# GGG.AU

20 August 2009 Rare Earth Elements, Uranium Greenland Advanced Exploration Exchanges: ASX:GGG

#### **Capital Profile**

Share price (A\$)	0.35							
52 week range (A\$/share)	0.15	to	0.56					
Number of shares (m)	223							
Options and warrants (m)	178							
Convertible notes (m)	0							
Fully diluted (m)	401							
Market capitalisation (undiluted) (A\$m)	77.9							
Debt (A\$m) - Sep 09F	0.0							
Enterprise value (A\$m)	77.9							
Major shareholders: GCM Nominees (18.1%), Westrip Holdings (15.6%),								
Gravner Ltd (15.0%), ANZ Nominees (10.5%), HSBC Custody Nom. (5.5%)								
Avg monthly volume (m)	12							
Cash (A\$m) - Sep 09F	12.2							
Price/Cash (x)	6.4							
Price/Book (x)	2.0							
Listed company options:	GGGO							

#### **Investment Points**

Multi-element focus at Kvanefjeld - uranium component valued at approx ~US\$15.5bn (US\$55/lb).

Potential to be one of the world's largest REE and U deposits - plus economic potential NaF, Zn and Sn.

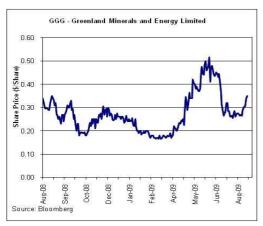
JORC resource (Jun '09) containing 283mlbs U<sub>3</sub> 4.9mt REO, 1mt Zn and 3.1mt NaF- defined over 2km x 1km, open at depth (>300m) and along strike.

Exploration budget '09 is A\$3m. Drilling ~5,000-7000m (geotech and met) in June-Sept '09.

Metallurgy and mineralogy budget ~A\$5m in 2009. Prefeasibility study, with mine plan (Coffey) and process flow sheet (GRD Minproc, ANSTO), expected late 2009.

Placements in 2Q09 raised A\$6m @ A20-25c/share.

Greenland Government (elected Jun '09) will allow issue of uranium production to be decided by public debate



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### **Greenland Minerals and Energy Ltd**

A\$ 0.35

After a Jun '09 upgrade, the giant Kvanefjeld Deposit has a JORC resource including 283mlb U<sub>3</sub>O<sub>8</sub> and 4.91mt total REO, with 79% Indicated. A PFS is expected in late 2009. In Greenland, a national debate is planned, to decide the future of uranium production.

#### Production and Financial Forecasts

Year End: June	Jun-09a	Sep-09F	2008a	2009F	2010F
Exploration and evaluation (A\$m)	2.59	1.50	11.78	10.97	3.30
Corporate (A\$m)	1.09	0.63	4	3.98	2.50
Exploration/(Expl.+ Corporate) (%)	70	71	0	73	57
Funding duration at current burn (years	)		0	1.0	3.1
Shares on issue (pr end) (m shares)	218.5	222.5	192.9	218.5	239.2
Drilling - RAB (m)	0	0	0	0	0
Drilling - Other/Diamond (m)	1,000	5,000	17,522	10,000	8,000
Land holding ('000 ha)	211	211	211	211	0
Tenement costs (\$k per year)	-	-	-	-	-
Capital raisings (A\$m)	5.0	1.0	38.8	5.0	11.0
Funding from JV partners (A\$m)	0	0	0	0	1.6
Cash (A\$m)	14.9	12.2	21.5	14.9	17.8
Cash backing (Ac/share)	6.8	5.5	11.2	6.8	7.4
Net asset backing (Ac/share)	18.5	17.9	18.7	18.5	19.7

Quarters refer to calander year

#### Company Comment

Overview: Greenland Minerals and Energy Limited is a Perth based company that listed on the ASX in

Overview: Greenland Minerals and Energy Limited is a Perth based company that listed on the ASX in June 2006 (ASX:GGG). It is evaluating the uranium-rich Kvanefjeld multi-element project in Greenland, a self-governing Danish province. The project was acquired in 2007. Kvanefjeld (uranium, Greenland): The project (80km²) is located on the SW tip of Greenland, at Narsaq. Within the Ilimaussaq alkaline intrusive complex, it is one of the world's largest undeveloped rare earth elements and uranium deposits. The Danish Atomic Energy Agency and the Danish Geological Survey completed >11,500m of diamond drilling (1957-1983) and defined a resource of 126mt @ 0.04% U<sub>3</sub>O<sub>8</sub> (1km² area). Other potentially economic elements and minerals include zinc, tin and sodium fluoride. Uranium likely accounts for ~25% of the potential in-ground value. GGG's ownership of 61% is moving to 90% with A\$10m cash payment, and 100% with additional A\$50m.

The deposit: is a flat-lying slab of disseminated mineralisation, open at depth and in three directions, and accounts for ~10% of the prospective host rock. Current JORC resource (Jun '09) is 457mt @ 0.028% U<sub>3</sub>O<sub>8</sub> for 283mlbs, 1.07% REO for 4.91mt (includes yttrium) and 0.22% Zn for 0.99mt, with 79% of these in the Indicated category. There is also 363mt @ 0.85% NaF for 3.09mt. Changes from previous (Aug '08) resource include 27% increase in U<sub>3</sub>O<sub>8</sub> and 88% increase in REO. Total '09 expudget is ~A\$3m, planning to drill 5,000m-7,000m (Jun-Sep) for metallurgical and geotechnical testing. The resource covers 2km by 1km and extends from surface to 280m depth. There is significant resource The resource covers 2km by 1km and extends from surface to 280m depth. There is significant resource and exploration upside within the ~6km x 4km Ilimaussaq intrusive (e.g. prospects K2-K8). GGG indicates **historical metallurgical testwork** recoveries of 70%-90% using pressure alkaline leach. Indicates **instorical metailurgical testwork** recoveries of 70%-90% using pressure alkaline leach. Further metallurgical and mineralogical tests began 4Q07, with a 2009 budget of A§5m (met currently in Phase 4, with SGS Lakefield). There is potential to beneficiate the ore and reduce downstream processing costs through upgrade of  $U_3O_8$  (e.g., from 0.04% to 0.14%) and REO. Potential production (open cut) is in the order of 3,000tpa  $U_3O_8$  and compares with Rossing (3,700tpa  $U_3O_8$ ), 174kt resource @ 0.03%  $U_3O_8$ , 470mlbs). There is potential to commercialise the large NaF resource, which could have applications in dentistry, agriculture, ceramics and aluminium smelting. **Pre-Feasibility Study:** began in 4Q08, drawing on the historic feasibility study. Results expected in late 2009, including mine plan (Coffey Mining) and multi-element process flow sheet (GRD Minproc, ANSTO). Environment studies are well advanced (Coffey Natural Systems, Orbicon).

**Investment Comment:** GGG's focus is on advancing the Kvanefjeld project in Greenland. The resource has potential to be one of the world's largest REE and uranium deposits, with huge exploration upside. A successful Pre-Feasibility Study would provide confidence in project economics, especially regarding mineralogy and metallurgical recoveries, and be a step towards potential re-rating of GGG mkt cap to over \$5500m (>U\$\$3/lb  $U_2O_8$  resource) mid-term. Two share placements in 2Q09 (\$\$6m @ A20-25c/share) were oversubscribed. Mineral rights will transfer from the Danish Crown to Greenland as part of the self-governing transition, expected to be formalized in Jan '10. The recently elected governing lnuit Ataqatigit party (Jun '09) has an anti-uranium stance; however, it has said it will allow the issue of uranium production as a byproduct of multi-element exploration and mining to be decided by public debate, as per a framework established by the Greenland parliament in Nov '08.

#### Reserves and Resources/Mineralised Material

Code for reporting mi	neral resources - Austral	ian: (JORC)						
Uranium	Classification	n Project	Ore	U <sub>3</sub> O <sub>8</sub>	Cut Off	U <sub>3</sub> O <sub>8</sub>	U <sub>3</sub> O <sub>8</sub>	U₃O <sub>8</sub> Eqty
U₃O <sub>8</sub>		Equity	Mt	%	ppm	Kt	MIb	Mlb
Reserves						0.0	0.0	0.0
Resources								
Kvanefjeld*	Inferred	61%	457	0.03	150	128	283	173
Mineralised Material (est., non compliant with JORC)						0.0	0.0	0.0

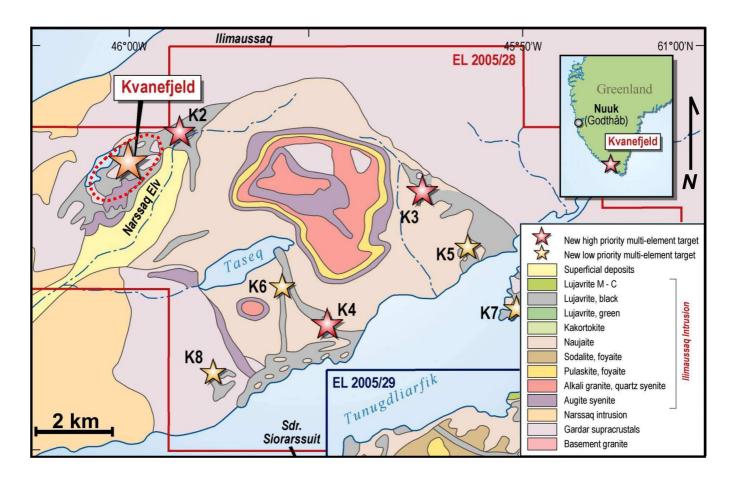
\*Also total REO (4.91mt contained @ 1.07%), Zn (0.99mt contained @ 0.22%) and NaF (3.09mt contained @ 0.85% NaF

#### **Key Projects**

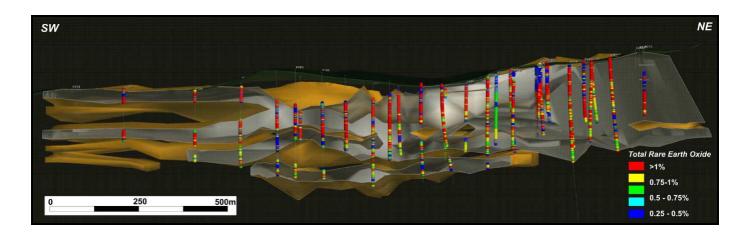
	Ownership/		JV	Target	Process	Project	
Project	Option	Metal	Partner	Type	Route	Status	Location
Kvanefjeld	61%/100%	U, REO	Westrip	Igneous	na	Advanced Expl	Greenland



Map of the Ilimaussaq intrusive complex showing the Kvanefjeld deposit and new multi-element targets. Current resource is 283mlbs U<sub>3</sub>O<sub>8</sub>, 4.9mt of rare earth oxides, 1mt of Zn and 3.1mt of NaF. Mineralised lujavrite is likely to continue between Kvanefjeld and K2.



Kvanefjevld resource model cross section (NE-SW), with drill strings coloured by distribution of REOs (rare earth oxides). The deposit is mineralised from surface. A PFS is expected late 2009, including preliminary mine plan and process flow sheet.





## **Disclosure and Disclaimer**

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