

## QUARTERLY ACTIVITIES REPORT

For the quarter ended 31 December 2011

### HIGHLIGHTS

#### RARE EARTHS

##### *Browns Range Project*

- Outstanding high grade drill results confirm Browns Range as a stand-out HREE project and extends mineralised zones:
  - Wolverine assays include 24m @ 2.18% TREO from 96m including 7m @ 5.35% TREO
  - Highest HREE grade to date at Area 5 – 2m @ 13.9% TREO from 4m
  - Several holes at Wolverine ended in high-grade HREE mineralisation
- Diamond drill program commenced, initial results indicate extension of mineralised zone to below 120m, and open at depth
- Off-take discussions advanced with potential international partners

##### *John Galt Project*

- Rock chip samples from John Galt return results up to 42% TREO with approximately 95% HREE including 36,791ppm (**3.68%**) dysprosium
- Metallurgical tests indicate excellent recovery rates (>90%) at John Galt with potential for concentrate grades greater than 40%
- High grade mineralisation in John Galt scree material - a new exploration target

#### CORPORATE

- Joint Venture with Toro Energy to earn up to 80% interest in mineral rights other than uranium in Toro's Browns Range NT tenements
- Agreement to grant Kurundi Project base metals mineral rights to Tungsten West, with Northern Minerals retaining all REE, uranium and gold rights

#### About Northern Minerals

Northern Minerals Limited (ASX: NTU) is focused on development of heavy rare earth elements (HREE), with a large and prospective landholding in Western Australia and the Northern Territory.

The Company's flagship project is Browns Range, where it has a number of prospects with high value, HREE, in xenotime mineralisation. In particular, the mineralisation includes high levels of dysprosium and yttrium, which are in short supply globally. Following outstanding drill results in 2011, the Company is focused on advancing Browns Range toward production, using a relatively simple and low cost processing flow sheet to produce a high grade concentrate. The Company is aiming to produce and deliver HREE in concentrate by 2015. Northern Minerals also has a HREE exploration program underway at the geologically similar John Galt project.

#### ASX CODE: NTU

**Northern Minerals Limited**

ABN 61 119 966 353

#### Directors:

Kevin Schultz Non-exec Chairman  
George Bauk Managing Director / CEO  
Dudley Kingsnorth Non-exec Director  
Adrian Griffin Non-exec Director  
Colin McCavana Non-exec Director

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**Shares on Issue as at 31/12/11:**  
175,500,000

**Market Capitalisation as at 31/12/11:**  
\$71,000,000

**12 month Share Range:**  
\$0.36 - \$1.07

## QUARTERLY ACTIVITIES REPORT

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### EXECUTIVE SUMMARY

Northern Minerals has delivered a number of significant exploration and corporate milestones which have further advanced it toward production of Heavy Rare Earth Elements. A highlight of the quarter was the outstanding assay results received from RC drilling at Browns Range, which featured the highest grades of Total Rare Earth Oxides (TREO) recorded to date. The results have confirmed the status of Browns Range as stand-out new HREE prospect of potentially global significance.

In December, the Company commenced a diamond drilling program at Browns Range, with initial indications of depth extensions to the identified mineralisation. Results from this program are expected in the first quarter of 2012. Northern Minerals has also continued to advance its metallurgical studies from Browns Range, the results of which are also being used to progress off-take discussions with a number of international parties.

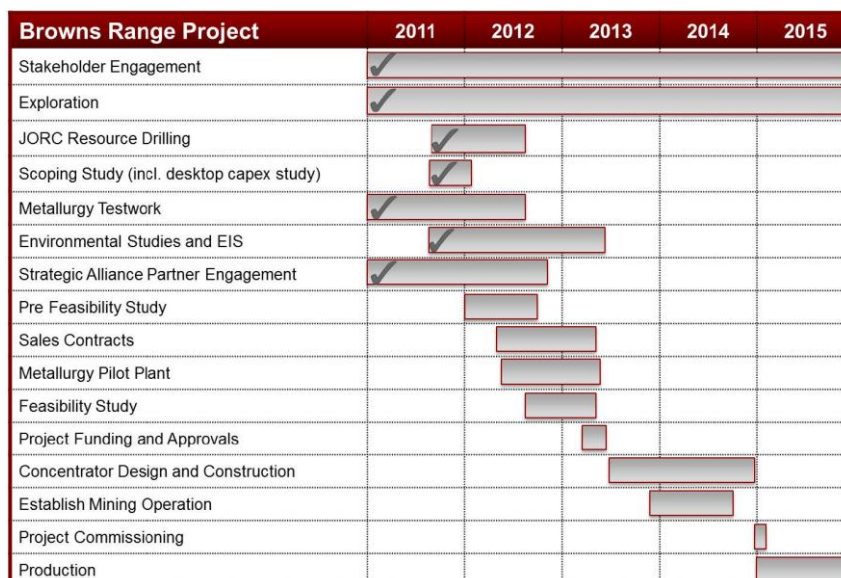
The Company has commenced on-ground exploration activities at John Galt, following completion of Aboriginal Heritage Surveys. A rock chip program at John Galt returned spectacular high grade samples, and identified an early exploration target in the talus (scree) material at John Galt.

Northern Minerals completed two transactions during the quarter which have consolidated a dominant land position in a highly prospective region in the Northern Territory (NT), and strengthened the focus on rare earths assets. These included the acquisition of REE rights off Toro Energy within its Browns Range project.

While prices for REE have declined from their highs of mid 2011, there are continued indications in the market of potential supply restrictions, particularly for HREE. A key feature of the market during the quarter was the allocation of export quotas from China, which is likely to have the effect of reducing exports of strategic HREE from China, and potentially putting upward pressure on global HREE prices.

### PATHWAY TO PRODUCTION

Northern Minerals vision is to become the global benchmark in the production of heavy rare earth elements, and to produce and deliver contained HREO in concentrate in 2015 via the following pathway to production.



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### RARE EARTH ELEMENTS

#### *Browns Range Project*

The December quarter featured further significant assays results from the Browns Range RC drilling program, including some of the highest grades of HREE received to date. This followed a series of outstanding assays results from Browns Range announced in the previous quarter.

The drilling program confirmed high-grade HREE mineralisation at the first four targets at Browns Range, and highlighted the Wolverine HREE prospect as an outstanding discovery. The results have provided the confidence for Northern Minerals to move quickly into the next phase of exploration with a diamond drilling, and the Company targeting the delineation of a JORC resource in mid-2012.

Browns Range Project	2011	2012	2013	2014	2015
Stakeholder Engagement	✓				

During the quarter the company met with the Kimberley Land Council (KLC) and the Central Land Council (CLC) to update them on the company's activities with particular focus on the Browns Range Project. As part of this process a meeting was held with the Kimberley Regional Economic Development group (KRED) to provide an update on the project and also understand the business model of KRED and how it could work with Northern Minerals on the project. This will continue to be a focus in 2012 for the exploration and study programs.

An aboriginal heritage survey was completed during the quarter as part of the preparation of the diamond drilling program which commenced in December.

Browns Range Project	2011	2012	2013	2014	2015
Exploration	✓				

The final batch of assay results announced in November included the highest HREE grades received to date (**2m @ 13.9% TREO**), from a hole at the Area 5 prospect. Best drilling intersections are included below (intersections have been determined using a 0.2% TREO cut-off and a maximum of 1m of internal dilution). (A full table of significant results is included as Appendix 1)

#### **Wolverine:**

Width (m)	TREO (%)	Dy <sub>2</sub> O <sub>3</sub> (ppm)	From (m)	Hole ID
24	2.18	2,072	96	NMBRRC160
7	5.35	5,151	Inc. 112	
6	2.68	2,321	99	NMBRRC163
2	6.71	5,838	Inc. 103	
5	1.1	979	95	NMBRRC161

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### Area 5 and Area 5 North:

Width (m)	TREO (%)	Dy <sub>2</sub> O <sub>3</sub> (ppm)	From (m)	Hole ID
4	7.14	6712	4	NMBRRC138
2	13.9	13112	Inc. 4	
3	2.13	944	Inc. 70	NMBRRC127
19	0.73	517	56	NMBRRC128
3	1.66	1339	62	
3	1.23	1040	Inc. 1	NMBRRC131
3	1.41	1093	14	

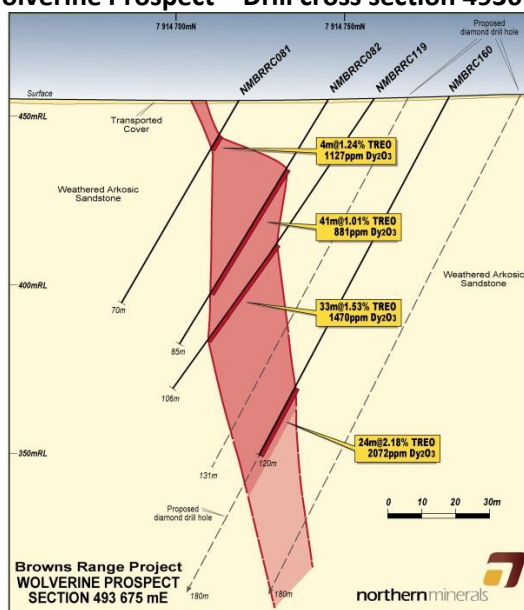
NB – TREO: Total Rare Earth Oxides – Total of La<sub>2</sub>O<sub>3</sub>, CeO<sub>2</sub>, Pr<sub>6</sub>O<sub>11</sub>, Nd<sub>2</sub>O<sub>3</sub>, Sm<sub>2</sub>O<sub>3</sub>, Eu<sub>2</sub>O<sub>3</sub>, Gd<sub>2</sub>O<sub>3</sub>, Tb<sub>4</sub>O<sub>7</sub>, Dy<sub>2</sub>O<sub>3</sub>, Ho<sub>2</sub>O<sub>3</sub>, Er<sub>2</sub>O<sub>3</sub>, Tm<sub>2</sub>O<sub>3</sub>, Yb<sub>2</sub>O<sub>3</sub>, Lu<sub>2</sub>O<sub>3</sub>, Y<sub>2</sub>O<sub>3</sub>

At Wolverine 41 holes have been drilled with mineralisation identified over a zone of up to 200m in length and open at depth. The mineralised zone strikes approximately east-west and dips steeply towards the north. Results from RC drilling indicate mineralisation continues to a vertical depth of approximately 100m, with one inclined hole ending in mineralisation at a depth of 120m with the last 8m averaging 4.8% TREO. Diamond drilling which commenced in December 2011 is testing the depth extent of mineralisation.

At the Area 5 prospect, 28 drill holes were completed, with significant mineralisation intersected in several holes over downhole widths of 2-19m. Shallow high grade mineralisation was intersected in NMBRRC138, with 2m @ 13.9% TREO from 4m. Mineralisation occurs mostly in holes drilled in the southeastern corner of the target area, and is open to the southeast. Four holes were completed at the Area 5 North prospect, to test a re-interpretation of the geometry of the high-grade mineralisation encountered in hole NMBRRC011. These four drill holes were designed to test for possible northwest or northerly-plunging high grade shoots of mineralisation. NMBRRC127 intersected 3m @ 2.13% TREO from 70m, however none of the other drill holes intersected any significant mineralisation.

A regional soil sampling program has also been completed across Browns Range to define additional potential drill targets. Results from this program have been received and are currently being compiled, reviewed and interpreted to help define new drill targets.

### Wolverine Prospect – Drill cross section 493675E





## QUARTERLY ACTIVITIES REPORT

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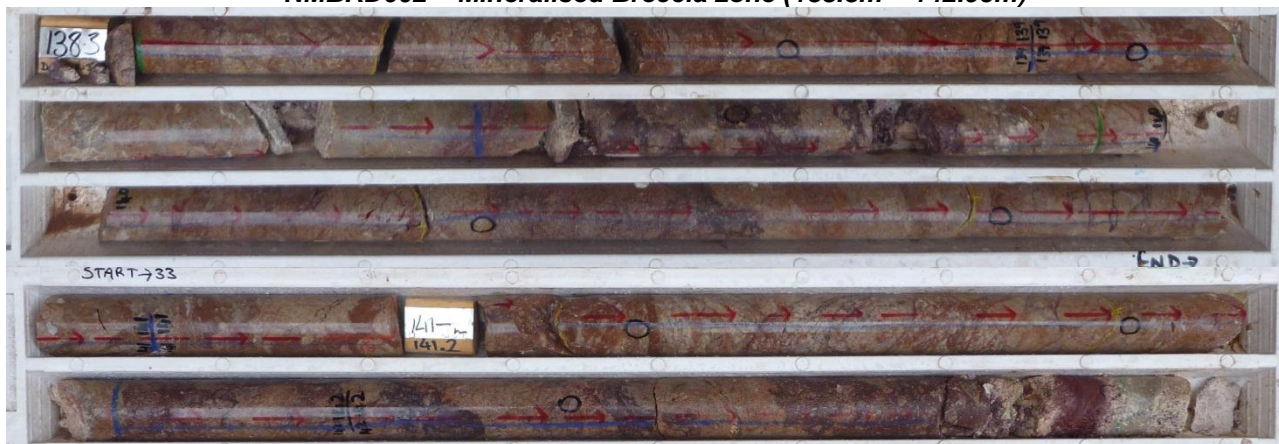
Browns Range Project	2011	2012	2013	2014	2015
JORC Resource Drilling		✓			

Following the promising results from the RC drilling program, Northern Minerals has commenced the next phase of HREE exploration at Browns Range with a 1,300m diamond drilling program. The program commenced in December and will be completed in February 2012. The program is initially concentrating on the Wolverine prospect.

The diamond drilling program is an essential step in the definition of a JORC resource at Browns Range, which is targeted for mid 2012. The focus of the diamond drilling program is to further define the geometry and orientation of the mineralised geological structures at Wolverine, as well as to test the mineralisation at greater depth, particularly where a number of RC drill holes have ended in mineralisation.

Four diamond drill holes were completed in December, , with visual observations and portable XRF measurements indicating potential extensions of the HREE mineralised zone to below 120m vertical depth at the Wolverine prospect. The drilling program was stopped over the Christmas/New Year break and recommenced in early January.

**NMBRD002 – Mineralised Breccia zone (138.3m – 142.95m)**



Laboratory assays are expected in February, but all holes completed to date have visual indications of xenotime mineralisation and anomalous yttrium measurements recorded (selected and spot measurements of >1,000ppm yttrium and up to 400,000ppm yttrium) by a portable XRF\*. Xenotime, an yttrium phosphate mineral, is the dominant HREE mineral identified at Browns Range. The diamond program is targeting areas of mineralization identified by RC drilling, and the first holes from the program have intersected the mineralised target. The extended mineralisation of the Wolverine prospect, which has yet to be closed off at depth, provides more confidence in the resource potential of the prospect.

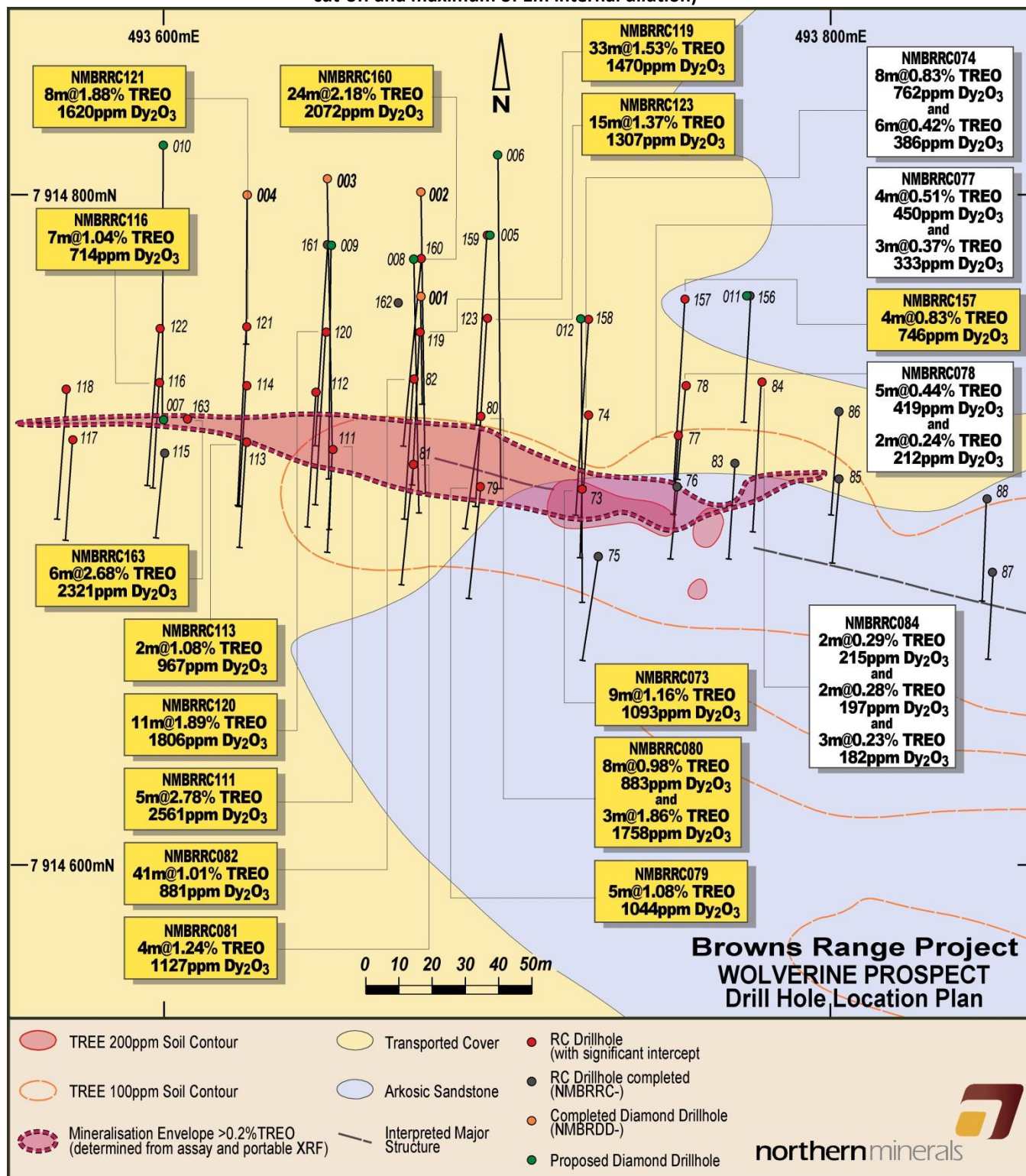
\* - A Niton XL3t 950 Gold D+ Mining Analyser portable XRF unit was used for yttrium measurements. Previous analysis of XRF results and laboratory assay results for yttrium on Browns Range RC drill samples has shown a reliable correlation between the two sets of results.



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**Wolverine Prospect – Diamond Drill hole location plan (all drill hole intersections quoted based on >0.2% TREO cut-off and maximum of 1m internal dilution)**



During the quarter, Bateman Engineering completed a desktop capital study estimate based on the metallurgical flow sheet prepared by Nagrom (see below) and assuming a 750,000 tonnes per year production rate. The capital cost was prepared in accordance with a Bateman Class 4 study with a confidence level of +/- 35%. This class of estimate is based on priced equipment and factored commodities

The first pass operating costs have been produced for the production plant and are currently being reviewed.

The flowchart illustrates the Grizzly Feeder Circuit process. It begins with a **Grizzly** (Screening) unit, which feeds into a **Primary Crush** (Crushing/Grinding) unit. The output of Primary Crush goes to a **Rod Mill / Ball Mill** (Crushing/Grinding). The Rod Mill / Ball Mill has a feedback loop for **+0.8mm** material returning to the Primary Screen. The Primary Screen (0.8mm) separates the material into a **Primary WHGMS 10000 Gauss** (Magnetic Separation) unit and a **Primary Screen 0.8mm** (Screening) unit. The Primary WHGMS unit has a **CON** (Concentrate) stream going to a **Regrind 106µm** (Crushing/Grinding) unit and a **TAIL** (Tail) stream going to the **Circuit Tails** (Flotation) unit. The Primary Screen 0.8mm unit has a **-0.8mm** stream going to the Primary WHGMS unit. The **Regrind 106µm** unit has a **CON** stream going to a **Scavenger WHGMS 10000 Gauss** (Magnetic Separation) unit and a **TAIL** stream going to the **Circuit Tails** unit. The Scavenger WHGMS unit has a **CON** stream going to the **Flotation Rougher / Cleaner / Scavenger** (Flotation) unit and a **TAIL** stream going to the **Circuit Tails** unit. The **Flotation Rougher / Cleaner / Scavenger** unit has a **CON** stream going to the **Final Concentrate** (Crushing/Grinding) unit and a **TAIL** stream going to the **Circuit Tails** unit.

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graph TD
    Grizzly[Grizzly] --> PrimaryCrush[Primary Crush]
    PrimaryCrush --> RodMill[Rod Mill / Ball Mill]
    RodMill -- "+0.8mm" --> PrimaryScreen[Primary Screen 0.8mm]
    PrimaryScreen -- "-0.8mm" --> PrimaryWHGMS[Primary WHGMS 10000 Gauss]
    PrimaryWHGMS -- "CON" --> Regrind106[Regrind 106µm]
    PrimaryWHGMS -- "TAIL" --> CircuitTails[Circuit Tails]
    Regrind106 -- "CON" --> ScavengerWHGMS[Scavenger WHGMS 10000 Gauss]
    Regrind106 -- "TAIL" --> CircuitTails
    ScavengerWHGMS -- "CON" --> Flotation[Flotation Rougher / Cleaner / Scavenger]
    ScavengerWHGMS -- "TAIL" --> CircuitTails
    Flotation -- "CON" --> FinalConcentrate[Final Concentrate]
    Flotation -- "TAIL" --> CircuitTails
  
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**KEY**

- Crushing/Grinding
- Magnetic Separation
- Screening
- Flotation

**Legend:**

- CON: Concentrate
- TAIL: Tail
- Grizzly: Circuit Yield %
- Primary Screen: Re Grade %
- Flotation: Screening Flotation

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Browns Range Project	2011	2012	2013	2014	2015
Metallurgy Testwork	✓				

Metallurgical testwork is continuing at Browns Range, in conjunction with the drilling programs. The testing continues to reaffirm the dominance of xenotime mineralisation at Browns Range, and preliminary results from test work on samples from the Gambit and Wolverine prospects indicate the ability to produce concentrate grades of greater than 30% TREO. This reinforces the early indications that the ore is amenable to a relatively simple flow sheet, incorporating crushing, grinding, magnetic separation and flotation (see Nagrom Conceptual Flowsheet above).

During the quarter, the Company commenced a bulk sampling program, involving the collection of approximately three tonnes of RC drilling samples from three prospects, targeting three different grades.

The bulk samples will be used to produce sufficient concentrate to provide to potential off-take partners. Northern Minerals has been approached and commenced discussions with a number of international REE end users interested in potential off-take arrangements.

Browns Range Project	2011	2012	2013	2014	2015
Environmental Studies and EIS		✓			

Outback Ecology have been contracted to provide environmental consulting services and have completed a desktop study on the Browns Range project including a site visit and consultation with the Department of Mines and Petroleum (DMP) and Department of Environment and Conservation (DEC). An environmental approvals process and baseline survey for the Browns Range Project was presented to the company which included detailed work packages, timelines and budgets. The work packages include:

- Pilot subterranean fauna survey
- Terrestrial vertebrate fauna survey
- Short range endemic (SRE) invertebrate fauna survey
- Flora and vegetation survey
- Hydrogeological and surface water supply review and strategy

On the 11<sup>th</sup> of January 2012, the SRE Invertebrate Fauna Survey commenced with a field team from Outback Ecology setting traps and collecting other data. The data is currently being reviewed and the traps will be collected in approximately 8 weeks from the date of setting.



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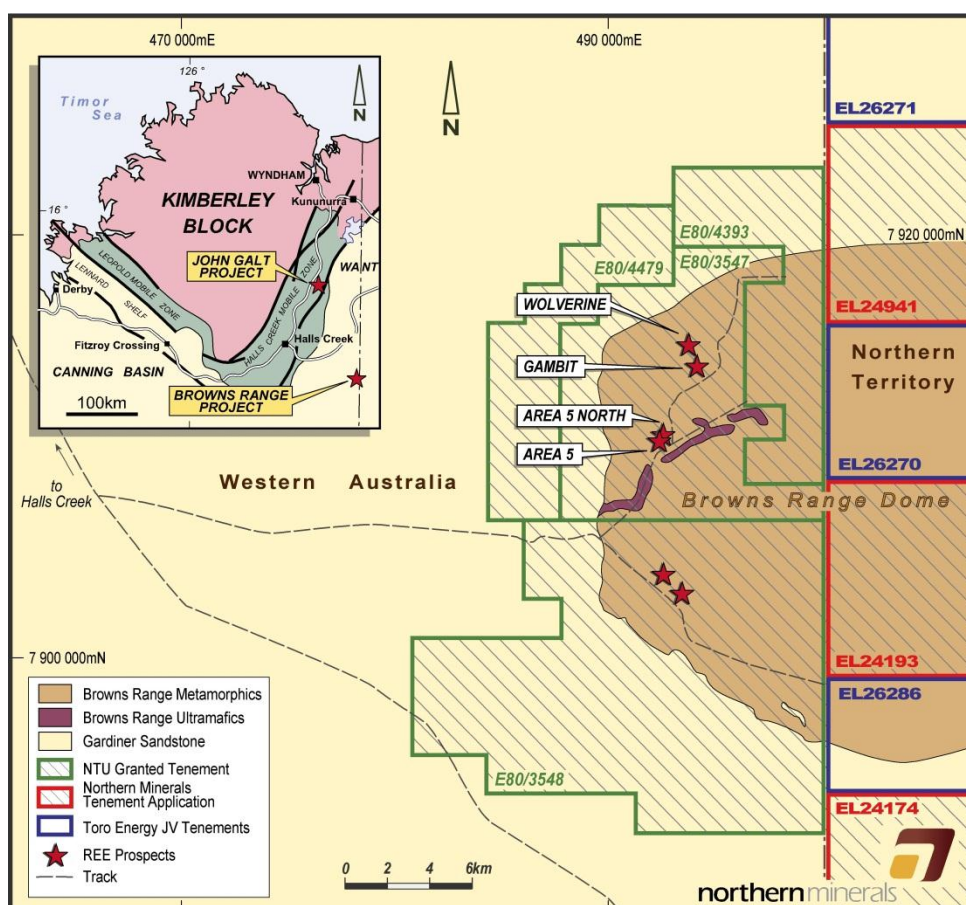
Browns Range Project	2011	2012	2013	2014	2015
Strategic Alliance Partner Engagement	✓				

Northern Minerals has identified and continued discussions with a number of large, international REE end users interested in potential off-take arrangements. Engagement with these potential strategic alliance partners has accelerated since the New Year with several unsolicited approaches from globally high profile organisations.

The Company has developed a shortlist of potential partners and has signed confidentiality agreements with a number of these. Advancing discussions with these potential partners is a priority for Northern Minerals in the coming quarter with meetings planned in Australia and overseas.

The focus of these discussions is to identify the most appropriate alliance partner, considering a range of criteria including access to capital and technology.

While the organisations cover a diverse range of sizes and industries, they share the common characteristic of securing a low-risk, cost effective and secure source of heavy rare earths. Several have conceded that the Northern Minerals Browns Range and John Galt projects are collectively one of the few heavy rare earth projects likely to be in production in the near term due to the unique xenotime mineralisation's simple flowsheet and low capex requirements.



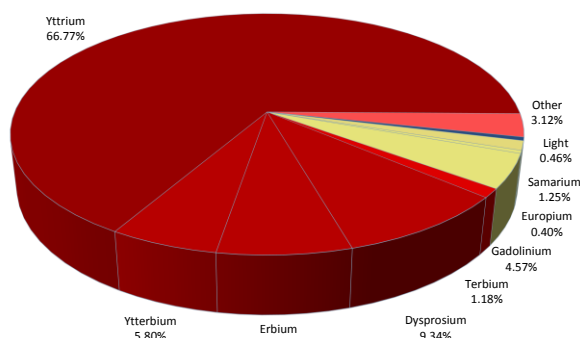
## QUARTERLY ACTIVITIES REPORT

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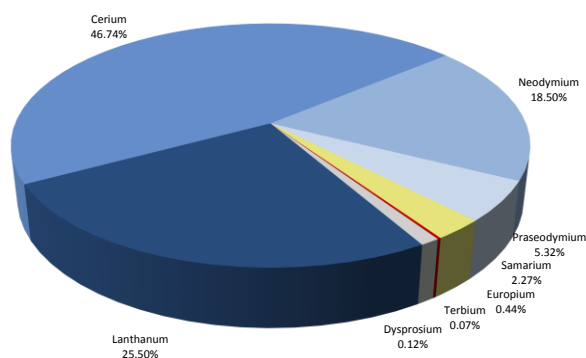
### John Galt Project

In January 2012, Northern Minerals announced results from a rock chip sampling program undertaken at the John Galt project. Results included exceptional grades of up to 42% TREO\* including 36,791ppm (3.68%) dysprosium ( $Dy_2O_3$ ) from rock chips, with the majority of samples returning high grades above 1% TREO. The TREO distribution is dominated by high value Heavy Rare Earth Oxides (HREO), with approximately 95% of REO's being HREO. Petrological studies of rock chip samples also confirmed the similarity of the mineralisation style with that of the Browns Range project, with xenotime identified in quartz veins and quartz-arenite breccias.

DISTRIBUTION OF RARE EARTHS AT JOHN GALT\*



DISTRIBUTION OF RARE EARTHS AT LYNAS MT WELD\*\*



Heavy	94%
Medium	5%
Light	1%

\*Based on average surface rock chip sampling \*\*Mt Weld REO composition data above sourced from the Lynas Corporation website + 20 ore samples before concentration from John Galt Main Zone

A total of 45 rock chip samples were taken in November 2011 from several sites including the Main Zone at John Galt, where historical exploration identified high grade HREE. Samples were selected using a spectrometer, a portable XRF (measuring yttrium) and visual xenotime mineralisation. 33 of the 45 samples returned assays greater than 1% TREO. A summary of the results with TREO greater than 1% are shown in Appendix 2 of this report.

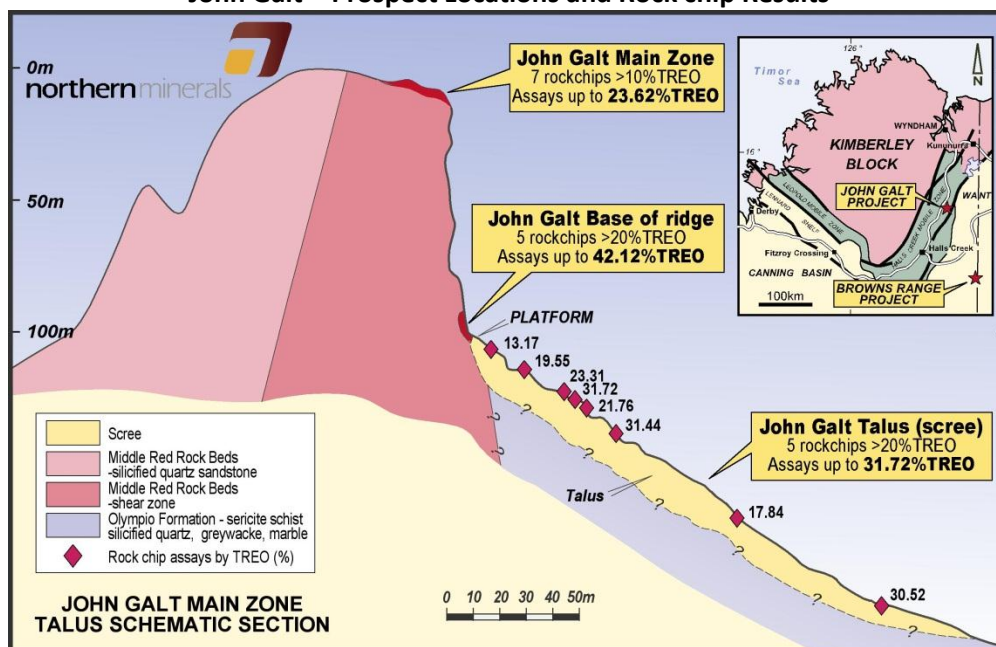
The program included sampling of the loose talus or scree material at the bottom of the John Galt ridge, which returned assays up to 31% TREO. The highest grade samples are from mineralisation outcropping at the base of the ridge.

The results from the talus sampling confirm this material to be a new HREE exploration target. Northern Minerals will now undertake further assessments to determine the extent and volume of mineralised talus material. The Company also completed characterisation testing on two 30kg samples of mineralisation which have provided highly encouraging early metallurgical results. Preliminary tests verify very good metallurgical recoveries in excess of 90%, with potential concentrate grades of greater than 40% TREO. Based on this preliminary testwork, the mineralisation at the Company's Browns Range and John Galt projects exhibit similar metallurgical characteristics and are therefore likely to provide similar process outcomes within the current beneficiation flow sheet.

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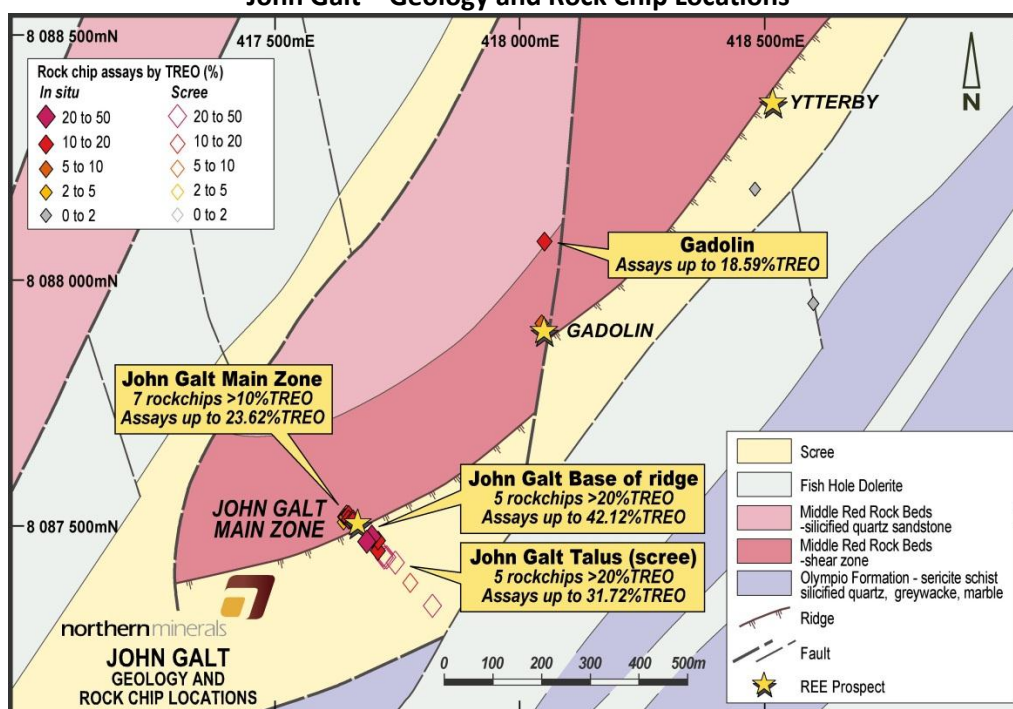
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## John Galt – Prospect Locations and Rock chip Results



The results complement the exploration success at Browns Range, and supports Northern Minerals focus and strategy of building a HREE mineral inventory in the region during 2012. Northern Minerals will now undertake further mapping and sampling at John Galt to finalise priority drill targets ahead of a planned drilling program in the second half of 2012. The work program follows the successful completion of an Aboriginal heritage survey at John Galt late last year, and a high resolution airborne geophysical survey earlier in the year.

## John Galt – Geology and Rock Chip Locations



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### The REE Market

During the quarter, Rare Earth prices declined off their highs of 2011, although they remained generally steady during December 2011 as producers and consumers waited for the publication of the 1H 2012 rare earths export quotas from the China Ministry of Commerce. The latest export quotas confirm the Chinese government's intention to manage the rare earth export market according to light and heavy rare earths to protect HREE as well as encourage the export of more plentiful LREE. This scenario is very likely to have an upward effect on the pricing of HREE.

From a global perspective, pricing is forecast to be steady throughout 2012, which is attributed to the generally depressed global economic and market outlook. One view from downstream rare earth consumers is that rare earth prices might move down further in the near future due to a reduction in downstream consumer buying. This has been caused by rare earth consumers halting production on high production costs and weak sales.

On the other hand the view is that rare earth producers have suspended production during the past two quarters and downstream customers have been drawing on stocks which will now be running lower. This supports higher rare earth prices in the first quarter of 2012. As a consequence some market players have been relatively positive about the market direction in the coming weeks.

**Rare Earths Price US\$/kg FOB China**

	2009	Quarter 4 2010	Quarter 1 2011	Quarter 2 2011	Quarter 3 2011	Quarter 4 2011	30 <sup>th</sup> November 2011	30 <sup>th</sup> December 2011
<b>Lanthanum Oxide</b>	\$6	\$52	\$76	\$138	\$116	\$116	\$64	\$51
<b>Cerium Oxide</b>	\$4	\$52	\$78	\$138	\$112	\$112	\$54	\$42.50
<b>Praseodymium Oxide</b>	\$15	\$79	\$120	\$215	\$237	\$237	\$208	\$165
<b>Neodymium Oxide</b>	\$15	\$81	\$130	\$253	\$306	\$306	\$235	\$195
<b>Samarium Oxide</b>	\$5	\$37	\$73	\$120	\$112	\$112	\$88	\$79
<b>Europium Oxide</b>	\$465	\$612	\$719	\$1,867	\$4,786	\$4,786	\$3,790	\$3,790
<b>Gadolinium Oxide</b>	\$7	\$47	\$65	\$167	\$188	\$188	\$132	\$102
<b>Dysprosium Oxide</b>	\$105	\$288	\$413	\$983	\$2,376	\$2,376	\$1,960	\$1,410
<b>Terbium Oxide</b>	\$350	\$620	\$718	\$1,767	\$3,210	\$3,840	\$3,010	\$2,810
<b>Yttrium Oxide</b>	\$14	\$70	\$90	\$158	\$152	\$167	\$142	\$91

Notes:

1. Source is Metal Pages.
2. Prices have been rounded



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### China Rare Earths Export Quotas

In December 2011, the Chinese Ministry of Commerce allocated the first batch of rare earth export quotas for 2012, divided into lights, mediums, heavies. The table below depicts the export quotas since their introduction in 2005.

**Chinese Export Quota History 2004-2012 (Tonnes REO)**

Year	Domestic Companies	Foreign Companies	Total	Y on Y Change
2005	48,040	17,659	65,669	0%
2006	45,752	16,069	61,821	-6.00%
2007	43,574	10,069	53,643	-4.00%
2008	49,871	15,834	65,705	-5.50%
2009	33,300	16,485	49,785	-12.00%
2010	22,513	7,746	30,259	-40.00%
2011	22,712	7,472	30,184	-0.25%
2012	17,926	6,978	24,907	

While the overall volume is similar to 2011, the critical difference is the restriction of heavy rare earth exports. This will be a major concern to existing HREE customers and has already been confirmed through direct discussions with non-China HRE customers. In past years Chinese REE producers have been able to allocate their REE for any REE product. Consequently, they have tended to focus on the HREE, restricting the exports of LRE's (Ce, La, Nd, Pr) and in turn artificially driving up the prices of the LREE's.

The volumes allocated so far are 11,243 and 1,760 tonnes REO for LRE and HRE respectively – a 85:15 ratio. The division between LRE and HRE was justified by the ministry as being a mechanism to preserve both the resource and the environment. This reasoning is justified given that there are limited sources of HREE in China, occurring mainly in the ionic clays of Southern China where there are significant environmental issues associated with the extraction and separation of HREE's. The ministry has also stated as one of its strategic resources, the rare earth industry should be managed by a more comprehensive system in the future.

The implications of a tiered export quota in favour of a LREE will be to increase the supply of LREE's while limiting HREE supply within and outside of China. Consequently, this is likely to put further upward pressure on HREE prices.

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### GOLD

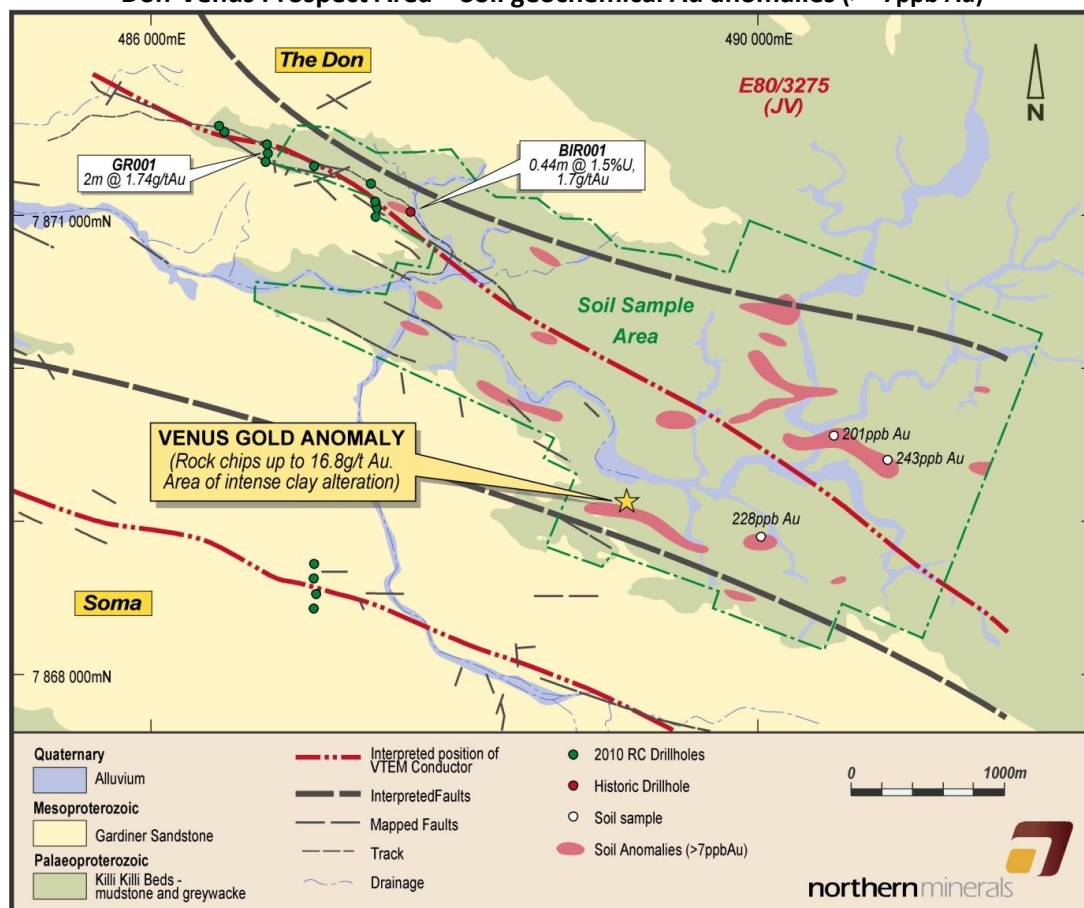
#### *Gardiner-Tanami/Gardiner Range JV*

Results from further soil sampling at The Don - Venus were received during December. The purpose of the soil program was to extend the June 2011 soil sampling program a further 1 kilometre east, where an area of significant gold anomalism was identified to the north-east of the Venus prospect. The Venus prospect has historical reports of rock chips assaying up to 16.8 ppm Au. The soil sampling program also extended sampling coverage a further 450m to the north.

The sampling was conducted on a 200m x 50m grid and a total of 278 assay results were received bringing the overall total for the program to 891. The results of the completed survey are shown in figure below. Assay results above 7ppb Au are listed in table below.

Several narrow and discontinuous geochemical soil anomalies (defined as >7ppb Au) have been outlined by the two sampling programs. The most extensive soil anomaly is located to the north-east of the Venus Prospect and has been delineated over a strike length of approximately 700m with a peak value of 243ppb Au. The soil anomaly at the Venus prospect extends discontinuously over a strike length of approximately 1km with a peak value of 228ppb Au. The soil anomalies appear to follow two distinct trends. The dominant trend is 120 ° parallel to the main lithological orientation of the Killi Killi Formation, and the orientation of several faults (including The Don Fault). The second trend is approximately east-west and could be associated with cross-cutting fault structures.

**Don-Venus Prospect Area – Soil geochemical Au anomalies (>= 7ppb Au)**



**Don-Venus Prospect Area – Soil sample assay results  $\geq$  7ppb Au**

Samp Id	East	North	Au_ppb
DS0745	490862.9	7869415	243.2
DS0744	490844.6	7869368	116
DS0697	490676.9	7869488	48
DS0633	490208	7870480	40.7
DS0743	490826.2	7869322	36.6
DS0696	490658.5	7869442	12
DS0873	491494.5	7869381	8.9
DS0728	490551	7868624	8.5
DS0872	491476.1	7869334	8
DS0840	491473.6	7869873	7.9
DS0632	490189.6	7870433	7.7

## CORPORATE

### Joint Venture with Toro Energy for REE rights at Browns Range

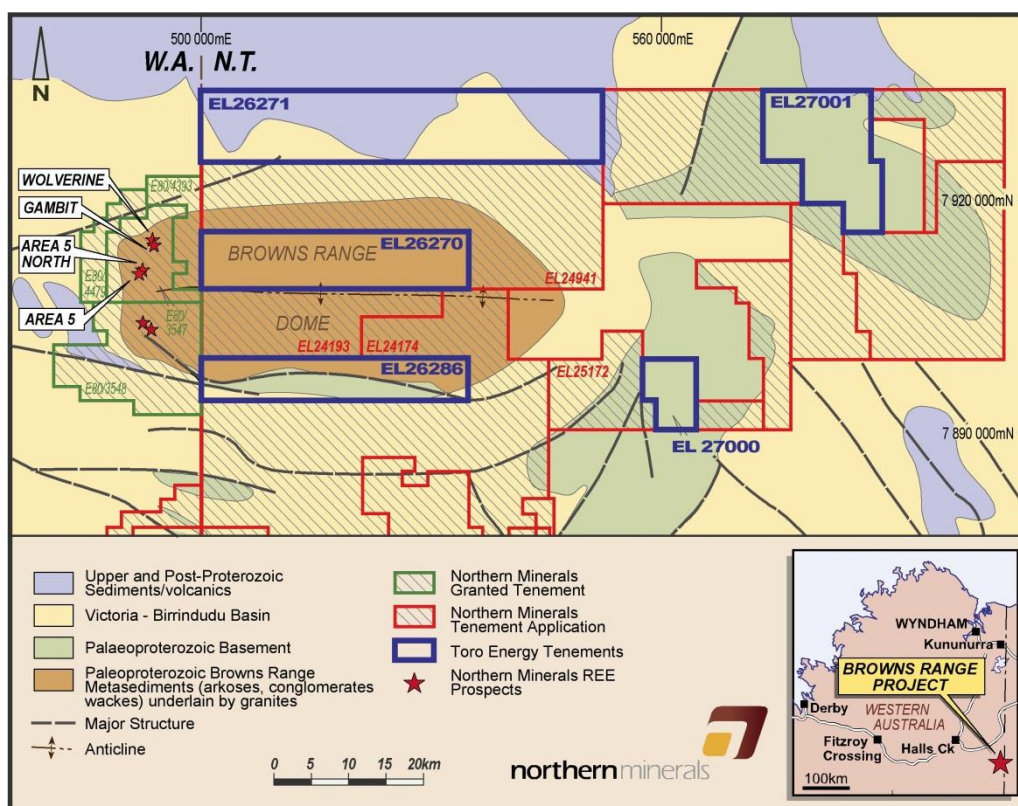
The Company signed a Heads of Agreement (HoA) with Toro Energy Limited to earn up to 80% interest in mineral rights (other than uranium) in Toro's Browns Range Northern Territory tenements. The HoA includes seven tenements comprising 1,403km<sup>2</sup>, adjacent to Northern Minerals Browns Range Project, further consolidating a strong land position in the highly prospective region. The agreement will expand Northern Minerals landholding on the Browns Range Dome area, and will form part of the Company's broader HREE exploration and development program in 2012.

Under the terms of the HoA, Northern Minerals will spend \$4 million on exploration over a three year period to earn a 51% interest. Northern Minerals has the option to increase its interest to 70%, by spending an additional \$2 million on exploration over a further two year period. Northern Minerals can elect to complete a bankable or definitive feasibility study to increase its equity to 80%. Toro will retain all uranium rights on the tenements. The transaction is subject to due diligence by Northern Minerals and the parties obtaining all necessary approvals.

The acquisition of the mineral rights complements Northern Minerals HREE expansion strategy. During the past twelve months, Northern Minerals has significantly grown its HREE and other mineral interests in the region, including entering into an option to acquire the John Galt Project near Halls Creek, the re-acquisition of non-uranium mineral rights from Areva in the Gardiner-Tanami Project and the acquisition of all mineral rights to Ferrum Crescent's Northern Territory Gardiner-Tanami tenements. Northern Minerals is aiming to commence a strategic exploration program across the Toro JV tenements as soon as possible in 2012, to test whether the geological setting identified at Browns Range continues into the NT. The program will most likely commence with airborne geophysical surveys.

## QUARTERLY ACTIVITIES REPORT

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### Kurundi Project (NT) base metals mineral rights grant to Tungsten West

In December, Northern Minerals also completed an agreement to grant Tungsten West NL the designated base metals mineral rights, excluding Rare Earth Elements (REE), gold and uranium - to the Kurundi Project located in the Northern Territory.

Kurundi consists of two adjacent exploration licenses, E23937 and E24995, located 80km southeast of Tennant Creek with a combined area of almost 190km<sup>2</sup>. These assets formed part of the Ferrum Crescent acquisition completed on 8 December 2010. The transaction with Tungsten West NL is in line with Northern Minerals' strategy of becoming a significant supplier of heavy rare earths from its Browns Range and other projects in northern Western Australia and Northern Territory. The retention of the REE rights at the divested tenements, provides further exploration upside and the potential to grow our REE mineral inventory in the future.

The transaction includes a \$50,000 payment at the signing of the deed, and an additional \$100,000, and 4 million consideration shares with a notional value of \$800,000 upon Tungsten West NL listing on the ASX. The Deed is conditional upon the consent of the relevant NT government Minister within 120 days after the execution date and Tungsten West being admitted to the ASX before 30 June 2013. Tungsten West NL has raised sufficient seed capital to commence an exploration program and to cover listing costs. The tungsten market exhibits similar characteristics to that of rare earths, where demand for the raw materials outstrips supply.



## QUARTERLY ACTIVITIES REPORT

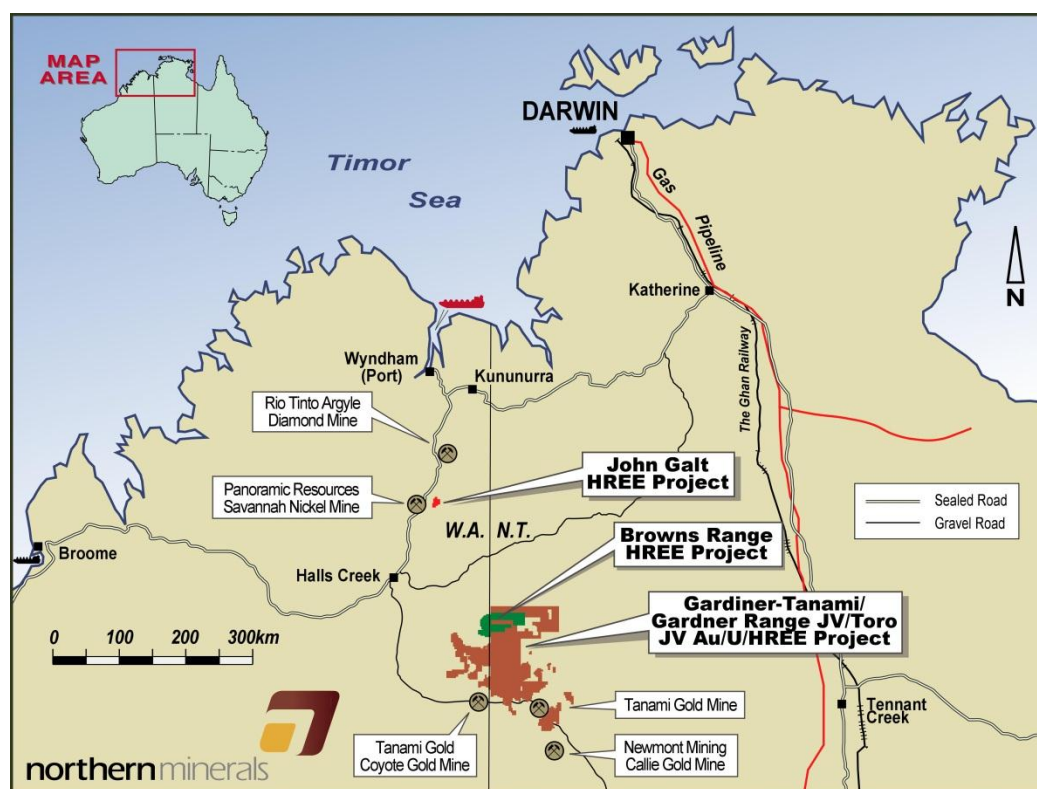
For the quarter ended 31 December 2011

### Competent Person Declaration

The information in this report accurately reflects information prepared by competent persons (as defined by the Australasian Code for Reporting of Mineral Resources and Ore Reserves). It is compiled by Mr R Wilson, an employee of the Company who is a Member of The Australasian Institute of Mining and Metallurgy with the requisite experience in the field of activity in which he is reporting. Mr Wilson has sufficient experience which is relevant to the style of mineralisation and the type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Wilson consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

#### For more information:

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# QUARTERLY ACTIVITIES REPORT

For the quarter ended 31 December 2011



## Appendix 1 – Browns Range RC Drilling results (announced 22<sup>nd</sup> November 2011)

### Browns Range - Significant drill intercepts (>0.2% TREO, with maximum of 1m internal dilution)

Prospect	Hole Id	From (m)	To (m)	Width (m)	TREO(%)	Dy <sub>2</sub> O <sub>3</sub> (ppm)	U <sub>3</sub> O <sub>8</sub> (ppm)	ThO <sub>2</sub> (ppm)
Area 5 North	NMBRRC124	60	62	2	0.72	527	42	38
Area 5 North	NMBRRC126	17 40	20 43	3 3	0.52 0.31	518 283	32 20	59 30
Area 5 North	NMBRRC127	65 <b>Inc. 70</b> 89	77 <b>73</b> 92	12 <b>3</b> 3	0.88 <b>2.13</b> 0.69	369 <b>944</b> 270	40 <b>97</b> 32	64 <b>82</b> 95
Area 5	NMBRRC128	6 10 56 <b>Inc. 57 &amp; 62</b> 77 88	8 13 75 <b>58</b> 82 96	2 3 19 <b>1</b> 5 8	0.41 0.30 0.73 <b>3.42</b> 0.45 0.26	284 243 517 <b>1463</b> 370 165	25 23 60 <b>154</b> 38 21	42 60 26 <b>42</b> 21 43
Area 5	NMBRRC129	63	65	2	0.26	116	17	41
Area 5	NMBRRC130	18	20	2	0.25	165	19	45
Area 5	NMBRRC131	0 <b>Inc. 1</b> 14 25	8 <b>4</b> 17 27	8 <b>3</b> 3 2	0.82 <b>1.23</b> <b>1.41</b> 0.93	697 <b>1040</b> <b>1093</b> 726	76 <b>114</b> <b>124</b> 61	44 <b>50</b> <b>46</b> 43
Area 5	NMBRRC132	13	14	1	0.86	624	81	40
Area 5	NMBRRC133	58 <b>67</b>	60 <b>74</b>	2 <b>7</b>	0.46 <b>1.08</b>	353 <b>868</b>	30 <b>98</b>	15 <b>27</b>
Area 5	NMBRRC134	46	50	4	0.34	193	32	35
Area 5	NMBRRC138	<b>4</b> <b>Inc. 4</b>	<b>8</b> <b>6</b>	<b>4</b> <b>2</b>	<b>7.14</b> <b>13.9</b>	<b>6712</b> <b>13112</b>	<b>329</b> <b>641</b>	<b>51</b> <b>61</b>
Area 5	NMBRRC140	24 30	26 38	2 8	0.25 0.45	208 381	27 45	35 38
Area 5	NMBRRC141	29 41 <b>44</b>	33 42 <b>47</b>	4 1 <b>3</b>	0.52 0.92 <b>1.62</b>	175 556 <b>1281</b>	24 63 <b>153</b>	54 49 <b>123</b>
Area 5	NMBRRC142	59 67 85 91	61 72 88 97	2 5 3 6	0.66 0.91 0.56 0.39	118 577 453 314	25 83 61 48	88 59 31 49
Area 5	NMBRRC144	43	45	2	0.49	362	22	27
Area 5	NMBRRC145	1	4	3	0.88	814	74	73
Area 5	NMBRRC149	1	4	3	0.37	250	21	41
Area 5	NMBRRC151	24	25	1	0.42	385	24	35
Area 5	NMBRRC152	20 25	22 27	2 2	0.83 0.91	525 753	42 51	44 27
Area 5	NMBRRC153	24 34	26 35	2 1	0.36 0.7	308 665	20 62	33 30
Area 5	NMBRRC154	31	34	3	0.36	100	15	1

# QUARTERLY ACTIVITIES REPORT

For the quarter ended 31 December 2011

Prospect	Hole Id	From (m)	To (m)	Width (m)	TREO(%)	Dy <sub>2</sub> O <sub>3</sub> (ppm)	U <sub>3</sub> O <sub>8</sub> (ppm)	ThO <sub>2</sub> (ppm)
Area 5	NMBRRC155	5	8	3	0.25	146	33	36
		31	32	1	0.89	820	61	47
Wolverine	NMBRRC157	90	94	4	0.83	746	32	22
Wolverine	NMBRRC159	99	101	2	0.72	500	23	33
Wolverine	NMBRRC160	90	93	3	0.29	200	9	36
		<b>96</b>	<b>120 EOH</b>	<b>24</b>	<b>2.18</b>	<b>2072</b>	<b>67</b>	<b>23</b>
		<b>Inc. 112</b>	<b>119</b>	<b>7</b>	<b>5.35</b>	<b>5151</b>	<b>163</b>	<b>20</b>
Wolverine	NMBRRC161	2	4	2	0.49	459	16	15
		<b>95</b>	<b>100</b>	<b>5</b>	<b>1.1</b>	<b>979</b>	<b>31</b>	<b>25</b>
		102	112	10	0.44	368	16	23
		114	120 EOH	6	0.34	264	12	27
Wolverine	NMBRRC163	49	52	3	0.37	163	16	36
		65	68	3	0.95	464	44	27
		87	89	2	0.30	221	19	28
		<b>99</b>	<b>105 EOH</b>	<b>6</b>	<b>2.68</b>	<b>2321</b>	<b>100</b>	<b>19</b>
		<b>Inc. 103</b>	<b>105 EOH</b>	<b>2</b>	<b>6.71</b>	<b>5838</b>	<b>229</b>	<b>15</b>

NB: TREO: Total Rare Earth Oxides – Total of La<sub>2</sub>O<sub>3</sub>, CeO<sub>2</sub>, Pr<sub>6</sub>O<sub>11</sub>, Nd<sub>2</sub>O<sub>3</sub>, Sm<sub>2</sub>O<sub>3</sub>, Eu<sub>2</sub>O<sub>3</sub>, Gd<sub>2</sub>O<sub>3</sub>, Tb<sub>4</sub>O<sub>7</sub>, Dy<sub>2</sub>O<sub>3</sub>, Ho<sub>2</sub>O<sub>3</sub>, Er<sub>2</sub>O<sub>3</sub>, Tm<sub>2</sub>O<sub>3</sub>, Yb<sub>2</sub>O<sub>3</sub>, Lu<sub>2</sub>O<sub>3</sub>, Y<sub>2</sub>O<sub>3</sub>

NB: Samples were submitted to Genalysis Laboratory for REE analysis using a FP6/OM Sodium Peroxide Fusion Digest

# QUARTERLY ACTIVITIES REPORT

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## Browns Range Project – Drill hole collar details (NMBRRC124 – 163)

HOLE ID	EAST	NORTH	RL	DEPTH	MAG AZIMUTH	DIP	PROSPECT
NMBRRC124	492396	7910430	476	120	135	-60	A5N
NMBRRC125	492412	7910442	477	120	136	-60	A5N
NMBRRC126	492425	7910453	475	120	136	-60	A5N
NMBRRC127	492442	7910467	471	120	135	-62	A5N
NMBRRC128	492170	7910014	453	106	225	-60	A5
NMBRRC129	492153	7909992	451	66	225	-60	A5
NMBRRC130	492179	7910026	453	61	226	-60	A5
NMBRRC131	492198	7910051	452	61	225	-60	A5
NMBRRC132	492215	7910073	452	70	225	-60	A5
NMBRRC133	492123	7909967	451	79	45	-60	A5
NMBRRC134	492140	7909980	452	61	45	-61	A5
NMBRRC135	492152	7910103	461	61	45	-62	A5
NMBRRC136	492134	7910082	460	61	44	-62	A5
NMBRRC137	492116	7910068	456	49	45	-60	A5
NMBRRC138	492099	7910047	457	64	45	-60	A5
NMBRRC139	492073	7910031	456	61	45	-60	A5
NMBRRC140	492208	7910019	448	61	45	-60	A5
NMBRRC141	492192	7910003	457	70	45	-60	A5
NMBRRC142	492153	7909956	452	100	45	-60	A5
NMBRRC143	492067	7910116	459	61	225	-60	A5
NMBRRC144	492084	7910132	460	61	225	-60	A5
NMBRRC145	492101	7910152	461	58	225	-60	A5
NMBRRC146	492119	7910163	460	73	225	-60	A5
NMBRRC147	492047	7910095	458	67	225	-60	A5
NMBRRC148	492058	7910352	459	61	45	-60	A5
NMBRRC149	492037	7910333	459	61	45	-60	A5
NMBRRC150	492019	7910316	458	70	45	-60	A5
NMBRRC151	492002	7910299	458	52	45	-60	A5
NMBRRC152	491982	7910279	458	70	45	-60	A5
NMBRRC153	491968	7910263	458	91	45	-60	A5
NMBRRC154	491950	7910245	457	55	45	-60	A5
NMBRRC155	492181	7910024	453	55	45	-60	A5
NMBRRC156	493776	7914770	464	76	180	-60	WV
NMBRRC157	493756	7914769	463	103	180	-60	WV
NMBRRC158	493727	7914763	464	112	180	-60	WV
NMBRRC159	493697	7914788	455	113	180	-59	WV
NMBRRC160	493677	7914781	455	120	182	-62	WV
NMBRRC161	493649	7914785	455	120	180	-60	WV
NMBRRC162	493670	7914768	456	67	360	-90	WV
NMBRRC163	493607	7914733	455	105	360	-90	WV



# QUARTERLY ACTIVITIES REPORT

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## Appendix 2 – John Galt sampling results – (announced 11 January 2012)

### John Galt Project - Rock chip samples with > 1% TREO

Sample ID	Prospect	Easting (Z52 GDA94)	Northing (Z52 GDA94)	TREO %	HREO %	Dy <sub>2</sub> O <sub>3</sub> ppm
NMJGRK022	Base of ridge (in-situ)	417689	8087468	42.12	40.82	36791
NMJGRK021	Base of ridge (in-situ)	417689	8087469	31.76	30.81	27092
NMJGRK019	Talus	417724	8087436	31.72	30.87	27516
NMJGRK017	Talus	417746	8087427	31.44	30.15	28675
NMJGRK015	Talus	417820	8087338	30.52	29.34	27462
NMJGRK020	Base of ridge (in-situ)	417689	8087470	26.09	25.37	22114
NMJGRK023	Base of ridge (in-situ)	417689	8087468	24.04	23.39	20283
NMJGRK006	Main zone	417657	8087503	23.62	22.47	20535
NMJGRK024	Talus	417724	8087438	23.31	22.44	21102
NMJGRK039	Main zone	417656	8087498	22.86	21.65	20609
NMJGRK010	Base of ridge (in-situ)	417697	8087475	22.46	21.68	19784
NMJGRK018	Talus	417731	8087434	21.76	20.83	19863
NMJGRK011	Talus	417709	8087450	19.55	19.08	16440
NMJGRK031	Gadolin	418049	8088078	18.59	16.73	17232
NMJGRK041	Main zone	417652	8087513	18.34	17.42	15736
NMJGRK016	Talus	417778	8087384	17.84	16.99	16745
NMJGRK044	Main zone	417642	8087516	16.09	14.93	13964
NMJGRK045	Main zone	417661	8087507	15.50	14.52	13091
NMJGRK036	Main zone	417652	8087520	14.88	14.00	13357
NMJGRK012	Talus	417712	8087469	13.17	12.53	11574
NMJGRK005	Main zone	417661	8087512	11.59	10.97	10434
NMJGRK042	Main zone	417658	8087505	8.77	8.23	7654
NMJGRK037	Main zone	417658	8087511	8.42	7.92	7706
NMJGRK014	Gadolin	418044	8087912	8.40	7.36	7791
NMJGRK034	Main zone	417647	8087523	7.77	7.25	6982
NMJGRK001	Main zone	417645	8087516	7.19	6.91	6064
NMJGRK035	Main zone	417651	8087522	4.73	4.48	4226
NMJGRK043	Main zone	417641	8087506	4.15	3.87	3857
NMJGRK033	Main zone	417642	8087516	4.08	3.81	3755
NMJGRK002	Main zone	417645	8087521	4.02	3.83	3547
NMJGRK046	Main zone	417648	8087520	2.97	2.76	2553
NMJGRK003	Main zone	417648	8087520	2.04	1.91	1932
NMJGRK029	Ytterby	418484	8088348	1.45	1.36	1350

NB: TREO: Total Rare Earth Oxides – Total of La<sub>2</sub>O<sub>3</sub>, CeO<sub>2</sub>, Pr<sub>6</sub>O<sub>11</sub>, Nd<sub>2</sub>O<sub>3</sub>, Sm<sub>2</sub>O<sub>3</sub>, Eu<sub>2</sub>O<sub>3</sub>, Gd<sub>2</sub>O<sub>3</sub>, Tb<sub>4</sub>O<sub>7</sub>, Dy<sub>2</sub>O<sub>3</sub>, Ho<sub>2</sub>O<sub>3</sub>, Er<sub>2</sub>O<sub>3</sub>, Tm<sub>2</sub>O<sub>3</sub>, Yb<sub>2</sub>O<sub>3</sub>, Lu<sub>2</sub>O<sub>3</sub>, Y<sub>2</sub>O<sub>3</sub>

NB: Samples were submitted to Genalysis Laboratory for REE analysis using a FP6/OM Sodium Peroxide Fusion Digest