ANNUAL REPORT

EL 8076

"PLENTY RIVER"

HARTS RANGE REGION, N.T.
NORTHEAST CORNER - ALICE SPRINGS [SF 53-14] 1:250,000
SOUTHEAST CORNER - ALCOOTA [SF 53-10] 1:250,000
SOUTHERN EDGE - HUCKITTA [SF 53-11] 1:250,000

TO N.T. D.M.E
FOR PERIOD TO 19/12/1998

LICENCE HOLDER:

CHAMBIGNE GARNET PTY LTD

REPORT COMPILED BY:

CHAMBIGNE GARNET

14-12-98

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APPENDICES

1 SUMMARY

During this reporting period Chambigne applied for two mineral leases from within EL8076 (PR5 and PR6). Subsequent to the mineral lease applications, the areas applied for in the EL was surrendered.

The EL embodied in this report lies along the eastward-flowing Plenty River, just to the north of the Strangways and Harts Ranges, and is focused on alluvial garnet and to a lesser extent, other industrial minerals in the sands of the riverbed.

Initial reconnaissance, exploration and subsequent re-examination of the Plenty River *in toto*, indicate economically recoverable garnet grades exist and exhibit substantial tonnages, as outlined in earlier annual reports. The small creeks and feeders to the Plenty River system commonly had shallow depths, narrow widths, and/or were uneven and rocky, making commercial large-scale sand recovery both difficult and commercially non-viable.

Substantial systematic sampling efforts were undertaken in previous reporting periods from the upper most reaches (19.5km) of the river and over the eastern portion of EL8076 commencing at the confluence with Entire Creek, moving east. The details of sampling sites, together with garnet size distributions from all these samples were presented in previous reports, along with preliminary minimum resource estimates.

The result of previous exploration (east and west of this remaining portion of the EL) demonstrates the Plenty River is a catchment for the mostly north flowing drainage system off the host and acts as a conduit as it slowly moves material downstream. This required only a limited amount of sampling on the EL to be performed in this reporting period to verify continuity of garnet concentration within the river between the zones already comprehensively tested.

2 INTRODUCTION AND TENURE

The exploration licence, EL8076 comprising 148 graticular blocks of approximately 477km^2, was granted to Chambigne Resources Pty Ltd on the 20th of December, 1993. The aim of exploration was to delineate economic reserves of alluvial garnet within the riverbed of the Plenty River and its feeders, and associated colluvium. In this year of tenure the EL8076 comprised 19 graticular blocks

Since grant date Chambigne have applied for three whole mineral leases from within the EL and the fourth mineral lease application also incorporated an adjoining EL.

3 LOCATION AND ACCESS

EL8076 is centred on the eastwards flowing Plenty River, with the location of the EL as shown in **Appendix page 1.**

Access to the EL is via the Plenty Highway, which runs east from the Stuart Highway, roughly subparallel to the Plenty River, on its southern side. Numerous station roads and tracks run off the Plenty Highway, crossing the Plenty River, and in most places, rough and rarely used but quite navigable tracks run along parts of the banks of the River.

4 GEOLOGY OF EL8076

The EL lies in the flood plain of the Plenty River, with little in the way of massive outcrops; numerous smaller outcrops and rock bars, however, indicate that for the most part, the riverbed lies in the mid-Proterozoic metamorphic rocks of the Harts Range Group. To the west, some of the shallow feeders cut through deeply weathered and essentially undifferentiated Lower Triassic rocks, but these have no real significance in terms of the garnet genesis or resource volume.

Of the Harts Range Group rocks, the most significant are the Irindina Gneiss, and the Riddock Amphibolite; both are heterogeneous, and may carry from zero to 18 volume% garnet, though the average for the Gneiss is closer to 10%. From a consideration of the regional geology, petrology and topography, it is evident that the sources of most of the garnet in the river sands are the two rock units named previously. There appears to be little if any contribution to the river sands of grossular-andradite garnet from the rare calc-silicate rocks that are garnetiferous, or of almandine-rich garnets from the weakly garnetiferous lower grade schists to the north of the Plenty.

The geological-lithological distribution of rocks adjacent to the ELs can be seen on the Alice Springs, Alcoota, Illogwa Creek and Huckitta 1:250,000 Geological maps. For a better appreciation of the distribution of petrological types, refer to the Geology of the Strangways Range Region, the Arltunga-Harts Range Special, and the Quartz 1:100,000 geological maps.

It is of particular note, in relation to garnet grades, that there is little direct creek or river-fed input into the Plenty River from the north, at least along the section beginning at the western boundary of EL8076. In fact, much of the alluvium from the high ground to the north of the Plenty is "captured" by the Bundey and Marshall Rivers and their tributaries. The Marshall runs subparallel to the Plenty; their sediment loads may mingle in the vicinity of Thring Bore during extreme flooding, but this is the exception rather than the rule.

Between the western and eastern limits of the EL, the sediment input to the Plenty from the south is exclusively derived from the rocks of the Harts Range Group. In particular, the immediate high ground west of the Harts Range Police Station, from 134 47' to 134 56', comprises mainly garnetiferous Irindina Gneiss and Riddock Amphibolite.

East of 134 56', the exposed high ground immediately south of the Plenty comprises the Brady Gneiss, which carries no appreciable garnet; colluvium from these rocks carried to the Plenty serves mainly to dilute garnet grades (via a surface sediment wash flowing north-east).

No purely geological mapping was carried out in any part of the EL in this reporting period. Written summaries of the regional geology of the areas encompassed by the EL is presented in the notes to accompany the Geology of the Strangways Range Region, and the Arltunga-Harts Range Special 1:100,000 geological maps. There is no equivalent in print for the Quartz Geological map, however the compilation notes appear as BMR Record 23, 1982, [Shaw *et al.*]. The previous geological summary was compiled directly from the above mentioned references, which are not presented here.

5 WORK PROGRAM TO 12/98

Previous reconnaissance over the entire length of the Plenty River contained within the EL demonstrated that the Plenty was everywhere garnetiferous. Systematic sampling via excavated holes carried out in previous reporting periods has established garnet size distributions and grades; detailed spreadsheets were included in previous reports.

Six samples were taken in this reporting period numbered 8076-98-L1 to 8076-98-L6. The samples were dispatched back to Brisbane, where they were weighed and initially screened to -850 microns.

The -850 micron material was pan concentrated and the concentrate was subsequently screened into four additional size fractions (-850+600µ; -600+425µ; -425+180µ and -180µ) then the heavy mineral concentrate was weighed to provide an estimated wt%. Over the length of the Plenty River the garnet component of the heavy mineral concentrate has ranged between 40% and 55% on average. Visual examination of samples 8076-98-L1 to 8076-98-L6 returned similar estimates thus confirming a continuity of economic garnet grades within this zone of the EL.

The representations of concentrate percentages within size distributions are included as **Appendix page 2.** A map of sample locations, name and numbers are included as **Appendix page 3.**

It is common knowledge that the traditional uses of garnet include abrasive blasting; water filtration; polishing of metals and glass; fract sand and non-skid surfacing etc.. It has long been our belief that almandine garnet, a naturally occurring very hard and inert mineral could have other uses in the wider community.

Because of this belief the company began experimenting with garnet. One concept was researched and the results of this research led the company to develop several proto-type product samples. Potential market representatives were specifically targeted to provide us with un-biased feed back on the proto-type product samples. About 85% of the feed back was very positive and the remaining 15% suggesting the product was good but not sure of the level of market acceptance. No negative feed back has yet been encountered.

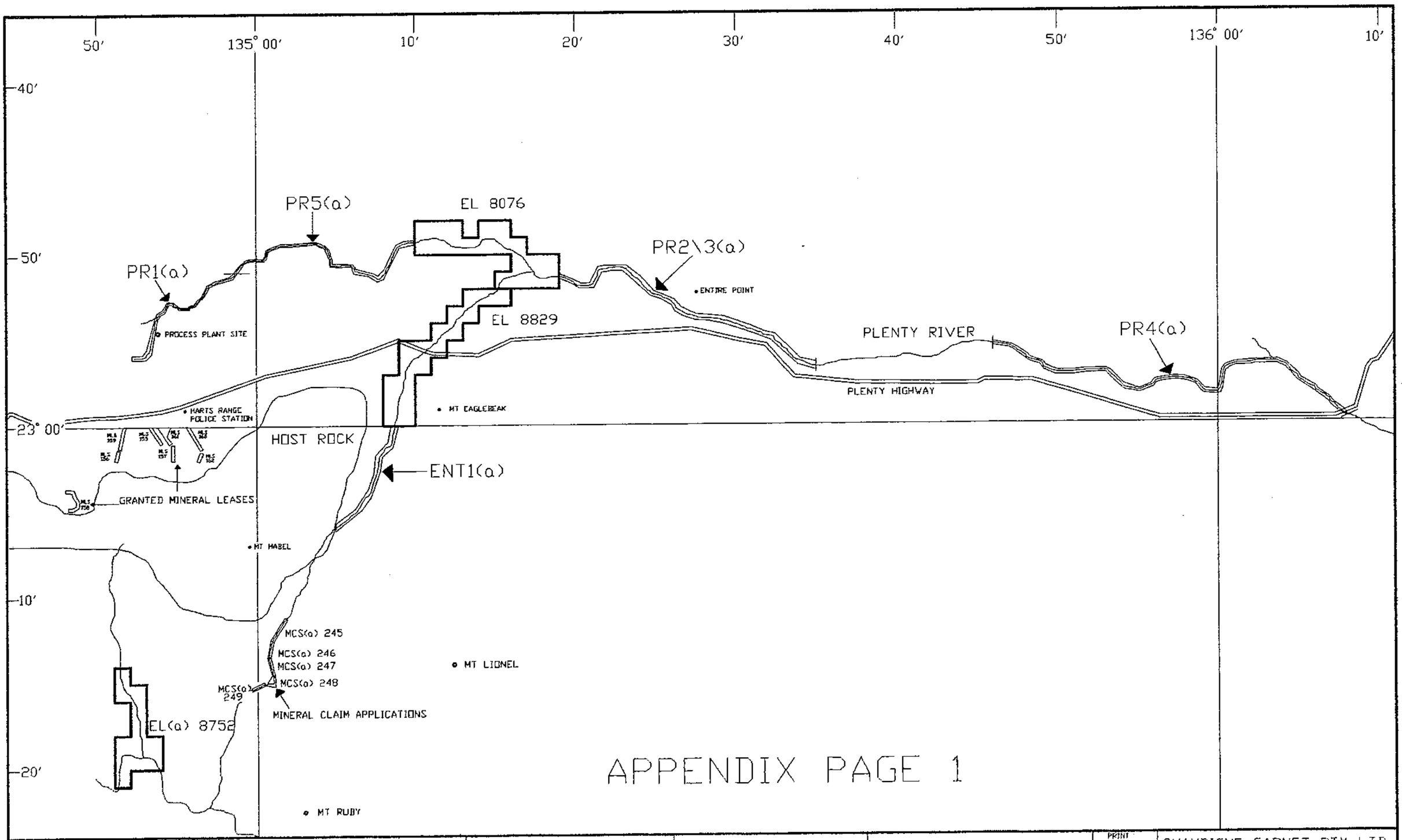
Encouraged by the response the company has commenced developing an improved proto-type for expanded marketing research and performance testing. If the results of this returns similar results the company will commission a feasibility study. This product may also have an international market.

6 EXPENDITURE TO 12/98

As the result of the work performed on EL8076 in this reporting period the expenditure incurred was:-

ITEM	EL8076
Travel and accommodation	3250
Vehicle and plant hire	1105
Sample transport and processing	845
Metallurgy	1170
Consultants	2500
Administration	1400
Total	**10,270**

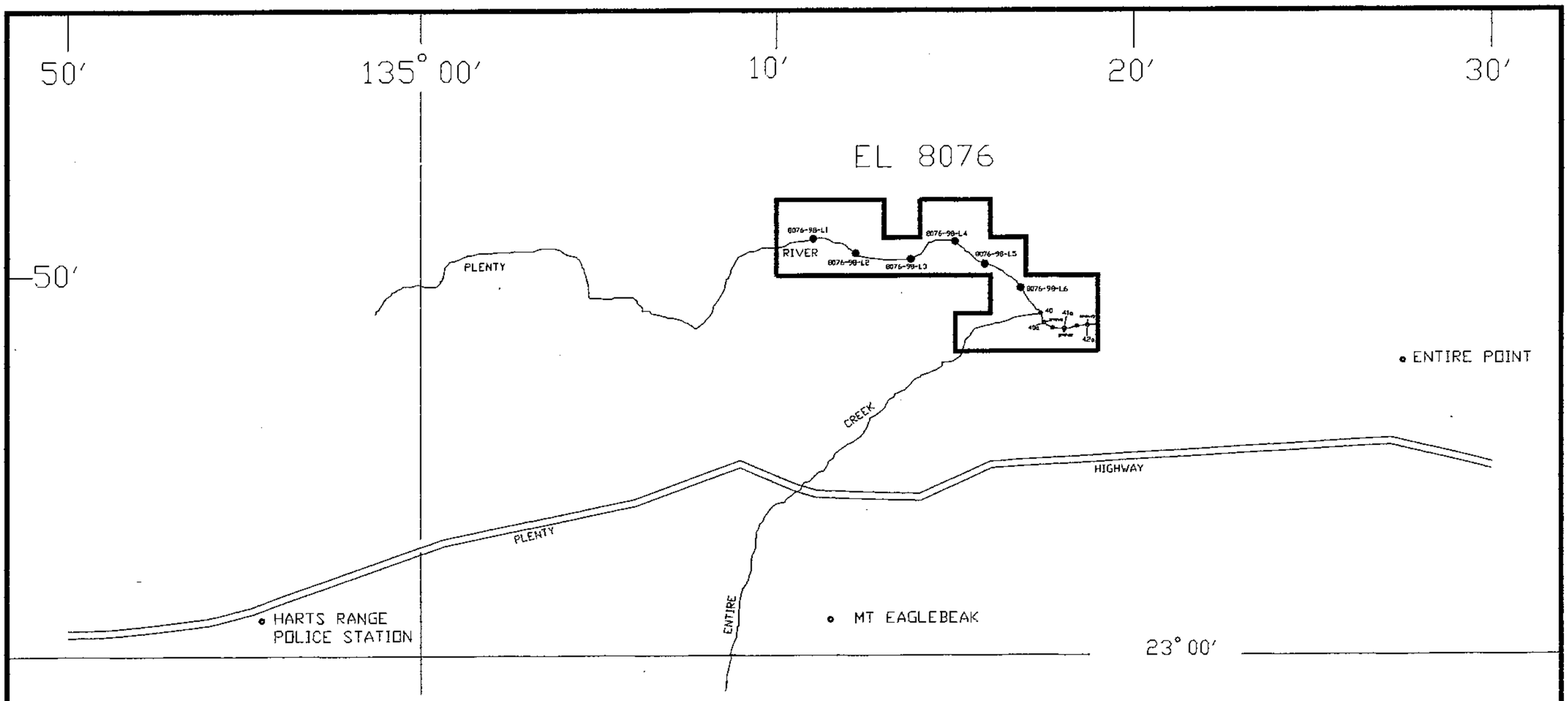
All of EL8076 has been surrendered therefore this is the last annual report.



APPENDIX PAGE 1

ACLTWIN \NTEL\ TENEMENT\TEN.DWG	EXPLORATION LICENCE	MINERAL LEASE	(a) APPLICATION	0 17 KILOMETRES	CHAMBIGNE GARNET PTY LTD
DRAWING NUMBER				PRINT 240 - 168	LOCATION MAP OF CHAMBIGNE TENEMENTS

	ESTIMATED CONC. WEIGHT %			
SAMPLE No.	-850 +600	-600 +425	-425 +180	-180
8076-98-L1	3.15	6.27	4.88	3.85
8076-98-L2	4.29	7.11	5.69	4.03
8076-98-L3	6.78	9.78	7.95	5.23
8076-98-L4	3.87	7.11	4.35	4.55
8076-98-L5	4.01	6.98	5.88	4.04
8076-98-L6	3.1	5.88	4.19	3.9



Explore\8076\ Rep98\App3.dwg		PRINT -.051 - 0.27 11.22 - 6.86	CHAMBIGNE GARNET	-
DRAWING NUMBER	APPENDIX PAGE 3		MAP OF EL8076	