

BARFUSS CORPORATION PTY LTD

HARTS RANGE PROJECT
NORTHERN TERRITORY OF AUSTRALIA

ANNUAL REPORT FOR
MINERAL CLAIMS
MCS 235, 236, 237, 238, 239, 240, 241, 242, 243, 244
FOR THE PERIOD ENDING 20th June 2004.

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Flagstaff GeoConsultants Pty Ltd

Report No. MCS235-244-AnnRept-2004.doc

Date: 14 January, 2005

Licensee: Barfuss Corporation Pty Ltd

A.C.N. 006 917 666

1:250,000 MAP SHEET: Illogwa Creek SF 53-15

1:100,000 MAP SHEET: Quartz 5951

KEYWORDS: anorthosite, Harts Range, Harts Range Meta-igneous Complex, Irindina Supracrustal Assemblage, Riddock Amphibolite, ruby, vermiculite

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LICENCE DETAILS:

Licence Numbers: MCS 235, MCS 236, MCS 237, MCS 238, MCS 239,
MCS 240, MCS 241, MCS 242, MCS 243, MCS 244

Project Name: Harts Range
(Ruby Mine & Vermiculite Prospects)

Licensee: Barfuss Corporation Pty Ltd

Licensee ACN: 006 917 666

Licence details:

Area: 172 hectares
(MCS 235, 236, 244 each 20 ha; MCS 237-243 each 16 ha)

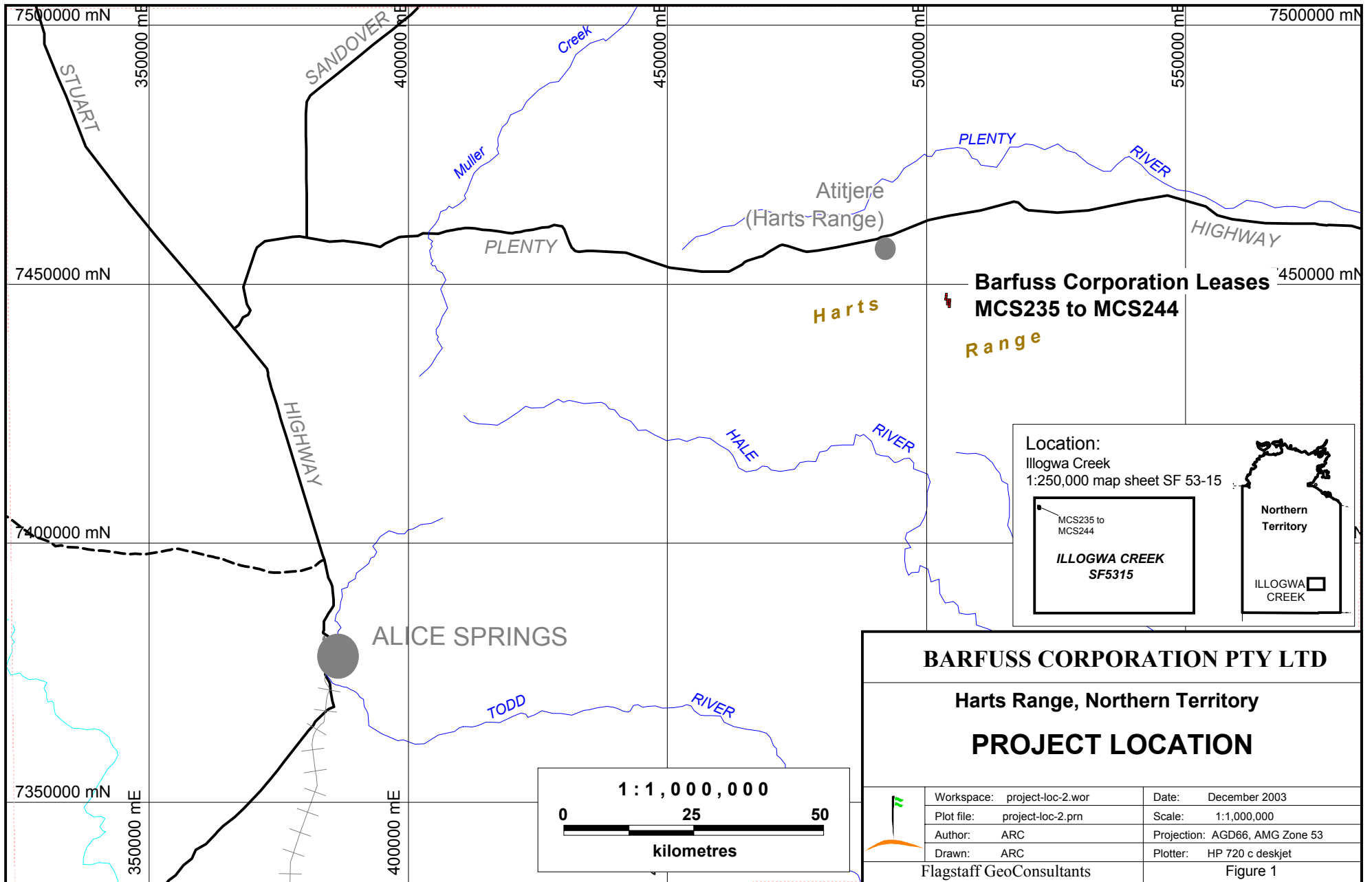
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Location:
 Illogwa Creek
 1:250,000 map sheet SF 53-15

ILLOGWA CREEK
 SF5315

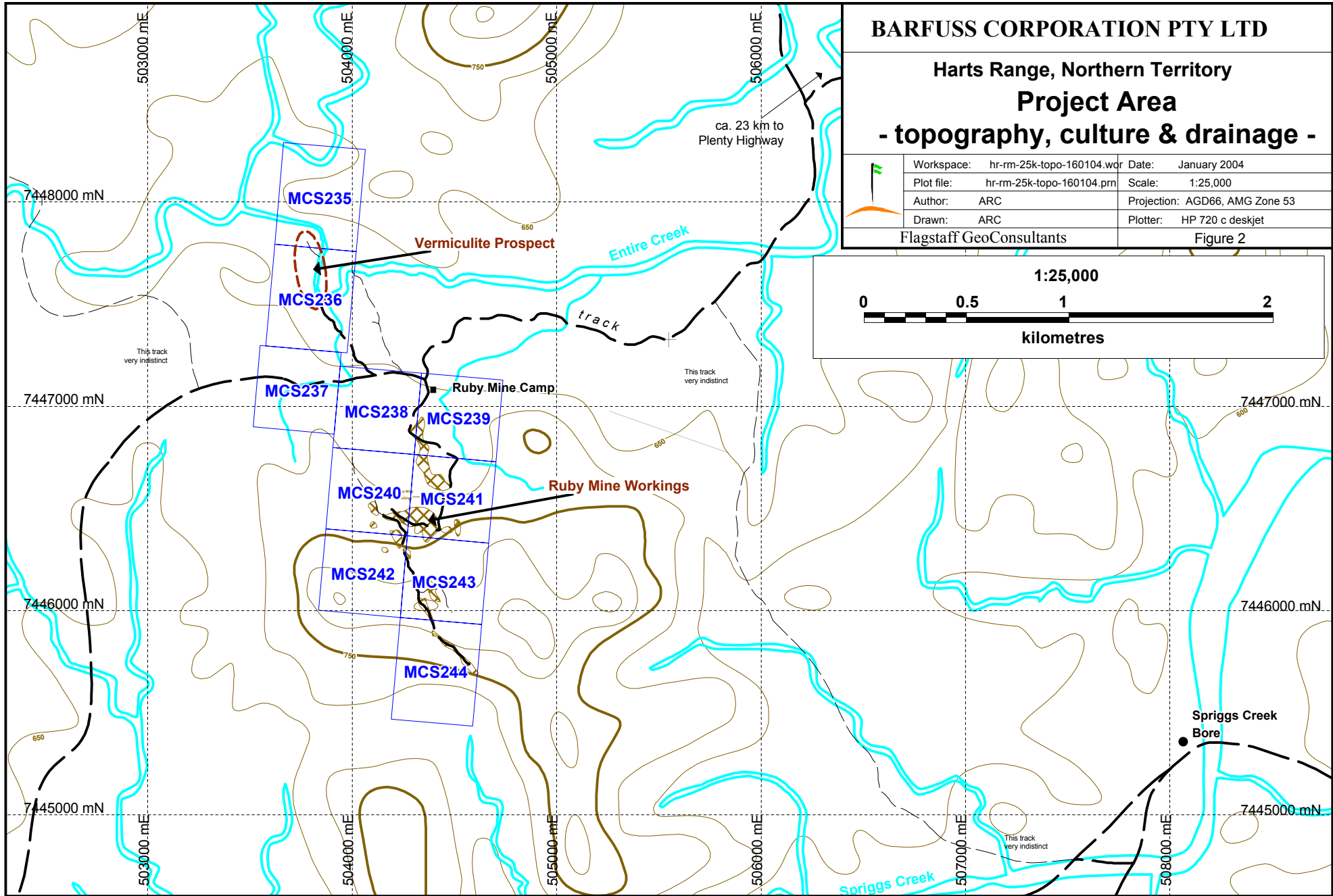
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Harts Range, Northern Territory

PROJECT LOCATION

Workspace: project-loc-2.wor	Date: December 2003
Plot file: project-loc-2.prn	Scale: 1:1,000,000
Author: ARC	Projection: AGD66, AMG Zone 53
Drawn: ARC	Plotter: HP 720 c deskjet

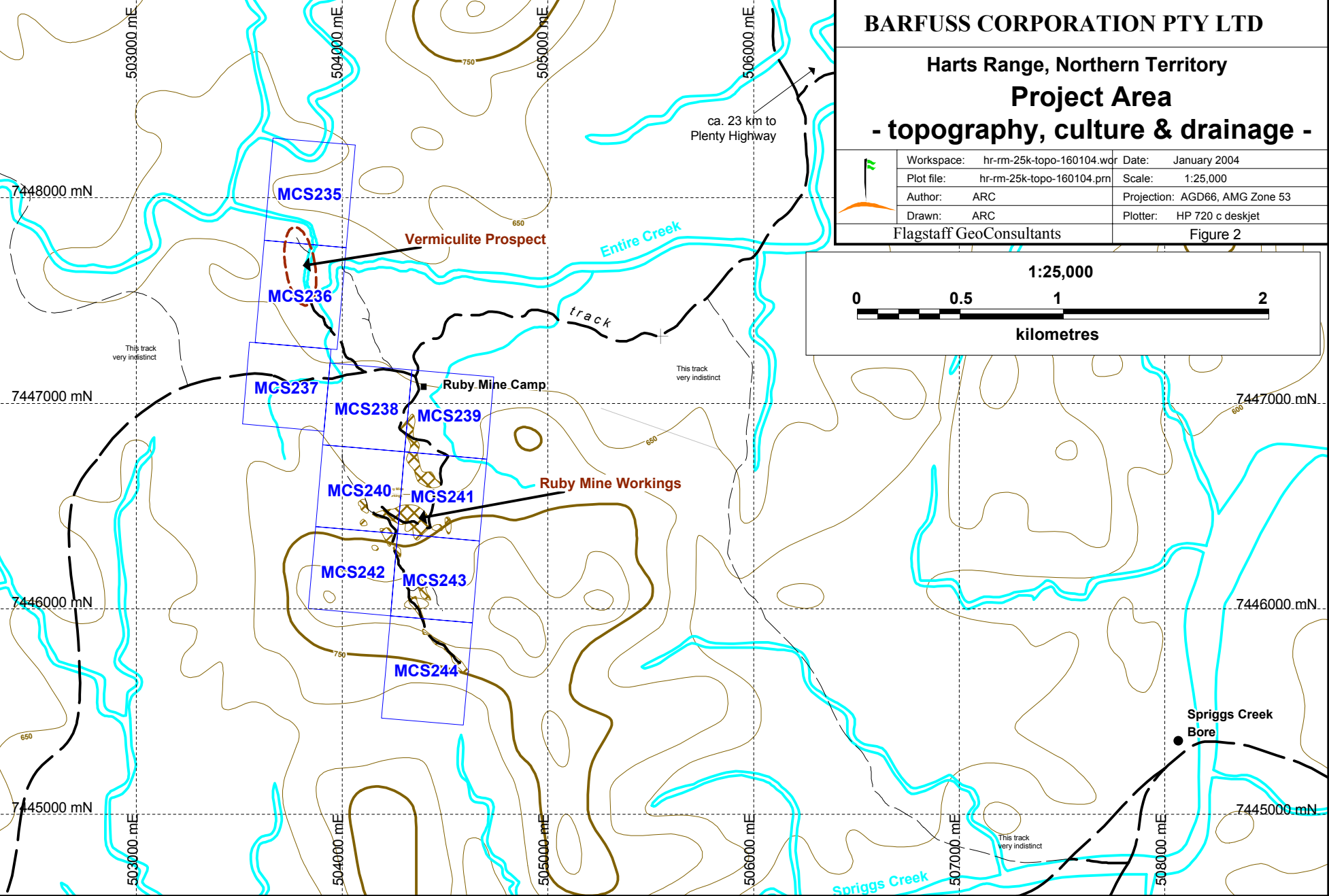
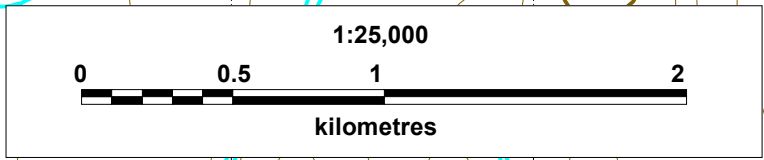
Flagstaff GeoConsultants Figure 1



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**Harts Range, Northern Territory
Project Area
- topography, culture & drainage -**

Workspace:	hr-rm-25k-topo-160104.wdr	Date:	January 2004
Plot file:	hr-rm-25k-topo-160104.prn	Scale:	1:25,000
Author:	ARC	Projection:	AGD66, AMG Zone 53
Drawn:	ARC	Plotter:	HP 720 c deskjet
Flagstaff GeoConsultants		Figure 2	



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1. SUMMARY

The Harts Range Ruby Mine workings lie roughly 130 kilometres northeast of Alice Springs, in the southeast of the Northern Territory. Mining Claims MCS238-MCS244 cover the main area of the workings (the Ruby Mine Prospect) and MCS235-MCS237 extend further northwest over the same sequence of rocks and additional exploratory workings (the Vermiculite Prospect). Barfuss Corporation holds all ten adjoining Mining Claims.

The Project is in the northern Harts Range and topography is frequently rugged. Access is from the north via station tracks running south from the Plenty Highway, past the Entire Bore. Vehicle access within the leases is largely restricted to established tracks.

The lease area is underlain by gneisses and amphibolites of the Riddock Amphibolite (or "Harts Range Meta-igneous Complex") – part of the Early Proterozoic Harts Range Group (or "Iridina Supracrustal Assemblage") – in the eastern Arunta Block. The ruby-corundum and vermiculite occurrences are associated with discrete meta-ultramafic bodies within the "Entire Anorthosite" unit.

Previous mining at the Harts Range Ruby Mine was conducted by Mistral Mines in the late 1970s to early 1980s and was restricted to surficial shallow open excavations. The ruby-bearing rocks have not been fully excavated and are known to still contain rubies. The ruby-bearing rocks are interpreted to be within metamorphosed boudinaged ultramafic rocks. The ultramafic bodies outcrop as discrete "pods" which are interpreted to be the surface expression of elongate boudins which may have significant sub-surface extent. Barfuss Corporation considers that there is potential for further economic ruby occurrences in these ultramafic bodies, which might be accessed by deeper excavations and/or underground mining.

The "Vermiculite Prospect" – MCS235 & MCS236 – lies 800-1,000 metres northwest of the northernmost Ruby Mine workings. Exploration for further ruby occurrences in this area by Mistral Mines in the early 1980s located significant vermiculite associated with a large meta-ultramafic body. Barfuss Corporation considers this occurrence to represent a resource which may be minable once its dimensions, extent and grade have been better assessed.

Barfuss Corporation intends to conduct detailed shallow drilling at both the Ruby Mine and Vermiculite Prospects to better locate and define potentially minable resources. Compilation and review of previous data – particularly geological mapping – was conducted as a prelude to this work. This produced a detailed digital GIS dataset. Shallow test drilling has commenced at the Vermiculite Prospect.

Barfuss Corporation has also established a base camp / site office at the site of the old Mistral Mines camp, at the north end of the Ruby Mine workings, and has re-established access tracks where necessary.

2. CONCLUSIONS AND RECOMMENDATIONS

Compilation of previous detailed mapping has confirmed the project's potential. Previous mining exploited only eroded and/or outcropping ruby-bearing rock, and workings consisted of shallow surface excavations only – rarely extending more than a few metres below the original outcrop. In these excavations, the ultramafic bodies containing the ruby-bearing rock do not appear to decrease in size with depth – indicating potential for significant quantities of un-exploited rock remaining below ground. Stratigraphic dip is generally shallow, suggesting that the ultramafic bodies could be mined via sub-horizontal workings, or open-cut in places, without the requirement for significant over-burden removal or shaft-sinking. In addition, many ultramafic occurrences do not appear to have been excavated at all – these may have ruby-bearing potential below surface.

At the Vermiculite Prospect, the presence of at least one sizeable vermiculite body is indicated by previous trenching, with a strike length at surface of 200 metres or more and probable width of 5-10 metres. This vermiculite zone lies on the edge of a large ultramafic body. The ultramafic is 70-100 m wide at surface – assuming its depth extent is similar, and the vermiculite zone extends to depth, there is potential for an economic vermiculite resource here (depending upon grade).

It is intended to conduct shallow (< 100 metres) drill testing at both the Ruby Mine and Vermiculite Prospects. At the Ruby Mine this work is intended to locate and define the extent, direction, dimensions and depth of the ultramafic bodies which host the ruby-bearing rock. Assessing the “grade” of these rocks is more problematical, given the apparently erratic and unpredictable distribution of the ruby-corundum, and the variations in its gem quality. It is likely that mining would have to proceed with, at best, a poor estimate of the ruby potential.

Drilling at the Vermiculite Prospect will test the extent and grade/quality of the vermiculite zone(s) below the trenching conducted to date. Some additional trenching may be conducted to assist in defining the lateral extent of the zones. Prior to any bulk sampling or test mining it is intended to identify whether the deposit is large enough – i.e. has the depth and width continuity – to constitute a minable resource.

3. INTRODUCTION

Barfuss Corporation's Harts Range Project lies on the north side of the Harts Range in the south-east of the Northern Territory, approximately 130 km north-east of Alice Springs (Figure 1). Mineral Claims MCS235-244 cover 172 hectares (Figure 2). The Mineral Claims cover the workings of the Harts Range Ruby Mine, which was active from the late 1970s to the early 1980s (operated by Mistral Mines NL), plus an adjoining area to the north-west where potentially-economic vermiculite occurrences have been identified. The area is in the north-east corner of the Illogwa Creek 1:250,000 map sheet (SF 53-15).

Ruby-corundum was first identified at this location in 1978. Mining by Hillrise Properties Pty Ltd and/or Mistral Mining NL up until the early 1980s produced "several hundred kilograms of red corundum" (Lawrence, 1992). This work was very poorly documented. Mining was evidently conducted by bulldozer and was terminated at each site when "no more rubies could be seen at surface" (ibid.). The excavations resulting from this work were rarely more than 5 metres deep and in all the workings the dimensions of the ultramafic bodies (which host the ruby-bearing rock) do not appear to decrease with depth.

Very little mining appears to have continued into the early 1980s, but reasonably intensive and systematic surface exploration of the Ruby Mine and surrounding areas was conducted by Mistral Mines in this period. A local grid was established and geological mapping was undertaken (in detail over the Ruby Mine area). No drilling appears to have been conducted but costeaning was undertaken on several ultramafic bodies within and beyond the productive Ruby Mine area. It was during this period that R.W. Lawrence conducted the work that comprised his PhD Thesis for the University of Adelaide (1987).

Little or no further work was done on the mine until Barfuss Corporation conducted exploration over the area including the Ruby Mine in the 1990s, when it was covered by Exploration Licences 23365 and 9434. This work included geophysical interpretation of airborne magnetic and radiometric data (Rutter, 1995, 2001).

The general geology of the project area, and the Ruby Mine in particular, is discussed by Lawrence (1992). The region is in the eastern part of the Arunta Block and the geology is dominated by various gneisses of Early Proterozoic age. The leases lie west of the Inkamulla/Huckitta Domes ('Huckitta Anticline') and are underlain by the Irindina Supracrustal Assemblage, which consists predominantly of feldspar-biotite-amphibole-garnet gneisses. This assemblage has been intensely multiply deformed and now has an overall very gentle dip to the west and/or south. The stratigraphy is thus now sub-horizontal and typically outcrops sub-parallel to topographic contours. Within the Irindina Assemblage is the "Harts Range Meta-igneous Complex" (Lawrence, 1992) (*equivalent to the Riddock Amphibolite Member*), interpreted as predominantly metamorphosed volcanics and intrusives. This complex consists mostly of amphibolitic gneisses ("amphibolites"). Within the Harts Range Complex is the Entire Anorthosite, interpreted to be a high-grade metamorphosed anorthosite. In the Ruby Mine area (and to the north and north-west) this anorthosite is fairly continuous and up to ca. 30 m thick. (The apparent thickness in outcrop is usually greater, due to the shallow stratigraphic dip.) To the east and south, it is more discontinuous. Ruby occurrences at the Harts Range Ruby Mine are very localised within the Entire Anorthosite and occur in what appear to be "pod"-like meta-ultramafic bodies. These are interpreted to be boudins (hence pod-like in outcrop), with cross sections generally less than ten metres in diameter (long dimensions not known). The rubies are associated with small (*dimensions usually less than a metre*) altered anorthosite inclusions within the ultramafic bodies.

Barfuss Corporation intends to test for further economic ruby-corundum occurrences in these ultramafic boudins, which might be accessed by deeper excavations and/or underground mining. The company

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also considers the vermiculite occurrence northwest of the ruby mine (in MCS236 & MCS237) to be a potentially economic minable resource. Barfuss plans to drill test both these areas.

4. WORK CONDUCTED DURING THE REPORT PERIOD

The principal field activities on the licences included

- Limited geological mapping and specimen sampling
- General exploratory prospecting
- Siting and planning drill locations at both the northern Ruby Mine workings and at the Vermiculite Prospect (MCS236 & MCS237) further north
- Drilling one shallow test hole beside the Ruby Mine site office (to 15 metres depth)
- Drilling two shallow test holes at the south end of the Vermiculite Prospect (to 12.1 metres and 7.5 metres depth)
- General maintenance of the site, site office and tracks.

The drillholes were all NQ-diameter diamond core, drilled with a small trailer-mounted rig.

The holes at the Vermiculite Prospect were on the southeast margin of the southern ultramafic body and passed through the vermiculite zone into the surrounding gneiss. Core loss was significant in the soft weathered near-surface vermiculite-rich rock, but appeared to confirm the presence of a zone up to several metres thick. It is planned to conduct several traverses of deeper drillholes here, after access tracks have been made.

Drill locations/traverses have been planned at both the Vermiculite Prospect and the northern Ruby Mine Prospect. These sites have been identified on the ground and access tracks are planned for the Vermiculite Prospect. The initial drilling at the Ruby Mine should require only fairly limited earth-moving to facilitate access.

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6. EXPENDITURE.

Expenditure of \$ 165,500 for the report period is allocated as follows:.

Principal expenses:-

Administration and access	- environmental clean-up	\$ 2,500
	- site preparation	6,000
	- marketing research	7,600
	- report preparation	7,000
	- general administration	12,700
	- general overheads	9,200
Consultants	- field work	16,000
	- drafting & report preparation	6,000
Field Work	- drilling	38,000
	- prospecting & exploration	24,000
	- airfares	2,400
	- accommodation	10,200
	- vehicle expenses	15,000
	- fuel	6,900
	Total:	<u>\$ 163,500</u>

7. FUTURE WORK PROGRAMME.

Both the Ruby Mine and the Vermiculite Prospect are considered to be at or close to a “drill-ready” stage. The mapping compilation conducted to date has provided a thorough understanding of the surface geology and distribution of mineralised rocks. Drill testing is necessary to determine the feasibility of mining.

At the Ruby Mine, very close-spaced drilling is planned – initially to very shallow depths and close to known ruby-related outcrop (i.e. selected ultramafic bodies). This drilling is intended to test for the continuation of the ultramafic bodies/boudins and to locate/confirm the direction of this continuation. Very close spaced drilling is required because of the small cross-sectional diameter (rarely greater than 10 m) of the ultramafic bodies. It is planned that drilling will be “stepped out” as a better understanding of the size and orientation of the ultramafic bodies is gained.

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At the Vermiculite Prospect deeper (but still less than 100 m depth) drilling is planned to test for the continuation of the vermiculite zone(s) at depth on the margin of the large ultramafic body. At present the vermiculite has only been identified in trenches roughly 2-3 metres deep. Any estimate of a minable resource will require drill definition. Drill traverses have been planned. Access tracks and some earthmoving will be required prior to drilling.

Estimated proposed expenditure for the 12 months ending 20 June 2005 is allocated as follows:

Principal expenses:-

Administration and access	- site preparation	\$ 10,000
	- report preparation	6,000
	- general administration	5,000
	- general overheads	40,000
Consultants	- field work	30,000
	- office work / reporting	30,000
Field Work	- drilling	100,000
	- airfares	9,000
	- sundries – mobilisation, vehicles, accommodation	20,000
	Total:	<u>\$ 250,000</u>

Ross Caughey
(Flagstaff GeoConsultants Pty Ltd)
14 January, 2005

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