0.60 |
| OREAS 920 | | | | | | | | | | | 0.08 | 7.71 | 5.1 | 550 | 2.58 | 0.66 |
| OREAS 920 | | | | | | | | | | | 0.08 | 7.71 | 5.6 | 550 | 2.88 | 0.65 |
| 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-121 | | | | | | | | | | | 0.04 | 4.59 | 3.3 | 1010 | 1.38 | 0.02 |
| Target Range - Lower Bound | | | | | | | | | | | <0.01 | 4.12 | 3.0 | 850 | 1.35 | <0.01 |
| Upper Bound | | | | | | | | | | | 0.05 | 5.06 | 4.1 | 1170 | 1.76 | 0.05 |
| REE-1 | | 222 | 110.5 | 779 | 111.5 | 139.0 | 9 | 5820 | 703 | 19800 | | | | | | |
| REE-1 | | 234 | 111.5 | 795 | 113.0 | 141.0 | 9 | 5570 | 698 | 20100 | | | | | | |
| REE-1 | | 227 | 106.0 | 754 | 111.5 | 140.0 | 7 | 5860 | 689 | 20100 | | | | | | |
| REE-1 | | 231 | 113.5 | 779 | 109.5 | 139.0 | 14 | 5630 | 710 | 18900 | | | | | | |
| REE-1 | | 230 | 110.0 | 834 | 113.0 | 143.5 | 15 | 5790 | 704 | 20100 | | | | | | |
| 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 | | | | | | |
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| BLANK | | | | | | | | | | | 0.01 | <0.01 | <0.2 | <10 | <0.05 | 0.01 |
| BLANK | | | | | | | | | | | <0.01 | <0.01 | <0.2 | <10 | <0.05 | 0.01 |
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| BLANK | | | | | | | | | | | 0.02 | <0.01 | <0.2 | <10 | <0.05 | <0.01 |
| BLANK | | | | | | | | | | | <0.01 | <0.01 | <0.2 | <10 | <0.05 | 0.01 |
| BLANK | | | | | | | | | | | 0.01 | <0.01 | <0.2 | <10 | <0.05 | <0.01 |
| Target Range - Lower Bound | | | | | | | | | | | <0.01 | <0.01 | <0.2 | <10 | <0.05 | <0.01 |
| Upper Bound | | | | | | | | | | | 0.02 | 0.02 | 0.4 | 20 | 0.10 | 0.02 |

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
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Page: 3 - C
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Finalized Date: 30-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 PI18302180

| 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 | | | | | | | | | | | | | | | | |
| 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 |
| OREAS 920 | | 0.51 | 0.08 | 87.2 | 14.8 | 83 | 8.33 | 106.0 | 4.07 | 19.95 | 0.18 | 4.7 | 0.079 | 2.85 | 43.2 | 28.2 |
| OREAS 920 | | 0.51 | 0.07 | 99.2 | 14.9 | 77 | 8.52 | 107.0 | 4.12 | 20.9 | 0.08 | 4.7 | 0.086 | 2.85 | 49.0 | 29.9 |
| OREAS 920 | | 0.50 | 0.05 | 92.4 | 14.6 | 84 | 8.18 | 112.5 | 4.04 | 20.3 | 0.23 | 4.3 | 0.070 | 2.83 | 44.0 | 28.1 |
| OREAS 920 | | 0.47 | 0.06 | 93.1 | 15.0 | 81 | 8.26 | 111.0 | 4.01 | 20.0 | 0.20 | 4.7 | 0.097 | 2.83 | 44.5 | 29.8 |
| OREAS 920 | | 0.51 | 0.04 | 91.8 | 15.2 | 85 | 8.21 | 105.5 | 4.02 | 19.75 | 0.13 | 4.2 | 0.077 | 2.80 | 45.2 | 29.3 |
| OREAS 920 | | 0.52 | 0.04 | 94.2 | 15.2 | 80 | 8.23 | 109.5 | 4.16 | 20.7 | 0.17 | 4.7 | 0.086 | 2.86 | 44.7 | 27.2 |
| OREAS 920 | | 0.50 | 0.05 | 86.1 | 17.0 | 85 | 8.63 | 115.0 | 4.08 | 22.9 | 0.21 | 4.6 | 0.076 | 2.82 | 46.2 | 26.8 |
| 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-121 | | 0.09 | <0.02 | 43.0 | 3.9 | 39 | 0.70 | 2.9 | 1.60 | 10.10 | 0.14 | 1.6 | 0.014 | 2.64 | 20.7 | 4.4 |
| Target Range - Lower Bound | | 0.05 | <0.02 | 40.2 | 3.8 | 30 | 0.61 | 2.5 | 1.42 | 9.94 | 0.10 | 1.2 | <0.005 | 2.30 | 18.0 | 4.1 |
| Upper Bound | | 0.10 | 0.06 | 49.2 | 4.9 | 39 | 0.89 | 3.4 | 1.76 | 12.25 | 0.32 | 1.8 | 0.025 | 2.84 | 23.2 | 5.5 |
| REE-1 | | | | | | | | | | | | | | | | |
| REE-1 | | | | | | | | | | | | | | | | |
| REE-1 | | | | | | | | | | | | | | | | |
| REE-1 | | | | | | | | | | | | | | | | |
| REE-1 | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
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| BLANK | | <0.01 | <0.02 | <0.01 | <0.1 | 1 | <0.05 | <0.2 | <0.01 | <0.05 | <0.05 | <0.1 | 0.007 | <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 |
| BLANK | | <0.01 | <0.02 | <0.01 | <0.1 | 1 | <0.05 | <0.2 | <0.01 | <0.05 | <0.05 | <0.1 | <0.005 | <0.01 | <0.5 | <0.2 |
| BLANK | | <0.01 | <0.02 | <0.01 | <0.1 | 1 | <0.05 | <0.2 | <0.01 | <0.05 | <0.05 | <0.1 | <0.005 | <0.01 | <0.5 | <0.2 |
| BLANK | | <0.01 | <0.02 | 0.01 | <0.1 | 1 | <0.05 | <0.2 | <0.01 | <0.05 | <0.05 | <0.1 | <0.005 | <0.01 | <0.5 | <0.2 |
| BLANK | | <0.01 | <0.02 | 0.01 | <0.1 | 1 | <0.05 | <0.2 | <0.01 | <0.05 | <0.05 | <0.1 | <0.005 | <0.01 | <0.5 | <0.2 |
| BLANK | | <0.01 | <0.02 | 0.01 | <0.1 | <1 | <0.05 | 0.2 | <0.01 | <0.05 | <0.05 | <0.1 | 0.009 | <0.01 | <0.5 | <0.2 |
| BLANK | | <0.01 | <0.02 | 0.02 | <0.1 | 1 | <0.05 | 0.2 | <0.01 | <0.05 | <0.05 | <0.1 | <0.005 | <0.01 | <0.5 | <0.2 |
| BLANK | | <0.01 | <0.02 | 0.01 | <0.1 | 1 | <0.05 | <0.2 | <0.01 | <0.05 | <0.05 | <0.1 | <0.005 | <0.01 | <0.5 | <0.2 |
| BLANK | | <0.01 | <0.02 | <0.01 | <0.1 | 1 | <0.05 | <0.2 | <0.01 | <0.05 | <0.05 | <0.1 | <0.005 | <0.01 | <0.5 | <0.2 |
| BLANK | | <0.01 | <0.02 | 0.02 | <0.1 | <1 | <0.05 | <0.2 | <0.01 | <0.05 | <0.05 | <0.1 | <0.005 | <0.01 | <0.5 | <0.2 |
| 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 |

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: 30-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 PI18302180

| 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 | | | | | | | | | | | | | | | | |
| 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 |
| OREAS 920 | | 1.30 | 596 | 0.53 | 0.62 | 19.0 | 40.1 | 700 | 25.1 | 163.0 | <0.002 | 0.03 | 1.50 | 13.3 | <1 | 4.7 |
| OREAS 920 | | 1.28 | 587 | 0.52 | 0.64 | 22.9 | 40.1 | 700 | 23.0 | 176.5 | 0.002 | 0.03 | 1.42 | 13.8 | 1 | 5.0 |
| OREAS 920 | | 1.32 | 600 | 0.43 | 0.66 | 18.7 | 39.7 | 710 | 21.8 | 170.0 | 0.003 | 0.04 | 1.52 | 13.3 | 1 | 5.0 |
| OREAS 920 | | 1.27 | 587 | 0.46 | 0.62 | 15.9 | 41.5 | 720 | 22.4 | 173.5 | 0.006 | 0.04 | 1.52 | 13.2 | 1 | 4.8 |
| OREAS 920 | | 1.35 | 605 | 0.44 | 0.64 | 18.5 | 41.2 | 740 | 23.2 | 177.5 | 0.003 | 0.04 | 1.45 | 13.1 | 1 | 4.6 |
| OREAS 920 | | 1.40 | 598 | 0.50 | 0.66 | 16.5 | 41.4 | 740 | 22.7 | 178.5 | 0.003 | 0.03 | 1.53 | 14.2 | 1 | 4.9 |
| OREAS 920 | | 1.33 | 598 | 0.49 | 0.62 | 17.0 | 45.0 | 760 | 23.3 | 189.0 | <0.002 | 0.03 | 1.45 | 15.4 | <1 | 4.7 |
| 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-121 | | 0.23 | 775 | 6.98 | 0.24 | 7.6 | 8.9 | 150 | 17.5 | 82.9 | <0.002 | 0.01 | 0.08 | 2.6 | 2 | 0.7 |
| Target Range - Lower Bound | | 0.21 | 697 | 6.64 | 0.21 | 6.9 | 7.7 | 110 | 17.2 | 78.2 | <0.002 | <0.01 | <0.05 | 2.5 | <1 | <0.2 |
| Upper Bound | | 0.27 | 863 | 8.22 | 0.27 | 8.6 | 9.9 | 170 | 22.2 | 95.8 | 0.006 | 0.02 | 0.17 | 3.3 | 3 | 1.1 |
| 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 | 0.4 | <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 | 0.1 | <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 | 0.08 | <0.1 | <1 | <0.2 |
| BLANK | | <0.01 | <5 | <0.05 | <0.01 | 0.1 | <0.2 | <10 | <0.5 | <0.1 | <0.002 | <0.01 | 0.06 | <0.1 | <1 | <0.2 |
| BLANK | | <0.01 | <5 | <0.05 | <0.01 | <0.1 | 0.2 | 10 | <0.5 | <0.1 | <0.002 | <0.01 | <0.05 | <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 | 0.3 | <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 | 0.06 | <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 | 2 | <0.2 |
| BLANK | | <0.01 | <5 | <0.05 | <0.01 | <0.1 | <0.2 | <10 | <0.5 | <0.1 | <0.002 | <0.01 | <0.05 | <0.1 | 1 | <0.2 |
| Target Range - Lower Bound | | <0.01 | <5 | <0.05 | <0.01 | <0.1 | <0.2 | <10 | <0.5 | <0.1 | <0.002 | <0.01 | <0.05 | <0.1 | <1 | <0.2 |
| Upper Bound | | 0.02 | 10 | 0.10 | 0.02 | 0.2 | 0.4 | 20 | 1.0 | 0.2 | 0.004 | 0.02 | 0.10 | 0.2 | 2 | 0.4 |

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: 30-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 PI18302180

| Sample Description | Method Analyte Units LOD | ME-MS61 Sr ppm 0.2 | ME-MS61 Ta ppm 0.05 | ME-MS61 Te ppm 0.05 | ME-MS61 Th ppm 0.01 | ME-MS61 Ti % 0.005 | ME-MS61 Tl ppm 0.02 | ME-MS61 U ppm 0.1 | ME-MS61 V ppm 1 | ME-MS61 W ppm 0.1 | ME-MS61 Y ppm 0.1 | ME-MS61 Zn ppm 2 | ME-MS61 Zr ppm 0.5 |
|----------------------------|-----------------------------------|-----------------------------|------------------------------|------------------------------|------------------------------|-----------------------------|------------------------------|----------------------------|--------------------------|----------------------------|----------------------------|---------------------------|-----------------------------|
| STANDARDS | | | | | | | | | | | | | |
| 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 |
| OREAS 920 | | 79.1 | 1.36 | 0.05 | 17.65 | 0.481 | 1.00 | 3.6 | 97 | 3.2 | 30.8 | 118 | 158.0 |
| OREAS 920 | | 83.3 | 1.42 | <0.05 | 18.95 | 0.473 | 0.83 | 3.6 | 92 | 3.0 | 33.6 | 118 | 158.0 |
| OREAS 920 | | 80.1 | 1.31 | <0.05 | 17.85 | 0.479 | 0.89 | 3.6 | 96 | 3.1 | 31.8 | 115 | 155.5 |
| OREAS 920 | | 79.9 | 1.35 | 0.08 | 19.95 | 0.475 | 0.87 | 3.6 | 90 | 3.2 | 31.5 | 116 | 155.5 |
| OREAS 920 | | 83.1 | 1.23 | <0.05 | 19.45 | 0.477 | 0.85 | 3.8 | 96 | 3.0 | 32.3 | 116 | 147.5 |
| OREAS 920 | | 79.6 | 1.33 | <0.05 | 18.35 | 0.484 | 0.95 | 3.6 | 94 | 3.2 | 32.3 | 114 | 155.5 |
| OREAS 920 | | 86.0 | 1.34 | <0.05 | 19.65 | 0.477 | 0.89 | 3.5 | 97 | 2.8 | 34.2 | 117 | 168.5 |
| Target Range - Lower Bound | | 73.6 | 1.08 | <0.05 | 17.35 | 0.434 | 0.76 | 3.3 | 86 | 2.5 | 29.8 | 102 | 128.0 |
| Upper Bound | | 90.4 | 1.43 | 0.10 | 21.2 | 0.542 | 1.08 | 4.2 | 108 | 3.7 | 36.6 | 130 | 174.0 |
| OREAS-121 | | 130.0 | 0.51 | <0.05 | 5.86 | 0.250 | 0.41 | 213 | 22 | 10.3 | 10.3 | 14 | 46.5 |
| Target Range - Lower Bound | | 117.0 | 0.40 | <0.05 | 5.00 | 0.214 | 0.35 | 185.5 | 18 | 0.2 | 9.4 | 17 | 40.9 |
| Upper Bound | | 143.0 | 0.66 | 0.10 | 6.14 | 0.272 | 0.51 | 227 | 25 | 0.6 | 11.7 | 28 | 56.5 |
| REE-1 | | | | | | | | | | | | | |
| REE-1 | | | | | | | | | | | | | |
| REE-1 | | | | | | | | | | | | | |
| REE-1 | | | | | | | | | | | | | |
| REE-1 | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | |
| BLANKS | | | | | | | | | | | | | |
| BLANK | | 0.4 | <0.05 | <0.05 | 0.01 | <0.005 | 0.02 | <0.1 | <1 | 0.2 | <0.1 | 2 | <0.5 |
| BLANK | | <0.2 | <0.05 | <0.05 | <0.01 | <0.005 | <0.02 | <0.1 | <1 | <0.1 | <0.1 | <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 | | <0.2 | <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 | | <0.2 | <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 |
| 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 |

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: 30-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 PI18302180

| 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 | | <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 | 0.06 | <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 |
| DUPLICATES | | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 191904 | | 5880 | 16.9 | 3.6 | 39.1 | 77.9 | 1 | 1.84 | 3480 | 0.34 | 188 | 1800 | 590 | <1 | 192.5 | <5 |
| DUP | | 5990 | 17.5 | 3.5 | 38.8 | 78.1 | 1 | 1.86 | 3590 | 0.38 | 169 | 1870 | 597 | <1 | 194.5 | <5 |
| Target Range - Lower Bound | | 5720 | 16.3 | 3.2 | 37.4 | 75.0 | <1 | 1.74 | 3410 | 0.30 | 171 | 1770 | 573 | <1 | 186.5 | <5 |
| Upper Bound | | 6150 | 18.1 | 3.9 | 40.5 | 81.0 | 2 | 1.96 | 3660 | 0.42 | 186 | 1900 | 614 | 2 | 200 | 10 |
| 191918 | | 1750 | 17.7 | 6.2 | 14.9 | 34.0 | 1 | 2.85 | 827 | 0.63 | 617 | 674 | 198.5 | 12 | 72.4 | <5 |
| DUP | | 1745 | 17.9 | 6.3 | 15.3 | 34.8 | 1 | 2.92 | 844 | 0.63 | 574 | 684 | 201 | 12 | 72.9 | <5 |
| Target Range - Lower Bound | | 1685 | 16.9 | 5.8 | 14.4 | 32.9 | <1 | 2.73 | 803 | 0.56 | 574 | 655 | 192.5 | 11 | 69.9 | <5 |
| Upper Bound | | 1810 | 18.7 | 6.7 | 15.8 | 35.9 | 2 | 3.04 | 868 | 0.70 | 617 | 703 | 207 | 13 | 75.4 | 10 |

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

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



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
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Account: ONUSEK

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 PI18302180

| 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 | | 0.8 | <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 | | <0.5 | <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 | | <0.5 | <0.05 | <0.3 | <0.05 | <0.3 | 6 | <3 | <0.2 | <10 | | | | | | |
| BLANK | | 1.0 | <0.05 | <0.3 | <0.05 | <0.3 | 6 | <3 | <0.2 | <10 | | | | | | |
| BLANK | | 0.9 | <0.05 | <0.3 | <0.05 | <0.3 | 8 | <3 | <0.2 | <10 | | | | | | |
| BLANK | | <0.5 | <0.05 | <0.3 | <0.05 | <0.3 | 7 | <3 | <0.2 | <10 | | | | | | |
| BLANK | | <0.5 | <0.05 | <0.3 | <0.05 | <0.3 | <5 | <3 | <0.2 | <10 | | | | | | |
| Target Range - Lower Bound | | <0.5 | <0.05 | <0.3 | <0.05 | <0.3 | <5 | <3 | <0.2 | <10 | | | | | | |
| Upper Bound | | 1.0 | 0.10 | 0.6 | 0.10 | 0.6 | 10 | 6 | 0.4 | 20 | | | | | | |
| DUPLICATES | | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | 0.07 | 1.81 | 12.1 | 20 | 1.06 | <0.01 |
| DUP | | | | | | | | | | | 0.05 | 1.86 | 12.1 | 20 | 1.10 | <0.01 |
| Target Range - Lower Bound | | | | | | | | | | | 0.05 | 1.73 | 11.3 | <10 | 0.98 | <0.01 |
| Upper Bound | | | | | | | | | | | 0.07 | 1.94 | 12.9 | 30 | 1.18 | 0.02 |
| ORIGINAL | | | | | | | | | | | 0.13 | 7.47 | 211 | 360 | 1.39 | 0.37 |
| DUP | | | | | | | | | | | 0.09 | 7.23 | 210 | 350 | 1.42 | 0.38 |
| Target Range - Lower Bound | | | | | | | | | | | 0.09 | 6.97 | 200.0 | 320 | 1.28 | 0.35 |
| Upper Bound | | | | | | | | | | | 0.13 | 7.73 | 221 | 390 | 1.53 | 0.40 |
| 191904 | | 1.7 | 5.94 | 298 | 0.34 | 3.4 | 7 | 47 | 2.4 | 50 | | | | | | |
| DUP | | 1.3 | 5.77 | 294 | 0.35 | 3.2 | 7 | 48 | 2.1 | 50 | | | | | | |
| Target Range - Lower Bound | | 0.9 | 5.60 | 285 | 0.28 | 2.9 | <5 | 43 | 2.0 | 40 | | | | | | |
| Upper Bound | | 2.1 | 6.11 | 307 | 0.41 | 3.7 | 10 | 52 | 2.5 | 60 | | | | | | |
| 191918 | | 12.4 | 3.97 | 75.6 | 0.71 | 4.1 | 8 | 66 | 4.3 | 100 | | | | | | |
| DUP | | 10.9 | 4.07 | 76.3 | 0.74 | 4.2 | 10 | 66 | 4.4 | 90 | | | | | | |
| Target Range - Lower Bound | | 10.7 | 3.83 | 73.0 | 0.65 | 3.7 | <5 | 61 | 4.0 | 80 | | | | | | |
| Upper Bound | | 12.6 | 4.21 | 78.9 | 0.80 | 4.6 | 10 | 71 | 4.7 | 110 | | | | | | |

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
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Plus Appendix Pages
Finalized Date: 30-DEC-2018
Account: ONUSEG

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

| 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 |
| BLANK BLANK BLANK BLANK BLANK BLANK BLANK BLANK BLANK BLANK | | BLANKS | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| ORIGINAL | | 7.50 | 0.04 | 0.96 | 320 | 6150 | 3.72 | 29.4 | 9.37 | 2.92 | 0.05 | <0.1 | 0.029 | <0.01 | 1.1 | 5.4 |
| DUP | | 7.72 | 0.05 | 0.59 | 334 | 6450 | 3.80 | 30.4 | 9.59 | 3.04 | 0.07 | <0.1 | 0.022 | <0.01 | 0.8 | 5.6 |
| Target Range - Lower Bound | | 7.22 | <0.02 | 0.73 | 311 | 5980 | 3.52 | 28.7 | 9.00 | 2.78 | <0.05 | <0.1 | 0.019 | <0.01 | <0.5 | 5.0 |
| Upper Bound | | 8.00 | 0.07 | 0.82 | 343 | 6620 | 4.00 | 31.1 | 9.96 | 3.18 | 0.10 | 0.2 | 0.032 | 0.02 | 1.0 | 6.0 |
| ORIGINAL | | 3.07 | 0.30 | 38.8 | 14.7 | 123 | 2.40 | 17.6 | 4.26 | 19.65 | 0.13 | 3.9 | 0.051 | 1.55 | 17.2 | 41.6 |
| DUP | | 3.00 | 0.33 | 38.6 | 15.1 | 119 | 2.38 | 17.5 | 4.18 | 19.55 | 0.17 | 4.0 | 0.051 | 1.50 | 17.3 | 43.1 |
| Target Range - Lower Bound | | 2.87 | 0.28 | 36.8 | 14.1 | 114 | 2.22 | 16.7 | 4.00 | 18.55 | 0.09 | 3.7 | 0.043 | 1.44 | 15.9 | 40.0 |
| Upper Bound | | 3.20 | 0.35 | 40.6 | 15.7 | 128 | 2.56 | 18.4 | 4.44 | 20.6 | 0.21 | 4.2 | 0.059 | 1.61 | 18.6 | 44.7 |
| 191904 DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 191918 DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |

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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

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 Account: ONUSEG

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

| 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 |
| BLANK | | | | | | | | | | | | | | | | |
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| BLANK | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| DUPLICATES | | | | | | | | | | | | | | | | |
| ORIGINAL | | 10.50 | 2270 | 0.36 | 0.01 | 0.2 | 5230 | <10 | <0.5 | 0.4 | <0.002 | <0.01 | 11.45 | 36.0 | 1 | <0.2 |
| DUP | | 10.70 | 2320 | 0.33 | 0.01 | 2.1 | 5360 | 20 | 0.5 | 0.4 | <0.002 | <0.01 | 11.55 | 37.8 | 1 | <0.2 |
| Target Range - Lower Bound | | 10.05 | 2180 | 0.28 | <0.01 | 1.0 | 5030 | <10 | <0.5 | 0.3 | <0.002 | <0.01 | 10.60 | 35.0 | <1 | <0.2 |
| Upper Bound | | 11.15 | 2410 | 0.41 | 0.02 | 1.3 | 5560 | 20 | 1.0 | 0.5 | 0.004 | 0.02 | 12.40 | 38.8 | 2 | 0.4 |
| ORIGINAL | | 2.67 | 629 | 1.31 | 2.35 | 7.5 | 33.1 | 590 | 9.8 | 51.5 | 0.002 | 0.25 | 6.39 | 15.2 | 1 | 2.2 |
| DUP | | 2.63 | 605 | 1.31 | 2.35 | 7.1 | 32.8 | 570 | 9.7 | 52.2 | 0.003 | 0.26 | 6.29 | 15.2 | 1 | 2.2 |
| Target Range - Lower Bound | | 2.51 | 581 | 1.19 | 2.22 | 6.8 | 31.1 | 540 | 8.8 | 49.2 | <0.002 | 0.23 | 5.81 | 14.3 | <1 | 1.9 |
| Upper Bound | | 2.79 | 653 | 1.43 | 2.48 | 7.8 | 34.8 | 620 | 10.7 | 54.5 | 0.004 | 0.28 | 6.87 | 16.1 | 2 | 2.5 |
| 191904 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 191918 | | | | | | | | | | | | | | | | |
| 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
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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

| 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 |
|---|-----------------------------------|------------------------------|---------------------------------|-------------------------------|------------------------------|----------------------------------|------------------------------|----------------------------|--------------------------|------------------------------|------------------------------|---------------------------|----------------------------------|
| BLANK BLANK BLANK BLANK BLANK BLANK BLANK BLANK BLANK BLANK Target Range - Lower Bound Upper Bound | | BLANKS | | | | | | | | | | | |
| ORIGINAL DUP Target Range - Lower Bound Upper Bound | | 46.8 47.9 44.8 49.9 | <0.05 <0.05 <0.05 0.10 | 0.05 0.05 <0.05 0.10 | 0.02 0.05 0.02 0.05 | 0.027 0.028 0.021 0.034 | 0.79 0.87 0.75 0.91 | 0.5 0.5 0.4 0.6 | 132 135 126 141 | 7.2 7.1 6.5 7.8 | 2.7 2.7 2.5 2.9 | 164 169 156 177 | 3.0 3.1 2.3 3.8 |
| ORIGINAL DUP Target Range - Lower Bound Upper Bound | | 312 301 291 322 | 0.55 0.56 0.48 0.63 | 0.10 0.09 <0.05 0.10 | 5.59 5.69 5.35 5.93 | 0.382 0.379 0.356 0.405 | 0.85 0.84 0.76 0.93 | 2.3 2.3 2.1 2.5 | 70 70 66 75 | 11.1 12.7 10.9 12.9 | 19.1 19.5 18.2 20.4 | 148 147 138 157 | 141.0 153.5 135.5 159.0 |
| 191904 DUP Target Range - Lower Bound Upper Bound | | | | | | | | | | | | | |
| 191918 DUP Target Range - Lower Bound Upper Bound | | | | | | | | | | | | | |

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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)
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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

| 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 | | | | | | | | | | | | | | | | |
| 198898 DUP Target Range - Lower Bound Upper Bound | | | | | | | | | | | | | | | | |
| 199335 DUP Target Range - Lower Bound Upper Bound | | 8040 8150 7810 8380 | 18.0 18.4 17.3 19.1 | 3.3 3.5 3.1 3.7 | 30.5 32.2 30.1 32.6 | 62.5 62.7 60.1 65.1 | <1 <1 <1 2 | 2.18 2.08 2.01 2.25 | 4790 4830 4640 4980 | 0.12 0.14 0.08 0.18 | 263 236 240 259 | 2310 2410 2280 2440 | 725 740 707 758 | 1 1 <1 2 | 157.5 164.5 155.0 167.0 | <5 <5 <5 10 |
| 199346 DUP Target Range - Lower Bound Upper Bound | | | | | | | | | | | | | | | | |
| 199349 DUP Target Range - Lower Bound Upper Bound | | 7220 7470 7080 7610 | 14.5 14.2 13.5 15.2 | 2.4 2.4 2.1 2.7 | 38.2 37.1 36.1 39.2 | 64.6 65.2 62.3 67.5 | 2 1 <1 2 | 1.47 1.39 1.33 1.53 | 4170 4240 4050 4360 | 0.10 0.09 <0.05 0.10 | 176 167 164 179 | 2630 2680 2560 2750 | 718 741 704 755 | 1 1 <1 2 | 219 227 215 231 | 20 23 16 27 |
| 199365 DUP Target Range - Lower Bound Upper Bound | | | | | | | | | | | | | | | | |
| 199369 DUP Target Range - Lower Bound Upper Bound | | 4060 4170 3970 4260 | 5.6 5.8 5.2 6.2 | 1.6 1.3 1.2 1.7 | 12.4 12.0 11.6 12.8 | 22.8 19.7 20.2 22.3 | 4 4 3 5 | 0.67 0.63 0.58 0.72 | 2590 2570 2490 2670 | 0.16 0.16 0.10 0.22 | 3660 3720 3560 3820 | 1045 1080 1025 1100 | 364 382 360 386 | 27 26 25 28 | 71.4 75.7 70.8 76.3 | 5 6 <5 10 |
| 199383 DUP Target Range - Lower Bound Upper Bound | | 7800 8220 7730 8290 | 8.2 7.9 7.5 8.6 | 1.8 1.7 1.5 2.0 | 16.5 16.2 15.6 17.1 | 29.3 27.8 27.3 29.8 | <1 <1 <1 2 | 0.98 0.92 0.87 1.03 | 5130 5260 5010 5380 | 0.06 0.05 <0.05 0.10 | 396 416 391 421 | 1995 2040 1945 2090 | 725 764 718 771 | 1 1 <1 2 | 118.0 113.5 111.5 120.0 | <5 <5 <5 10 |
| 199403 DUP Target Range - Lower Bound Upper Bound | | 3860 3960 3770 4050 | 4.9 5.2 4.6 5.5 | 1.2 1.0 0.9 1.3 | 10.0 10.0 9.5 10.6 | 13.3 14.3 13.0 14.6 | <1 <1 <1 2 | 0.58 0.50 0.47 0.61 | 2740 2780 2660 2860 | 0.12 0.10 0.06 0.16 | 280 279 269 290 | 939 956 914 981 | 329 340 323 346 | 5 4 3 6 | 60.2 61.1 58.3 63.0 | <5 <5 <5 10 |

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



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

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

| 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 | | | | | | | | | | | | | | | | |
| 198898 | | | | | | | | | | | 1.33 | 0.12 | 4.3 | 2630 | 0.36 | 0.42 |
| DUP | | | | | | | | | | | 1.30 | 0.12 | 4.1 | 1400 | 0.38 | 0.42 |
| Target Range - Lower Bound | | | | | | | | | | | 1.24 | 0.10 | 3.8 | 1850 | 0.30 | 0.39 |
| Upper Bound | | | | | | | | | | | 1.39 | 0.14 | 4.6 | 2180 | 0.44 | 0.45 |
| 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 | | | | | | |
| 199346 | | | | | | | | | | | 3.80 | 0.42 | 46.7 | 150 | 0.91 | 11.10 |
| DUP | | | | | | | | | | | 3.70 | 0.43 | 45.7 | 650 | 0.90 | 10.85 |
| Target Range - Lower Bound | | | | | | | | | | | 3.55 | 0.39 | 43.7 | 360 | 0.81 | 10.40 |
| Upper Bound | | | | | | | | | | | 3.95 | 0.46 | 48.7 | 440 | 1.00 | 11.55 |
| 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 | | | | | | |
| 199365 | | | | | | | | | | | 0.94 | 0.37 | 5.8 | 2940 | 0.34 | 0.51 |
| DUP | | | | | | | | | | | 1.18 | 0.36 | 5.2 | 2740 | 0.30 | 0.48 |
| Target Range - Lower Bound | | | | | | | | | | | 1.00 | 0.34 | 5.0 | 2620 | 0.25 | 0.46 |
| Upper Bound | | | | | | | | | | | 1.12 | 0.39 | 6.0 | 3060 | 0.39 | 0.53 |
| 199369 | | 52.8 | 1.88 | 206 | 0.12 | 50.6 | <5 | 18 | 1.1 | 270 | | | | | | |
| DUP | | 57.1 | 1.64 | 210 | 0.14 | 50.8 | 5 | 17 | 1.3 | 240 | | | | | | |
| Target Range - Lower Bound | | 52.5 | 1.65 | 200 | 0.08 | 48.6 | <5 | 14 | 1.0 | 240 | | | | | | |
| Upper Bound | | 57.4 | 1.87 | 216 | 0.18 | 52.8 | 10 | 21 | 1.4 | 270 | | | | | | |
| 199383 | | 7.4 | 2.52 | 66.4 | 0.11 | 10.2 | <5 | 19 | 0.8 | 20 | | | | | | |
| DUP | | 6.8 | 2.33 | 64.1 | 0.10 | 9.8 | <5 | 19 | 0.8 | 10 | | | | | | |
| Target Range - Lower Bound | | 6.4 | 2.29 | 62.7 | <0.05 | 9.4 | <5 | 15 | 0.6 | <10 | | | | | | |
| Upper Bound | | 7.8 | 2.56 | 67.8 | 0.16 | 10.7 | 10 | 23 | 1.0 | 20 | | | | | | |
| 199403 | | 1.0 | 1.33 | 41.8 | 0.11 | 4.2 | <5 | 12 | 0.6 | 10 | | | | | | |
| DUP | | 0.8 | 1.26 | 42.1 | 0.12 | 4.2 | <5 | 12 | 0.7 | 10 | | | | | | |
| Target Range - Lower Bound | | <0.5 | 1.20 | 40.2 | 0.06 | 3.8 | <5 | 9 | 0.4 | <10 | | | | | | |
| Upper Bound | | 1.0 | 1.39 | 43.7 | 0.17 | 4.6 | 10 | 15 | 0.9 | 20 | | | | | | |

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

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

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

| 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 | | | | | | | | | | | | | | | | |
| 198898 | | 18.90 | 1.38 | >500 | 27.8 | 8 | 0.05 | 8.3 | 8.60 | 14.55 | 1.65 | 0.2 | 0.373 | 0.01 | 1940 | 4.1 |
| DUP | | 18.60 | 1.41 | >500 | 27.4 | 7 | 0.05 | 8.0 | 8.37 | 13.95 | 1.53 | 0.2 | 0.370 | 0.01 | 1900 | 4.2 |
| Target Range - Lower Bound | | 17.80 | 1.31 | 475 | 26.1 | 6 | <0.05 | 7.7 | 8.05 | 13.50 | 1.46 | <0.1 | 0.348 | <0.01 | 1825 | 3.7 |
| Upper Bound | | 19.70 | 1.48 | >500 | 29.1 | 9 | 0.10 | 8.6 | 8.92 | 15.00 | 1.72 | 0.3 | 0.395 | 0.02 | 2020 | 4.6 |
| 199335 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 199346 | | 17.15 | 1.12 | >500 | 24.0 | 19 | 0.44 | 6.7 | 11.00 | 14.35 | 1.85 | 0.3 | 0.335 | 0.01 | 870 | 8.6 |
| DUP | | 17.60 | 1.23 | >500 | 24.5 | 18 | 0.44 | 6.2 | 11.35 | 14.45 | 1.78 | 0.3 | 0.331 | 0.01 | 860 | 8.4 |
| Target Range - Lower Bound | | 16.50 | 1.10 | 475 | 22.9 | 17 | 0.37 | 6.0 | 10.60 | 13.65 | 1.67 | 0.2 | 0.311 | <0.01 | 821 | 7.9 |
| Upper Bound | | 18.25 | 1.25 | >500 | 25.6 | 20 | 0.51 | 6.9 | 11.75 | 15.15 | 1.96 | 0.4 | 0.355 | 0.02 | 909 | 9.1 |
| 199349 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 199365 | | 17.75 | 0.81 | >500 | 10.7 | 6 | 0.34 | 3.0 | 8.65 | 11.30 | 1.22 | 0.3 | 0.423 | 0.03 | 3250 | 10.9 |
| DUP | | 17.45 | 0.79 | >500 | 10.4 | 5 | 0.31 | 2.5 | 8.48 | 10.60 | 1.07 | 0.3 | 0.418 | 0.03 | 3210 | 10.5 |
| Target Range - Lower Bound | | 16.70 | 0.74 | 475 | 9.9 | 4 | 0.26 | 2.5 | 8.13 | 10.35 | 1.04 | 0.2 | 0.394 | 0.02 | 3070 | 10.0 |
| Upper Bound | | 18.50 | 0.86 | >500 | 11.2 | 7 | 0.39 | 3.0 | 9.00 | 11.55 | 1.25 | 0.4 | 0.447 | 0.04 | 3390 | 11.4 |
| 199369 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 199383 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 199403 | | | | | | | | | | | | | | | | |
| 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 - D
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Plus Appendix Pages
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Account: ONUSEG

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

| 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 | | | | | | | | | | | | | | | | |
| 198898 | | 7.92 | 12200 | 116.0 | 0.02 | 269 | 35.4 | 1120 | 28.4 | 0.3 | 0.008 | 1.39 | 0.10 | 15.8 | 1 | 0.8 |
| DUP | | 7.89 | 12050 | 115.0 | 0.01 | 274 | 34.3 | 1120 | 27.2 | 0.3 | 0.009 | 1.29 | 0.12 | 15.4 | 1 | 0.9 |
| Target Range - Lower Bound | | 7.50 | 11500 | 109.5 | <0.01 | 258 | 32.9 | 1050 | 25.9 | 0.2 | 0.006 | 1.26 | <0.05 | 14.7 | <1 | 0.6 |
| Upper Bound | | 8.31 | 12750 | 121.5 | 0.02 | 285 | 36.8 | 1190 | 29.7 | 0.4 | 0.011 | 1.42 | 0.17 | 16.5 | 2 | 1.1 |
| 199335 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 199346 | | 5.05 | 12300 | 139.0 | 0.07 | 102.5 | 16.0 | 5010 | 125.5 | 1.1 | 0.005 | 1.22 | 0.34 | 21.6 | 1 | 4.8 |
| DUP | | 5.14 | 12450 | 137.5 | 0.06 | 100.0 | 15.5 | 4880 | 121.5 | 1.1 | 0.004 | 1.24 | 0.34 | 21.6 | 1 | 4.7 |
| Target Range - Lower Bound | | 4.83 | 11750 | 131.5 | 0.05 | 96.1 | 14.8 | 4690 | 117.0 | 0.9 | <0.002 | 1.16 | 0.26 | 20.4 | <1 | 4.3 |
| Upper Bound | | 5.36 | 13000 | 145.0 | 0.08 | 106.5 | 16.7 | 5200 | 130.0 | 1.3 | 0.007 | 1.30 | 0.42 | 22.8 | 2 | 5.2 |
| 199349 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 199365 | | 7.28 | 11200 | 376 | 0.01 | >500 | 4.3 | 1680 | 12.7 | 2.0 | 0.005 | 0.72 | 0.25 | 11.4 | <1 | 1.3 |
| DUP | | 7.14 | 11100 | 371 | 0.18 | >500 | 4.5 | 1630 | 12.3 | 1.9 | 0.005 | 0.71 | 0.22 | 10.7 | <1 | 1.4 |
| Target Range - Lower Bound | | 6.84 | 10600 | 355 | 0.08 | 475 | 4.0 | 1560 | 11.4 | 1.8 | 0.003 | 0.67 | 0.17 | 10.4 | <1 | 1.1 |
| Upper Bound | | 7.58 | 11700 | 392 | 0.11 | >500 | 4.8 | 1750 | 13.6 | 2.1 | 0.007 | 0.76 | 0.30 | 11.7 | 2 | 1.6 |
| 199369 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 199383 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 199403 | | | | | | | | | | | | | | | | |
| 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

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

| Sample Description | Method Analyte Units LOD | ME-MS61 Sr ppm 0.2 | ME-MS61 Ta ppm 0.05 | ME-MS61 Te ppm 0.05 | ME-MS61 Th ppm 0.01 | ME-MS61 Ti % 0.005 | ME-MS61 Tl ppm 0.02 | ME-MS61 U ppm 0.1 | ME-MS61 V ppm 1 | ME-MS61 W ppm 0.1 | ME-MS61 Y ppm 0.1 | ME-MS61 Zn ppm 2 | ME-MS61 Zr ppm 0.5 |
|----------------------------|-----------------------------------|-----------------------------|------------------------------|------------------------------|------------------------------|-----------------------------|------------------------------|----------------------------|--------------------------|----------------------------|----------------------------|---------------------------|-----------------------------|
| DUPLICATES | | | | | | | | | | | | | |
| 198898 | | 2640 | 1.71 | 0.72 | 112.0 | 0.006 | 0.02 | 2.7 | 8 | 0.9 | 19.0 | 92 | 7.6 |
| DUP | | 2610 | 1.53 | 0.73 | 108.0 | 0.006 | 0.02 | 2.7 | 8 | 0.8 | 18.5 | 91 | 7.4 |
| Target Range - Lower Bound | | 2490 | 1.49 | 0.64 | 104.5 | <0.005 | <0.02 | 2.5 | 7 | 0.7 | 17.7 | 85 | 6.4 |
| Upper Bound | | 2760 | 1.75 | 0.81 | 115.5 | 0.010 | 0.04 | 2.9 | 9 | 1.0 | 19.8 | 98 | 8.6 |
| 199335 | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | |
| 199346 | | 1650 | 0.44 | 0.20 | 348 | 0.046 | 0.10 | 5.5 | 45 | 1.4 | 27.3 | 649 | 21.4 |
| DUP | | 1660 | 0.45 | 0.17 | 343 | 0.046 | 0.10 | 5.4 | 47 | 1.4 | 27.6 | 658 | 21.0 |
| Target Range - Lower Bound | | 1570 | 0.37 | 0.13 | 328 | 0.039 | 0.07 | 5.1 | 43 | 1.2 | 26.0 | 619 | 19.1 |
| Upper Bound | | 1740 | 0.52 | 0.24 | 363 | 0.053 | 0.13 | 5.8 | 49 | 1.6 | 28.9 | 688 | 23.3 |
| 199349 | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | |
| 199365 | | 2490 | 11.00 | 0.26 | 178.5 | 0.014 | 0.09 | 15.3 | 21 | 0.9 | 16.9 | 107 | 14.2 |
| DUP | | 2460 | 11.15 | 0.23 | 174.0 | 0.014 | 0.09 | 14.7 | 21 | 0.9 | 16.3 | 107 | 14.2 |
| Target Range - Lower Bound | | 2350 | 10.45 | 0.18 | 167.5 | 0.008 | 0.06 | 14.2 | 19 | 0.7 | 15.7 | 100 | 12.6 |
| Upper Bound | | 2600 | 11.70 | 0.31 | 185.0 | 0.020 | 0.12 | 15.9 | 23 | 1.1 | 17.5 | 114 | 15.8 |
| 199369 | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | |
| 199383 | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | |
| 199403 | | | | | | | | | | | | | |
| 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

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

| 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 |
|--|-----------------------------------|----------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|----------------------------|-------------------------------|------------------------------|-------------------------------|------------------------------|----------------------------------|------------------------------|----------------------------|----------------------------------|----------------------------|
| 199413 DUP Target Range - Lower Bound Upper Bound | | DUPLICATES | | | | | | | | | | | | | | |
| 199417 DUP Target Range - Lower Bound Upper Bound | | 6500 6740 6390 6850 | 17.1 17.7 16.5 18.3 | 5.2 5.1 4.8 5.5 | 23.5 22.8 22.1 24.2 | 49.4 51.4 48.3 52.5 | 2 2 <1 3 | 2.37 2.33 2.22 2.48 | 4240 4380 4160 4460 | 0.66 0.67 0.59 0.74 | 1510 1570 1485 1595 | 1615 1670 1585 1700 | 584 613 577 620 | 13 14 12 15 | 113.5 117.5 111.5 119.5 | <5 <5 <5 10 |
| 199433 DUP Target Range - Lower Bound Upper Bound | | | | | | | | | | | | | | | | |
| 199436 DUP Target Range - Lower Bound Upper Bound | | 5740 6130 5720 6150 | 5.6 5.2 4.9 5.9 | 1.1 0.9 0.8 1.2 | 15.5 14.4 14.2 15.7 | 25.7 25.1 24.2 26.6 | <1 <1 <1 2 | 0.58 0.55 0.50 0.63 | 3730 3900 3680 3950 | 0.11 0.11 0.06 0.16 | 549 555 532 572 | 1370 1425 1350 1445 | 495 514 487 522 | 10 9 8 11 | 91.0 92.0 88.1 94.9 | <5 <5 <5 10 |
| 199447 DUP Target Range - Lower Bound Upper Bound | | | | | | | | | | | | | | | | |
| 199451 DUP Target Range - Lower Bound Upper Bound | | 10700 10950 10450 11200 | 9.3 9.9 9.0 10.2 | 2.0 1.9 1.7 2.2 | 27.5 25.6 25.4 27.7 | 45.6 40.9 41.4 45.1 | <1 <1 <1 2 | 1.03 0.92 0.89 1.06 | 6560 6920 6500 6980 | 0.18 0.13 0.10 0.21 | 412 413 397 428 | 2520 2580 2460 2640 | 922 936 896 962 | 24 24 22 26 | 156.5 166.0 155.5 167.0 | <5 <5 <5 10 |
| 199457 DUP Target Range - Lower Bound Upper Bound | | 453 439 427 465 | 5.5 5.3 4.9 5.9 | 2.0 1.8 1.6 2.2 | 4.6 4.6 4.2 5.0 | 9.9 10.3 9.4 10.8 | 1 <1 <1 2 | 0.82 0.78 0.72 0.88 | 245 244 233 256 | 0.28 0.29 0.23 0.34 | 735 722 702 755 | 154.5 150.0 146.5 158.0 | 46.4 44.3 43.6 47.1 | 27 24 24 27 | 20.3 18.7 18.6 20.4 | <5 <5 <5 10 |
| 199467 DUP Target Range - Lower Bound Upper Bound | | | | | | | | | | | | | | | | |

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

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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

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

| 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 | | | | | | | | | | | | | | | | |
| 199413 | | | | | | | | | | | 0.75 | 0.90 | 8.8 | 1030 | 1.45 | 0.25 |
| DUP | | | | | | | | | | | 0.68 | 0.91 | 8.7 | 1350 | 1.59 | 0.23 |
| Target Range - Lower Bound | | | | | | | | | | | 0.67 | 0.85 | 8.1 | 1090 | 1.39 | 0.22 |
| Upper Bound | | | | | | | | | | | 0.76 | 0.96 | 9.4 | 1290 | 1.65 | 0.26 |
| 199417 | | 22.0 | 7.29 | 137.5 | 0.63 | 133.0 | 9 | 58 | 4.4 | 50 | 1.02 | 0.25 | 5.7 | 1180 | 0.77 | 0.20 |
| DUP | | 22.8 | 7.66 | 139.0 | 0.62 | 127.0 | 8 | 61 | 4.2 | 60 | 2.84 | 0.25 | 5.3 | 1570 | 0.72 | 0.19 |
| Target Range - Lower Bound | | 21.1 | 7.16 | 133.0 | 0.55 | 125.0 | <5 | 54 | 3.9 | 40 | 1.82 | 0.23 | 5.0 | 1260 | 0.66 | 0.18 |
| Upper Bound | | 23.7 | 7.79 | 143.5 | 0.70 | 135.0 | 10 | 65 | 4.7 | 70 | 2.04 | 0.27 | 6.0 | 1490 | 0.83 | 0.21 |
| 199433 | | | | | | | | | | | 1.20 | 0.26 | 2.1 | 1420 | 0.69 | 0.55 |
| DUP | | | | | | | | | | | 0.87 | 0.26 | 2.8 | 1440 | 0.58 | 0.55 |
| Target Range - Lower Bound | | | | | | | | | | | 0.97 | 0.24 | 2.1 | 1310 | 0.55 | 0.51 |
| Upper Bound | | | | | | | | | | | 1.10 | 0.28 | 2.8 | 1550 | 0.72 | 0.59 |
| 199436 | | 1.6 | 4.50 | 58.2 | 0.10 | 7.6 | <5 | 14 | 0.8 | 10 | | | | | | |
| DUP | | 2.2 | 4.45 | 58.4 | 0.09 | 7.1 | <5 | 13 | 0.7 | 10 | | | | | | |
| Target Range - Lower Bound | | 1.3 | 4.27 | 56.0 | <0.05 | 6.8 | <5 | 10 | 0.5 | <10 | | | | | | |
| Upper Bound | | 2.5 | 4.68 | 60.6 | 0.10 | 7.9 | 10 | 17 | 1.0 | 20 | | | | | | |
| 199447 | | | | | | | | | | | 0.95 | 0.19 | 4.4 | 860 | 0.52 | 0.29 |
| DUP | | | | | | | | | | | 1.04 | 0.19 | 4.6 | 850 | 0.45 | 0.29 |
| Target Range - Lower Bound | | | | | | | | | | | 0.94 | 0.17 | 4.1 | 780 | 0.41 | 0.27 |
| Upper Bound | | | | | | | | | | | 1.05 | 0.21 | 4.9 | 930 | 0.56 | 0.31 |
| 199451 | | 0.8 | 8.37 | 134.5 | 0.24 | 13.0 | <5 | 20 | 1.3 | 30 | | | | | | |
| DUP | | 1.0 | 8.19 | 130.0 | 0.17 | 13.1 | <5 | 21 | 1.3 | 30 | | | | | | |
| Target Range - Lower Bound | | <0.5 | 7.94 | 127.5 | 0.15 | 12.3 | <5 | 17 | 1.1 | 20 | | | | | | |
| Upper Bound | | 1.0 | 8.62 | 137.0 | 0.26 | 13.8 | 10 | 24 | 1.5 | 40 | | | | | | |
| 199457 | | 8.5 | 1.30 | 26.3 | 0.28 | 38.7 | 8 | 19 | 1.7 | 20 | | | | | | |
| DUP | | 7.9 | 1.27 | 26.6 | 0.29 | 35.7 | 8 | 18 | 1.7 | 10 | | | | | | |
| Target Range - Lower Bound | | 7.4 | 1.19 | 25.2 | 0.23 | 35.6 | <5 | 15 | 1.4 | <10 | | | | | | |
| Upper Bound | | 9.0 | 1.38 | 27.7 | 0.34 | 38.8 | 10 | 22 | 2.0 | 20 | | | | | | |
| 199467 | | | | | | | | | | | 0.82 | 0.07 | 3.0 | 2250 | 0.40 | 0.11 |
| DUP | | | | | | | | | | | 0.12 | 0.08 | 2.6 | 1520 | 0.37 | 0.11 |
| Target Range - Lower Bound | | | | | | | | | | | 0.44 | 0.06 | 2.5 | 1730 | 0.32 | 0.09 |
| Upper Bound | | | | | | | | | | | 0.50 | 0.09 | 3.1 | 2040 | 0.45 | 0.13 |

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
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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

| 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 | | | | | | | | | | | | | | | | |
| 199413 | | 17.05 | 1.99 | >500 | 19.8 | 23 | 2.64 | 34.8 | 8.59 | 14.35 | 1.19 | 1.7 | 0.357 | 0.28 | 3340 | 46.1 |
| DUP | | 14.80 | 2.01 | >500 | 20.3 | 26 | 2.66 | 36.1 | 8.66 | 14.00 | 1.06 | 1.8 | 0.374 | 0.28 | 3440 | 49.3 |
| Target Range - Lower Bound | | 15.10 | 1.88 | 475 | 18.9 | 22 | 2.47 | 34.0 | 8.18 | 13.40 | 1.02 | 1.6 | 0.342 | 0.26 | 3220 | 45.1 |
| Upper Bound | | 16.75 | 2.12 | >500 | 21.2 | 27 | 2.83 | 36.9 | 9.07 | 14.95 | 1.23 | 1.9 | 0.389 | 0.30 | 3560 | 50.3 |
| 199417 | | 20.4 | 0.49 | >500 | 13.8 | 7 | 1.55 | 2.9 | 6.57 | 40.3 | 3.22 | 0.2 | 0.294 | 0.14 | 3630 | 29.6 |
| DUP | | 20.2 | 0.52 | >500 | 12.8 | 6 | 1.51 | 2.8 | 6.34 | 38.8 | 3.21 | 0.1 | 0.280 | 0.14 | 3690 | 28.7 |
| Target Range - Lower Bound | | 19.30 | 0.46 | 475 | 12.5 | 5 | 1.40 | 2.6 | 6.12 | 37.5 | 3.00 | <0.1 | 0.268 | 0.12 | 3480 | 27.5 |
| Upper Bound | | 21.3 | 0.55 | >500 | 14.1 | 8 | 1.66 | 3.1 | 6.79 | 41.6 | 3.43 | 0.2 | 0.306 | 0.16 | 3840 | 30.8 |
| 199433 | | 18.00 | 0.74 | >500 | 9.3 | 5 | 1.03 | 1.3 | 7.77 | 37.5 | 3.67 | 0.3 | 0.350 | 0.09 | 6700 | 23.7 |
| DUP | | 18.00 | 0.71 | >500 | 10.1 | 4 | 1.12 | 1.0 | 7.74 | 38.5 | 3.87 | 0.3 | 0.328 | 0.09 | 6770 | 23.3 |
| Target Range - Lower Bound | | 17.10 | 0.67 | 475 | 9.1 | 3 | 0.97 | 0.9 | 7.36 | 36.1 | 3.53 | 0.2 | 0.317 | 0.08 | 6400 | 22.1 |
| Upper Bound | | 18.90 | 0.78 | >500 | 10.3 | 6 | 1.18 | 1.4 | 8.15 | 40.0 | 4.01 | 0.4 | 0.361 | 0.10 | 7070 | 24.9 |
| 199436 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 199447 | | 18.35 | 0.80 | >500 | 13.8 | 10 | 0.96 | 2.0 | 8.05 | 33.5 | 3.59 | 0.4 | 0.375 | 0.08 | 5740 | 20.4 |
| DUP | | 18.50 | 0.75 | >500 | 14.7 | 7 | 0.99 | 1.9 | 8.14 | 34.9 | 3.53 | 0.4 | 0.364 | 0.08 | 5780 | 20.1 |
| Target Range - Lower Bound | | 17.50 | 0.72 | 475 | 13.4 | 7 | 0.88 | 1.7 | 7.68 | 32.4 | 3.33 | 0.3 | 0.346 | 0.07 | 5470 | 19.0 |
| Upper Bound | | 19.35 | 0.83 | >500 | 15.1 | 10 | 1.07 | 2.2 | 8.51 | 36.0 | 3.79 | 0.5 | 0.393 | 0.09 | 6050 | 21.5 |
| 199451 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 199457 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 199467 | | 18.90 | 1.38 | >500 | 11.9 | 10 | 0.28 | 1.8 | 8.02 | 47.1 | 3.83 | 0.3 | 0.256 | 0.02 | 4770 | 4.2 |
| DUP | | 17.75 | 1.38 | >500 | 11.1 | 8 | 0.26 | 1.7 | 7.79 | 27.7 | 3.04 | 0.3 | 0.259 | 0.01 | 4850 | 3.9 |
| Target Range - Lower Bound | | 17.40 | 1.29 | 475 | 10.8 | 8 | 0.21 | 1.5 | 7.50 | 35.5 | 3.21 | 0.2 | 0.240 | <0.01 | 4570 | 3.6 |
| Upper Bound | | 19.25 | 1.47 | >500 | 12.2 | 10 | 0.33 | 2.0 | 8.31 | 39.3 | 3.66 | 0.4 | 0.275 | 0.02 | 5050 | 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: 6 - D
Total # Pages: 8 (A - E)
Plus Appendix Pages
Finalized Date: 30-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 PI18302180

| 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 | | | | | | | | | | | | | | | | |
| 199413 | | 6.26 | 7490 | 119.5 | 0.14 | 239 | 23.8 | >10000 | 14.4 | 21.4 | 0.008 | 0.70 | 0.21 | 16.2 | 1 | 2.3 |
| DUP | | 6.55 | 7700 | 122.5 | 0.16 | 248 | 24.5 | >10000 | 14.6 | 21.7 | 0.008 | 0.75 | 0.23 | 15.4 | <1 | 2.4 |
| Target Range - Lower Bound | | 6.07 | 7210 | 115.0 | 0.13 | 231 | 22.7 | 9490 | 13.3 | 20.4 | 0.006 | 0.68 | 0.15 | 14.9 | <1 | 2.0 |
| Upper Bound | | 6.74 | 7980 | 127.0 | 0.17 | 256 | 25.6 | >10000 | 15.7 | 22.7 | 0.010 | 0.77 | 0.29 | 16.7 | 2 | 2.7 |
| 199417 | | 6.23 | 8630 | 195.5 | 0.02 | >500 | 4.7 | >10000 | 15.8 | 13.0 | 0.011 | 1.22 | 0.18 | 10.8 | <1 | 2.0 |
| DUP | | 6.31 | 8770 | 198.0 | 0.02 | >500 | 4.7 | >10000 | 15.1 | 12.5 | 0.010 | 1.20 | 0.17 | 10.2 | 1 | 1.9 |
| Target Range - Lower Bound | | 5.95 | 8260 | 187.0 | <0.01 | 475 | 4.3 | 9490 | 14.2 | 12.0 | 0.008 | 1.14 | 0.11 | 9.9 | <1 | 1.7 |
| Upper Bound | | 6.59 | 9140 | 207 | 0.03 | >500 | 5.1 | >10000 | 16.7 | 13.5 | 0.013 | 1.28 | 0.24 | 11.1 | 2 | 2.2 |
| 199433 | | 6.77 | 10800 | 267 | 0.10 | 430 | 2.9 | 2030 | 11.5 | 11.0 | 0.011 | 0.74 | 0.15 | 8.5 | 1 | 1.0 |
| DUP | | 6.83 | 11000 | 270 | 0.10 | 421 | 2.9 | 2110 | 11.7 | 11.2 | 0.012 | 0.76 | 0.17 | 8.5 | <1 | 0.9 |
| Target Range - Lower Bound | | 6.45 | 10350 | 255 | 0.09 | 404 | 2.6 | 1960 | 10.5 | 10.4 | 0.009 | 0.70 | 0.10 | 8.0 | <1 | 0.7 |
| Upper Bound | | 7.15 | 11450 | 282 | 0.12 | 447 | 3.2 | 2180 | 12.7 | 11.8 | 0.014 | 0.80 | 0.22 | 9.0 | 2 | 1.2 |
| 199436 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 199447 | | 6.77 | 11500 | 371 | 0.07 | 393 | 4.5 | 5280 | 11.5 | 8.3 | 0.004 | 0.70 | 0.22 | 10.5 | 1 | 1.0 |
| DUP | | 6.73 | 11500 | 371 | 0.07 | 371 | 4.7 | 5460 | 10.9 | 8.1 | 0.003 | 0.74 | 0.22 | 10.5 | 1 | 1.1 |
| Target Range - Lower Bound | | 6.40 | 10900 | 352 | 0.06 | 363 | 4.2 | 5090 | 10.1 | 7.7 | <0.002 | 0.67 | 0.15 | 9.9 | <1 | 0.8 |
| Upper Bound | | 7.10 | 12100 | 390 | 0.08 | 401 | 5.0 | 5650 | 12.3 | 8.7 | 0.004 | 0.77 | 0.29 | 11.1 | 2 | 1.3 |
| 199451 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 199457 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 199467 | | 7.05 | 11400 | 16.40 | 0.02 | >500 | 9.4 | 760 | 9.9 | 1.6 | 0.007 | 0.46 | 0.11 | 7.4 | 1 | 1.2 |
| DUP | | 6.60 | 11300 | 16.45 | 0.12 | >500 | 9.7 | 730 | 9.4 | 1.5 | 0.002 | 0.42 | 0.17 | 7.0 | <1 | 1.3 |
| Target Range - Lower Bound | | 6.47 | 10800 | 15.55 | 0.06 | 475 | 8.9 | 700 | 8.7 | 1.4 | <0.002 | 0.41 | 0.08 | 6.7 | <1 | 1.0 |
| Upper Bound | | 7.18 | 11900 | 17.30 | 0.08 | >500 | 10.2 | 790 | 10.6 | 1.7 | 0.007 | 0.47 | 0.20 | 7.7 | 2 | 1.5 |

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: 6 - E
 Total # Pages: 8 (A - E)
 Plus Appendix Pages
 Finalized Date: 30-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 PI18302180

| Sample Description | Method Analyte Units LOD | ME-MS61 Sr ppm 0.2 | ME-MS61 Ta ppm 0.05 | ME-MS61 Te ppm 0.05 | ME-MS61 Th ppm 0.01 | ME-MS61 Ti % 0.005 | ME-MS61 Tl ppm 0.02 | ME-MS61 U ppm 0.1 | ME-MS61 V ppm 1 | ME-MS61 W ppm 0.1 | ME-MS61 Y ppm 0.1 | ME-MS61 Zn ppm 2 | ME-MS61 Zr ppm 0.5 |
|----------------------------|-----------------------------------|-----------------------------|------------------------------|------------------------------|------------------------------|-----------------------------|------------------------------|----------------------------|--------------------------|----------------------------|----------------------------|---------------------------|-----------------------------|
| DUPLICATES | | | | | | | | | | | | | |
| 199413 | | 3190 | 3.79 | 0.17 | 189.5 | 0.155 | 0.24 | 9.0 | 21 | 0.9 | 97.5 | 265 | 59.5 |
| DUP | | 3270 | 5.02 | 0.16 | 181.0 | 0.170 | 0.24 | 9.3 | 22 | 0.8 | 96.1 | 278 | 58.6 |
| Target Range - Lower Bound | | 3070 | 4.13 | 0.11 | 176.0 | 0.149 | 0.20 | 8.6 | 19 | 0.7 | 91.9 | 256 | 54.1 |
| Upper Bound | | 3390 | 4.68 | 0.22 | 194.5 | 0.176 | 0.28 | 9.7 | 24 | 1.0 | 101.5 | 287 | 64.0 |
| 199417 | | 3320 | 0.30 | 0.32 | 138.0 | 0.017 | 0.12 | 131.0 | 15 | 0.8 | 56.6 | 50 | 12.6 |
| DUP | | 3340 | 0.39 | 0.32 | 134.5 | 0.018 | 0.13 | 123.5 | 14 | 0.8 | 53.9 | 52 | 7.7 |
| Target Range - Lower Bound | | 3160 | 0.28 | 0.25 | 129.5 | 0.012 | 0.10 | 121.0 | 13 | 0.6 | 52.4 | 46 | 8.9 |
| Upper Bound | | 3500 | 0.41 | 0.39 | 143.0 | 0.023 | 0.15 | 133.5 | 16 | 1.0 | 58.1 | 56 | 11.4 |
| 199433 | | 2420 | 6.70 | 0.28 | 168.0 | 0.009 | 0.12 | 16.4 | 14 | 0.5 | 30.1 | 56 | 19.3 |
| DUP | | 2400 | 5.81 | 0.29 | 167.0 | 0.009 | 0.12 | 15.7 | 13 | 0.4 | 30.7 | 56 | 19.0 |
| Target Range - Lower Bound | | 2290 | 5.89 | 0.22 | 159.0 | <0.005 | 0.09 | 15.1 | 12 | 0.3 | 28.8 | 51 | 17.2 |
| Upper Bound | | 2530 | 6.62 | 0.35 | 176.0 | 0.010 | 0.15 | 17.0 | 15 | 0.6 | 32.0 | 61 | 21.1 |
| 199436 | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | |
| 199447 | | 2230 | 1.06 | 0.44 | 97.6 | 0.013 | 0.16 | 14.3 | 16 | 0.6 | 28.0 | 73 | 21.1 |
| DUP | | 2250 | 1.06 | 0.44 | 96.8 | 0.013 | 0.18 | 13.7 | 16 | 0.6 | 27.7 | 71 | 20.5 |
| Target Range - Lower Bound | | 2130 | 0.96 | 0.37 | 92.3 | 0.007 | 0.14 | 13.2 | 14 | 0.5 | 26.4 | 66 | 18.7 |
| Upper Bound | | 2350 | 1.16 | 0.51 | 102.0 | 0.019 | 0.20 | 14.8 | 18 | 0.7 | 29.3 | 78 | 22.9 |
| 199451 | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | |
| 199457 | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | |
| 199467 | | 2780 | 1.55 | 0.23 | 186.5 | 0.007 | 0.03 | 8.6 | 13 | 0.9 | 28.3 | 77 | 12.4 |
| DUP | | 2640 | 1.47 | 0.21 | 196.5 | 0.007 | 0.05 | 8.5 | 16 | 0.9 | 27.1 | 71 | 12.0 |
| Target Range - Lower Bound | | 2570 | 1.38 | 0.16 | 182.0 | <0.005 | <0.02 | 8.0 | 13 | 0.7 | 26.2 | 68 | 10.8 |
| Upper Bound | | 2850 | 1.64 | 0.28 | 201 | 0.010 | 0.06 | 9.1 | 16 | 1.1 | 29.2 | 80 | 13.6 |

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: 30-DEC-2018
Account: ONUSEG

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

| 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 | | | | | | | | | | | | | | | | |
| 199471 | | 12250 | 10.8 | 2.3 | 30.5 | 43.0 | <1 | 1.14 | 8620 | 0.09 | 391 | 2840 | 1035 | 2 | 174.5 | <5 |
| DUP | | 12100 | 10.1 | 1.5 | 30.0 | 42.5 | <1 | 1.14 | 8260 | 0.12 | 397 | 2800 | 1025 | 2 | 170.5 | <5 |
| Target Range - Lower Bound | | 11750 | 9.8 | 1.6 | 29.0 | 41.0 | <1 | 1.05 | 8140 | <0.05 | 379 | 2720 | 994 | <1 | 166.5 | <5 |
| Upper Bound | | 12600 | 11.1 | 2.2 | 31.5 | 44.5 | 2 | 1.23 | 8740 | 0.16 | 409 | 2920 | 1065 | 3 | 178.5 | 10 |
| 199486 | | 7800 | 20.4 | 4.5 | 33.6 | 71.9 | 2 | 2.29 | 5170 | 0.32 | 412 | 2050 | 698 | 11 | 175.5 | <5 |
| DUP | | 7510 | 20.2 | 4.1 | 32.3 | 65.5 | 2 | 2.32 | 5100 | 0.32 | 390 | 1975 | 670 | 11 | 167.0 | <5 |
| Target Range - Lower Bound | | 7380 | 19.3 | 3.9 | 31.6 | 66.0 | <1 | 2.17 | 4950 | 0.26 | 386 | 1940 | 660 | 10 | 165.0 | <5 |
| Upper Bound | | 7930 | 21.3 | 4.7 | 34.3 | 71.4 | 3 | 2.44 | 5320 | 0.38 | 416 | 2080 | 708 | 12 | 177.5 | 10 |
| 199497 | | 3790 | 5.1 | 1.4 | 10.0 | 17.9 | <1 | 0.63 | 2700 | 0.08 | 718 | 822 | 304 | 3 | 52.7 | <5 |
| DUP | | 3750 | 5.0 | 1.4 | 9.7 | 18.8 | <1 | 0.70 | 2620 | 0.06 | 721 | 807 | 302 | 3 | 50.6 | <5 |
| Target Range - Lower Bound | | 3640 | 4.6 | 1.2 | 9.3 | 17.4 | <1 | 0.59 | 2560 | <0.05 | 693 | 785 | 292 | 2 | 49.6 | <5 |
| Upper Bound | | 3900 | 5.5 | 1.6 | 10.4 | 19.3 | 2 | 0.74 | 2760 | 0.10 | 746 | 844 | 314 | 4 | 53.7 | 10 |
| 199498 | | 15400 | 9.4 | 1.4 | 33.2 | 48.3 | <1 | 1.00 | 10850 | 0.11 | 203 | 3490 | 1260 | 1 | 183.5 | <5 |
| DUP | | 15800 | 9.8 | 1.9 | 33.0 | 50.8 | <1 | 0.98 | 11200 | 0.13 | 221 | 3540 | 1335 | 1 | 189.0 | <5 |
| Target Range - Lower Bound | | 15050 | 9.0 | 1.4 | 31.7 | 47.5 | <1 | 0.91 | 10650 | 0.07 | 204 | 3390 | 1250 | <1 | 179.5 | <5 |
| Upper Bound | | 16150 | 10.2 | 1.9 | 34.5 | 51.6 | 2 | 1.07 | 11400 | 0.17 | 220 | 3640 | 1345 | 2 | 193.0 | 10 |
| 199502 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 199506 | | 16750 | 20.5 | 2.8 | 46.8 | 76.8 | <1 | 2.13 | 11200 | 0.27 | 40 | 4070 | 1450 | 1 | 255 | <5 |
| DUP | | 16550 | 20.7 | 3.1 | 45.7 | 80.1 | 1 | 2.04 | 11150 | 0.23 | 41 | 4030 | 1445 | 1 | 253 | <5 |
| Target Range - Lower Bound | | 16050 | 19.6 | 2.6 | 44.4 | 75.4 | <1 | 1.96 | 10800 | 0.19 | 38 | 3910 | 1395 | <1 | 245 | <5 |
| Upper Bound | | 17250 | 21.6 | 3.3 | 48.1 | 81.5 | 2 | 2.21 | 11550 | 0.31 | 43 | 4190 | 1500 | 2 | 263 | 10 |
| FEN198283 | | | | | | | | | | | | | | | | |
| DUP | | | | | | | | | | | | | | | | |
| Target Range - Lower Bound | | | | | | | | | | | | | | | | |
| Upper Bound | | | | | | | | | | | | | | | | |
| 199520 | | 12500 | 12.9 | 2.1 | 27.0 | 48.7 | <1 | 1.32 | 8600 | 0.22 | 240 | 2740 | 1065 | 14 | 152.0 | <5 |
| DUP | | 12750 | 12.5 | 2.2 | 26.7 | 49.9 | <1 | 1.32 | 8740 | 0.23 | 240 | 2790 | 1080 | 14 | 155.5 | <5 |
| Target Range - Lower Bound | | 12200 | 12.0 | 1.9 | 25.7 | 47.3 | <1 | 1.22 | 8360 | 0.17 | 231 | 2670 | 1035 | 13 | 148.0 | <5 |
| Upper Bound | | 13050 | 13.4 | 2.4 | 28.0 | 51.3 | 2 | 1.42 | 8980 | 0.28 | 249 | 2860 | 1110 | 15 | 159.5 | 10 |

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



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: 30-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 PI18302180

| 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 | | | | | | | | | | | | | | | | |
| 199471 | | 5.8 | 8.47 | 124.0 | 0.20 | 10.3 | <5 | 24 | 1.2 | 20 | | | | | | |
| DUP | | 6.0 | 8.17 | 122.5 | 0.17 | 11.1 | <5 | 24 | 1.4 | 20 | | | | | | |
| Target Range - Lower Bound | | 5.2 | 7.98 | 118.5 | 0.13 | 10.0 | <5 | 20 | 1.1 | <10 | | | | | | |
| Upper Bound | | 6.6 | 8.66 | 128.0 | 0.24 | 11.4 | 10 | 28 | 1.5 | 30 | | | | | | |
| 199486 | | 13.5 | 8.79 | 289 | 0.50 | 43.2 | <5 | 49 | 2.7 | 130 | | | | | | |
| DUP | | 13.8 | 8.49 | 279 | 0.48 | 41.8 | <5 | 46 | 2.8 | 110 | | | | | | |
| Target Range - Lower Bound | | 12.7 | 8.29 | 274 | 0.42 | 40.7 | <5 | 43 | 2.5 | 110 | | | | | | |
| Upper Bound | | 14.6 | 8.99 | 294 | 0.56 | 44.3 | 10 | 52 | 3.0 | 130 | | | | | | |
| 199497 | | 5.2 | 1.76 | 38.0 | 0.08 | 9.3 | <5 | 16 | 0.7 | 20 | | | | | | |
| DUP | | 4.6 | 1.74 | 37.0 | 0.10 | 9.7 | <5 | 15 | 0.7 | 20 | | | | | | |
| Target Range - Lower Bound | | 4.2 | 1.64 | 35.9 | <0.05 | 8.9 | <5 | 12 | 0.5 | <10 | | | | | | |
| Upper Bound | | 5.6 | 1.86 | 39.1 | 0.10 | 10.1 | 10 | 19 | 0.9 | 30 | | | | | | |
| 199498 | | 1.3 | 3.64 | 105.5 | 0.07 | 3.5 | <5 | 20 | 0.8 | 10 | | | | | | |
| DUP | | 1.1 | 3.89 | 106.5 | 0.09 | 3.9 | <5 | 21 | 0.9 | 10 | | | | | | |
| Target Range - Lower Bound | | 0.7 | 3.58 | 102.0 | <0.05 | 3.3 | <5 | 17 | 0.6 | <10 | | | | | | |
| Upper Bound | | 1.7 | 3.95 | 110.0 | 0.10 | 4.1 | 10 | 24 | 1.1 | 20 | | | | | | |
| 199502 | | | | | | | | | | | 0.36 | 0.16 | 2.5 | 890 | 0.46 | 0.50 |
| DUP | | | | | | | | | | | 0.38 | 0.15 | 2.0 | 750 | 0.50 | 0.49 |
| Target Range - Lower Bound | | | | | | | | | | | 0.34 | 0.14 | 1.9 | 750 | 0.41 | 0.46 |
| Upper Bound | | | | | | | | | | | 0.40 | 0.17 | 2.6 | 890 | 0.55 | 0.53 |
| 199506 | | 1.3 | 6.92 | 219 | 0.26 | 3.3 | 7 | 44 | 1.2 | 20 | 0.33 | 0.02 | 2.0 | 350 | 0.37 | 0.13 |
| DUP | | 0.9 | 6.34 | 218 | 0.24 | 3.4 | 7 | 43 | 1.2 | 20 | 0.31 | 0.02 | 3.2 | 420 | 0.36 | 0.13 |
| Target Range - Lower Bound | | 0.6 | 6.35 | 211 | 0.19 | 2.9 | <5 | 39 | 1.0 | <10 | 0.29 | <0.01 | 2.3 | 350 | 0.30 | 0.11 |
| Upper Bound | | 1.6 | 6.91 | 226 | 0.31 | 3.8 | 10 | 48 | 1.4 | 30 | 0.35 | 0.03 | 2.9 | 420 | 0.43 | 0.15 |
| FEN198283 | | | | | | | | | | | 0.25 | 0.07 | 1.6 | 2330 | 0.17 | 0.13 |
| DUP | | | | | | | | | | | 0.28 | 0.07 | 2.7 | 1820 | 0.20 | 0.14 |
| Target Range - Lower Bound | | | | | | | | | | | 0.24 | 0.06 | 1.8 | 1910 | 0.13 | 0.12 |
| Upper Bound | | | | | | | | | | | 0.29 | 0.08 | 2.5 | 2240 | 0.24 | 0.15 |
| 199520 | | 1.8 | 4.41 | 142.5 | 0.21 | 5.6 | 7 | 24 | 1.2 | 20 | | | | | | |
| DUP | | 1.7 | 4.58 | 141.5 | 0.21 | 5.4 | 7 | 24 | 1.1 | 20 | | | | | | |
| Target Range - Lower Bound | | 1.2 | 4.29 | 136.5 | 0.15 | 5.0 | <5 | 20 | 0.9 | <10 | | | | | | |
| Upper Bound | | 2.3 | 4.70 | 147.5 | 0.27 | 6.0 | 10 | 28 | 1.4 | 30 | | | | | | |

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

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Plus Appendix Pages
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Account: ONUSEG

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

| 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 |
| 199471 DUP Target Range - Lower Bound Upper Bound | | DUPLICATES | | | | | | | | | | | | | | |
| 199486 DUP Target Range - Lower Bound Upper Bound | | | | | | | | | | | | | | | | |
| 199497 DUP Target Range - Lower Bound Upper Bound | | | | | | | | | | | | | | | | |
| 199498 DUP Target Range - Lower Bound Upper Bound | | | | | | | | | | | | | | | | |
| 199502 DUP Target Range - Lower Bound Upper Bound | | 18.55 18.70 17.70 19.55 | 0.82 0.89 0.79 0.92 | >500 >500 475 >500 | 14.0 14.0 13.2 14.8 | 5 5 4 6 | 0.60 0.63 0.53 0.70 | 1.6 1.6 1.3 1.9 | 7.79 7.68 7.34 8.13 | 29.4 30.4 28.4 31.4 | 3.13 3.28 2.99 3.42 | 0.3 0.3 0.2 0.4 | 0.275 0.271 0.254 0.292 | 0.04 0.04 0.03 0.05 | 5640 5520 5300 5860 | 8.6 8.9 8.1 9.4 |
| 199506 DUP Target Range - Lower Bound Upper Bound | | 17.65 17.05 16.45 18.25 | 1.21 1.21 1.13 1.29 | >500 >500 475 >500 | 10.9 11.5 10.5 11.9 | 11 11 9 13 | 0.15 0.15 0.09 0.21 | 2.5 2.6 2.3 2.8 | 7.26 7.11 6.82 7.55 | 91.3 96.4 89.1 98.6 | 7.41 7.76 7.16 8.01 | 0.5 0.5 0.4 0.6 | 0.184 0.181 0.168 0.197 | 0.01 0.02 <0.01 0.02 | 9190 8930 8610 9510 | 3.5 3.1 2.9 3.7 |
| FEN198283 DUP Target Range - Lower Bound Upper Bound | | 21.4 21.7 20.5 22.6 | 0.67 0.64 0.60 0.71 | >500 >500 475 >500 | 5.1 5.7 5.0 5.8 | 1 1 <1 2 | 0.12 0.11 0.06 0.17 | 0.9 1.2 0.8 1.3 | 5.97 6.02 5.69 6.30 | 45.8 47.5 44.3 49.0 | 5.07 5.21 4.83 5.45 | 0.4 0.4 0.3 0.5 | 0.247 0.253 0.233 0.268 | 0.01 0.01 <0.01 0.02 | 9840 9770 9310 >10000 | 11.3 11.9 10.8 12.4 |
| 199520 DUP Target Range - Lower Bound Upper Bound | | | | | | | | | | | | | | | | |

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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
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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

| 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 |
| 199471 DUP Target Range - Lower Bound Upper Bound | | DUPLICATES | | | | | | | | | | | | | | |
| 199486 DUP Target Range - Lower Bound Upper Bound | | | | | | | | | | | | | | | | |
| 199497 DUP Target Range - Lower Bound Upper Bound | | | | | | | | | | | | | | | | |
| 199498 DUP Target Range - Lower Bound Upper Bound | | | | | | | | | | | | | | | | |
| 199502 DUP Target Range - Lower Bound Upper Bound | | 6.80 7.02 6.55 7.27 | 10900 11000 10400 11500 | 214 217 205 226 | 0.07 0.06 0.05 0.08 | 357 371 346 382 | 5.4 5.2 4.8 5.8 | 1740 1820 1680 1880 | 10.1 10.0 9.0 11.1 | 6.3 6.4 5.9 6.8 | 0.010 0.009 0.007 0.012 | 1.08 1.09 1.02 1.15 | 0.15 0.14 0.08 0.21 | 7.9 8.0 7.5 8.4 | 1 1 <1 2 | 1.0 1.1 0.8 1.3 |
| 199506 DUP Target Range - Lower Bound Upper Bound | | 6.56 6.32 6.11 6.77 | 10450 10250 9830 10850 | 48.2 46.4 44.9 49.7 | 0.02 0.02 <0.01 0.03 | 40.2 46.0 40.8 45.4 | 15.6 16.3 15.0 16.9 | 1050 1020 970 1100 | 8.6 8.4 7.6 9.4 | 0.8 0.9 0.7 1.0 | 0.011 0.010 0.008 0.013 | 0.79 0.77 0.73 0.83 | 0.08 0.07 <0.05 0.10 | 4.4 4.7 4.2 4.9 | <1 <1 <1 2 | 0.3 0.4 <0.2 0.4 |
| FEN198283 DUP Target Range - Lower Bound Upper Bound | | 4.63 4.66 4.40 4.89 | 7820 7720 7380 8160 | 76.8 78.2 73.6 81.4 | 0.15 0.12 0.12 0.15 | 11.8 12.6 11.5 12.9 | 0.3 0.5 <0.2 0.6 | 1000 980 930 1050 | 7.8 8.3 7.1 9.0 | 1.9 1.9 1.7 2.1 | 0.004 0.006 0.003 0.007 | 0.34 0.35 0.32 0.37 | 0.13 0.13 0.07 0.19 | 8.7 8.7 8.2 9.2 | <1 1 <1 2 | 0.2 0.2 <0.2 0.4 |
| 199520 DUP Target Range - Lower Bound Upper Bound | | | | | | | | | | | | | | | | |

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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
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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

| 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 |
|---|-----------------------------------|------------------------------|------------------------------|-------------------------------|----------------------------------|-------------------------------------|---------------------------------|------------------------------|--------------------------|----------------------------|------------------------------|---------------------------|------------------------------|
| 199471 DUP Target Range - Lower Bound Upper Bound | | DUPLICATES | | | | | | | | | | | |
| 199486 DUP Target Range - Lower Bound Upper Bound | | | | | | | | | | | | | |
| 199497 DUP Target Range - Lower Bound Upper Bound | | | | | | | | | | | | | |
| 199498 DUP Target Range - Lower Bound Upper Bound | | | | | | | | | | | | | |
| 199502 DUP Target Range - Lower Bound Upper Bound | | 2710 2730 2580 2860 | 5.99 5.98 5.64 6.33 | 0.27 0.34 0.24 0.37 | 143.0 143.0 136.0 150.0 | <0.005 <0.005 <0.005 0.010 | 0.09 0.10 0.07 0.12 | 15.9 16.5 15.3 17.1 | 15 15 13 17 | 0.5 0.5 0.4 0.6 | 27.4 28.5 26.5 29.4 | 55 57 51 61 | 10.1 10.8 9.2 11.7 |
| 199506 DUP Target Range - Lower Bound Upper Bound | | 3050 2970 2860 3160 | 0.21 0.23 0.16 0.28 | 0.19 0.24 0.15 0.28 | 193.5 191.0 182.5 202 | <0.005 <0.005 <0.005 0.010 | <0.02 <0.02 <0.02 0.04 | 3.2 3.1 2.9 3.4 | 7 7 6 8 | 0.7 0.7 0.5 0.9 | 44.4 44.5 42.1 46.8 | 48 49 44 53 | 18.2 18.5 16.5 20.2 |
| FEN198283 DUP Target Range - Lower Bound Upper Bound | | 2130 2140 2030 2240 | 0.59 0.62 0.52 0.69 | 0.08 0.08 <0.05 0.10 | 225 227 215 237 | <0.005 <0.005 <0.005 0.010 | 0.04 0.04 <0.02 0.06 | 5.4 5.7 5.2 5.9 | 11 11 9 13 | 0.3 0.3 0.2 0.4 | 30.5 30.9 29.1 32.3 | 40 41 36 45 | 11.4 11.5 10.1 12.8 |
| 199520 DUP Target Range - Lower Bound Upper Bound | | | | | | | | | | | | | |

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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
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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

| 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 |
|--|-----------------------------------|----------------------------|------------------------------|------------------------------|------------------------------|------------------------------|----------------------------|-------------------------------|----------------------------|-------------------------------|----------------------------|------------------------------|------------------------------|----------------------------|------------------------------|----------------------------|
| ORIGINAL DUP Target Range - Lower Bound Upper Bound | | DUPLICATES | | | | | | | | | | | | | | |
| ORIGINAL DUP Target Range - Lower Bound Upper Bound | | | | | | | | | | | | | | | | |
| ORIGINAL DUP Target Range - Lower Bound Upper Bound | | | | | | | | | | | | | | | | |
| | | PREP DUPLICATES | | | | | | | | | | | | | | |
| 199384 | | 9020 | 8.7 | 1.9 | 18.7 | 37.4 | <1 | 0.99 | 5750 | 0.07 | 732 | 2250 | 840 | 1 | 138.0 | <5 |
| 199384 PREP DUP | | 8820 | 8.9 | 1.8 | 18.6 | 32.7 | <1 | 1.00 | 5830 | 0.16 | 679 | 2130 | 792 | 1 | 125.5 | <5 |
| 199434 | | 13550 | 14.4 | 2.2 | 36.9 | 60.6 | <1 | 1.54 | 8920 | 0.17 | 468 | 3210 | 1205 | 8 | 203 | <5 |
| 199434 PREP DUP | | 14050 | 13.1 | 2.1 | 33.2 | 51.8 | <1 | 1.36 | 9800 | 0.20 | 468 | 3310 | 1230 | 8 | 209 | <5 |
| 199484 | | 9490 | 12.2 | 2.2 | 27.2 | 43.7 | 1 | 1.46 | 7530 | 0.13 | 1260 | 2120 | 781 | 6 | 146.5 | <5 |
| 199484 PREP DUP | | 9110 | 12.5 | 2.4 | 25.3 | 46.1 | <1 | 1.41 | 7150 | 0.17 | 1260 | 1925 | 761 | 6 | 137.5 | <5 |
| | | | | | | | | | | | | | | | | |

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

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

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POSTBOKS 6315 TORGARDEN
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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

| 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 | | | | | | | | | | | | | | | | |
| ORIGINAL | | | | | | | | | | | 0.13 | 4.62 | 3.8 | 220 | 0.14 | 6.78 |
| DUP | | | | | | | | | | | 0.10 | 4.48 | 4.7 | 220 | 0.12 | 6.21 |
| Target Range - Lower Bound | | | | | | | | | | | 0.10 | 4.31 | 3.8 | 190 | 0.07 | 6.16 |
| Upper Bound | | | | | | | | | | | 0.13 | 4.79 | 4.7 | 250 | 0.19 | 6.83 |
| ORIGINAL | | | | | | | | | | | 0.02 | 6.66 | 2.1 | 600 | 1.93 | 0.18 |
| DUP | | | | | | | | | | | 0.03 | 6.66 | 2.1 | 600 | 2.01 | 0.19 |
| Target Range - Lower Bound | | | | | | | | | | | <0.01 | 6.32 | 1.8 | 550 | 1.82 | 0.17 |
| Upper Bound | | | | | | | | | | | 0.04 | 7.00 | 2.4 | 660 | 2.12 | 0.20 |
| ORIGINAL | | | | | | | | | | | 0.03 | 0.74 | 1.0 | 270 | 0.08 | 0.02 |
| DUP | | | | | | | | | | | 0.03 | 0.73 | 0.4 | 260 | 0.06 | 0.02 |
| Target Range - Lower Bound | | | | | | | | | | | 0.02 | 0.69 | 0.5 | 240 | <0.05 | <0.01 |
| Upper Bound | | | | | | | | | | | 0.04 | 0.78 | 0.9 | 290 | 0.10 | 0.03 |
| PREP DUPLICATES | | | | | | | | | | | | | | | | |
| 199384 | | 4.2 | 2.96 | 113.0 | 0.07 | 8.2 | <5 | 21 | 0.8 | 20 | 1.45 | 0.27 | 6.2 | 330 | 0.35 | 0.22 |
| 199384 PREP DUP | | 5.2 | 3.12 | 110.0 | 0.10 | 7.6 | 8 | 19 | 0.8 | 10 | 1.43 | 0.25 | 3.2 | 300 | 0.30 | 0.21 |
| 199434 | | 18.1 | 11.05 | 159.5 | 0.22 | 29.2 | <5 | 26 | 1.6 | 20 | 0.94 | 0.11 | 0.3 | 1060 | 0.51 | 0.20 |
| 199434 PREP DUP | | 16.8 | 4.13 | 153.0 | 0.11 | 27.4 | 7 | 25 | 1.1 | 10 | 0.79 | 0.10 | <0.2 | 1500 | 0.41 | 0.20 |
| 199484 | | 29.7 | 7.13 | 112.5 | 0.27 | 17.7 | <5 | 29 | 1.5 | 40 | 0.32 | 0.16 | 1.3 | 1520 | 0.35 | 0.14 |
| 199484 PREP DUP | | 7.2 | 4.55 | 109.0 | 0.15 | 19.5 | 10 | 27 | 1.4 | 30 | 0.84 | 0.15 | <0.2 | 1860 | 0.32 | 0.13 |

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

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POSTBOKS 6315 TORGARDEN
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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

| 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 | | | | | | | | | | | | | | | | |
| ORIGINAL | | 0.06 | <0.02 | 80.3 | 0.2 | 23 | 0.27 | 1.4 | 0.26 | 5.90 | 0.07 | 2.8 | 0.015 | 1.86 | 40.3 | 2.3 |
| DUP | | 0.08 | <0.02 | 80.0 | 0.2 | 48 | 0.26 | 1.5 | 0.27 | 6.03 | 0.08 | 2.8 | 0.016 | 1.88 | 39.5 | 2.2 |
| Target Range - Lower Bound | | 0.06 | <0.02 | 76.1 | <0.1 | 33 | 0.20 | 1.2 | 0.24 | 5.62 | <0.05 | 2.6 | 0.010 | 1.77 | 37.4 | 1.9 |
| Upper Bound | | 0.08 | 0.04 | 84.2 | 0.3 | 38 | 0.33 | 1.7 | 0.29 | 6.31 | 0.10 | 3.0 | 0.021 | 1.97 | 42.4 | 2.6 |
| ORIGINAL | | 1.58 | 0.06 | 68.8 | 11.6 | 48 | 2.60 | 8.1 | 3.24 | 17.40 | 0.15 | 8.1 | 0.052 | 2.06 | 27.3 | 21.9 |
| DUP | | 1.57 | 0.04 | 67.7 | 11.7 | 48 | 2.59 | 7.8 | 3.23 | 17.35 | 0.15 | 7.7 | 0.050 | 2.03 | 28.0 | 21.4 |
| Target Range - Lower Bound | | 1.49 | 0.03 | 64.8 | 11.0 | 45 | 2.42 | 7.5 | 3.06 | 16.45 | 0.09 | 7.4 | 0.043 | 1.93 | 25.8 | 20.4 |
| Upper Bound | | 1.66 | 0.07 | 71.7 | 12.3 | 51 | 2.77 | 8.4 | 3.41 | 18.30 | 0.21 | 8.4 | 0.059 | 2.16 | 29.5 | 22.9 |
| ORIGINAL | | 0.01 | <0.02 | 9.59 | 0.5 | 9 | 0.09 | 8.1 | 0.62 | 1.54 | 0.05 | 0.8 | 0.005 | 0.35 | 4.7 | 0.5 |
| DUP | | 0.01 | <0.02 | 9.54 | 0.5 | 9 | 0.09 | 7.9 | 0.64 | 1.44 | 0.06 | 0.8 | 0.005 | 0.34 | 4.8 | 0.6 |
| Target Range - Lower Bound | | <0.01 | <0.02 | 9.08 | 0.4 | 8 | <0.05 | 7.5 | 0.59 | 1.37 | <0.05 | 0.7 | <0.005 | 0.32 | 4.0 | 0.3 |
| Upper Bound | | 0.02 | 0.04 | 10.05 | 0.6 | 10 | 0.10 | 8.5 | 0.67 | 1.61 | 0.10 | 0.9 | 0.010 | 0.37 | 5.5 | 0.8 |
| PREP DUPLICATES | | | | | | | | | | | | | | | | |
| 199384 | | 30.4 | 0.12 | >500 | 7.3 | 7 | 0.16 | 1.7 | 2.94 | 16.40 | 1.61 | 0.2 | 0.370 | <0.01 | 5430 | 5.1 |
| 199384 PREP DUP | | 30.8 | 0.23 | >500 | 8.7 | 6 | 0.17 | 2.4 | 3.04 | 36.5 | 3.22 | 0.3 | 0.369 | 0.01 | 5260 | 5.5 |
| 199434 | | 17.80 | 0.73 | >500 | 9.9 | 3 | 0.88 | 1.3 | 6.92 | 45.4 | 4.50 | 0.3 | 0.332 | 0.06 | 8010 | 20.3 |
| 199434 PREP DUP | | 14.40 | 0.72 | >500 | 9.5 | 3 | 0.90 | 1.3 | 6.55 | 42.4 | 4.67 | 0.3 | 0.323 | 0.07 | 7910 | 18.9 |
| 199484 | | 18.50 | 0.90 | >500 | 8.4 | 7 | 0.61 | 0.9 | 7.41 | 28.6 | 2.94 | 0.5 | 0.249 | 0.04 | 6000 | 8.2 |
| 199484 PREP DUP | | 18.95 | 0.89 | >500 | 6.9 | 5 | 0.64 | 1.3 | 7.34 | 36.4 | 2.83 | 0.5 | 0.253 | 0.05 | 6140 | 8.4 |

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

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



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

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Plus Appendix Pages
Finalized Date: 30-DEC-2018
Account: ONUSEK

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

| 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 | | | | | | | | | | | | | | | | |
| ORIGINAL | | 0.07 | 25 | 3.16 | 0.18 | 2.3 | 0.8 | 280 | 5.6 | 28.1 | 0.023 | 0.01 | 1.98 | 5.8 | 1 | 0.4 |
| DUP | | 0.07 | 36 | 3.38 | 0.18 | 2.5 | 1.3 | 290 | 5.5 | 28.6 | 0.020 | 0.01 | 1.88 | 5.9 | 1 | 0.4 |
| Target Range - Lower Bound | | 0.06 | 24 | 3.06 | 0.16 | 2.2 | 0.8 | 260 | 4.8 | 26.8 | 0.018 | <0.01 | 1.74 | 5.5 | <1 | <0.2 |
| Upper Bound | | 0.08 | 37 | 3.48 | 0.20 | 2.6 | 1.3 | 310 | 6.3 | 29.9 | 0.025 | 0.02 | 2.12 | 6.2 | 2 | 0.6 |
| ORIGINAL | | 0.74 | 466 | 2.39 | 1.82 | 18.1 | 14.7 | 380 | 16.6 | 95.0 | <0.002 | 0.02 | 0.41 | 11.8 | 1 | 2.1 |
| DUP | | 0.74 | 465 | 2.42 | 1.82 | 18.1 | 14.4 | 400 | 16.7 | 91.7 | <0.002 | 0.02 | 0.42 | 11.4 | 1 | 2.1 |
| Target Range - Lower Bound | | 0.69 | 437 | 2.23 | 1.72 | 17.1 | 13.6 | 360 | 15.3 | 88.6 | <0.002 | <0.01 | 0.33 | 10.9 | <1 | 1.8 |
| Upper Bound | | 0.79 | 494 | 2.58 | 1.92 | 19.1 | 15.5 | 420 | 18.0 | 98.1 | 0.004 | 0.03 | 0.50 | 12.3 | 2 | 2.4 |
| ORIGINAL | | 0.03 | 59 | 0.29 | 0.05 | 0.4 | 3.3 | 50 | 1.0 | 9.5 | <0.002 | 0.01 | 0.10 | 0.5 | 1 | 0.3 |
| DUP | | 0.04 | 62 | 0.37 | 0.05 | 0.3 | 3.5 | 40 | 1.3 | 9.7 | 0.002 | 0.01 | 0.14 | 0.5 | <1 | 0.3 |
| Target Range - Lower Bound | | 0.02 | 52 | 0.26 | 0.04 | 0.2 | 3.0 | 30 | 0.6 | 9.0 | <0.002 | <0.01 | 0.06 | 0.4 | <1 | <0.2 |
| Upper Bound | | 0.05 | 69 | 0.40 | 0.06 | 0.5 | 3.8 | 60 | 1.7 | 10.2 | 0.004 | 0.02 | 0.18 | 0.6 | 2 | 0.4 |
| PREP DUPLICATES | | | | | | | | | | | | | | | | |
| 199384 | | 1.87 | 4040 | 395 | 0.04 | >500 | 2.7 | 680 | 8.5 | 0.5 | 0.010 | 0.29 | 0.30 | 9.0 | 1 | 1.6 |
| 199384 PREP DUP | | 1.85 | 4080 | 400 | 0.01 | >500 | 3.8 | 730 | 8.8 | 0.6 | 0.011 | 0.31 | 0.28 | 9.5 | 2 | 1.7 |
| 199434 | | 6.40 | 10500 | 119.0 | 0.08 | 339 | 2.5 | 1410 | 8.9 | 7.9 | 0.005 | 0.52 | 0.15 | 8.5 | 1 | 0.7 |
| 199434 PREP DUP | | 6.47 | 10400 | 118.5 | 0.12 | 306 | 2.5 | 1340 | 9.1 | 7.9 | 0.007 | 0.51 | 0.18 | 8.8 | <1 | 0.7 |
| 199484 | | 7.49 | 10900 | 89.9 | 0.11 | >500 | 5.8 | 830 | 6.4 | 5.6 | 0.006 | 0.39 | 0.14 | 9.1 | 1 | 1.4 |
| 199484 PREP DUP | | 7.34 | 11000 | 86.2 | 0.01 | >500 | 5.7 | 810 | 6.7 | 6.1 | 0.006 | 0.36 | 0.10 | 9.3 | 2 | 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

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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

| Sample Description | Method Analyte Units LOD | ME-MS61 Sr ppm 0.2 | ME-MS61 Ta ppm 0.05 | ME-MS61 Te ppm 0.05 | ME-MS61 Th ppm 0.01 | ME-MS61 Ti % 0.005 | ME-MS61 Tl ppm 0.02 | ME-MS61 U ppm 0.1 | ME-MS61 V ppm 1 | ME-MS61 W ppm 0.1 | ME-MS61 Y ppm 0.1 | ME-MS61 Zn ppm 2 | ME-MS61 Zr ppm 0.5 |
|----------------------------|-----------------------------------|-----------------------------|------------------------------|------------------------------|------------------------------|-----------------------------|------------------------------|----------------------------|--------------------------|----------------------------|----------------------------|---------------------------|-----------------------------|
| DUPLICATES | | | | | | | | | | | | | |
| ORIGINAL | | 21.2 | 0.16 | 7.23 | 5.76 | 0.124 | 0.35 | 2.3 | 33 | 2.1 | 7.5 | 6 | 101.0 |
| DUP | | 21.4 | 0.16 | 6.52 | 5.85 | 0.126 | 0.35 | 2.4 | 35 | 2.3 | 7.4 | 11 | 102.0 |
| Target Range - Lower Bound | | 20.0 | 0.10 | 6.48 | 5.50 | 0.114 | 0.30 | 2.1 | 31 | 1.9 | 7.0 | 6 | 93.4 |
| Upper Bound | | 22.6 | 0.22 | 7.27 | 6.11 | 0.136 | 0.40 | 2.6 | 37 | 2.5 | 7.9 | 11 | 109.5 |
| ORIGINAL | | 277 | 1.10 | <0.05 | 6.68 | 0.588 | 0.50 | 2.8 | 78 | 1.0 | 21.3 | 60 | 320 |
| DUP | | 276 | 1.09 | <0.05 | 7.29 | 0.589 | 0.50 | 2.8 | 78 | 1.0 | 21.0 | 61 | 306 |
| Target Range - Lower Bound | | 262 | 0.99 | <0.05 | 6.63 | 0.554 | 0.44 | 2.6 | 73 | 0.8 | 20.0 | 55 | 289 |
| Upper Bound | | 291 | 1.20 | 0.10 | 7.34 | 0.623 | 0.56 | 3.0 | 83 | 1.2 | 22.3 | 66 | 337 |
| ORIGINAL | | 18.2 | <0.05 | <0.05 | 2.99 | 0.015 | 0.04 | 0.3 | 2 | 0.1 | 1.6 | 5 | 28.8 |
| DUP | | 19.0 | <0.05 | <0.05 | 3.09 | 0.016 | 0.04 | 0.3 | 2 | 0.1 | 1.7 | 5 | 26.5 |
| Target Range - Lower Bound | | 17.5 | <0.05 | <0.05 | 2.88 | 0.010 | <0.02 | 0.2 | <1 | <0.1 | 1.5 | 3 | 25.1 |
| Upper Bound | | 19.7 | 0.10 | 0.10 | 3.20 | 0.021 | 0.06 | 0.4 | 3 | 0.2 | 1.8 | 7 | 30.2 |
| PREP DUPLICATES | | | | | | | | | | | | | |
| 199384 | | 877 | 4.51 | 0.26 | 111.0 | 0.014 | 0.08 | 8.7 | 14 | 2.1 | 18.7 | 31 | 10.3 |
| 199384 PREP DUP | | 906 | 3.94 | 0.34 | 123.5 | 0.014 | 0.06 | 7.6 | 11 | 2.2 | 19.0 | 33 | 10.8 |
| 199434 | | 2540 | 4.22 | 0.37 | 166.5 | <0.005 | 0.08 | 24.3 | 11 | 0.5 | 25.9 | 55 | 10.9 |
| 199434 PREP DUP | | 2470 | 4.20 | 0.29 | 155.5 | <0.005 | 0.09 | 25.7 | 11 | 0.5 | 24.7 | 58 | 11.2 |
| 199484 | | 3320 | 4.46 | 0.19 | 111.0 | 0.008 | 0.06 | 17.2 | 14 | 1.1 | 26.4 | 58 | 24.4 |
| 199484 PREP DUP | | 3280 | 7.47 | 0.26 | 121.0 | 0.007 | 0.07 | 20.8 | 11 | 1.2 | 26.6 | 59 | 25.3 |

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

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

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POSTBOKS 6315 TORGARDEN
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Project: Not provided

QC CERTIFICATE OF ANALYSIS PI18302180

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

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

ACCREDITATION COMMENTS

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



LABORATORY ADDRESSES

Applies to Method: Processed at ALS Pitea located at Hammarvagen 22, SE-943 36, Ojebyn, Sweden.
CRU-31 CRU-QC LOG-22 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