

# Rare Earth Elements Letter

## INTERNATIONAL

*the independent information and advice bulletin for Rare Earth Elements and related investments*

Special Situation – January 2012 Update

[www.ramresources.com.au](http://www.ramresources.com.au)



### Ram Resources Ltd. (A\$ 0.004)

ASX : RMR  
 H+L prices (12 months) : A\$ 0.02 - 0.004  
 Net issued shares : 954.9 million  
 Fully diluted shares : 1,748 million  
 Market capitalization : A\$ 3.8 million

**Next price target: A\$ 0.05**

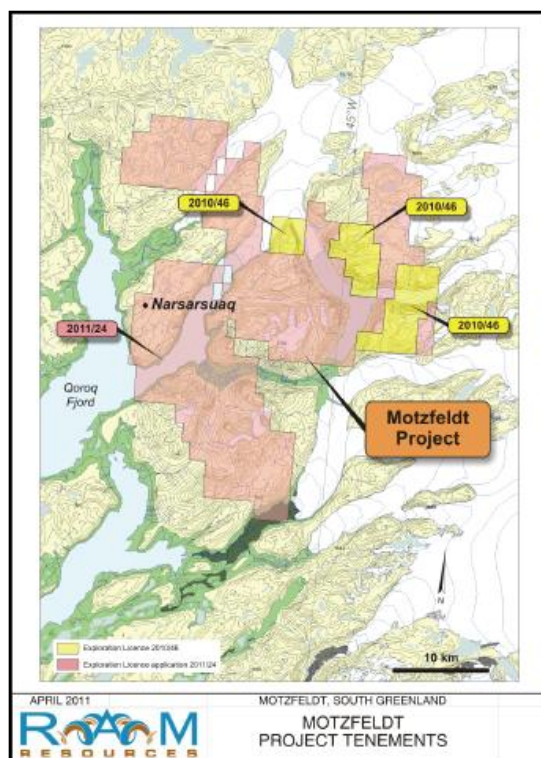
### Company profile

Ram Resources' ("Ram") key asset is the **Motzfeldt Project** located in south Greenland. Ram completed the acquisition of the initial 51% of the Motzfeldt multi-element (tantalum–niobium–rare earth elements) Project in October 2010. The Company has the right to increase its ownership to 100%.

The key aim of the completed 2011 drilling program was targeted at extending the drilled area along strike at the **Aries Prospect** with a total of 7 holes drilled for approximately 962 metres using a diamond drill rig.

Grades of potential economic interest were confirmed in all of the 7 drill holes with good high grade intercepts including:

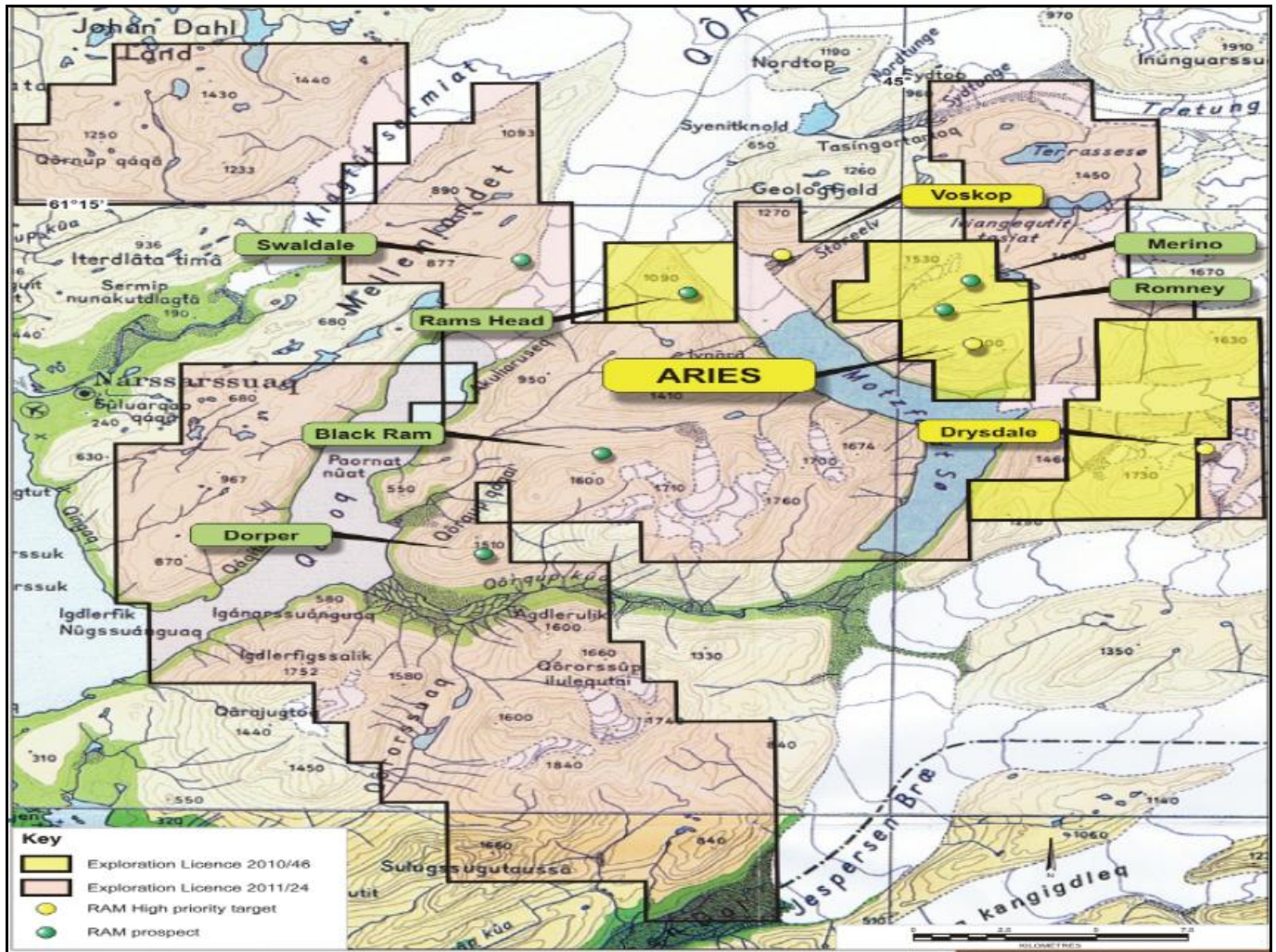
- 192.5m grading 2,210 ppm Nb<sub>2</sub>O<sub>5</sub>, 278 ppm Ta<sub>2</sub>O<sub>5</sub>, 2,771 ppm TREO and 5,338 ppm ZrO<sub>2</sub> in hole PSRK-009
- 40.78m grading 2,671 ppm Nb<sub>2</sub>O<sub>5</sub>, 294 ppm Ta<sub>2</sub>O<sub>5</sub>, 5,980 TREO and 11,418 ppm ZrO<sub>2</sub> in hole PSRK-016



On May 16, 2011, Ram announced that it had entered into a MoU with the vendors of GRL to vary the non-binding terms on which the Company may acquire the remaining 49% in GRL.

Subsequently, Ram and the vendors signed formal agreements comprising an Option Deed and Deed of Termination and Variation on July 20, 2011. The Option Deed provides Ram with an option to acquire the remaining 49% interest in one stage by issuing to the vendors 200 million fully paid shares in the capital of the Company.

Ram has 12 months from July 20, 2011 to exercise the new option. This new option reduces the complexity of the acquisition compared to the current terms, is on improved financial terms and also allows RAM greater flexibility should it choose to bring in a joint venture partner on the Motzfeldt Project.



In addition to the Motzfeldt Project Ram holds two Exploration Licences, granted in July 2010, located in the Telfer area close proximity to Newcrest Mining's Telfer Mine, **Western Australia**, Telfer is reported to contain resources of 19.5 million ounces of gold and 0.7 million tonnes copper.

## Overview of projects

### ➤ Motzfeldt multi-element Project, Gardar Province, southern Greenland

The Motzfeldt Licence comprises Exploration Licence 2010/26 of some 84 km<sup>2</sup> and Exploration Licence 2011/24 of which is 568km<sup>2</sup> which surrounds the 2010/46 and incorporates most of the alkaline intrusives in the area. On August 3, 2011, RAM announced that a new exploration licence 2011/24 has been granted and new discoveries on this new licence during the 2011 field season have added considerably to the exploration potential of the Motzfeldt Project.

The nearest town to the project area is Narsarsuaq, which is located approximately 24 kilometres to the west which has an international airport and a small port facility that remains ice-free all year.

Greenland Minerals and Energy's (ASX - GGG) world-class Kvanefjeld Project is located some 60 kilometres to the south east of Motzfeldt.

The Motzfeldt Project is a multi-element style deposit that is primarily being targeted for tantalum (Ta), niobium (Nb) and rare earth elements (REE), through zircon (Zr), uranium (U) and thorium (Th) and a range of base metals are also present in the mineralised zone.

The prospectivity of the Motzfeldt area was first investigated by the Greenland – Danish Geological Survey (GEUS) in the early 1980s which identified Ta-Nb mineralization hosted by the Motzfeldt Centre.

In 1987, the GEUS outlined a mineralised zone at the Aries Prospect, 2-300 metres wide, 1,500 metres long (running N-S) and up to 400 metres deep and estimated to contain between 200-500 million tonnes with average grades of 1800-2200 ppm Nb<sub>2</sub>O<sub>5</sub>, 130-160 ppm Ta<sub>2</sub>O<sub>5</sub> and 3,000-5,000 ppm TREO

These target areas are considered to be exploration targets according to the JORC code as there is currently insufficient information to define a Mineral Resource, and it is uncertain if further exploration will result in the determination of a Mineral Resource.

Ram has estimated a target of 200-500 million tonnes at an average grade 2,000 ppm Nb<sub>2</sub>O<sub>5</sub> and 150 ppm Ta<sub>2</sub>O<sub>5</sub> and 4,000 ppm TREO with potential to outline internal higher-grade zones at the Aries and Merino targets.

In 2000-01, the Motzfeldt Project attracted the attention of Cabbot Corporation (a major tantalum oxide and speciality metals producer) which invested in the previous owner Angus & Ross Plc to fund an initial exploration program. Angus & Ross followed up the GEUS work, focusing primarily on the Aries target. This follow-up work comprised ground radiometric surveys, surface sampling, diamond drilling and some initial metallurgical test work.

## Highlights of the 2011 Field Season

Drilling targeted at extending the drilled area along strike at the **Aries Prospect** with a total of 7 holes drilled for approximately 962 metres using a diamond drill rig.

Prospective geology has been observed in all drill holes over a distance of some 600 metres north to south and 250 metres east-west.

The 2011 drilling Program confirms long high-grade intersection in all of the drill holes analysed the highlights of which are shown in the table below. Intersections for holes PSRK-009 and PSRK-010 are full hole intercepts, indicating good grade continuity down hole.

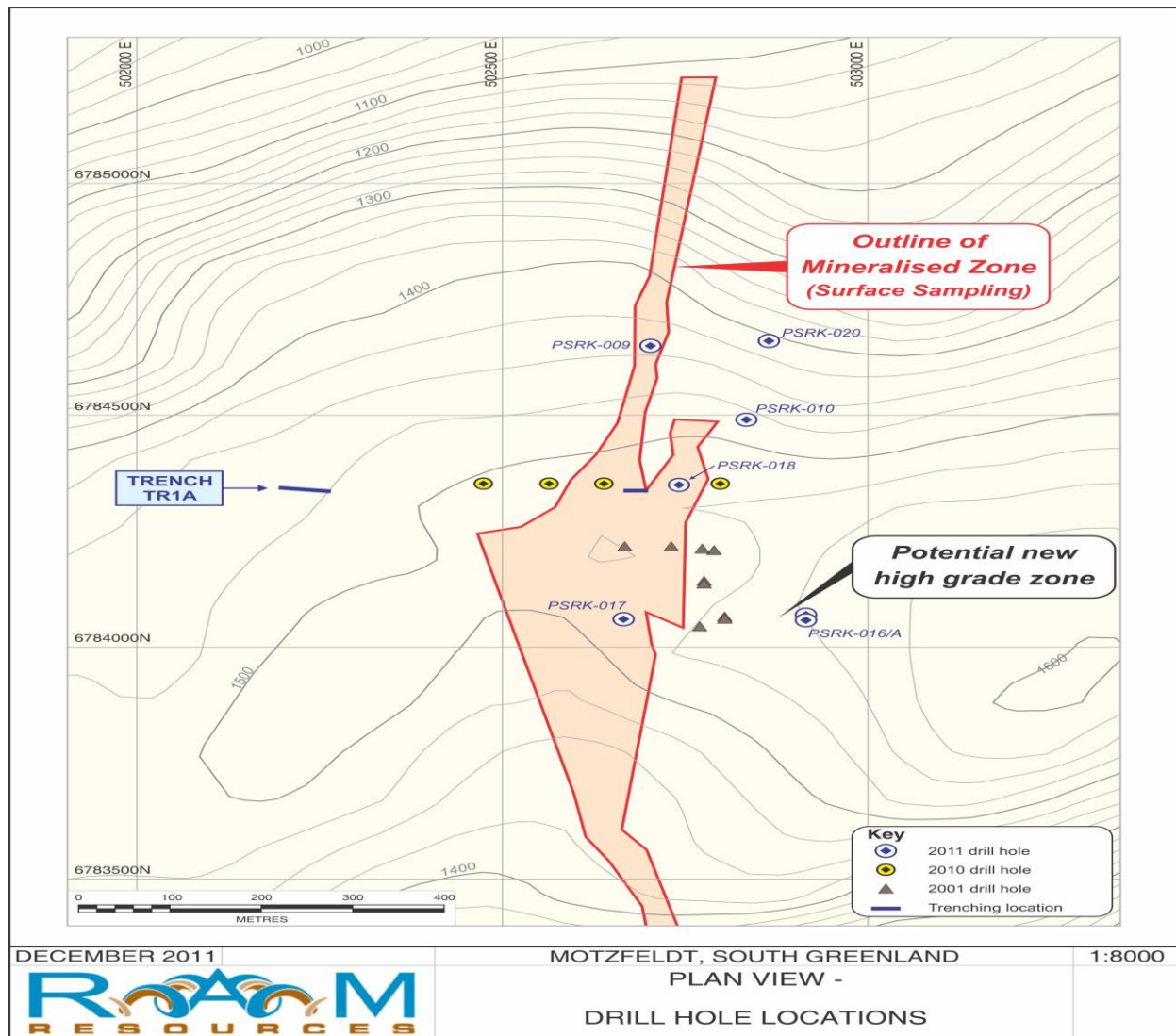
Key outcomes from the 2011 field season:

- ▶ Grades of potentially economic interest for Niobium, Tantalum and REE's is confirmed in all holes analysed to date, from near surface
- ▶ Significant mineralization is confirmed within an area approximately 600 metres north-south and 250 metres east-west
- ▶ Surface sampling successfully demonstrates potential for a new mineralised zone of approximately 700 metres x 250 metres located 1,000 metres to the west of the current zone where drilling has been focused.
- Two new high priority targets Voskop and Drysdale which show very promising grades and favourable geology have been identified
- Mineralisation at Drysdale and Voskop occurs with similar grades and over similar areas to that at Aries, which is an internationally recognised occurrence

The Voskop and Drysdale discoveries have improved the prospectivity of the Motzfeldt Project.

Hole ID	From	To	Intercept (meters)	Nb <sub>2</sub> O <sub>5</sub> ppm	Ta <sub>2</sub> O <sub>5</sub> ppm	ZrO <sub>2</sub> ppm	TREO ppm	HREO %	Comment
<b>PSRK- 009</b>	2.00	194.5	192.5	2,210	278	5,338	2771		Full hole intercept
Including	59.95	151.00	91.05	2,899	384	5,999	3090		
Including	123.26	133.00	9.74	6,516	1,001	5,710	2,470		
<b>PSRK- 010</b>	2.80	174.2	171.4	1,833	179	7,055	3,409		Full hole intercept
Including	94.00	174.2	80.20	2,361	222	8,151	3,902		
<b>PSRK- 017</b>	2.00	147.58	145.6	1,534	152	6,686	2,834		Full hole Intercept
Including	2.00	81.10	79.10	1,990	205	8,816	3,236		
<b>PSRK-016</b>	12.1	52.88	40.78	2,671	294	11,418	5,980		Hole abandoned in dyke
<b>PSRK-016A</b>	13.9	57.93	44.0	2,067	246	9,475	4,900	21.1%	hole intersected by dyke
	130.21	188.13	57.92	2,113	213	6,052	2,196	16.1%	Hole finished in good mineralisation
<b>PSRK_018</b>	64.00	114.00	50.00	2,246	265	7,341	3,163	17.3%	
<b>PSRK_020</b>	30.5	37.8	7.23	1,892	104	7,773	5,549	13.5%	Hole ended at 37.8m

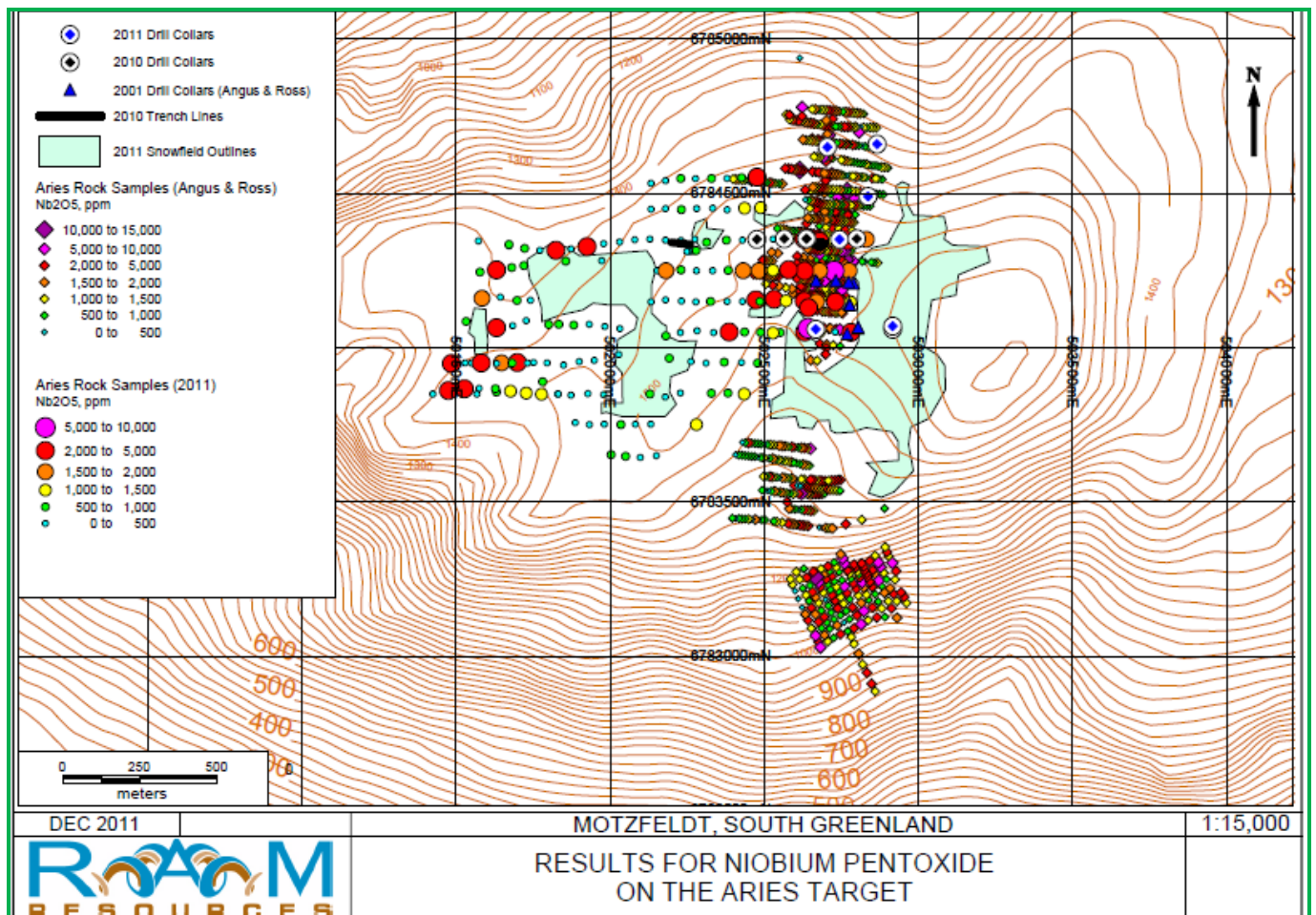
The drill holes completed this season are generally located in the eastern part of the mineralised zone where surface sampling has shown that Ta-Nb grades trend higher and the TREO and Zr grades are slightly lower, so lower TREO grades of 0.25-0.35% were expected. However, the results of the short hole PSRK-016 which is the furthest to the south east has reported average TREO of 0.6% over an intercept of 41 metres, which is amongst the best results for rare earths on the Aries prospect to date. The results from PSRK-016 and PSRK-16A may indicate a new high grade zone which has not previously been sampled as it has been under light snow cover.



High-grade tantalum results seen in this drilling are particularly pleasing with the average grade across all intercepts being 205 ppm Ta<sub>2</sub>O<sub>5</sub> and 1,685 ppm Nb<sub>2</sub>O<sub>5</sub>. Numerous high-grade Ta-Nb results were seen from near surface in all reported herein.

To put these tantalum results in perspective, the average tantalum grades reported above are comparable with a number of tantalum projects. Commerce Resources has reported an average grade of 195 ppm Ta<sub>2</sub>O<sub>5</sub> for its Upper Fir Deposit, Noventa has reported an average grade for its Marropino Deposit of 223 ppm Ta<sub>2</sub>O<sub>5</sub> and Gippsland has reported an average grade of 252 ppm Ta<sub>2</sub>O<sub>5</sub> for its Abu-DabDab Deposit. This comparison should be considered as being broadly indicative only as the three projects sited as comparisons are more advanced than Aries and have established Mineral resources and Reserves which Aries does not have at this stage.

All of the data from the 2011 field season has now been received and be used by SRK Consulting (UK) for the estimation of the initial Mineral Resource for the Aries Prospect.



Rock chip sampling on the **Merino** and **Romney** prospects during the 2011 field season has proved the presence of mineralization for the targeted elements Ta<sub>2</sub>O<sub>5</sub>, Nb<sub>2</sub>O<sub>5</sub>, ZrO<sub>2</sub> and REOs. In both prospects there are zones of higher grade mineralization that merit further investigation.

On January 13, 2012, Ram announced that 76 rock chip samples were acquired over the Merino and Romney prospects. The best rock chip sample assay from the merino prospect intercepted 6,051 ppm Nb<sub>2</sub>O<sub>5</sub>, 757 ppm Ta<sub>2</sub>O<sub>5</sub>, 3.16% ZrO<sub>2</sub> and 1.08% TREO. HREO content at Merino averages 18.5% with best of 27.7%. 18 (of 53) samples of Merino have grades of > 1,000 ppm Nb<sub>2</sub>O<sub>5</sub>.

During the 2011 field season work on Exploration Licence 2011/24 identified two new high priority exploration targets Voskop and Drysdale.

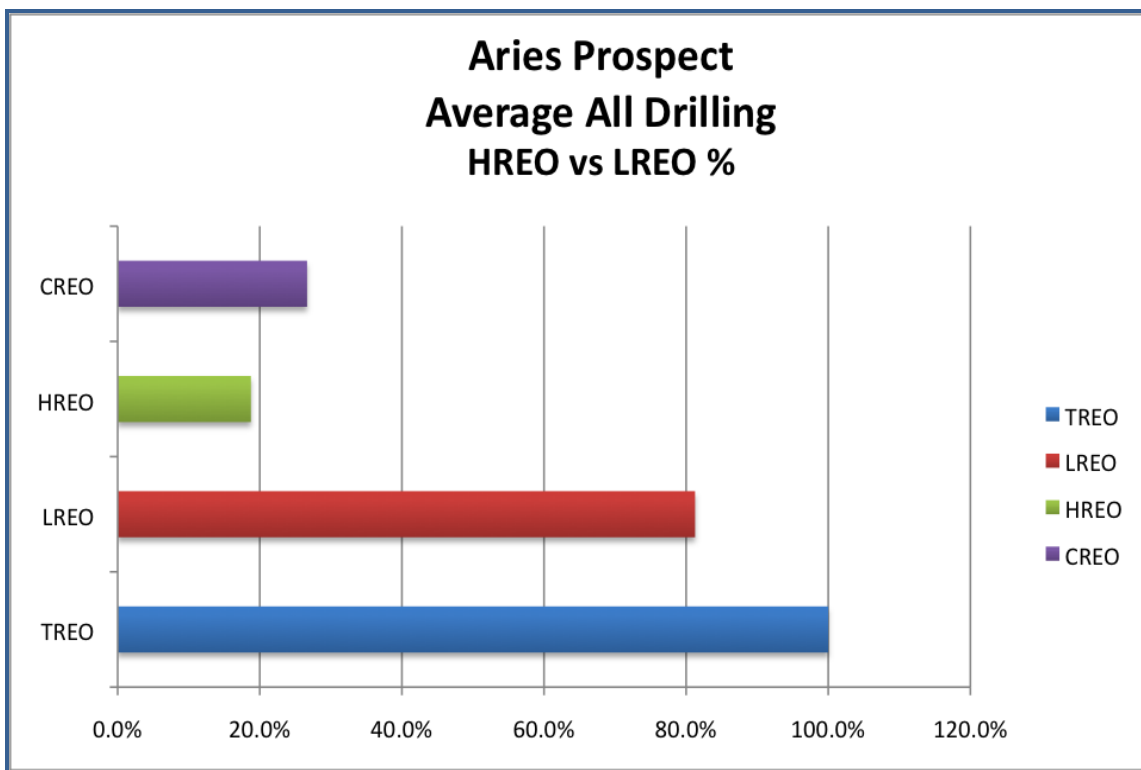
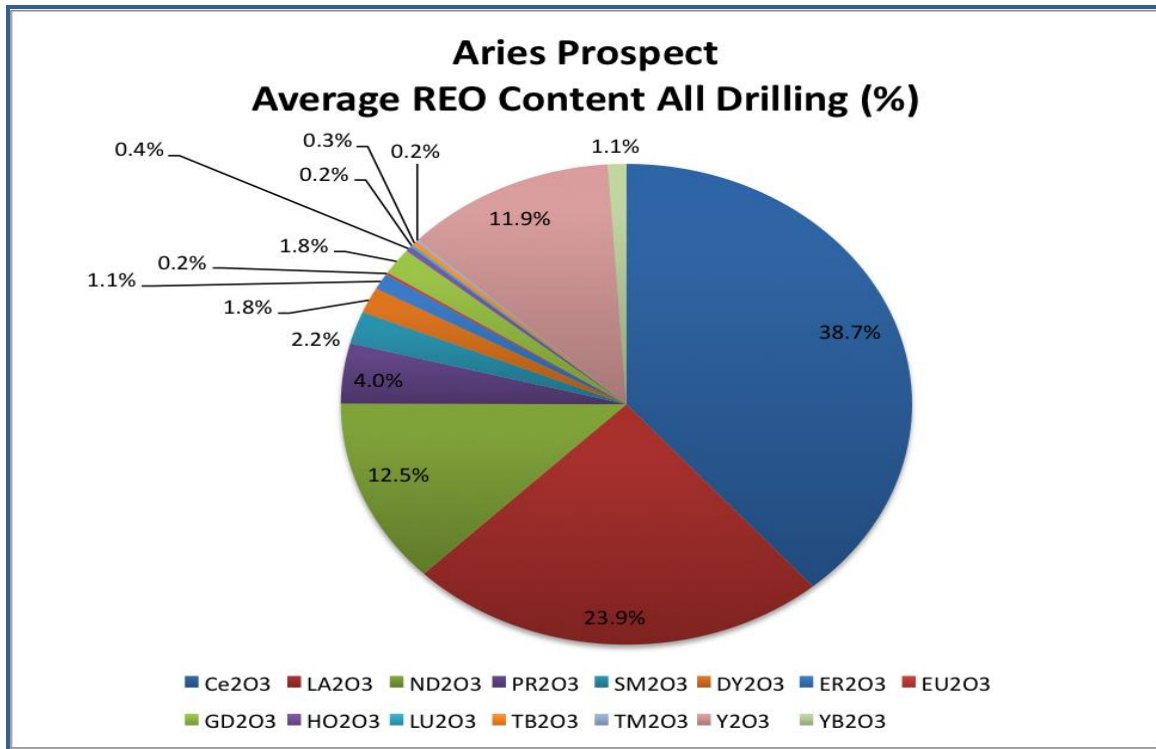
A total of 48 surface samples were taken at Voskop which shows very encouraging results, with the best assay being; 10,829 ppm Total Rare Earth Oxides (“TREO”), 3,032 ppm Nb<sub>2</sub>O<sub>5</sub>, 403 ppm Ta<sub>2</sub>O<sub>5</sub> and 2.97% ZrO<sub>2</sub>.

13 samples (of 48) returning assays over 2,000 ppm Nb<sub>2</sub>O<sub>5</sub>, with an average of 1,431 ppm across all samples. High grades for ZrO<sub>2</sub> are observed on both targets with five samples above 2% ZrO<sub>2</sub>.

A total of 99 surface rock chip samples were collected along the ridge at Drysdale with best assay result being 12,467 ppm TREO, 16,737 ppm Nb<sub>2</sub>O<sub>5</sub>, 830 ppm Ta<sub>2</sub>O<sub>5</sub> and 1.3% ZrO<sub>2</sub>.

The Drysdale Prospect is a very prospective target with high grades in samples collected over an area of about 1.4 km x 0.5 km. A total of 27 (out of 99) samples returned Nb<sub>2</sub>O<sub>5</sub> results above 2,000 ppm whilst the average is 1,458 ppm.

The graphs below show the composition of the individual Rare Earth Oxides (REO) that comprise the TREO reported (i.e. the sum of all REE's). The data in the graphs is a composite of all the drill hole data for Aries to date and includes 2001, 2010 and 2011 Drilling. LREO comprise (La,Ce,Pr,Nd,Sm), HREO comprise (Eu,Gd,Tb,Dy,Ho,Er,Yb,Lu,Y), whilst TREO = LREO+HREO . The concept of Critical Rare Earths ("CREO") has been advanced by a number of industry observers including Technology Metals Research ("TMR") and comprise (Dy,Y,Tb,Eu,Nd), which are the rare earth elements that are forecast to remain in supply deficit beyond 2015.



➤ **Telfer Area Gold Prospects**

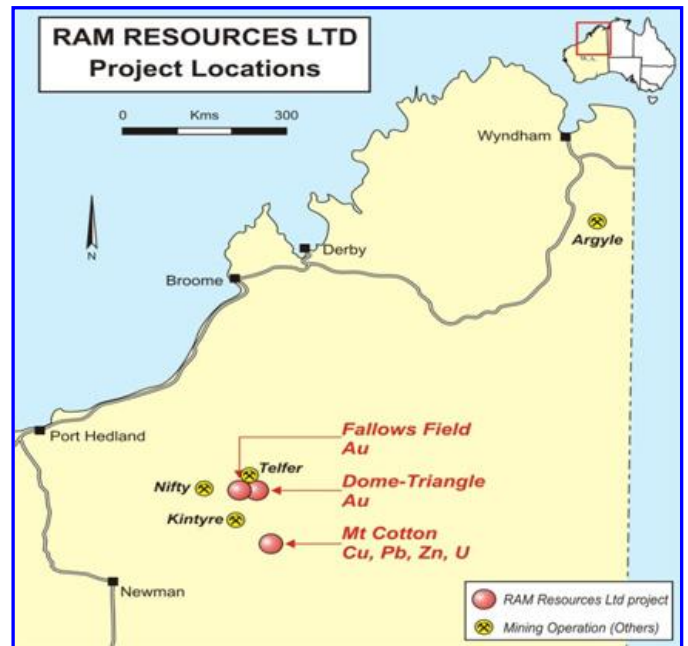
Ram holds two Exploration Licences located in close proximity to Newcrest Mining's Telfer Mine, which is reported to contain reserves of 13.2 million ounces gold and 0.5 million tonnes copper.

➤ **Triangle Dome Gold Project**

Ram's 100%-owned Dome Triangle Gold Property, for which a licence was granted in July 2010, is located 27 km to the east of the Telfer Gold Mine. The area has been explored to a by a number of companies, including Carr Boyd Minerals, Western Mining and Newcrest, over a period of 25 years.

A site visit was completed in November by Ram's Consultants CSA Global who carried out a number of ground traverses updating the local geological mapping, reviewed and re logged the historical drill core with the aim of improving the understanding of the structural geology of the dome area.

This work confirmed the conclusion of past exploration that there is limited opportunity for near surface mineralisation at the Triangle Dome, and that future exploration should focus on deeper drilling 400-500m to determine if similar structural conditions exist with E45/2726 that host the nearby Telfer mine.



➤ **Fallows Field Gold Project**

Ram's 100%-owned Fallsows Field tenement is located approximately 10 km to the south of the Telfer Gold Mine and covers an area around the old Fallow Field Gold Mine, which is recorded to have produced in the order of 50,000 ounces of gold.

The tenement is subject to an option agreement with Newcrest Mining, whereby Newcrest has a 3-year option (from date of grant) to acquire the tenement for A\$ 500,000 plus a 1.5% NSR royalty. During the option period, Newcrest also has the right to carry out exploration on the tenement and must keep the tenement in good standing, including paying all outgoings.

## **Management**

**Michael Drew, B.Bus, Grad Dip App Corp, ACIS, Managing Director**, has a strong commercial and corporate background with 19 years experience in the mining and resources industry in Australia, Africa and South-East Asia. He has experience in mining project development, joint ventures and project financing. Mr. Drew was previously Chief Financial Officer of Precious Metals Australia and played an integral part of their development of the original Windimurra Vanadium Mine in Western Australia and the subsequent feasibility into the re-development and financing of Windimurra in 2007. He also served as a director for Apollo Minerals.

**Neville John Bassett, BBus., FCA, Non-Executive Director**, is a Chartered Accountant operating his own consulting business, specializing in the area of corporate financial and management advisory services in a diversity of industry sectors such as stock broking, property and resources and includes significant knowledge and exposure to the Australian financial markets. He is a director or company secretary of a number of publicly listed and private companies, including Vector resources, Mambo resources and Neurodiscovery.

**James Lumley, Non-Executive Director**, has been working in the resource industry for a number of years and previously having worked at director level in the London property sector for more than 15 years, providing property investment opportunities for international institutions. More recently, Mr. Lumley has acted as a consultant for a number of companies in the resource and clean energy sectors, assisting them with raising capital, establishing joint venture relationships, and new project opportunities.

## **Finance**

In April 2011, Ram completed the placement of 50 million ordinary shares at an issue price of A\$ 0.02, with a free attaching listed option on a one for one basis exercisable at A\$ 0.03 on or before March 30, 2012.

The Company has a cash position of A\$ 2.1 million as at September 30, 2011.

### **Investment recommendation:**

Ram has focused its primary attention to explore the Motzfeldt multi-element Project in southern Greenland, which is renowned as one of the Island's major mineral occurrences. In addition, the Company has some gold and base metal projects in proximity of Newcrest Mining's rich Telfer Mine.

After having completed an initial 51% of the Motzfeldt Project in October 2010, Ram and the Vendors signed formal agreements on the option to acquire the remaining 49% interest in one stage.

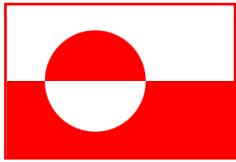
The Motzfeldt Project has been explored earlier in the 1980s by the GEUS, which estimated a target of 200-500 million tonnes at an average grade of 1800-2200 ppm Nb<sub>2</sub>O<sub>5</sub> and 130 – 160 ppm Ta<sub>2</sub>O<sub>5</sub> with potential to outline internal high-grade zones at the Aries Prospect.

The focus of Ram's successfully completed 2011 drilling program focused on the Aries Prospect confirms high-grades of potentially economic interest for niobium, tantalum and REEs in all 4 drill holes of 7 drill holes analysed to date.

Finalised results of drill cores should be available at the end of this month with all of the data then to be used for estimation of the initial Mineral resource estimate for the Aries Prospect.

At a current market capitalization of just A\$ 3.8 million, the positive results from the Company's 2011 field season program, funded by an initial budget of A\$ 2.5 million, being followed up by an initial Inferred Mineral resource estimate to be expected by the end of this month, in our view, shares of Ram are offering a highly attractive speculative investment potential.

Our next price objective is A\$ 0.05.



## Self-rule will unlock Greenland's rich mineral potential

Greenland, the world's biggest island, has had "Home Rule" since 1979, and "Self Rule" since June 2, 2009, which means that the island has assumed the political decisions and competences that were previously issued from Denmark.

On January 31, 2010, the Mineral Resource Act approved by the government of Greenland, came into effect. There exists a general acceptance within Greenland that the mining industry holds the key to the island's future economic stability and growth.

The period since 1990 has been the first for many years with no active mines operating in Greenland. This was one of the reasons that the Mineral Resources Act was changed in 1991 in an attempt to attract investment from renewed mineral exploration.

In 1998, the Bureau of Minerals and Petroleum (BMP) took over from the Danish authorities and from 2002 a market strategy was designed where the Greenland mineral potential was to be promoted on a systematic continuous basis.

From 2002 and onwards the number of exclusive licences has grown from 17 to approximately 100 exclusive licences, including current operations.

From 2003 to 2010 the Government of Greenland has issued 4 exploitation licences. As the number of drillings rose in the years 2002 to 2010, the exploration expenditure spent exploring Greenland has expanded to more than DK 525 million (US\$ 100 million).

## Greenland's rich mineral potential driven by REEs and uranium

While before 2009 exploration activities had been particularly focused on base metals, precious metals, iron ore and gems, in the last few years exploration has been driven by the search for rare earth elements and uranium, led by **Greenland Minerals and Energy** of Australia (Kvanefjeld deposit) and also including **Hudson Resources** of Canada (Sarfartoq deposit), **NunaMinerals** of Greenland (Queguertaasag and Tijijsaaq prospects), **Ram Resources** of Australia (Motzfeldt project) and non-listed **Avannaa Resources** of Denmark (Karrat deposit).

With exploration for and exploitation of radioactive elements not being allowed, in September 2010 the Greenland government introduced an amendment to Standard Terms for Exploration Licences. The amendments allow for upon approval the inclusion of radioactive elements as exploitable minerals for the purpose of thorough evaluation and reporting.

The Greenland-Danish Geological Survey (GEUS) has published a summary of biggest mineral deposits in Greenland which includes one zinc-lead deposit (Citronen), one molybdenum deposit (Malmberg), one PGE-gold deposit (Skaergaard) and three REE deposits (Kvanefjeld, Kringlerne and **Motzfeldt**).

In November 2010, **Ram** confirmed that 5.0 million fully paid ordinary shares were issued to Greenland Minerals and Energy (ASX - GGG) in consideration for the provision of equipment and associated services in relation to the Company's exploration program at the Motzfeldt Project.

GGG's Kvanefjeld Project, the world's largest undeveloped multi-element occurrence of REEs, uranium and zinc (619 million tonnes REO) is located approximately 60 km to the southeast of Motzfeldt.

In December 2011, GGG announced that the Government of Greenland has amended the terms of its exploration licence that covers Kvanefjeld such that it is now inclusive uranium.