GREENLAND
MINERALS AND ENERGY LTD

ASX: GGG

Company Announcement, December 14th, 2012

Kvanefjeld Concentrator Pilot Plant Campaign Complete; Results Exceed Expectations

Greenland Minerals and Energy Ltd ("GMEL" or "the Company") is pleased to provide an update on the status of process development for the Kvanefjeld multi-element project ("Kvanefjeld").

Between the 19th and 22nd of November 2012, the Company continuously operated a flotation pilot plant at the laboratory of SGS-Oretest in Perth, Western Australia. The pilot plant produced approximately 300 kg of rare earth mineral concentrate ("Concentrate") from 4 tonnes of Kvanefjeld ore.

Successfully completing this continuous piloting campaign represents the final phase of process de-risking for the concentrator circuit in the Kvanefjeld flow-sheet.

The results obtained during the operation of the pilot plant exceeded the Company's expectations. Highlights of the campaign include:

- *Achieving a Concentrate grade of 15% REO, significantly exceeding both feasibility design and results achieved in bench-scale laboratory test-work*
- *Lower levels of impurities were present in the Concentrate in comparison to the results achieved in bench-scale laboratory test-work*
- *The successful use of Jameson Cells in a scalper/rougher duty to produce final grade concentrate in a single step*
- *Smooth operation of the pilot plant, a reflection of the overall simplicity of the concentrator circuit.*

These results will be incorporated in the process design which will form part of the final feasibility study for the concentrator. **The significant increase in concentrate grade achieved in the pilot plant will lead to further reductions in both operating and capital costs.**

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Once off-line test-work that is required to confirm equipment selection has been finalised, metallurgical development for the concentrator will be complete.

Conclusion

The success of the pilot plant campaign is a watershed moment in the development of Kvanefjeld. The Company has conclusively demonstrated that a high grade flotation concentrate can be produced from Kvanefjeld ore.

Damien Krebs Greenland Minerals' Metallurgy Manager commented "I haven't been involved in a pilot plant campaign where everything has gone so smoothly and in which metallurgical results so clearly exceeded expectations."

The results confirm that few REE ore-types, particularly those enriched in heavy REEs, can be as effectively and simply upgraded as those from Kvanefjeld.

The Company has now:

- Established a very sound technical basis for completion of Kvanefjeld's feasibility study process design.
- Produced Concentrate to provide to potential off-take partners in support of strategic development initiatives

Yours faithfully,

Roderick McIllree

Managing Director

Greenland Minerals and Energy Ltd

Pictorial Highlights of the Concentrator Pilot Plant

Figure 1: Overview of pilot plant facilities with the Jameson Cell in the foreground.

Figure 2: Lower level of pilot plant with ore introduced into the blue bin in the foreground.

Figure 3: Ball mill used to produce a slurry with a grind size of 80%, passing 75 microns.

Figure 4: Zinc rougher flotation showing sphalerite (zinc sulphide) floating. Sphalerite is the first mineral isolated in the concentration process. The rougher concentrate was 25-30% zinc.

Figure 5: Rare earth flotation intense conditioning working well at pilot scale.

Figure 6: Rare earth minerals ready for flotation out of the conditioning tanks.

Figure 7: Jameson cell rougher/scalper concentrate which contains 15% REO.

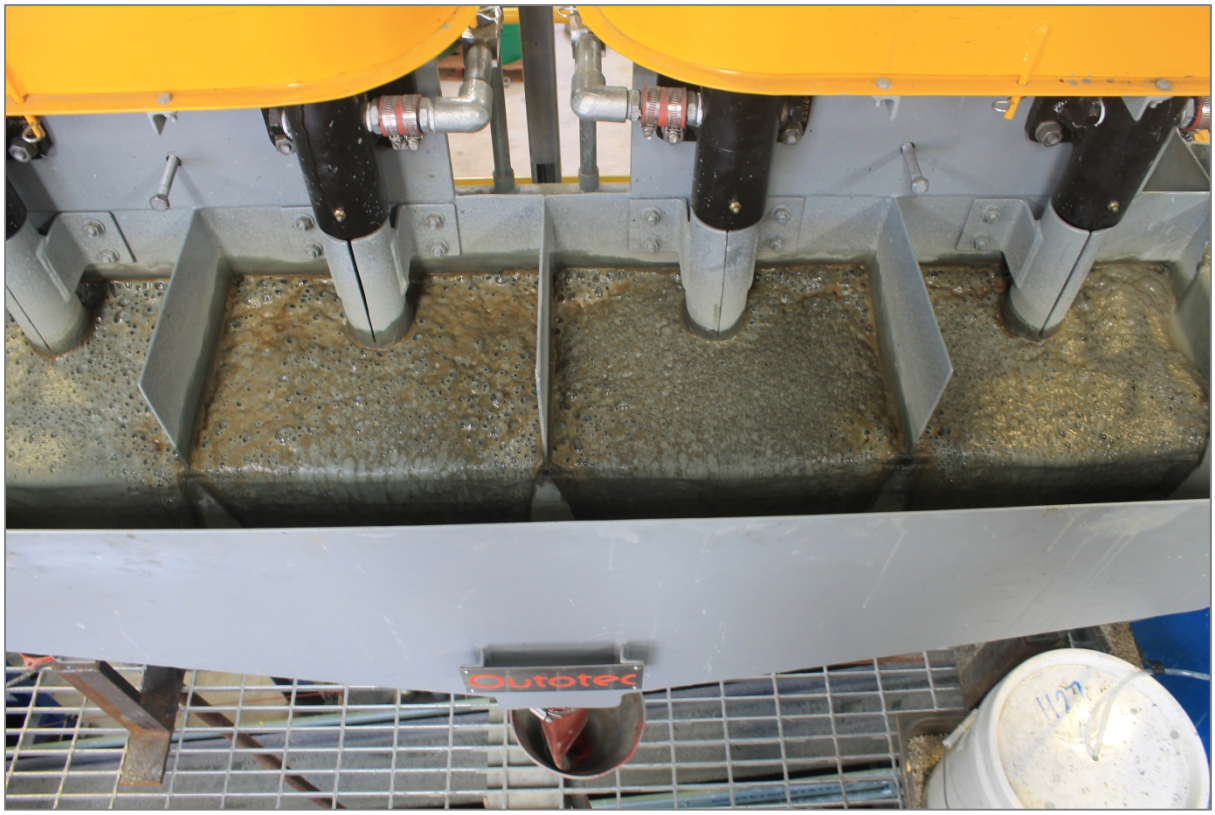


Figure 8: Scavenger rare earth flotation in pilot scale conventional cells. This concentrate is further treated in a cleaning circuit to increase grade.

Figure 9: Cleaner concentrate produced from the scavenger concentrate.

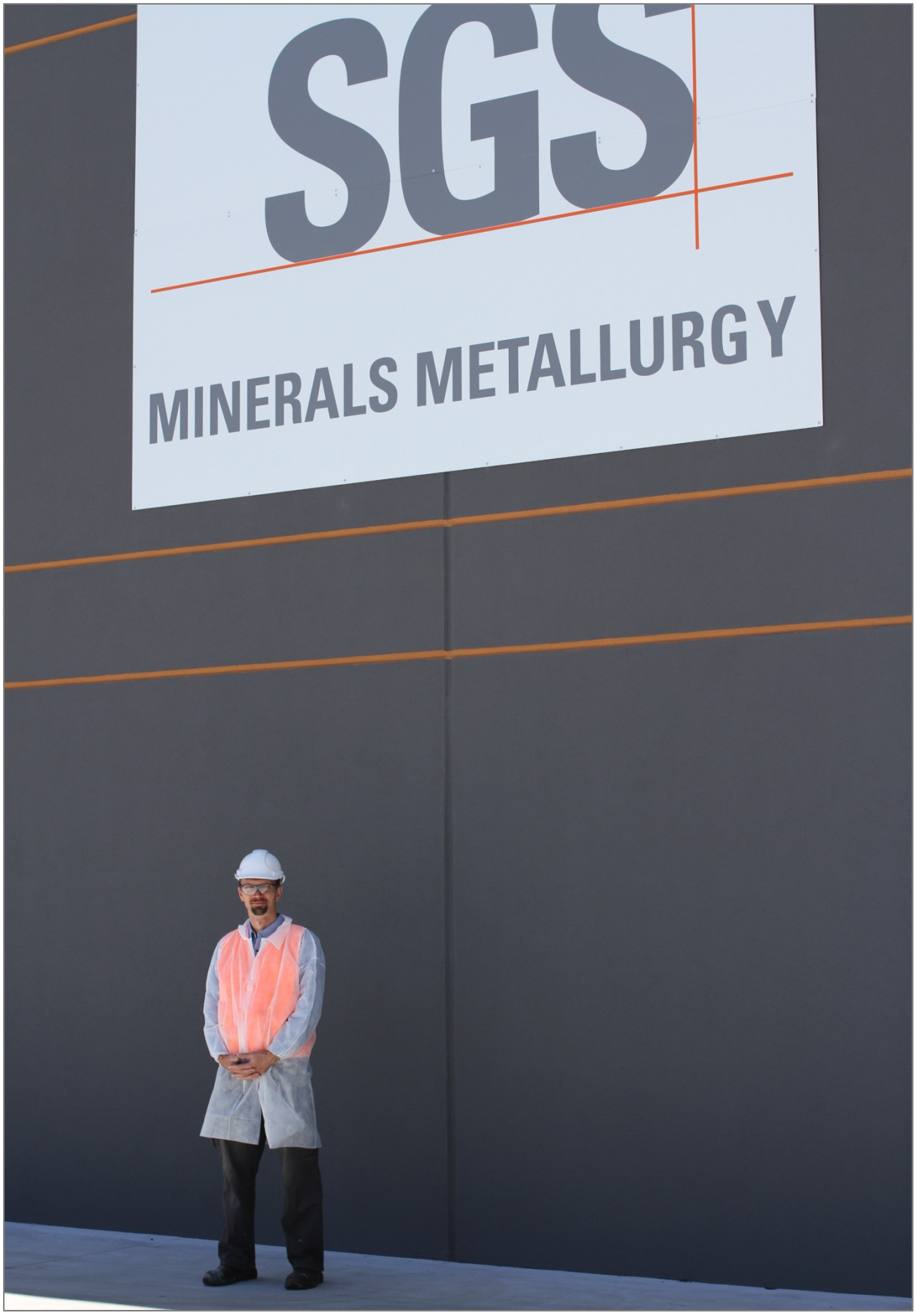
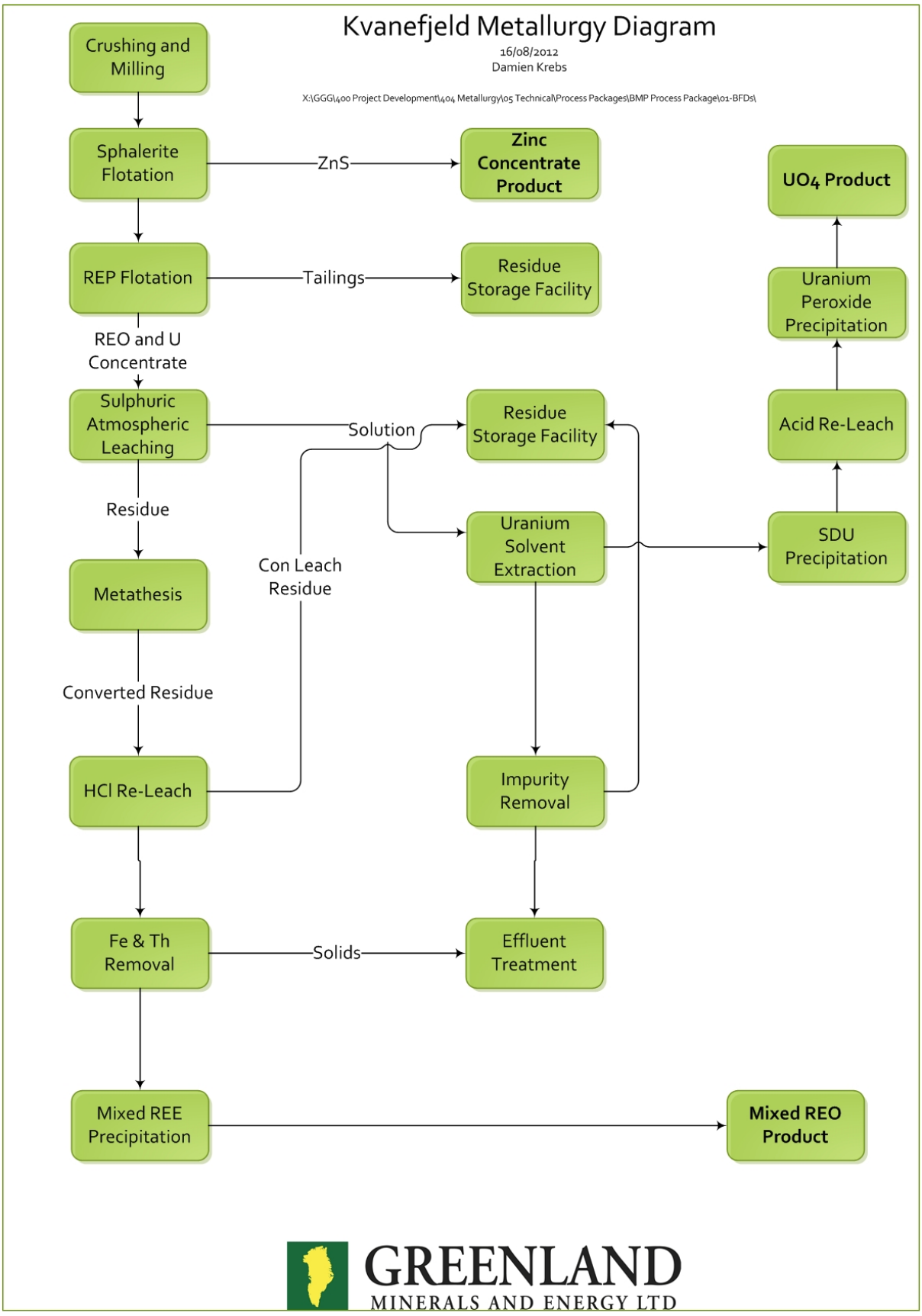


Figure 10: Greenland Minerals would like to thank SGS Oretest for their excellent operation of the pilot plant. GMEL's Damien Krebs satisfied after the extremely positive outcome of the concentrator pilot plant operation.

Appendix A – Complete Project Metallurgical Flowsheet



REP = Rare Earth Phosphate mineral concentrate (dominantly steenstrupine and closely related minerals). REP contains >12% TREO and 0.2% U_3O_8.

ABOUT GREENLAND MINERALS AND ENERGY LTD.

Greenland Minerals and Energy Ltd (ASX – GGG) is an exploration and development company focused on developing high-quality mineral projects in Greenland. The Company's flagship project is the 100% owned Kvanefjeld multi-element deposit (Rare Earth Elements, Uranium, Zinc), that is rapidly emerging as a premier specialty metals project. A comprehensive pre-feasibility study has demonstrated the potential for a large-scale, cost-competitive, multi-element mining operation. For further information on Greenland Minerals and Energy visit http://www.ggg.gl or contact:

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Greenland Minerals and Energy Ltd will continue to advance the Kvanefjeld project in a manner that is in accord with both Greenlandic Government and local community expectations, and looks forward to being part of continued stakeholder discussions on the social and economic benefits associated with the development of the Kvanefjeld Project.

The information in this report that relates to exploration targets, exploration results, geological interpretations, appropriateness of cut-off grades, and reasonable expectation of potential viability of quoted rare earth element, uranium, and zinc resources is based on information compiled by Mr Jeremy Whybrow. Mr Whybrow is a director of the Company and a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Whybrow has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined by the 2004 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Whybrow consents to the reporting of this information in the form and context in which it appears.

The geological model and geostatistical estimation for the Kvanefjeld and Zone 2 deposits were prepared by Robin Simpson of SRK Consulting. Mr Simpson is a Member of the Australian Institute of Geoscientists (AIG), and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined by the 2004 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Simpson consents to the reporting of information relating to the geological model and geostatistical estimation in the form and context in which it appears.