

## Quarterly Report for the period ended 30 June 2007

### SUMMARY

#### EXPLORATION – EAST KIMBERLEY, WA (Zn, Ni, Au)

- High-grade assay results received from initial 13-hole drilling program at **Emull Zinc Prospect** (Red Billabong Project) including:
  - **3m @ 9.58% Zn from 39m including 2m @ 13.75% Zn (RBC-029)**
  - **3m @ 7.06% Zn from 45m including 1m @ 17.4% Zn (RBC-029)**
  - **3m @ 5.67% Zn from 87m including 1m @ 7.91% Zn (RBC-035)**
  - **2m @ 6.04% Zn from 62m including 1m @ 9.29% Zn (RBC-037)**
- Further 24 hole (2,087m) follow-up drill program completed at Emull with assay results awaited.
- Further drilling to evaluate the potential for shallower, high-grade shoots which are amenable to open cut mining planned for the second half of 2007.
- Anomalous values returned from follow-up aircore drilling at the Red Billabong Project testing for nickel sulphide mineralisation, including:
  - **17m @ 0.13% Ni, 174ppm Cu and 13ppb Pt from 32m (RBC406).**
- Highly anomalous results returned from reconnaissance drilling of a platinum soil anomaly at the Lamboo Prospect including:
  - **3m @ 1.9 g/t (Au+Pt+Pd) from 38m (RBC042)**
  - **2m @ 2.05 g/t (Au+Pt+Pd) from 36m (RBC044)**
  - **3m @ 1.75g/t (Au+Pt+Pd) from 51m (RBC040)**
- Next phase of exploration currently being planned for 2007 exploration field season following encouraging results from testing key zinc and nickel targets at Red Billabong.

#### CORPORATE

- \$2.57 million in cash at the end of the Quarter.

## 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 2,700 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 last year confirmed the epithermal gold potential within the Wilson River and Tunganary Project Groups.*

During the June Quarter, Northern Star completed first pass drilling of several priority targets as part of its 2007 exploration field season, including key base metal (nickel and zinc) and platinum targets at the Red Billabong Project.

Significantly, the Company has confirmed the high-grade zinc potential of the Emull mineralisation within the Red Billabong project, returning a series of high-grade zinc intercepts. The initial drilling for 2007 concentrated on the central portion of the mineralisation, with subsequent follow-up drilling further testing the central area, as well the south eastern and southern “shoots”. Assay results from the follow-up drilling are anticipated shortly.

The Company is now focused on confirming the potential for shallow higher grade shoots within the Emull mineralisation which could be amenable to open cut mining. Further drilling to evaluate this potential is planned for the second half of the year.

The Company is also committed to accelerating exploration during 2007 through its joint venture with specialist uranium exploration company, U3O8 Limited. This joint venture will assess the potential of the Wilson River and Tunganary Project Group areas to host uranium mineralisation.

As outlined in the Company’s March Quarterly report and its ASX release of 27 April 2007, Northern Star has been advised of an application by Fraka Investments Pty Ltd over ELs 80/2426 and 2427 and objected to those applications. Since then the Company has been advised by the Department of Industry and Resources (DOIR) that its applications for renewal of ELs 80/ 2425, 2426 and 2427 were received out of time. The Company has instituted Supreme Court proceedings seeking a declaration that its applications for renewal were lodged within time and an order that the Minister deal with them.

### **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 820 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 330 km<sup>2</sup>.

- **Red Billabong Project (Emull Prospect) – Zinc**

Within the Red Billabong Project, Northern Star is evaluating the Emull Prospect. Zinc-rich mineralisation hosted by the Emull gabbro occurs over a strike length of 500m and a maximum width of 50m. The Company’s objective is to define high-grade zinc shoots within a mineralised zone which has previously been broadly drilled (typically 100m traverse spacing).

A program of 13 RC percussion holes (RBC-026 to RBC-038 totalling 1,166m) was completed in the central portion of the zone testing for higher grade shoots. These holes (except RBC-033) were nominally drilled on 20m to 60m centres over a strike length of 250m intersecting the mineralisation about 50m below surface (Figures 1 and 2). A single hole RBC-033 was drilled some 300m southwest of the main body of mineralisation.

Assay results from the holes returned significant higher grade intervals including:

- **3m @ 9.58% Zn from 39m including 2m @ 13.75% Zn** (RBC-029)
- **3m @ 7.06% Zn from 45m including 1m @ 17.4% Zn** (RBC-029)
  - **making a combined interval of 9m @ 5.75% Zn from 39m.**
- The intervals above are contained within a broad zone of **61m @ 1.32% Zn, 0.36% Cu, 0.13% Pb, 6.9ppm Ag** from 38m.
- **3m @ 5.67% Zn (0.081% Cu and 5.8ppm Ag) from 87m including 1m @ 7.91% Zn** within a broad zone of **29m @ 1.19% Zn, 0.39% Cu, 0.18% Pb, 7.9ppm Ag** from 84m to 113m (EOH) (RBC-035)
- **2m @ 6.04% Zn (0.43% Cu and 18.3ppm Ag) from 62m including 1m @ 9.29% Zn** within a broad zone of **19m @ 1.30% Zn, 0.25% Cu, 0.24% Pb, 9.4ppm Ag** from 56m (RBC-037)

Other significant results, which are shown in Table 1, include:

- **3m @ 2.93% Zn, 0.71% Cu, 0.01% Pb, 6.5g/t Ag** from 48m (RBC-027).
- **1m @ 4.36% Zn and 1m @ 4.05% Zn (from 81m).** The latter is contained within a wide zone of mineralisation including **16m @ 0.91% Zn, 0.37% Cu, 0.14% Pb, 6.1ppm Ag from 68m** (RBC-028).
- **2m @ 3.01% Zn (from 34m) and 5m @ 1.93% Zn (from 43m)** contained within a wide zone of mineralisation including **33m @ 1.03% Zn, 0.41% Cu, 0.19% Pb, 9.3ppm Ag from 32m** (RBC030).
- **2m @ 1.72% Zn (from 68m) and 3m @ 1.66% Zn (from 79m)** again contained within a wide zone of mineralisation including **17m @ 1.06% Zn, 0.32% Cu, 0.17% Pb, 6.6ppm Ag from 32m** (RBC034).

Significantly, RBC-033 drilled some 300m southwest of the main body mineralisation returned significant zinc values (**18m @ 0.77% Zn from 32m including 1m @ 3.01% Zn**) highlighting the potential for further mineralisation outside the known mineralised zone.

Recent drill results have confirmed that the potentially higher grade mineralisation is plunging to the south west and not to the south east as was previously interpreted (Figure 3).

In order to further define the shallow high grade potential a program of 24 holes (for 2,087m) of RC drilling was completed confirm the location of higher grade mineralised zones within the existing mineralised envelope. Assay results from this work are still awaited.

- ***Red Billabong Project (Areas 1, 4, 5, 6) – Nickel Sulphide***

Approximately 1,500m of aircore (AC) drilling was undertaken during the June Quarter at a number of prospect areas in the northern portion of the Red Billabong project area to test whether elevated nickel values returned in previous AC drilling are due to the presence of nickel sulphide mineralisation. Assay results are available for the initial composite 4m sampling. Results for the 1m infill sampling are awaited.

The previously unrecognised prospective areas occur in the covered region to the north and west of the Moola Bulla Complex (Figure 4). Previous drilling in this region intersected mafic/ultramafic lithologies with anomalous base metal geochemistry.

The priority areas with the potential to host nickel sulphide and/or PGE mineralisation include:

**Area 1:** The recent drilling has highlighted the predominance of granitic dykes in the area with the majority of the recently drilling failing to detect ultramafic rocks. No significant values were returned from the 4m composite sampling, although RBA392 (EOH 48m) returned 12m @ 159ppm Ni and 212ppm Cu from 24m. The results of the infill sampling are awaited before further work is planned in this area.

A previous single hole RBR-107 (EOH 36m) returned 20m @ 0.17% nickel from 16m including 7m @ 0.29% nickel from 17m from a traverse across the Moola Bulla Complex.

**Area 4:** A nine hole program covering an area of some 2 km<sup>2</sup> was completed in the recent follow up. Again ultramafic lithologies were intersected. Significantly, anomalous results including those from RBA406 which intersected peridotite returning 17m @ 0.13% Ni, 174 ppm Cu and 13ppb Pt from 32m to 49m (EOH). As the holes are nominally 200m to 500m apart further drilling is planned to test this area.

Previous drilling on a single traverse of nominally 200m spaced holes testing an aeromagnetic high, approximately 3 km west of the Moola Bulla Complex, returned strongly elevated nickel values including RBR-168 (EOH 60m) 8m @ 0.08% nickel from 37m, RBA-169 (EOH 68m) 40m @ 0.10% nickel from 28m including 7m @ 0.20 % nickel from 29m, RBA-170 (EOH 55m) 16m @ 0.10% nickel from 32 and RBA-569 (EOH 47m) 15m @ 0.11% nickel from 32m. The depth of the cover in this area varied from 10 to 25m. Ultramafic rocks were identified from the logging.

**Area 5:** A further four holes were completed in this area, RBA413-415, 417. Anomalous values included, 32m@ 0.08% Ni, 108ppm Cu from 24m (RBA414), and 12m @ 0.06% Ni, 80ppm Cu from 32m (RBA417).

The results of the infill sampling are awaited before further work is planned in this area.

A single traverse of nominally 200m spaced holes testing an aeromagnetic high and associated airborne electromagnetic anomaly, located approximately 6 km north west of the Moola Bulla Complex, returned strongly elevated nickel values. Significant intercepts include RBA-147 (EOH 58m) 30m @ 0.16% nickel from 28m and RBA-148 (EOH 39m) 7m @ 0.07% nickel from 32m. Cover depths vary from 7m to 21m.

- ***Lambo Platinum***

During the 2006 field season the Company completed an initial evaluation of the platinum potential of the Lamboo Ultramafics which outcrop poorly on the south eastern portion of the Red Billabong Project.

An exploration grid based -80 mesh soil sampling (80m spaced sampling on 200m spaced traverses) over a 2.8 km<sup>2</sup> area 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) returned highly elevated platinum values including one sample which returned **2.74ppm Pt**, 0.47ppm palladium (Pd) and 42ppb Au.

Drilling of this area was completed during the quarter with assay results just received, Table 2.

A program of six RC holes (for a total of 493m) tested a strike length of approximately 400m. Three of the holes returned highly anomalous Platinum Group Elements (PGEs), including:

- **3m @ 1.9 g/t (Au+Pt+Pd) from 38m (RBC042)**
- **2m @ 2.05 g/t (Au+Pt+Pd) from 36m (RBC044)**
- **3m @ 1.75g/t (Au+Pt+Pd) from 51m (RBC040)**

These results are included within broader anomalous intervals including 12m @ 0.9 g/t (Au+Pt+Pd) from 37m (RBC042). The Company will continue to evaluate the area to identify continuity to the PGE mineralisation.

### ***McGowan Project***

The McGowan Project comprises a single exploration licence which covers 114 km<sup>2</sup> and is located 85 km to the south west of Halls Creek.

The tenement covers a number of poorly outcropping gabbro intrusives and is prospective for base metal and gold mineralisation. Previous exploration identified a number of gossanous quartz veins (Cu-Ag-Au-Zn) hosted within gabbroic rocks which returned up to 4.5m @ 3.1% copper and 1.5m @ 2.9% copper from shallow drilling. The one hole drilled below the base of oxidation returned 3m @ 0.7% copper from 56m.

The Company continued to evaluate the area with a number of grid soil programs scheduled. Drilling of the gossanous quartz veins will be undertaken once a suitable drill rig and the necessary approvals are gained.

A programme of reconnaissance rock chip sampling over the gossanous quartz veins earlier in the year highlighted at least four areas which have returned elevated gold, copper and silver values.

The zones of veining are hosted within gabbroic rocks and vary in strike length (up to 250m) and width (up to 7m). The veining is associated with the margins of an approximately 600m wide and 3,000m long magnetic low within the gabbro.

The multiplicity of these gossanous veins, the significant outcropping strike extent of some of the veins – which may continue beneath alluvial cover – and the limited amount of historic drill testing all indicate that this project area has excellent potential for the discovery of significant mineralisation.

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

*The Wilson River Project Group is located about 150km north of Halls Creek and centred 50km west of the Argyle diamond mine. Together with the present ground holdings at the Wilson River, Dunham and new Tunganary projects, 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 within the Wilson River Project Group are remarkably similar to the mineralised epithermal quartz vein systems in Queensland's Drummond Basin. Examples of low sulphidation epithermal gold mineralisation in Australia are the Pajingo-Vera-Nancy and Cracow deposits in Queensland, although these are of a younger age.

A part of this project area is subject to a tenement complication which has been subject to a separate ASX release on 27 April 2007 (see above). Northern Star intends to vigorously pursue all legal remedies available to it to ensure that it retains title to the relevant ground

Permits to allow the drilling of the Hunter Prospect within the Dunham Project have been submitted to the relevant authorities. Once approval has been gained, anticipated during the September Quarter, then drill testing of the high grade gold-silver veins identified at the Hunter prospect will be undertaken.

- ***Uranium Exploration***

During the Quarter, the Company reached agreement with ASX-listed specialist uranium explorer, **U308 Ltd**, on the uranium rights within its East Kimberley exploration portfolio. The agreement will provide a platform to significantly accelerate uranium exploration on these highly prospective tenements.

A number of known uranium anomalies exist within Northern Star's Wilson River group of tenements, including A3, Frog, Frog West, and Last. While no previous drilling has been reported on the tenements, preliminary exploration by Northern Star last year confirmed the uranium potential of the region. Significant uranium rock chip assays have been recorded at Frog (**0.38% U<sub>3</sub>O<sub>8</sub>**), Frog West (**1.23% U<sub>3</sub>O<sub>8</sub>**) and A3 (**0.16% U<sub>3</sub>O<sub>8</sub>**).

**U308 Ltd** have indicate they will be conducting a combined magnetic/radiometric survey over the Northern Star's ground during the second half of the year, in order to identify potential drill targets.

## **CORPORATE**

The Company had \$2.57 million cash at the end of the quarter.

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.*

**Table 1 RC Percussion Drilling 2007 -Emull**

Hole	EOH (m)	Easting AGD66	Northing AGD66	From (m)	To (m)	Interv. (m)	Zn %	Cu %	Pb %	Ag ppm	
# RBC-026	95	321081	7961049	40	45	5	0.75	0.26	0.17	8.4	
# RBC-027	95	321045	7961049	47	70	<b>23</b>	<b>1.04</b>	<b>0.38</b>	0.17	10.9	
Including				48	51	<b>3</b>	<b>2.93</b>	<b>0.71</b>	0.10	6.5	
# RBC-028	107	321020	7961043	43	44	<b>1</b>	<b>4.36</b>	<b>0.43</b>	0.07	4	
				68	84	<b>16</b>	<b>0.91</b>	<b>0.37</b>	0.14	6.1	
including				81	82	<b>1</b>	<b>4.05</b>	<b>0.63</b>	0.16	7.5	
# RBC-029	101	321003	7961057	38	99	<b>61</b>	<b>1.32</b>	<b>0.36</b>	0.13	6.5	
Including				39	48	<b>9</b>	<b>5.75</b>	<b>0.44</b>	0.11	6.5	
			including	39	42	<b>3</b>	<b>9.58</b>	<b>0.74</b>	0.15	8.8	
			and	45	48	<b>3</b>	<b>7.7</b>	<b>0.29</b>	0.08	4.8	
RBC-030	107	320980	7961069	32	65	<b>33</b>	<b>1.03</b>	<b>0.41</b>	0.19	9.3	
Including				34	36	<b>2</b>	<b>3.01</b>	<b>0.44</b>	0.18	5.6	
				43	48	5	1.93	0.35	0.16	7.9	
				87	92	5	0.81	0.43	0.14	10.9	
RBC-031	80	320965	7961073	61	68	7	0.56	0.18	0.13	6.64	
Including				61	62	1	1.45	0.34	0.15	8.5	
						74m to EOH Granitic Dyke					
RBC-032	42	320942	7961083	No Significant Assays – Hole Intersected Granitic Dyke							
RBC-033	80	320650	7960998	32	50	18	0.77	0.37	0.11	6.1	
Including				32	33	<b>1</b>	<b>3.01</b>	<b>0.48</b>	0.10	6.0	
RBC-034	95	320942	7961068	65	82	<b>17</b>	<b>1.06</b>	<b>0.32</b>	0.17	6.6	
Including				68	70	2	1.72	0.35	0.17	6.25	
				79	82	3	1.66	0.29	0.39	11.3	
RBC-035	113	320979	7961046	84	113(EOH )	<b>29</b>	<b>1.19</b>	<b>0.39</b>	0.18	7.9	
Including				87	90	<b>3</b>	<b>5.67</b>	<b>0.81</b>	0.1	5.8	
RBC-036	83	321119	7961033	N/S							
RBC-037	85	320919	7961091	56	75	<b>19</b>	<b>1.3</b>	0.25	0.24	9.4	
Including						<b>2</b>	<b>6.04</b>	<b>0.25</b>	<b>0.43</b>	<b>18.3</b>	
RBC-038	83	320875	7961105	N/S							

Holes drilled nominally at -60°. 1 metre samples analysed for base metals using mixed acid digest and ICP-OES or MS finish. Intercepts are downhole intervals.

N/S – No significant assays.

**Table 2 Significant Drill Intercepts –Lambo Prospect**

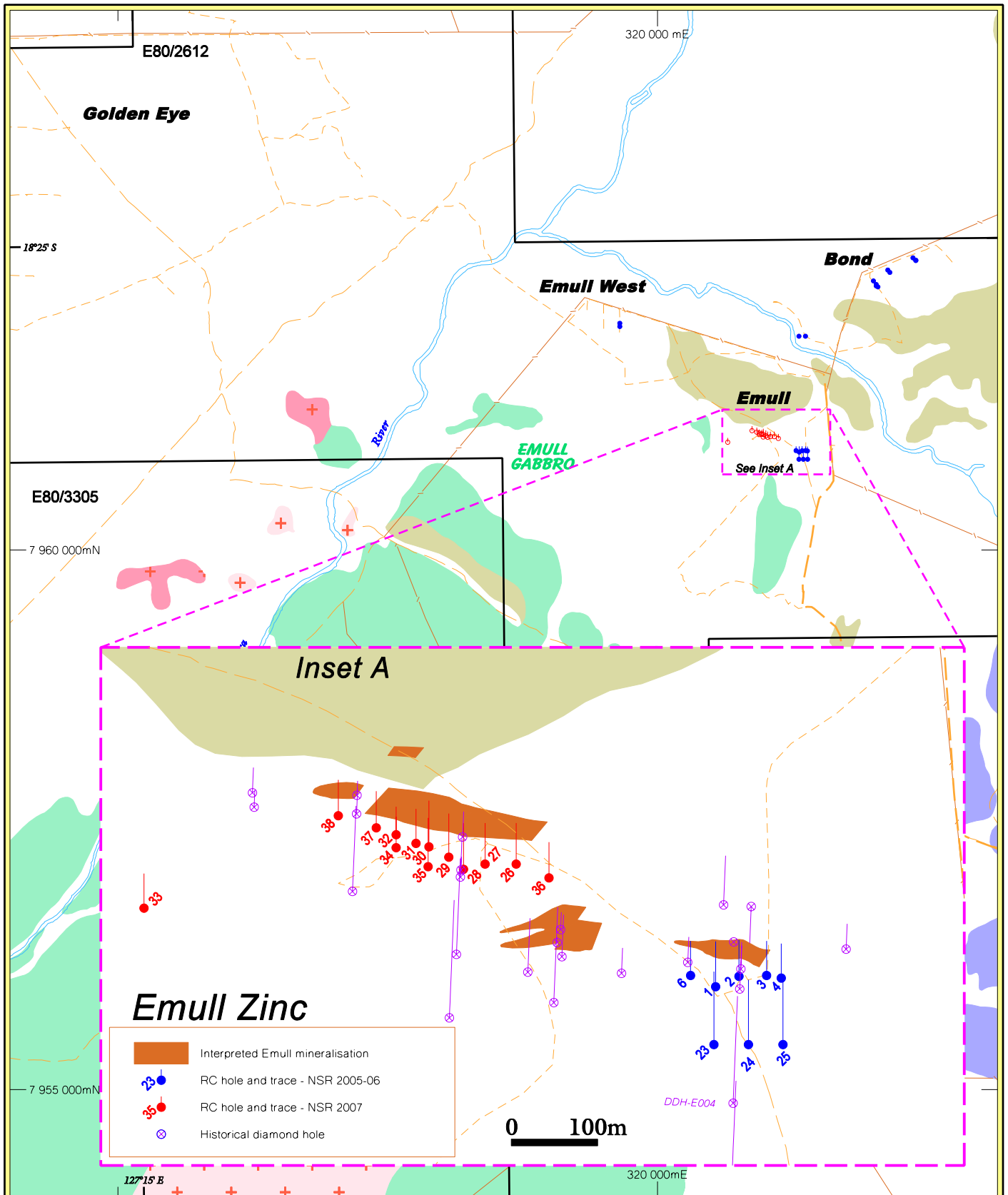
Hole	EOH (m)	Easting AGD66	Northing AGD66	From (m)	To (m)	Interv. (m)	<b>PGE+ Au</b> g/t
RBC-039	80	323436	7959351				NS
RBC-040	78	323464	7959324	38	41	<b>3</b>	<b>1.75</b>
RBC-041	80	323536	7959471				NS
RBC-042	89	323565	7959441	36	39	<b>3</b>	<b>1.9</b>
RBC-043	95	323665	7959565	11	13	2	0.49
RBC-044	71	323404	7959266	36	39	<b>3</b>	<b>2.05</b>

Holes drilled nominally at  $-60^{\circ}$  to  $135^{\circ}$  AGD, 1 metre samples - Au, Pt, Pd determined by lead collection fire assay by firing a 40g (approx) sample with an ICP OES finish.

RBC = Reverse circulation hole

NS- No significant Assays



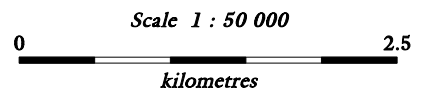


**Emull Zinc**

	Interpreted Emull mineralisation
	RC hole and trace - NSR 2005-06
	RC hole and trace - NSR 2007
	Historical diamond hole

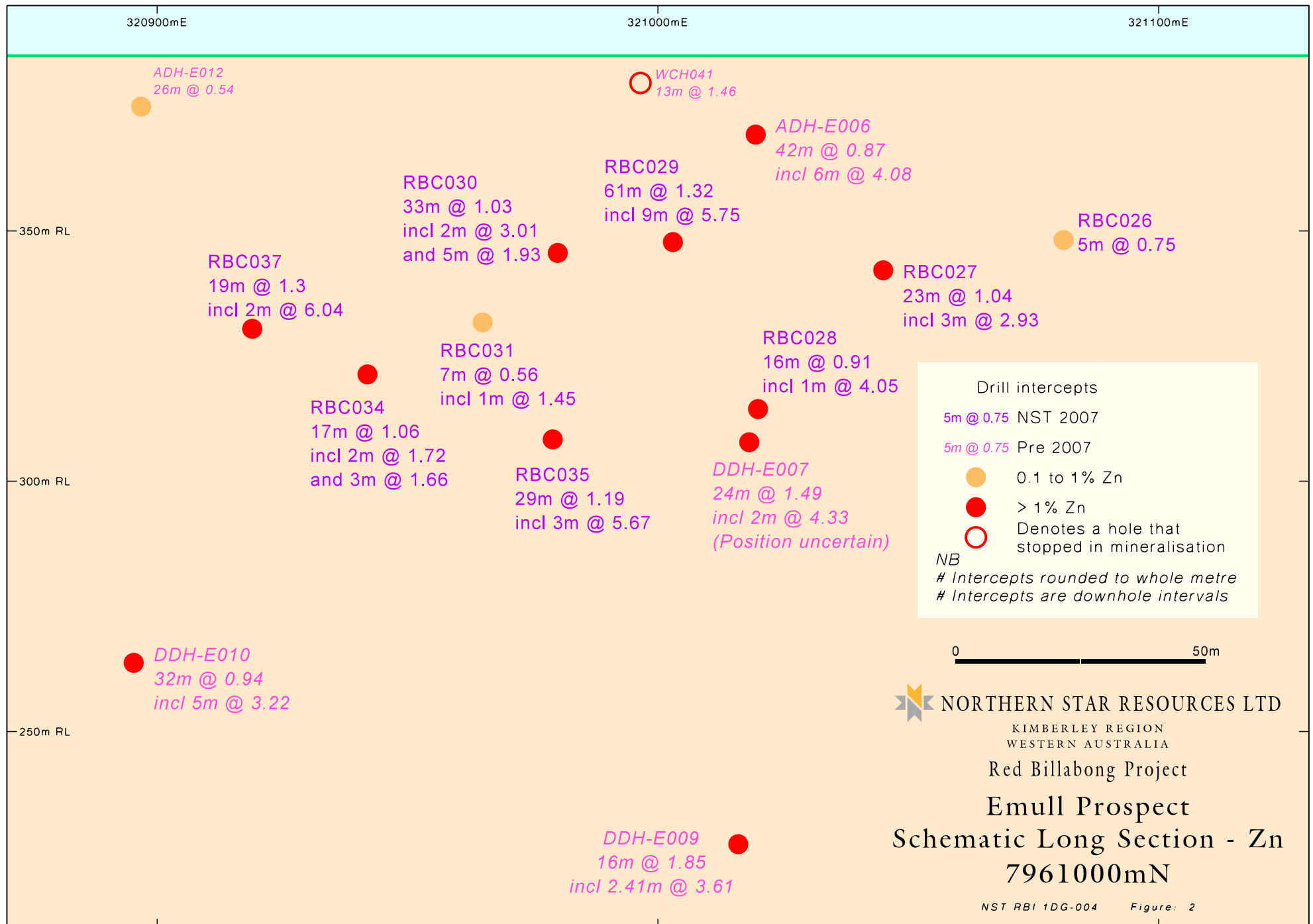
- LEGEND**
- Cover
  - GSWA outcrop geology
    - Gabbro
    - Granotoid
    - Metamorphic rocks
    - Lamboo Ultramafic

- NST - RAB/AC drill hole location (2005/2006)
- NST - RC drill hole location (2007)



**NORTHERN STAR RESOURCES LTD**  
 KIMBERLEY REGION  
 WESTERN AUSTRALIA  
 Red Billabong Project

## Southern Location Plan



320900mE

321000mE

321100mE

ADH-E012  
26m @ 0.54

WCH041  
13m @ 1.46

ADH-E006  
42m @ 0.87  
incl 6m @ 4.08

RBC030  
33m @ 1.03  
incl 2m @ 3.01  
and 5m @ 1.93

RBC029  
61m @ 1.32  
incl 9m @ 5.75

RBC026  
5m @ 0.75

350m RL

RBC037  
19m @ 1.3  
incl 2m @ 6.04

RBC027  
23m @ 1.04  
incl 3m @ 2.93

RBC031  
7m @ 0.56  
incl 1m @ 1.45

RBC028  
16m @ 0.91  
incl 1m @ 4.05

300m RL

RBC034  
17m @ 1.06  
incl 2m @ 1.72  
and 3m @ 1.66

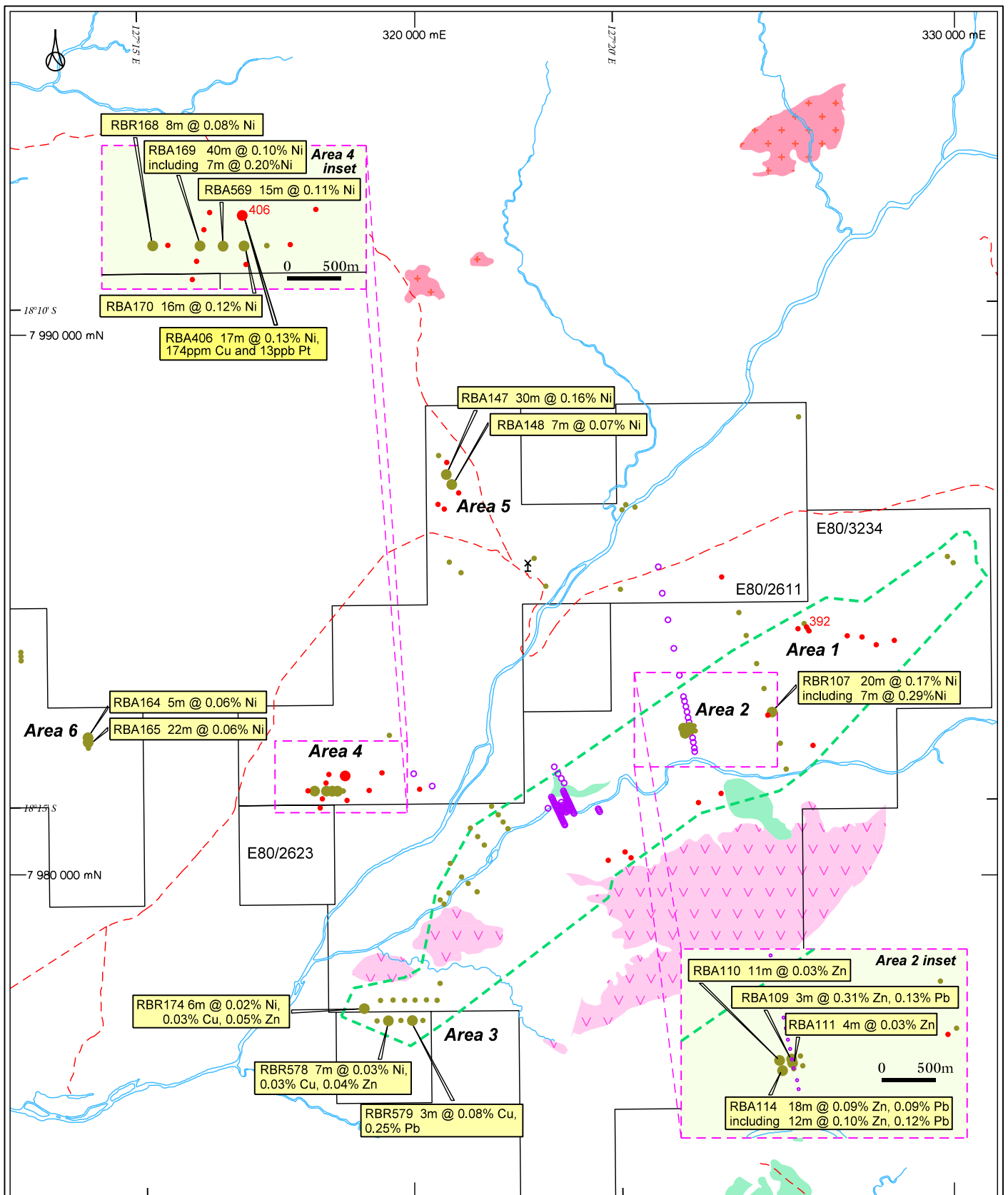
RBC035  
29m @ 1.19  
incl 3m @ 5.67

DDH-E007  
24m @ 1.49  
incl 2m @ 4.33  
(Position uncertain)

250m RL

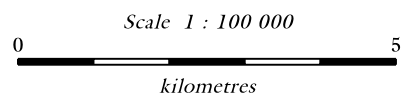
DDH-E010  
32m @ 0.94  
incl 5m @ 3.22

DDH-E009  
16m @ 1.85  
incl 2.41m @ 3.61



LEGEND

- Cover
- GSWA outcrop geology
  - CAMBRIAN volcanics and conglomerates
  - Gabbro
  - Granodiorite
- Moola-Bulla-Complex
- NST - RAB/AC drill hole location
- NST - RAB/AC drill hole location - May 2007
- Historical drill hole location



**NORTHERN STAR RESOURCES LTD**  
KIMBERLEY REGION  
WESTERN AUSTRALIA  
Red Billabong Project

Northern Location Plan