

BROWNS RANGE EXPLORATION UPDATE

## Major HRE drilling program underway in WA as radiometric results from a recent airborne survey begin to unveil the potential across the border in the Northern Territory

**Key points:**

- 2013 Browns Range Dome Heavy Rare Earths (HRE) exploration program underway with the commencement of drilling on the Western Australia side of the WA-NT Border
- Planned program of more than 20,000m of RC and diamond drilling with an initial focus on expanding the Company's HRE resource base, by drilling targets at Gambit West, Gambit and Area 5, and expanding the current resource at Wolverine.
- New airborne survey results identify radiometric anomalies (possible xenotime targets) on recently granted tenements on the Northern Territory side of the Browns Range Dome
- Geological structure analysis and research underway in collaboration with WA Geological Survey to refine the HRE exploration model and develop a pipeline of new prospects

Northern Minerals (ASX: NTU) has commenced drilling as part of its significant 2013 exploration program focused on defining further HRE resources at the Browns Range project.

The Company's exploration strategy is supported by new airborne survey results which indicate the enormous geological potential of the Browns Range Dome region of WA and Northern Territory.

Northern Minerals is planning more than 20,000 meters of RC and diamond drilling for 2013, which aims to build on the success of last year by expanding the existing resource at Wolverine, and delivering a maiden resource at Gambit West, Gambit and Area 5

The program will also continue the development of a number of exciting early-stage targets across the Browns Range Dome, including a number of new anomalies in the largely untested NT side of the project area identified by recent airborne radiometric surveys.

Northern Minerals Managing Director George Bauk said the Company's exploration activities last year produced some outstanding results, including the delivery of a maiden JORC compliant resource on time and within budget.

"Last year we delivered on all of our exploration commitments at Browns Range. We now look forward to building on this success in 2013, and with our recent capital raising initiatives, we have the funding solution in train to do so," Mr Bauk said.



“Our primary target is to expand our resource to between 22,000 and 29,000 tonnes of TREO, by extending the existing Wolverine resource at depth, and defining new resources at the Gambit West, Gambit Central and Area 5 prospects.” The potential quantity of TREO targeted at the Wolverine, Gambit Central, Gambit West and Area 5 Prospects is based on existing drill results from 2011 and 2012, but is still conceptual in nature. There has been insufficient exploration at Gambit Central, Gambit West and Area 5 to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource at these prospects.

“We also want to continue to develop the pipeline of prospects that we believe will contribute to a significant mineral inventory in the region and extend the life of our proposed mining operation.” Mr Bauk said.

Mr Bauk said the ongoing exploration activities continue to highlight the significant potential and unique characteristics of the Browns Range Dome mineralisation.

“The latest geophysical survey results from the Northern Territory show the untested potential that exists in that area of the Dome, while in the WA section, our detailed exploration has only covered 45km<sup>2</sup> out of 455km<sup>2</sup> – with eight of the 10 targets drilled to date having significant HRE intersections.”

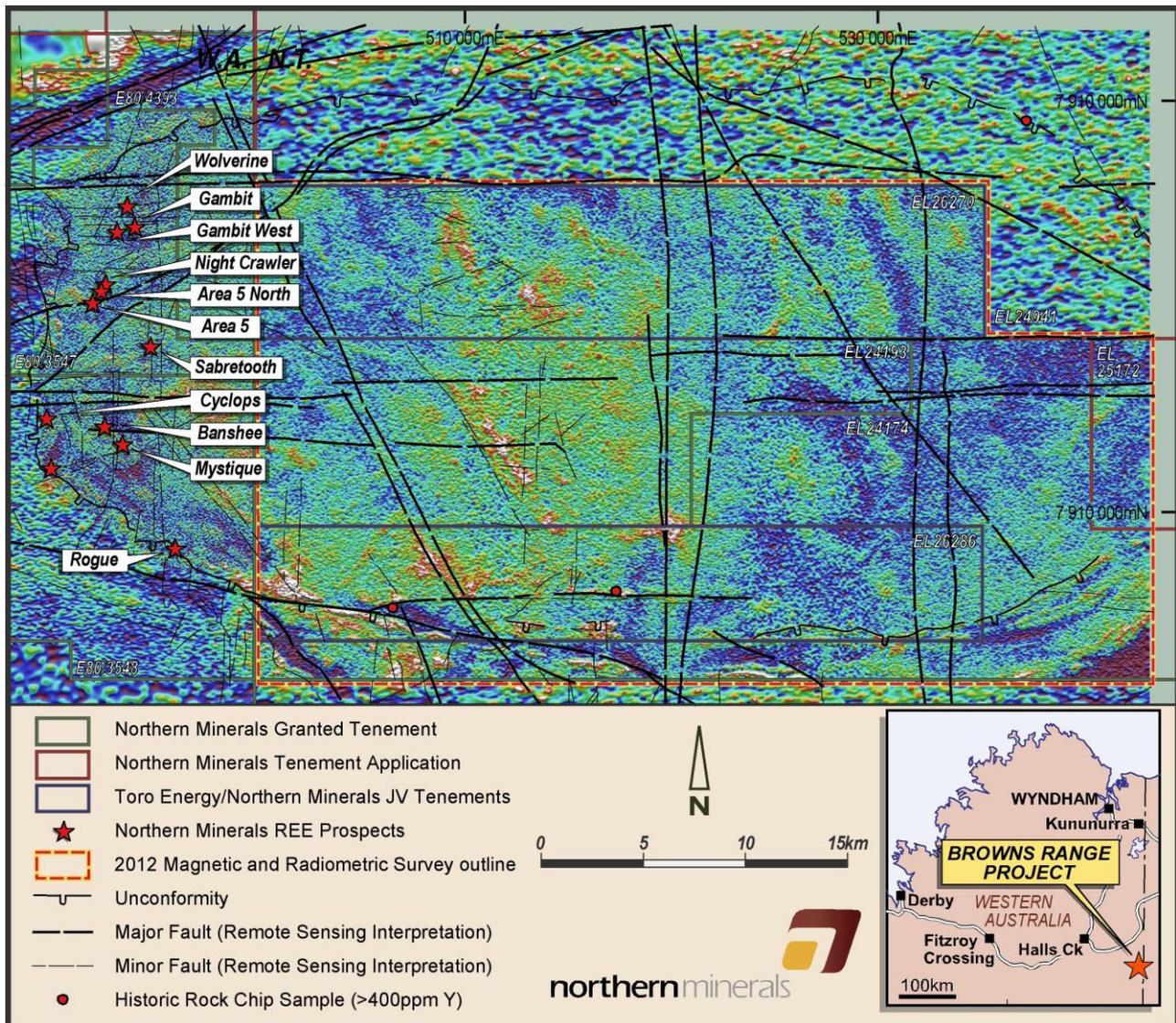
### **New early stage targets in Northern Territory**

In late 2012, Northern Minerals commenced first pass exploration across its recently granted tenements in the Northern Territory side of the Browns Range Dome (BRD). The exploration program featured airborne magnetic, radiometric and hyperspectral surveys across a number of new tenements, including a number under the Toro Energy Joint Venture, and also around the previously identified Boulder Ridge HRE prospect.

Exploration results have recently identified a number of radiometric anomalies across the region. These anomalies are currently being prioritised for future examination. A Heritage Survey is expected to be undertaken this month, and ground work is planned for later in the year. The results confirm the significant potential on the eastern side of the BRD, which comprises over 2,000km<sup>2</sup> but has been largely untested to date. Historical rock chip samples collected by PNC Exploration in the 1980s include several anomalous yttrium values greater than 400ppm in the vicinity of the BRD (see Figure 1 below).



Figure 1: Browns Range Dome region – Northern Minerals & Toro JV tenements and 2012 airborne radiometric survey data (uranium channel)



### Resource expansion program

Northern Minerals has commenced a program of about 20,000 meters of RC and Diamond Drilling across Browns Range WA. The program follows the announcement in December, of the Company's maiden JORC compliant resource of 1.44Mt @ 0.73% TREO comprising 10,500t TREO at Wolverine.

RC drilling commenced this week at Gambit West, a new and exciting prospect discovered late last year, located approximately 200m west of the central Gambit prospect. With high grade intersections of HRE (see Figures 2 and 3 below) and strong geological similarities to Wolverine, it will be a priority target for resource drilling in 2013, and a maiden resource estimate is targeted later in the year. Drilling will also take place at Gambit Central and Area 5, where the Company is also aiming to delineate TREO resources.



Figure 2: Gambit West Drill Hole locations and 2013 proposed drill holes

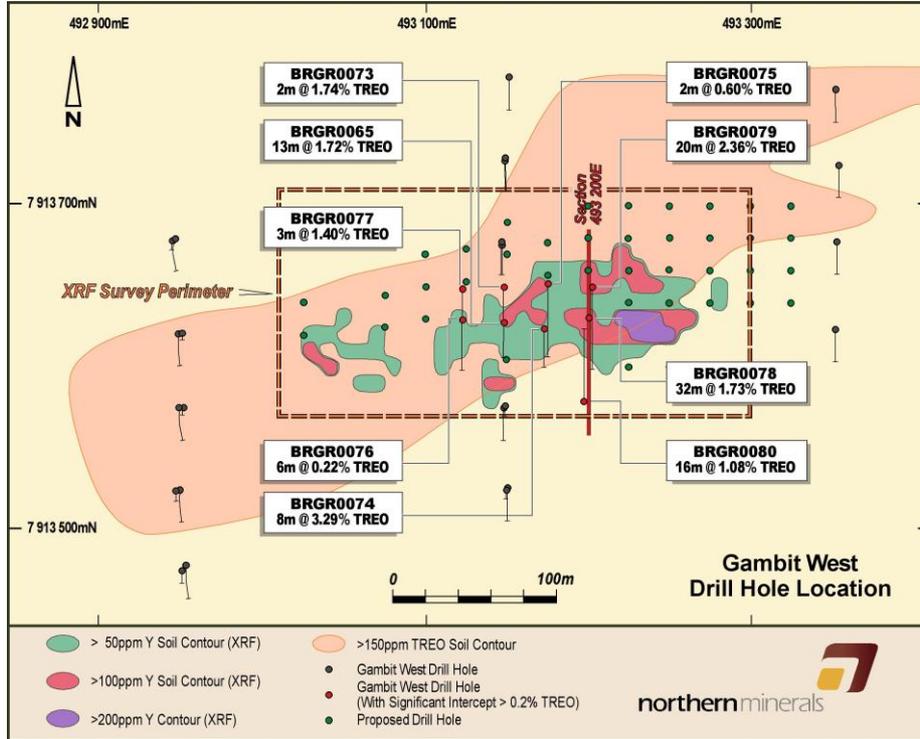
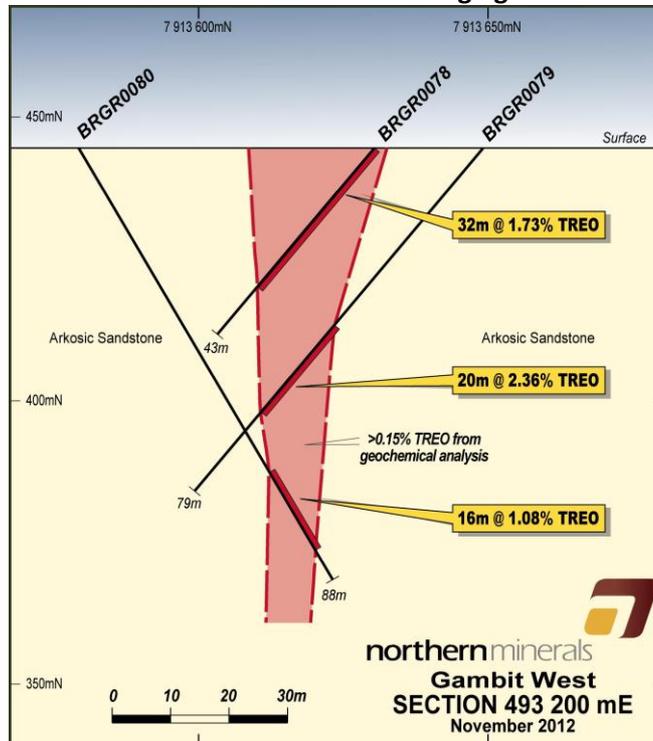


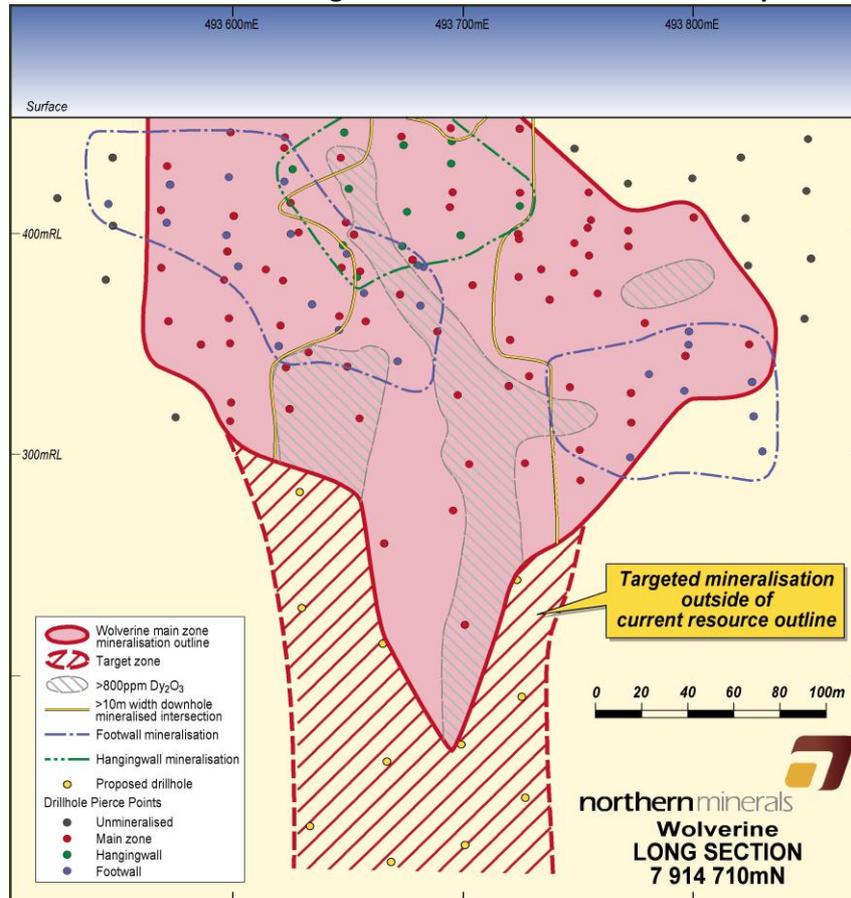
Figure 3: Gambit West Drill Section 493200E - high grade HRE mineralisation



The drilling program at Wolverine will focus on extensions at depth. The current resource is predominantly based on modeling to 150m, with subsequent drill results confirming high grade HREE to depths of 250m. The 2013 program will include drilling to 400m to test extensions below 150m, targeting a wider, high grade central zone (see Figure 4 below).



Figure 4: Wolverine resource Long section – 7914710N – resource expansion targets



### Pipeline of new prospects

The Company is also implementing a number of initiatives to help further identify and develop the next generation of exploration targets across the Browns Range Dome region. This month, it commenced a comprehensive review of the geology of the region, and contracted a structural geologist to assist in improving the understanding of the structural controls on xenotime mineralisation within the broader Dome region and at an individual prospect level.

The Company is also about to commence a collaborative research project with the Geological Survey of Western Australia (GSWA). The project will investigate the hydrothermal alteration characteristics of, and associated with, the HRE mineralisation, determine its age and develop a genetic model for the mineralisation. This work will assist in the development of an exploration model for the discovery of further HRE mineralisation both around the existing known prospects and within the Browns Range Dome region, enabling future exploration programs to be better targeted and focused.

Northern Minerals has been collating and reviewing additional historical drill data from the region, which was generated by PNC in the 1970s and 1980s. Results from those drilling programs, which were focused on uranium, are being collated into a digital database for review to further increase the understanding of the regional geology and to identify potential new HRE targets in WA and NT.



**Competent Persons Declaration:**

Information that relates to exploration results and geological interpretation has been compiled by the Company and is based on information provided by Robin Wilson, an employee of Northern Minerals, who is a member of the Australasian Institute of Mining and Metallurgy. All information of this type is expressed in terms of the 2004 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Robin Wilson has sufficient experience which is 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 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.

The information in this report relating to Mineral Resources was compiled by Mr John Tyrrell who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Tyrrell is a full time employee of AMC 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 in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code). Mr Tyrrell consents to the inclusion of this information in the form and context in which it appears.

**For more information:**

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**About Northern Minerals:**

Northern Minerals Limited (ASX: NTU) is focused on development of rare earth elements (REE), 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 HRE in xenotime mineralisation. In particular, the mineralisation includes high levels of dysprosium and yttrium, which are in short supply globally and expected to be increasingly sought after as world economies stabilise and recent trends in urbanisation and technology diffusion, particularly in Asia, accelerate. Following outstanding results from its drilling and metallurgical programs in 2012, the Company has delivered its maiden JORC resource, advancing Browns Range toward production, using a relatively simple and low cost processing flow sheet to produce a high grade mixed Rare Earth oxide. Northern Minerals also has a HRE exploration program underway at the geologically similar John Galt project. For more information, visit [www.northernminerals.com.au](http://www.northernminerals.com.au)

