



December 2012 Quarterly Report

Friday 25th January, 2013

Highlights

- Pilot plant operation of Kvanefjeld beneficiation circuit successfully completed:
 - Results exceed expectations with higher grades achieved than in previous test work
 - Over 300 kg's of rare earth-rich mineral concentrate generated
 - Pilot plant operation completes test work program for beneficiation circuit
- Semi-continuous leach testwork conducted at ANSTO that further confirms the non-refractory nature of Kvanefjeld value minerals with high extractions of both rare earth elements and uranium in an atmospheric leach
- Greenland's parliament unanimously support a fast-tracked revue on outstanding issues associated with potential uranium exploitation; review aiming to be finalised prior to the spring sitting of parliament (2013)
- Company Executives join delegation led by the Greenland Government on a visit to South Korea, to promote resource business opportunities
- All necessary shareholder approvals finalised associated with GMEL's \$17M (AUD) capital raising, and the move to 100% ownership of the Kvanefjeld multi-element project



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Introduction

Greenland Minerals and Energy Ltd ('GMEL' or 'the Company') is a mineral exploration and development company operating in southern Greenland. The Company is primarily focused on advancing the 100% owned Kvanefjeld multi-element project (*both light and heavy rare earth elements, uranium, and zinc*) through the feasibility and permitting phase and into mine development.

The Kvanefjeld project is centred on the northern Ilimaussaq Intrusive Complex in southern Greenland. The project includes several large scale multi-element deposits including Kvanefjeld, Sørensen and Zone 3. Global mineral resources now stand at **956 Mt** (JORC-code compliant). The deposits are characterised by thick, persistent mineralisation hosted within sub-horizontal lenses that can exceed 100m in true thickness. Highest grades generally occur in the uppermost portions of deposits, with overall low waste-ore ratios.

While the resources are extensive, a key advantage to the Kvanefjeld project is the unique rare earth and uranium-bearing minerals. These minerals can be effectively beneficiated into a low-mass, high value concentrate, then leached with conventional acidic solutions under atmospheric conditions to achieve particularly high extraction levels of both heavy rare earths and uranium. This contrasts to the highly refractory minerals that are common in many rare earth deposits.

The Kvanefjeld project area is located adjacent to deep-water fjords that allow for shipping access directly to the project area, year round. An international airport is located 35km away, and a nearby lake system has been positively evaluated for hydroelectric power.

GMEL recently finalised a comprehensive, multi-year pre-feasibility program that has focussed on identifying and evaluating the best possible process flow sheet for the Kvanefjeld project, taking into account economic metrics, environmental considerations, technical and market risk. The outcomes are extremely positive and reiterate the potential for Kvanefjeld to become one of the largest rare earth producing mines globally, occupying a dominant position at the low end of the future production cost-curve. A large heavy REE output and significant uranium output differentiate Kvanefjeld from many other emerging RE projects.

Importantly, the Greenland government introduced a uranium licensing framework for the Kvanefjeld project in late 2011. This provides a clear path to see the project move through the feasibility phase and ultimately into mine development.

Rare earth elements (REEs) are now recognised as being critical to the global manufacturing base of many emerging consumer items and green technologies. Uranium forms an important part of the global base-load energy supply, with demand set to grow in coming years as developing nations expand their energy capacity.

December Quarter Activities

The December Quarter 2012 saw GMEL end the calendar year on a positive note with the company having achieved several key milestones. A \$17M (AUD) capital raising was finalised along with all necessary shareholder approvals. This facilitated the execution of the settlement that sees GMEL acquire the outstanding 39% of the Kvanefjeld project, thereby moving to 100% ownership. The move to 100% ownership of Kvanefjeld had been a key milestone for GMEL in 2012, positioning the company to effectively structure strategic partnerships at the project level.

A highly successful continuous pilot plant operation of the Kvanefjeld concentrator circuit was undertaken in November. The pilot plant operation confirmed the viability of the flotation circuit proposed for Kvanefjeld that GMEL has now developed and rigorously evaluated. The successful completion of the continuous piloting represents the final phase of process de-risking for the Kvanefjeld concentrator circuit.

Progress was also made on the Kvanefjeld refinery stage with a successful testwork program of semi-continuous leaching completed at the Australian National Science and Technology Organisation (ANSTO). An international application under the Patent Cooperation Treaty (PCT) was filed for the Kvanefjeld Hydrometallurgical Refinery Process on the 30th November 2012.

In Greenland's fall sitting of parliament all political parties unanimously supported a proposed fast-tracked independent review on issues associated with uranium in the case of removing the zero-tolerance policy. The review is scheduled to be finalised in March prior to the spring sitting of parliament. The review is aimed to increase the knowledge base on aspects associated with uranium production and regulation, including issues associated with foreign policy.

In December company executives joined a delegation led by the Greenland government on a visit to South Korea. The trip to Seoul followed an official visit by the South Korean President to Greenland in September 2012, and aimed at promoting emerging opportunities in Greenland's resources sector. The visit to South Korea was a very positive exercise for all involved and was covered extensively in the Greenlandic, Danish and South Korean media.

GMEL representatives also participated in a Danish Industry forum in Copenhagen in January 2013 to promote emerging opportunities in Greenland's resources sector.

Technical Update

2012 proved to be an important year in the technical development of the Kvanefjeld project. A comprehensive prefeasibility study (PFS) on the Kvanefjeld project, including a rigorously developed process flowsheet was released in Q2. Further improvements to the PFS study were then presented in a technical update in September that strengthened the economic metrics of the Kvanefjeld project. GMEL has now developed an advantageous flowsheet for the Kvanefjeld project that includes a beneficiation circuit to concentrate the key value minerals into <10% of the starting mass, followed by a simple atmospheric leach stage that delivers high extractions and recoveries of REEs and uranium from the mineral concentrate.

Kvanefjeld Beneficiation Circuit Successfully Piloted

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 over 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.**

The Company has conclusively demonstrated that a high grade flotation concentrate can be produced from Kvanefjeld ore. 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 success achieved in developing an effective beneficiation circuit builds on the comprehensive mineralogy studies undertaken by GMEL through 2009 to 2011. Conducted in association with the Mineral Deposit Research Unit of the University of British Columbia, the mineralogical studies mapped out the mineral associations providing critical insight into the department of value elements amongst the key minerals. This focussed the early test-work that aimed to establish the optimal approach to beneficiating the Kvanefjeld ore. Ultimately, the ability to effectively beneficiate ores from Kvanefjeld is primarily reflective of the unique and highly favourable mineralogy; REE and uranium-rich minerals that can be effectively beneficiated then leached under atmospheric conditions.

Further details on the outcomes of the pilot plant campaign and the benefits to Kvanefjeld will be released over the coming weeks.

Refinery Developments; Semi-Continuous Leach Testwork Complete

Process development for the Kvanefjeld concentrate refinery has continued with promising results. Semi-continuous leach testwork was performed on Kvanefjeld mineral concentrate at ANSTO laboratories in Sydney. This testwork demonstrated that leaching of impurities can be effectively controlled whilst achieving high extractions of uranium and rare earth elements. The results further confirm that the non-refractory nature of the Kvanefjeld value containing minerals allows for the use of atmospheric leaching and its associated advantages.

An international application under the Patent Cooperation Treaty (PCT) was filed for the Kvanefjeld Hydrometallurgical Refinery Process on the 30th November 2012. This provides protection for all of the leading edge metallurgical technology applied to produce a metallurgical flowsheet which consists of simple equipment and elegant chemistry. Potential off-take partners are now able to secure both the concentrate and the technology to treat the concentrate efficiently.

Political Developments in Greenland

On Wednesday 21st November the position of Greenland in regard to uranium policy was addressed in Greenland's parliament. A show of unanimous support was given from all political parties to fast-track an independent review to finalise the government-driven phase of information gathering on uranium production undertaken over the last three years. Importantly this review includes aspects that relate to Greenland's foreign policy, which is managed by Denmark. The review is aimed to be finalised in March 2013 prior to the sitting of Greenland parliament.

The information campaign conducted by the Greenland Government has greatly expanded the knowledge base required to evaluate and effectively manage potential uranium production in Greenland. In addition to a compilation and dissemination of technical information, government and key stakeholder representatives have conducted visits to Canada to learn more about the regulation and operation of uranium production, and the effective management of environmental and social impacts.

Parliamentary backing for a fast-tracked review follows a number of key licensing developments for the Kvanefjeld project over the last two years. In Greenland uranium is regulated at the license level, rather than under the Mining Act, and in late 2011 uranium was incorporated into GMEL's exploration license for Kvanefjeld. This effectively provides the Company with the right to apply for exploitation in accordance with Greenland's broader mining regulatory framework.

Significantly, 2013 is an election year in Greenland with an election set to be called prior to mid-year. The unanimous parliamentary support to back an independent review prior to the next sitting of parliament marks a step toward depoliticising the issue of uranium exploitation and garnering a position of clear political support.

GMEL Attends Trade Visit to South Korea with Government Delegation

In December 2012, company executives joined a delegation led by the Greenland government on a visit to South Korea. The trip to Seoul followed an official visit by the South Korean President to Greenland in September 2012, when agreements were signed on resource cooperation and geological research. South Korea is renowned for its strong manufacturing industries yet is resource poor, whereas Greenland is looking to expand its resources industry and is looking for foreign investment and trade partners.

The December visit to Seoul aimed at promoting emerging opportunities in Greenland's resources sector. Presentations were made by members of the Greenland government and representatives of Greenland's resources industry to forums that were very well attended by representatives of South Korean corporations; a number of which are well known to GMEL and the Kvanefjeld project. The visit highlights the efforts of the Greenland government to progressively build a profile as an important new minerals region. Through the Bureau of Minerals and Petroleum (BMP), the government actively promotes Greenland's resource opportunities in China, South Korea, Europe, Canada and Australia.

The visit to South Korea was a very positive exercise for all involved and was covered extensively in the Greenlandic, Danish and South Korean media.

GMEL Participates in Danish Industry Forum

At the request of the Confederation of Danish Industry (DI), the premier lobbying organisation for Danish businesses on national and international issues, and the Greenland Employers' Association, Greenland's principal trade organisation, GMEL presented at a seminar held on January 8th 2013 discussing opportunities for Danish companies in Greenland.

Greenland is experiencing a rapidly growing international interest in searching for and extracting mineral resources in Greenland. Whilst the exploration for raw materials will only be interesting for a few Danish companies, as the Greenland mining industry develops there are great opportunities for all types of Danish companies that can provide services, equipment and know-how for the mining industry. This can usefully be done in cooperation with Greenlandic companies, which through their local roots can facilitate access to the market in Greenland.

DI and Greenland Employers therefore invited Danish suppliers of services (e.g. logistics, catering, cleaning, and security), equipment (e.g. pipes, pumps, arctic equipment) and know-how (design, knowledge consultancy, contracting) to the seminar to learn about the possibilities that the Greenland mining industry offers. The seminar had over 100 business participants who appreciated the opportunity to hear from international mining companies operating in Greenland, about their expectations for future investments in Greenland in the coming years.

The forum highlighted a growing understanding amongst Danish Industry of the great growth opportunities that Greenland's emerging resources sector can provide.

Tenure, Permitting and Project Location

Tenure

Greenland Minerals and Energy Ltd (ABN 85 118 463 004) is a company listed on the Australian Securities Exchange. The Company is conducting exploration of license EL2010/2. The Company controls 100% of EL2010/2 through its Greenlandic subsidiary.

The tenement is classified as being for the exploration of minerals. The project hosts significant multi-element mineralisation within the Ilimaussaq Intrusive Complex.

Historically the Kvanefjeld deposit, which comprises just a small portion of the Ilimaussaq Complex, was investigated by the Danish Authorities. The project has received significant past exploration and feasibility evaluation in the form of drilling, geophysics, geochemistry, an exploratory adit and numerous and varying metallurgical test work and technical papers.

Permitting

Greenland Minerals and Energy Limited is permitted to conduct all exploration activities and feasibility studies for the Kvanefjeld REE-uranium project. The company's exploration license is inclusive of all economic components including uranium and REEs. The Company holds the right to apply to exploit the Kvanefjeld project. The approval of an exploitation license is largely dependent on establishing an economically robust, and environmentally and socially acceptable development scenario.

Location

The exploration lease covers an area of 80km² in Nakkaalaaq North on the southwest coast of Greenland. The project is located around 46° 00'W and 60 55'N.

The town of Narsaq is located approximately 8 kilometres to the south west of the license area. Narsaq is connected to Narsarsuaq International Airport by commercial helicopter flights operated by Air Greenland. Local transport between settlements is either by boat or by helicopter.

The Company has office facilities in Narsaq where storage, maintenance, core processing, and exploration activities are managed. This office supports the operational camp located on the Kvanefjeld Plateau above the town where the operational staff are housed.

Access to the Kvanefjeld plateau (at approximately 500m asl) is generally gained by helicopter assistance from the operations base located on the edge of the town of Narsaq. It is possible to access the base of the plateau by vehicle and then up to the plateau by a track.

Other Exploration License Holdings

As announced on 18 May 2011 GMEL had applied for, and was granted license holdings to consolidate its ground position in the Kvanefjeld area. The new license areas occur immediately adjacent to the Ilimaussaq Complex and may be prospective for specialty metal mineralization hosted near the margins of the complex (see Figure 4). GMEL aims to conduct evaluations to assess the potential for mineralization, in conjunction with sterilising key areas that are under assessment for plant and infrastructure locations. The Company is considering a number of possible locations for key infrastructure items, which include areas adjacent to the Kvanefjeld resource, as well as the broad area on the northeastern side of the Ilimaussaq Complex. Stakeholder input and environmental considerations are critically important to the site selection process. Options for the location of key infrastructure items have recently been presented to Greenlandic stakeholders during public meetings held in early-April 2011.

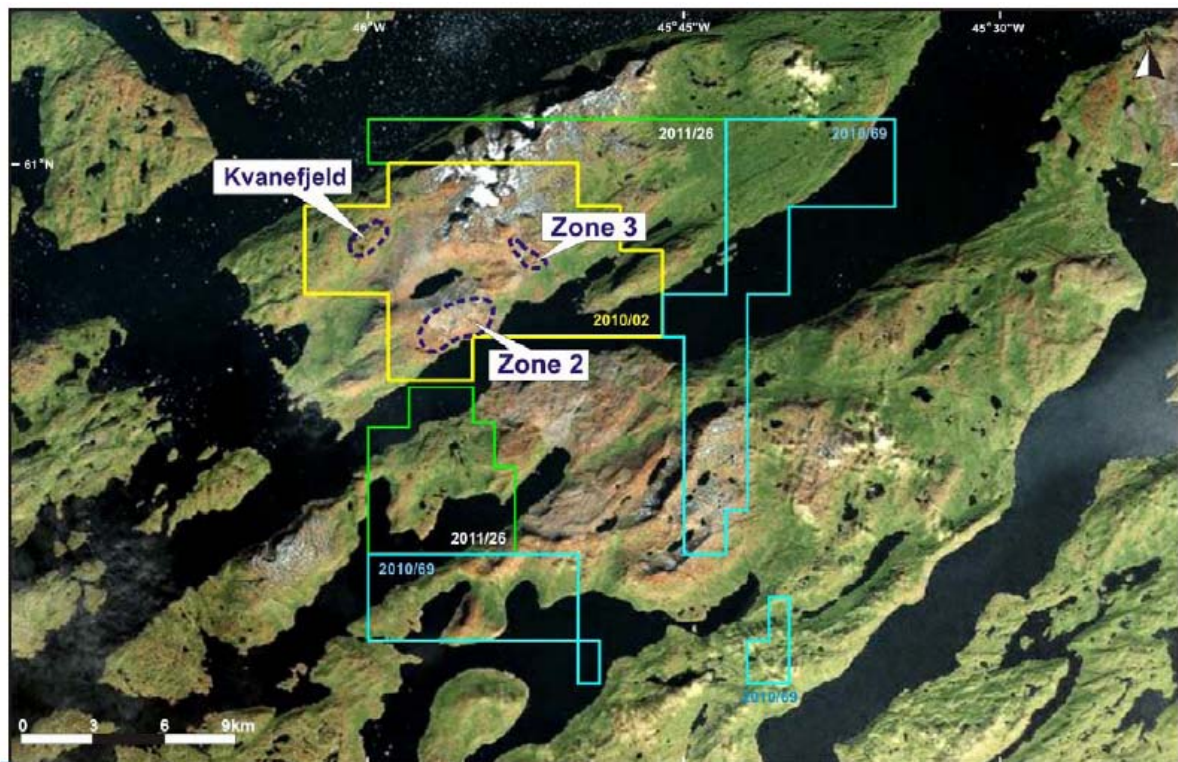


Figure 2. GMEL's license holdings over and adjacent to the Ilimaussaq complex in south Greenland. All licences are held outright by GMEL.

Capital Structure – As at 31st December, 2012

<u>Total Ordinary shares:</u>	567,937,409
Quoted options exercisable at \$0.60	25,769,191
Unquoted unvested performance options exercisable at \$1.75	7,000,000
Unquoted options exercisable at \$0.75	4,999,520
Unquoted employee options exercisable at \$0.25	750,000
Performance rights (refer to announcement 21/10/2011 for terms)	17,450,000

Please visit the company's website at www.ggg.gl where recent news articles, commentary, and company reports can be viewed.

Yours faithfully,



Roderick McIlree

Managing Director

Greenland Minerals and Energy Ltd.

Statement of Identified Mineral Resources, Kvanefjeld Multi-Element Project (Prepared by SRK Consulting)

Multi-Element Resources Classification, Tonnage and Grade										Contained Metal				
Cut-off (U ₃ O ₈ ppm) ¹	Classification	M tonnes Mt	TREO ² ppm	U ₃ O ₈ ppm	LREO ppm	HREO ppm	REO ppm	Y ₂ O ₃ ppm	Zn ppm	TREO Mt	HREO Mt	Y ₂ O ₃ Mt	U ₃ O ₈ M lbs	Zn Mt
Kvanefjeld - March 2011														
150	Indicated	437	10929	274	9626	402	10029	900	2212	4.77	0.18	0.39	263	0.97
150	Inferred	182	9763	216	8630	356	8986	776	2134	1.78	0.06	0.14	86	0.39
150	Grand Total	619	10585	257	9333	389	9721	864	2189	6.55	0.24	0.53	350	1.36
200	Indicated	291	11849	325	10452	419	10871	978	2343	3.45	0.12	0.28	208	0.68
200	Inferred	79	11086	275	9932	343	10275	811	2478	0.88	0.03	0.06	48	0.20
200	Grand Total	370	11686	314	10341	403	10743	942	2372	4.32	0.15	0.35	256	0.88
250	Indicated	231	12429	352	10950	443	11389	1041	2363	2.84	0.10	0.24	178	0.55
250	Inferred	41	12204	324	10929	366	11319	886	2598	0.46	0.02	0.03	29	0.11
250	Grand Total	272	12395	347	10947	431	11378	1017	2398	3.33	0.12	0.27	208	0.65
300	Indicated	177	13013	374	11437	469	11906	1107	2414	2.30	0.08	0.20	146	0.43
300	Inferred	24	13120	362	11763	396	12158	962	2671	0.31	0.01	0.02	19	0.06
300	Grand Total	200	13025	373	11475	460	11935	1090	2444	2.61	0.09	0.22	164	0.49
350	Indicated	111	13735	404	12040	503	12543	1192	2487	1.52	0.06	0.13	98	0.27
350	Inferred	12	13729	403	12239	436	12675	1054	2826	0.16	0.01	0.01	10	0.03
350	Grand Total	122	13735	404	12059	497	12556	1179	2519	1.68	0.06	0.14	108	0.31
Sørensen - March 2012														
150	Inferred	242	11022	304	9729	398	10127	895	2602	2.67	0.10	0.22	162	0.63
200	Inferred	186	11554	344	10223	399	10622	932	2802	2.15	0.07	0.17	141	0.52
250	Inferred	148	11847	375	10480	407	10887	961	2932	1.75	0.06	0.14	123	0.43
300	Inferred	119	12068	400	10671	414	11084	983	3023	1.44	0.05	0.12	105	0.36
350	Inferred	92	12393	422	10967	422	11389	1004	3080	1.14	0.04	0.09	85	0.28
Zone 3 - May 2012														
150	Inferred	95	11609	300	10242	396	10638	971	2768	1.11	0.04	0.09	63	0.26
200	Inferred	89	11665	310	10276	400	10676	989	2806	1.03	0.04	0.09	60	0.25
250	Inferred	71	11907	330	10471	410	10882	1026	2902	0.84	0.03	0.07	51	0.2
300	Inferred	47	12407	358	10887	433	11319	1087	3008	0.58	0.02	0.05	37	0.14
350	Inferred	24	13048	392	11392	471	11864	1184	3043	0.31	0.01	0.03	21	0.07
Project Total														
Cut-off (U ₃ O ₈ ppm) ¹	Classification	M tonnes Mt	TREO ² ppm	U ₃ O ₈ ppm	LREO ppm	HREO ppm	REO ppm	Y ₂ O ₃ ppm	Zn ppm	TREO Mt	HREO Mt	Y ₂ O ₃ Mt	U ₃ O ₈ M lbs	Zn Mt
150	Indicated	437	10929	274	9626	402	10029	900	2212	4.77	0.18	0.39	263	0.97
150	Inferred	520	10687	272	9437	383	9820	867	2468	5.55	0.20	0.45	312	1.28
150	Grand Total	956	10798	273	9524	392	9915	882	2351	10.33	0.37	0.84	575	2.25

¹There is greater coverage of assays for uranium than other elements owing to historic spectral assays. U₃O₈ has therefore been used to define the cut-off grades to maximise the confidence in the resource calculations.

²Total Rare Earth Oxide (TREO) refers to the rare earth elements in the lanthanide series plus yttrium.

Note: Figures quoted may not sum due to rounding.

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 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.