

# BARFUSS CORPORATION PTY LTD

HARTS RANGE PROJECT  
NORTHERN TERRITORY OF AUSTRALIA

ANNUAL TECHNICAL REPORT FOR  
EXPLORATION LICENCE GROUP  
GR-132/09  
ELs 24552, 25063, 25430  
FOR THE YEAR ENDING 21st FEBRUARY 2010.

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Flagstaff GeoConsultants Pty Ltd  
Date: 04 June, 2010  
Licensee: Barfuss Corporation Pty Ltd  
A.C.N. 006 917 666

Target Commodities: copper, gold, thorium, uranium, rare earth elements,  
gemstones

1:250,000 MAP SHEETS: Alcoota SF 53-10, Huckitta SF 53-11,  
Alice Springs SF 53-14, Illogwa Creek SF 53-15

1:100,000 MAP SHEETS: Riddoch 5851, Delny 5852, Quartz 5951, Dneiper 5952

Datum / Zone: GDA94 / MGA zone 53

KEYWORDS: Harts Range, Arunta Block, Strangways Metamorphic Complex, Harts  
Range Group, Riddock Amphibolite, Gough Dam Schist Zone, uranium,  
thorium, rare earth elements, copper-gold, uranium, thorium, rare earth  
elements, niobium, tantalum, samarskite, ruby, gemstones

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## LICENCE DETAILS:

Group (Technical) Reporting Number: GR - 132/09

Group Reporting Approval Date: 10 December 2009

Licence Numbers: EL 24552, EL 25063, EL 25430

*(EL 25764, currently under application, is not currently part of the Group)*

Project Name: Harts Range

Licensee: Barfuss Corporation Pty Ltd

Licensee ACN: 006 917 666

Licence details:

### EL 24552

Anniversary Date: 25 August

Area: 642.1 square kilometres

### EL 25063

Anniversary Date: 19 November

Area: 40.77 square kilometres \*  
within 15 square blocks  
(1 minute x 1 minute longitude/latitude)

\* actual area, excluding Mineral Claims and EL25764 (formerly RO1357), is  
35.69 square kilometres.

### EL 25430

Anniversary Date: 13 March

Area: 32.37 square kilometres  
within 13 square blocks \*  
(1 minute x 1 minute longitude/latitude)

\* excluding approx. 3 blocks, comprising Reserve from Occupation RO26349.

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## **EXECUTIVE SUMMARY**

Exploration Licences 24552, 25063 and 25430 comprise Barfuss Corporation's Harts Range Project, covering more than 700 square kilometres. The licences were granted, respectively, on 26 August 2005, 20 November 2006 and 13 March 2007. Underlying geology through most of the area consists of high-grade metamorphic rocks of the Arunta Block, including the Harts Range Group (part of the Late Proterozoic to Cambrian Irindina Province), with older Aileron Province rocks in the east ("Entia Dome") and west (Strangways Metamorphic Complex, including younger deformation in the Gough Dam Schist Zone). Field activity to date has included reconnaissance mapping, extensive rock-chip sampling and detailed ground spectrometer surveying in a number of areas of interest. Detailed air-borne geophysical surveying is planned. A significant number of prospects have been identified. These include:- rare earth element ("REE") prospects (+thorium, +/-uranium), principally the "Spinifex Gully" group of prospects in EL 25430, extending into EL 24552 (assays up to 11.9 % REE, 1140 ppm uranium, 4.72 % thorium); the extensive "Copper Queen" group of copper-gold prospects, investigated previously by Tanami Gold NL, mostly in EL 24552 but extending into EL 25430; two meta-ultramafic bodies ("Plug 1" and "Plug 2") in the west of EL 24552, with indications of nickel-chrome (+/- platinum-palladium) anomalism (reconnaissance assays 0.2-0.27 % nickel over 125 metres); and several pegmatite dykes in the east of EL 24552 and EL 25063 with very strong uranium-niobium-yttrium-tantalum(-REE) mineral enrichment ("Bobs", "Cusp", "Malex", "Pearly Gates" prospects) (assays over 7 % uranium). Prospectivity for other minerals is indicated by, for example, the Harts Range Ruby Mine and a near-by vermiculite prospect (surrounded by EL 25764) and the Oonagalabi copper-zinc prospect, a couple of kilometres south of EL 24552. During the current reporting period, field work – and therefore "numerical" results (sampling, drilling, surveying) – has been largely prevented due to a protracted legal dispute with the company's principal former financial backer resulting in all funds earmarked for on-ground activity being "frozen". This dispute was not concluded until late in the reporting period, when Barfuss Corporation was finally able to bring the matter to court, whereupon the parties rapidly settled out of court, largely in Barfuss' favour. Barfuss Corporation is now free to spend its own funds on its projects and/or seek other funding or partners. The company regards the project as highly prospective and is keen to resume significant exploration activity on it.

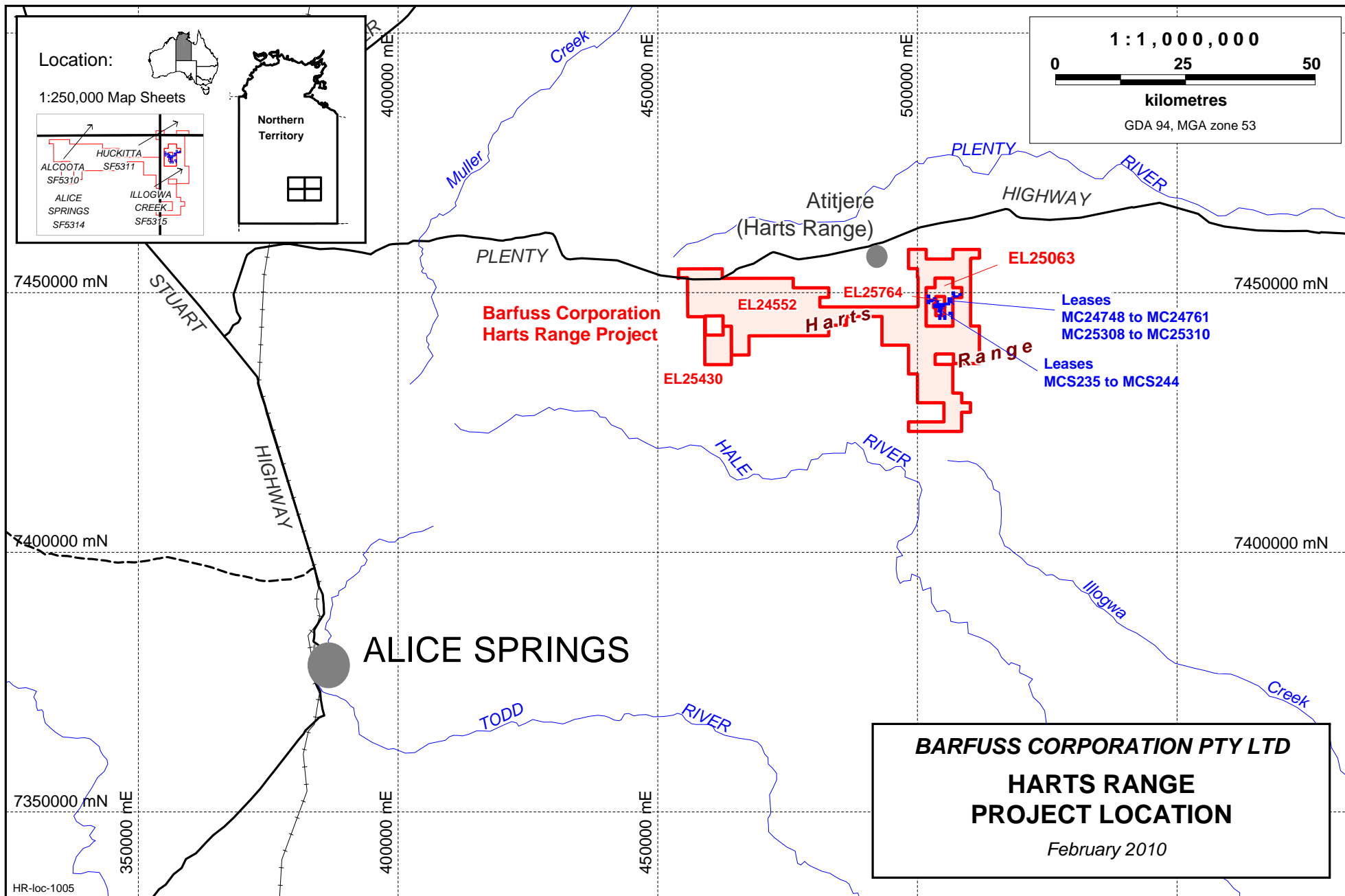


Figure 1

## 1. INTRODUCTION

Barfuss Corporation's Harts Range Project is comprised of EL 24552, ELs 25063 and 25430, EL application 25764, and a number of Mineral Claims within the area of ELs 25063 and 25764.

- EL 24552 (642.1 square kilometres)
- EL 25063 (40.77 square kilometres)
- EL 25430 (32.37 square kilometres)
- EL (application) 25764 (6 square kilometres)
- Mineral Claims MC 24748-24761 & 25308-25310 (621 hectares)

The exploration licences are contiguous and the MCs are within the area of ELs 25063 and 25764. The company also has granted Mineral Claim coverage of the Harts Range Ruby Mine (MCS235-244, 172 hectares) which is also surrounded by EL 25764.

This report covers only grouped licences EL 24552, EL 25063 and EL 25430.

The Harts Range Project lies in the southeast of the Northern Territory, roughly 100 to 140 kilometres northeast of Alice Springs (170 to 260 km by road, via the Plenty Highway) (Figure 1). The project extends roughly 50 km east-west and 10 km north-south, except at the eastern end where it is just over 30 km north-south.

Topography and terrain in the Harts Range is frequently rugged, with relief up to 300 to 400 metres in some areas. Access is predominantly from the north via station tracks running south from the Plenty Highway. The rugged terrain generally restricts vehicle access to established tracks.

The project as a whole covers much of the central Harts Range (Figure 2), which is dominated by gneisses and amphibolites of the Riddock Amphibolite Member, part of the Harts Range Group in the Irindina Province (formerly considered Early Proterozoic, now recognised as Late Proterozoic to Cambrian), in Division 2 of the eastern Arunta Block. The project also covers adjacent rocks, predominantly schist, gneiss and some calcsilicates which also belong to the Harts Range Group. The far eastern part of the project also overlies the older Bruna and Entia Gneisses on the western flank of the "Entia Dome" (Aileron Province, Arunta Division 1).

In the southwest of the project area, most of EL 25430 is also underlain by older Aileron province rocks (Strangways Metamorphic Complex), though these are dominated here by younger deformation forming the Gough Dam Schist Zone. Geology is generally dominated by high-grade quartzofeldspathic gneisses and schist, with subordinate amphibolite and calcsilicates.

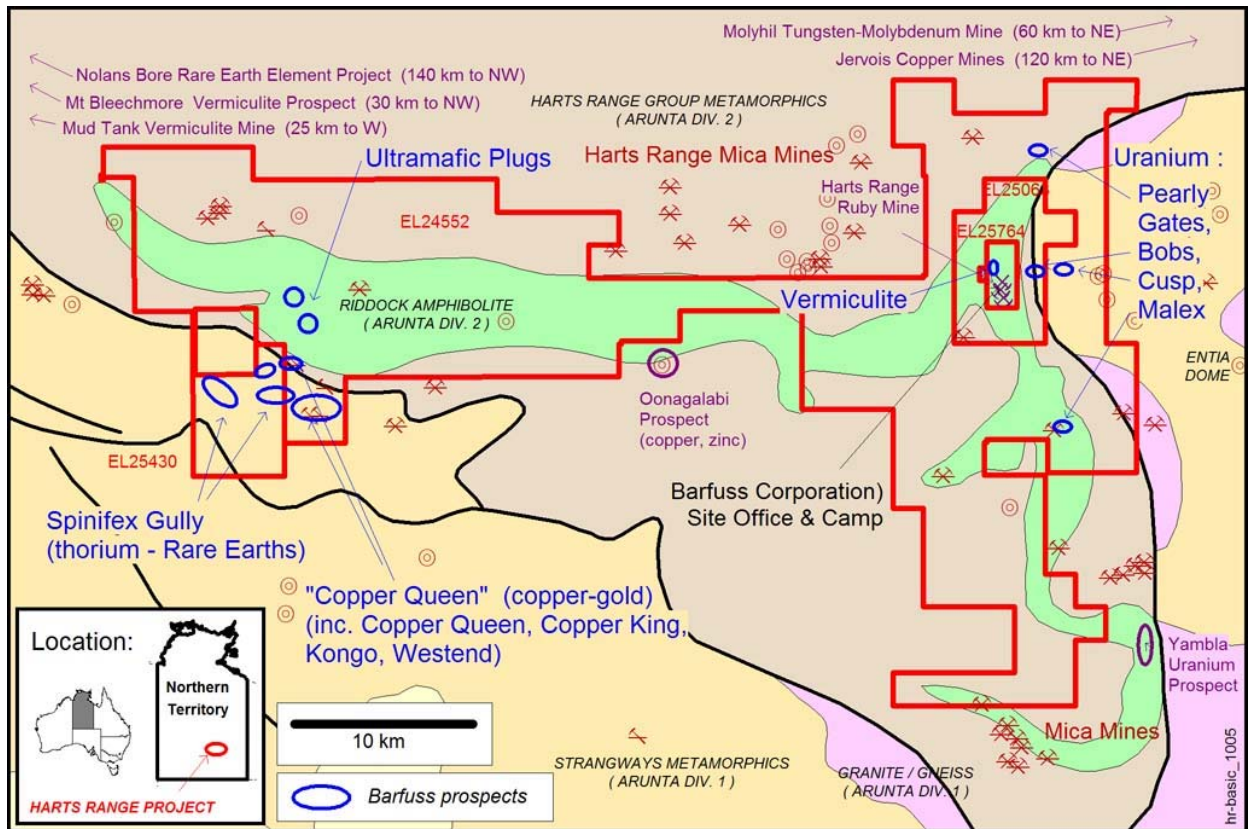
The Harts Range was a major area of pegmatite-related mica mining in the early-mid- 20<sup>th</sup> century. Other mining in the project area has generally been very small scale, targeting semi-precious gem minerals. Small-scale base metals mineralisation occurs in several areas, however, and some larger deposits have been identified. Base metal mineralisation in the region includes the Jervois copper deposits, to the northeast, the Molyhil Mine (scheelite-molybdenite (tungsten)) and the Oonagalabi copper-lead-zinc deposit.

Most recently, copper-gold mineralisation was investigated by Tanami Gold NL at its Copper Queen group of prospects in 2001-2005 (following earlier work by Kinex at its White Hill Dam prospect in 1984-1987), and Power Nuclear Corporation of Japan (PNC) explored the area for uranium in the 1990s (company reports are listed in the References at the end of this report). The Copper Queen prospects are now mostly within Barfuss Corporation's Harts Range Project, in the southwest corner of EL 24552, extending into the northeast corner of EL 25430. Much of the area investigated by PNC is also covered by the Project. Recent activity has included

that of Mithril Resources limited at its Huckitta Project (mostly south-east of the Barfuss Harts Range Project) where significant copper-cobalt and nickel-copper sulphide mineralisation is being investigated.

The Harts Range ruby deposit was found in the late 1970s and mined from then into the early 1980s by Hillrise Properties and Mistral Mines. Barfuss Corporation has mineral claim coverage of the ruby mine, which is surrounded by EL 25764, and has its site office and camp located there.

In addition to gemstones, and base and precious metals, the Harts Range is also prospective for a variety of industrial minerals. The Mud Tank vermiculite mine is 25-30 km to the west, and a garnet sand resource has been identified by Olympia Resources at Aturga Creek. Other potential garnet sand and vermiculite deposits are known in the area. Barfuss Corporation has a vermiculite-rich deposit within its Ruby Mine mineral claims, within the Riddoch Amphibolite unit, and considers that there is potential for more such mineralisation within the project area.



HARTS RANGE - BASIC GEOLOGY & SELECTED PROSPECTS

Barfuss Corporation Pty Ltd May 2010

Figure 2

Barfuss Corporation has conducted a substantial amount of non-invasive work on the Harts Range Project leases. Several prospect areas were identified in different areas of the licences. Investigations included analysis of available geophysical data, geological mapping, rock-chip sampling and ground spectrometer surveys. Several areas were identified as significantly prospective, requiring further investigation. Rock-chip assays include some highly anomalous results. Numerous areas have been subject to reconnaissance and more detailed investigations, including mapping, rock-chip sampling and ground spectrometer surveys. Identified mineralisation and anomalism includes copper-gold, rare earth elements (REE), uranium, thorium and nickel. This work is documented in detail in previous Annual Reports.

Very little work was conducted in the current reporting period. Since late 2007, the company was in a protracted legal dispute with its principal financial backer, who is based the USA. All funds intended for exploration expenditure were legally “frozen” at the start of this dispute, which effectively halted all proposed field operations and other exploration-targeted work until the dispute was resolved. Legal and contractual details have prevented Barfuss Corporation spending its own funds on the project or seeking other funding or partners. Barfuss Corporation was finally successful in bringing the matter to court in late 2009, whereupon the parties rapidly settled out of court, largely in Barfuss’ favour.

This matter has been discussed previously between Barfuss Corporation and the Northern Territory Government Department’s Titles Division, and is not the subject of this report.

The company is and has been in discussions with a number of parties regarding investment in the project. It is currently finalising a deal with a Chinese group to test and mine the small vermiculite deposit on one of the company’s Mineral Claims, which is surrounded by EL 25764.

Proposed work for the coming reporting period is as it was for the prior one, except the company is now free of the onerous constraints of the legal dispute. The company plans to fly a detailed geophysical survey (magnetic and radiometric) over much or all of the project area. This will help identify areas warranting more detailed investigation, and will aid in the geological interpretation of areas already of interest. A low-level, helicopter borne, 50-metre-line-spaced magnetic and radiometric survey is planned. To save time and reduce costs – thereby allowing for surveying of a larger area – Barfuss Corporation is purchasing its own geophysical equipment for the surveying.

In addition to the proposed survey, certain prospect areas warrant more immediate field investigation. These are detailed in section 4 of this report (*Work Program for the Next Twelve Months*) and include further investigation of the Spinifex Gully group of REE-thorium(-uranium) prospects, assessment of the Copper Queen group of copper-gold prospects (particularly the potential for extension(s) under cover to the west), follow-up investigation of nickel-chrome anomalism in a (meta-)“ultramafic” and further investigation of the high-grade uranium-niobium-tantalum-yttrium-REE mineralisation in pegmatites at the Cusp, Bobs, Malex and Pearly Gates prospects.



## 2. WORK CONDUCTED DURING THE REPORT PERIOD

As noted in the Introduction to this report:

*Very little work was conducted in the current reporting period. Since late 2007, the company was in a protracted legal dispute with its principal financial backer, who is based the USA. All funds intended for exploration expenditure were legally “frozen” at the start of this dispute, which effectively halted all proposed field operations and other exploration-targeted work until the dispute was resolved. Legal and contractual details have prevented Barfuss Corporation spending its own funds on the project or seeking other funding or partners. Barfuss Corporation was finally successful in bringing the matter to court in late 2009, whereupon the parties rapidly settled out of court, largely in Barfuss’ favour.*

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The principal of Barfuss Corporation Pty Ltd, Mr Uwe Barfuss, has been obliged to neglect his other business interests owing to the demands of this legal dispute, and has incurred very substantial legal costs in seeking to resolve the matter and resume active exploration of the licence by its holder, Barfuss Corporation. These expenses are not attributable, however, to the tenement’s statutory expenditure requirements.

Several visits have been made to the project, but active fieldwork has been largely restricted to traditional prospecting.

### 3. EXPENDITURE.

Active exploration of the project was severely restricted during the reporting period owing to legal matters discussed in previous sections of this report.

Costs associated with on-going maintenance of the project and field activities are not insubstantial, however, and include access costs (fuel, vehicle expenses, camp maintenance), plant and equipment purchases and maintenance, contract labour and limited office work (literature research, report preparation, general office overheads).

Expenditure figures are provided in the separate Exploration Expenditure Reports for each exploration licence.

### 4. WORK PROGRAM FOR THE NEXT TWELVE MONTHS.

The principal work planned for the next reporting period is a detailed helicopter-borne radiometric and magnetic survey. At commercial geophysical contract company rates, Barfuss has been quoted in the order of \$1,000,000 for the planned survey (for the whole of the Harts Range Project). For such a large, expensive, survey, Barfuss considers the purchase of its own equipment to be an economical alternative. Geophysical surveying equipment costing \$300,000 has been ordered from *Radiation Solutions Inc.*, an Ontario, Canada -based company. *Geoz Pty Ltd*, in Western Australia, will install and commission the equipment and *Alice Springs Helicopters* has quoted approximately \$200,000 to fly the survey. Processing and interpretation of the survey results will be additional costs, in the order of tens of thousands of dollars, and follow-up in the field will be more again.

In addition to the proposed survey, certain prospect areas warrant more immediate field investigation. Principal among these are, from west to east:

- The Spinifex Gully group of prospects in the north of EL 25430:- More detailed investigation of these REE/thorium prospects should include
  - Infill ground spectrometer surveying of areas less intensely surveyed previously.
  - Ground spectrometer surveying between the prospects identified to date.
  - Detailed geological mapping of the prospect areas (including detailed identification of potentially prospective areas concealed by alluvial cover).
  - More detailed and systematic rock-chip sampling to better delineate mineralised areas.
  - *The above work to proceed to drill testing.*
- Also in the north of EL 25430:- Assessment of the potential for concealed mineralisation along strike from the Copper Queen prospect, which lies to the east in EL 24552. [*Reconnaissance drilling in 2001 by Tanami Gold NL indicated copper anomalism here under cover, over a distinct linear magnetic high, along strike from the Copper Queen deposit. This may warrant follow-up drilling.*]
- In the west of EL 24552:- "Ultramafic Plugs 1 & 2" received only a cursory field investigation previously. Corundum crystals found at Plug 1 may indicate potential for gem-quality material (sapphire or ruby). A brief traverse of rock-chip samples (seven only, of the unremarkable amphibolitic rock-mass of the unit) across Plug 1 indicated distinct nickel-chrome anomalism. Four samples across one end assayed 0.2 to 0.27 % Ni (the three at the other end were 0.15 to 0.19 %). The samples all assayed 0.36 to 0.48 % Cr; with some platinum-palladium anomalism also (up to 24 ppb Pt and 29 ppb Pd). This merits further work.

Annual report for the period ending 21<sup>st</sup> February, 2010.

- In the southeast of EL 25063:- A very thick tourmaline-bearing pegmatite returned anomalous assay in very minor reconnaissance sampling previously. Assays were elevated in a similar suite of elements to the Cusp and Bobs mineralisation (e.g. 195 ppm U). The size of this dyke (ca. 20-30<sup>+</sup> metres thick) is such that it might be an attractive target even at grades significantly lower than those at Cusp and Bobs.
- In the east of EL 24552:- The area between the Cusp prospect and Bobs prospect (EL25063). These two prospects contain high-grade uranium-niobium-tantalum-yttrium-REE (rare earth element) mineralisation. Sampling of masses of samarskite(?) mineral have consistently returned assays of the order of over 7% uranium, over 4.75% yttrium, mostly over 7.5% niobium, over 4% tantalum and mostly over 4% REE (rich in the more valuable heavy REE). These are hosted by similar pegmatite bodies, along strike from one another. The intervening 1.6 kilometre strike length has not yet been investigated. [Cusp, Bobs, and Malex further south, all require further investigation also.]
- In the northeast of EL 24552:- The "Pearly Gates" prospect was identified by PNC in the mid-1990s but has not yet been investigated by Barfuss Corporation. It is between the old Eastern Chief mica mine and Mt Bruna (several kilometres from each). PNC reported euxenite crystals (inferred to be similar to the mineralisation at Cusp and Bobs) "in two distinct ellipsoidal pegmatoid bodies" and "five uranium anomalies (up to 3,000 cps) along a . . . pegmatite dyke of more than 500m in length".
- In the east of EL 24552:- A new ruby occurrence has been discovered but not yet been further investigated.

Ross Caughey  
(Flagstaff GeoConsultants Pty Ltd)  
04 June, 2010

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## REFERENCES

Caughey, R. (Flagstaff GeoConsultants Pty Ltd.)

- 2002 to 2010: various unpublished reports for Barfuss Corporation Pty. Ltd.
- 20/09/2006: Annual Report for Exploration Licence EL 24552 for the period ending 25<sup>th</sup> August 2006.
- 12/11/2007: Annual Report for Exploration Licence EL 24552 for the period ending 25<sup>th</sup> August 2007.
- 21/09/2008: Annual Report for Exploration Licence EL 24552 for the period ending 25<sup>th</sup> August 2008.
- 29/01/2008: Annual Report for Exploration Licence EL 25063 for the period ending 19<sup>th</sup> November 2007.
- 19/12/2008: Annual Report for Exploration Licence EL 25063 for the period ending 19<sup>th</sup> November 2008.
- 21/04/2008: Annual Report for Exploration Licence EL 25430 for the period ending 13<sup>th</sup> March 2008.
- 09/05/2009: Annual Report for Exploration Licence EL 25430 for the period ending 13<sup>th</sup> March 2009.

Hussey, K.J., 2003. Rare earth element mineralisation in the eastern Arunta Region. Northern Territory Geological Survey, Record 2003-004.

Huston, D.L., Maidment, D., and Hussey, K., 2006. Regional geology and metallogeny of the eastern Aileron and Irindina Provinces: a field guide. Geoscience Australia, Record 2006/13.

Kinex Pty Ltd: various open-file reports, 1985 to 1987; Report Numbers CR1985-0136, CR1986-0270, CR1986-0271, CR1986-0272, CR1987-0089A, CR1987-0287. \*

Maidment, D.W., Hand, M. & Williams, I.S., 2006. A time frame for protracted multiphase metamorphism, magmatism and deformation in the exhumed core of the Alice Springs Orogen, Harts Range, central Australia. ASEG Extended Abstracts 2006.

PNC Exploration (Australia): various open-file tenement annual, final and partial relinquishment reports, 1994 to 1997; Report Numbers CR1994-0325, CR995-0298, CR1995-0525, CR1995-0697, CR-1996-0285, CR1996-0286, CR-1997-0611. \*

Rutter, H. (Flagstaff GeoConsultants Pty Ltd.) 2006. 'An analysis of airborne radiometric data from the Harts Range, N.T.' (unpublished report)

Shaw, R.D., Senior, B.R., Offe, L.A., Stirzaker, J.F., Walton, D.G., Apps, H.E., Freeman, M.J. 1:250,000 Geological Map Series Explanatory Notes Illogwa Creek SF53-15. Bureau of Mineral Resources Australia & Northern Territory Geological Survey, 1985.

Shaw, R.D., Wells, A.T. 1:250,000 Geological Map Series Explanatory Notes Alice Springs SF53-14. Bureau of Mineral Resources Australia, 1983.

Tanami Exploration NL: various open-file tenement annual, final and partial relinquishment reports, 2002 to 2005; Report Numbers CR2002-0290, CR2004-0015, CR2004-0649, CR2005-0445. \*

\* *Open file company reports sourced from the Northern Territory Mineral Industry Reports Management System (IRMS) (<http://apps.minerals.nt.gov.au/irmsmin/>).*