

## Quarterly Report for the period ended 31 December 2006

### HIGHLIGHTS

- \$3.1 million raised (exclusive of costs) following successful completion of non-renounceable pro rata rights issue.
- Extensions to high-grade quartz veining at the Range Prospect (previous intersections of 5m @ 15.08g/t Au and 6.15m @ 10.48g/t Au). Geological mapping and sampling confirmed that quartz veining extends for 800m to the east, with limited rock chipping returning **2.2g/t Au and 1.1g/t Ag**.
- Further target areas of epithermal-style gold mineralisation were identified from mapping and sampling in the Range and broader Wilson River Project areas. Elevated gold and silver values were returned from rock chip and stream sediment sampling from two new prospect areas, one 3 km to the north and the other 4 km to the north east of the Range Prospect, including: **0.7g/t Au and 7.2g/t Ag**.
- Further significant uranium rock chip values returned from the Antares Prospect (Wilson River Project) including:
  - **0.08% U<sub>3</sub>O<sub>8</sub>**
- Elevated platinum (Pt) assay results received from soil and rock chip sampling within the Red Billabong Project including:
  - A 700m long north east trending +35ppb Pt soil anomaly
  - Up to 2.74 g/t Pt in rock chip values
- Planning well advanced for 2007 field season including follow-up drilling at the Range and Wilson River epithermal gold projects and an accelerated uranium exploration program.

## OVERVIEW

Northern Star Resources (ASX Code: NST) has three project groups centred on Halls Creek in the largely under-explored East Kimberley region of Western Australia (Figure 1). The project groups cover an area of approximately 3,500 km<sup>2</sup> and are highly prospective for nickel-copper-cobalt and platinum group elements (PGE) mineralisation, gold, uranium, diamonds and base metals.

Drilling completed during the last year confirmed the prospectivity of the Company's tenements, particularly the epithermal gold potential within its Wilson River Project Group. Results from the follow up drilling at the Range Prospect again returned high grade gold-silver values.

The Company also enjoyed success with high-grade gold and silver values returned from rock chip sampling confirming the epithermal gold potential of the Hunter Prospect (Dunham Project). The Company is currently compiling results from the 2006 field season and has already has defined several priority drilling targets for the 2007 season. These include follow-up drilling of the high-grade gold mineralisation intersected at the Range Prospect and base metal (nickel and zinc) and platinum targets at the Red Billabong Project.

A review of the uranium potential of the Company's tenement holding highlighted a number of prospect areas that yielded highly anomalous uranium mineralisation in previous exploration. These include rock chip samples assaying 1.23% U<sub>3</sub>O<sub>8</sub>, 0.76% U<sub>3</sub>O<sub>8</sub> and 0.38% U<sub>3</sub>O<sub>8</sub> within the Dunham Project, 0.15% U<sub>3</sub>O<sub>8</sub> within the Wilson River Project, and 0.157% U<sub>3</sub>O<sub>8</sub> from the Tunganary Project. No drilling has been conducted previously in these areas. The Company is committed to accelerating exploration during 2007 to assess the potential of these areas to host uranium mineralisation.

### **Wilson River Project Group (100% NST)**

The Wilson River Project Group, located about 150 km north of Halls Creek and centred 50 km west of the Argyle diamond mine, comprises eight exploration licences (ELs) and four exploration licence applications (ELAs) covering approximately 2,230 km<sup>2</sup>. Together with the present ground holdings at the Wilson River, Dunham and new Tunganary projects (covering some 900 km<sup>2</sup> of potential host rocks), the Company is a major landholder in the East Kimberley district and is strategically well placed to take advantage of the emerging epithermal style of gold mineralisation in the region.

The silicified quartz veins at the Range and Hunter prospects are remarkably similar to those from mineralised epithermal quartz vein systems in Queensland's Drummond Basin. Examples of low sulphidation epithermal gold mineralisation in Australia are the **multi-million ounce** Pajingo-Vera-Nancy and Cracow deposits in Queensland, although these are of a younger age.

#### *Range Prospect, Wilson River Project - Gold*

The Range prospect is located about 130 km due north of Halls Creek.

Mapping and surface sampling was undertaken during the quarter in and around the Range Prospect. The work has identified an eastward continuation of the recently drilled high grade gold and silver quartz veining (WRC-027 **4m @ 15.06g/t Au and 7.30g/t Ag** from 21m including **1m @ 57.15 g/t Au and 15.70 g/t Ag** from 23m). Limited rock chip sampling (two samples with values up to **2.2g/t Au** and **1.1g/t Ag**) of the quartz veining indicates the mineralisation extends up to 800m to the east of the previous drilling.

As this veining lies outside the previously assessed area, the Company has planned further mapping and rock chip sampling as well as soil geochemistry to define drill targets as soon as field conditions allow. The Company is currently in discussions with drilling contractors to commence its 2007 drilling program at the Range Prospect as soon as possible after the wet season.

### ***Wilson River Project Area***

Stream sediment sampling and surface rock chip sampling on veins in the wider project region was accelerated during the quarter. Mapping and surface sampling was focussed on bringing any new areas identified to a drill definition stage.

This work has highlighted a number of new areas containing epithermal style quartz veining, some of which have returned elevated values from rock chip sampling (Figure 2). These include:

- ◆ Teddy: located some 3 km north of the Range Prospect. Mapping has highlighted two veins, one 1.2km long nominally trending east-west and the other 700m long striking to the northwest. Rock chip sampling of the northwest veining has returned up to **0.7g/t Au and 7.2g/t Ag**. Limited bulk cyanide leach stream sediment sampling within the vicinity of the veining returned 0.43ppb Au/10.1ppb Ag, 0.28ppb Au/14.8ppb Ag, and 0.4ppb Au/9.8ppb Ag. Again, the Company has planned further mapping and rock chip sampling as well as soil geochemistry to define drill targets as soon as field conditions allow.
- ◆ Black Bear: located some 4.5 km to the north east of the Range Prospect. Reconnaissance mapping has shown quartz veining within an area of 600m<sup>2</sup> with vein orientation varying from northeast to northwest. Limited rock chip sampling (5 samples) has returned values including 0.1g/t Au and 0.4 g/t Ag. Bulk cyanide leach stream sediment sampling within the vicinity of the veining has returned values up to 1.79ppb Au/11.2ppb Ag, 1.38ppb Au/14.3ppb Ag, 0.23ppb Au/50ppb Ag and 0.9ppb Au/16.9ppb Ag. As with the other areas, the Company proposes further mapping and rockchip sampling as well as soil geochemistry to define higher grade zones as soon as field conditions allow.

Given the low density of sampling to date, the Company is very encouraged with these results as they give confirmation for the potential additional epithermal style mineralisation within the Wilson River Project area.

### ***Antares Prospect, Wilson River Project - Uranium***

This prospect was discovered in 1973 following investigation of an anomalous airborne radiometric survey response. The Antares uranium–fluorine mineralisation occurs within a volcanoclastic succession of the Whitewater Volcanics about 100–200 m from the Greenvale Fault. Three costeans dug across the Antares anomaly in 1981 indicated a positive correlation between zones of intense jointing and radiometric response. Assay results up to 943 ppm U<sub>3</sub>O<sub>8</sub> were reported. Follow up work in 1990 returned rock chip sample results of up to 0.15% U<sub>3</sub>O<sub>8</sub>, coinciding with high radiometric counts.

Further reconnaissance by the Company has returned values up to 0.08% U<sub>3</sub>O<sub>8</sub> from rock chip samples within the Antares prospect. Further exploration will comprise work aimed at

determining the source of the approximately 1.2km long uranium radiometric anomaly to the west of the prospect area.

In addition, the Company intends to continue the evaluation of the airborne radiometric uranium channel anomalies in the Wilson River project area, including a large 7 km by 2 km target at Mt Remarkable within the volcanics, close to the unconformity with sandstones of the O'Donnell Formation. Very few of these targets have been subject to on-ground evaluation.

### **East Kimberley Nickel Project Group (100% NST)**

The East Kimberley Nickel Project Group comprises five tenement holdings – Springvale, Toby, Foal Creek, Red Billabong, and McGowan – covering an approximate area of 1,050 km<sup>2</sup>.

This commanding land holding covers known and inferred mafic/ultramafic intrusive rocks, which are considered prospective for nickel-copper-platinum and base metal mineralisation.

#### ***Red Billabong Project***

The Red Billabong Project, located between 30 to 70 km west and southwest of Halls Creek, comprises five ELs covering an area of approximately 440 km<sup>2</sup>.

##### *Lambooo Platinum*

The Company has completed an initial evaluation of the platinum potential of the Lambooo Ultramafics that crop out poorly on the south eastern portion of the Red Billabong Project.

Exploration grid based -80 mesh soil sampling (80m spaced sampling on 200m spaced traverses) over a 2.8 km<sup>2</sup> area has defined an approximately 200m wide and 700m long northeast trending +35ppb platinum (Pt) anomaly, with a peak value of 125ppb Pt. Limited rock chip sampling (four samples) has returned highly elevated platinum values including one sample which returned **2.74ppm Pt**, 0.47ppm palladium (Pd) and 42ppb Au.

The Company proposes to follow up these encouraging results with in-fill soil sampling and rock chip sampling in order to define the high grade component of the platinum anomaly. Drilling of these targets would be conducted in conjunction with the drilling scheduled for the Emull zinc mineralisation. The Emull mineralisation occurs 2.7 km to the northwest of the platinum anomaly and previous drill intercepts include 6 metres @ 4.1% zinc; 6 metres @ 4.4% zinc; and 7.9 metres @ 7.4% zinc.

## **CORPORATE**

The Company had \$3.3 million cash at the end of the quarter.

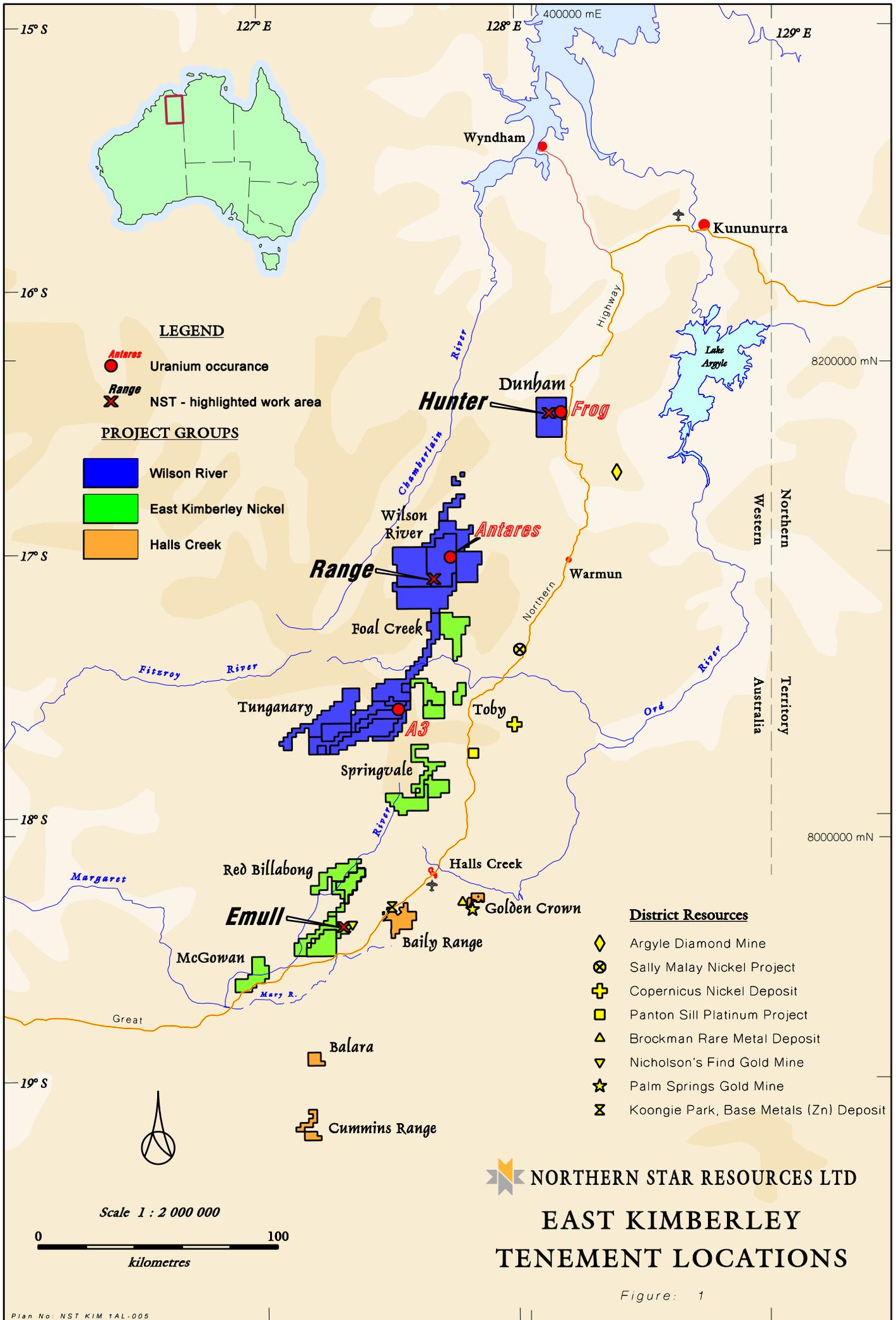
The Company completed its non-renounceable pro rata rights issue to shareholders, raising \$3,131,845 exclusive of costs of the issue. The funds raised will provide working capital for the continued assessment of the Company's East Kimberley projects and underpin follow up exploration of recent encouraging drill results received from the epithermal gold Range Prospect within the Wilson River Project, and zinc mineralisation delineated at the Emull Prospect within the Red Billabong Project.

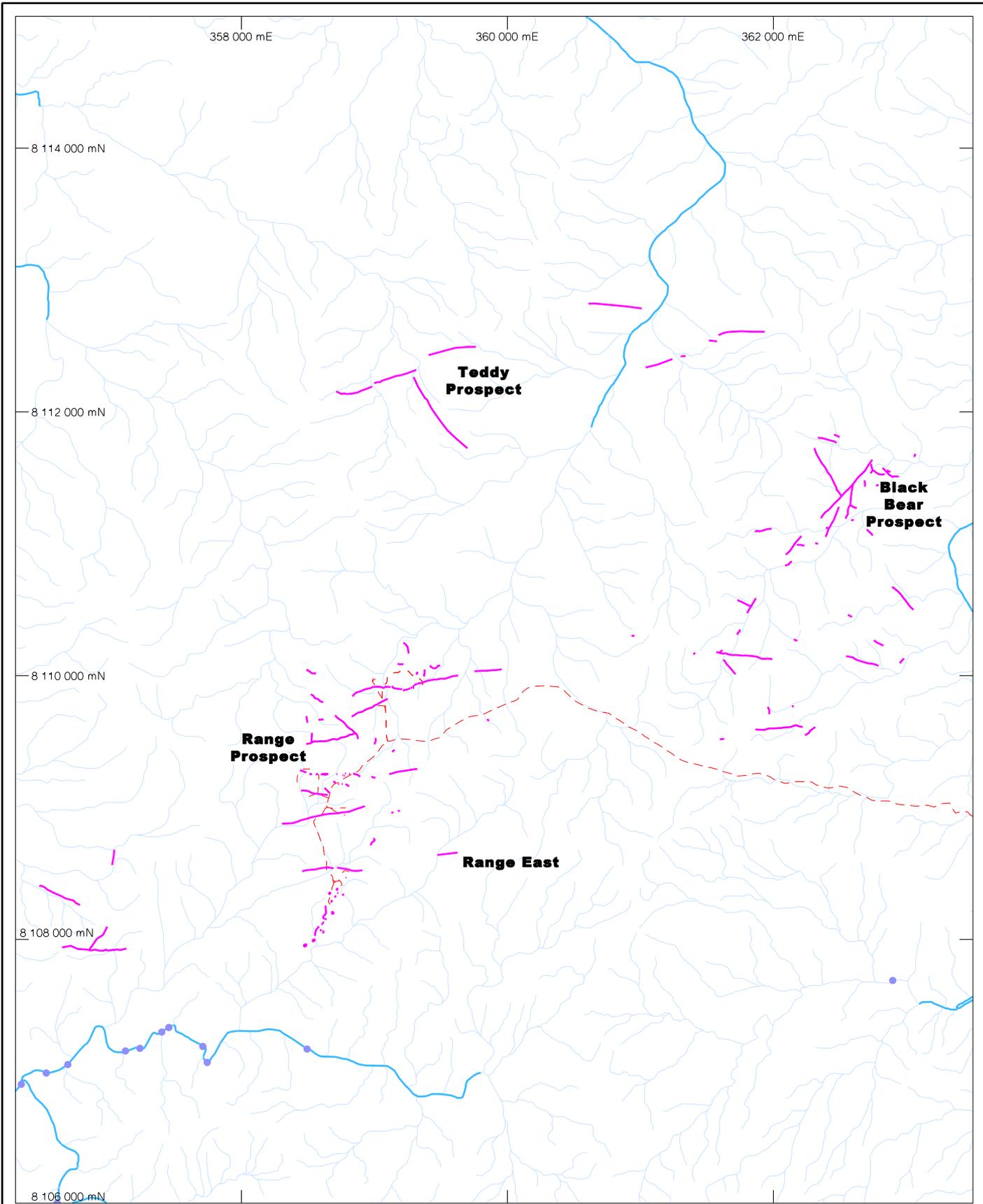
The Company's issued capital stands at 77,473,712 shares. In addition, 13,049,358 options exercisable at 20 cents each at any time up to and including 30 September 2008 were issued as part of the rights issue.

Jubilee Mines NL remains the key investor in the Company with a 25.56% holding.

Charles Wilkinson  
**Managing Director**

*Information in this report is based on information compiled by Mr C S Wilkinson, MAusIMM, Managing Director of the Company, who is a competent person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Wilkinson has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity, which is being undertaking and consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*





- Legend
- Quartz vien
  - Creek - major
  - Creek - minor
  - Track

0 Scale 1 : 40 000 2.5km

**NORTHERN STAR RESOURCES LTD**  
**KIMBERLEY REGION**  
**WESTERN AUSTRALIA**  
**Wilson River Project**

**Prospect Location**

0 Scale 1 : 40 000 2.5km  
kilometres